

Writing for Clean Water and Sanitation

Accelerating Momentum Toward the UN Sustainable Development Goals Through Action Research

Debbie Goss

Soka University of America (dgoss@soka.edu)

Abstract

This action research assignment invites students to participate in the progress of the UN's Sustainable Development Goal #6 (SDG6) by contributing knowledge to two distinct public discourse communities: *Wikipedia: The Free Encyclopedia* and *Consilience: The Journal of Sustainable Development*. SDG6 targets access to clean water and sanitation for all by the year 2030. But, in order to accomplish this, the rate of progress must accelerate dramatically. In small groups, students research an SDG6-related topic and improve a Wikipedia article to make it neutral, balanced, and organized in accordance with Wikipedia quality assessment standards. Simultaneously, students compose an opinion paper addressing SDG6 goals and targeting the cross-disciplinary audience of *Consilience: A Journal of Sustainable Development*. The project raises awareness of discourse communities while students make headway on SDG6 by publicly sharing their research. The assignment is adaptable to an extensive range of subject matter suitable in both face-to-face and online teaching platforms. Students reflect on their own connections and learn to empathize with others by analyzing how lack of access to potable water and sanitation causes suffering. Action research calls on students, thinking as global citizens, to be bold in creating a new and better world—a world where access to clean water and sanitation brings justice to all.

As the COVID-19 pandemic rolls on, the whole of humanity is rethinking social, economic, and environmental praxes. People see the need for change, and many groups are aware of the need for urgent progress toward both better human and planetary health. United Nations (UN) Secretary-General António Guterres (2019, September 24) has called for accelerated action toward the Sustainable Development Goals: “We need all hands on deck. We need to move together, in step with the world’s young people . . . to move faster and farther to reach our destination for people and planet” (para. 18). In 2015, the UN concretized a plan to shift the people and the planet Earth toward a truly sustainable future by formalizing 17 Sustainable Development Goals (SDGs) to be achieved by 2030. One of these, SDG6, aims to “ensure availability and sustainable management of water and sanitation for all.” The current rate of progress on SDG6, however, must double to reach its goal (Guterres, 2019, May 8). COVID-19 and other projected viruses, along with heightened awareness of systemic racism and other forms of xenophobia, have intensified the urgency.

Developing countries increasingly illustrate how deprivation of clean water and safe sanitation systems seriously threatens human potential because of the connection to socioeconomic stability and health (Grafton, 2017, p. 3037). For example, Adjei and Kyei (2013) found a high correlation between the rate of malaria and skin disease in rural Ghana, where there is extremely limited access to water and sanitation. Lack of access also disproportionately affects women and children. In many countries (e.g., Mauritania, Somalia, Yemen), women and children spend significant portions of their days fetching water at the expense of their health, safety, and education (Sorenson et al., 2011, p. 1523). In these ways, access to water and sanitation becomes

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an issue of human and planetary health; it needs to be decolonized, deracialized, demasculinized, and degendered.

This action research project invites students in a first-year composition course to make headway on the UN SDG6—access to cleaner water, higher quality sanitation, and sustainable hygiene systems—from two angles: a Wikipedia article edit and an opinion paper that targets an online academic journal. Participation in SDG6 engages students to address critical social and environmental issues, an important aspect of action research. With less than a decade to go to reach SDG6, students participate in meaning-making and creating knowledge through research, dialogue, writing, and publication as global citizens.

Access to clean water and adequate sanitation is a complex and far-reaching problem. Solutions are contentious, processes of relief are disputed, and consequences require critical attention. Today, nearly a third of the world’s population lacks access to safe drinking water, nearly half lacks access to soap and water for home-handwashing, and over a third lacks access to basic sanitation systems (United Nations: Department of Economic and Social Affairs. Sustainable Development., n.d.). In this project, students explore solutions to what Grafton (2017) calls a “wicked problem.” The spread of COVID-19 and other diseases, the current economic crisis and widening economic gap, the soaring refugee crisis, and climate change deeply coalesce with water and sanitation. Importantly, water and sanitation needs transcend political, economic, racial, ethnic, gender, and other systemic gatekeepers. In other words, “effects of water scarcity . . . are not uniform” (Grafton, 2017, p. 3024).

SDG6, then, also intersects with other SDGs in a way that is importantly “universal, interdependent and mutually reinforcing” (UN-Water, 2016, p. 8). The synergistic interconnections and interdependence among and between the SDGs advances progress overall. For instance, the introduction of a rope pump, a low-cost household groundwater pump, has increased sustainable water access in economically disadvantaged rural communities in parts of Asia, Latin America and Sub-Saharan Africa (Holtslag & McGill, 2017; MacCarthy et al., 2017). Having a functioning family well reduces the need to fetch water from distant community wells. This improved water access (SDG6) leads to reduced poverty (SDG1) because maintenance of the pumps becomes a source of income. Often, providers of pump maintenance are women. Increasing income opportunities for women advances gender equality (SDG5).

The water access in low-income rural areas also reduces the distance to fetch water. Water fetching is problematic for women and children in multiple ways, including minimizing their opportunities to receive an education (SDG4) due to the time involved in accessing water. Pickering and Davis (2012) found that a 15-minute reduction in time spent water fetching produces a “41% average relative reduction in diarrhea prevalence, improved anthropometric indicators of child nutritional status, and a 11% relative reduction in under-five child mortality” (p. 2391). These findings demonstrate how reducing time to fetch water connects to health and well-being (SDG3).

What is more, students grapple with systemic issues such as the commodification of water and sanitation, which disproportionately hijacks human rights of those already marginalized. At the same time, students look inward to reflect on what they can do within their own unique social contexts. During the project, students reflect on these discrepancies through low-stakes writing posts and class discussions. By exploring answers to questions such as how to decolonize, deracialize, demasculinize, and degender access to water and sanitation, students join the community of action researchers committed to transformation and knowledge for public benefit (Whitehead, 2019, p. 212). Thus, problems and solutions are explored both inwardly and outwardly, and students reflect on their connections to the global community.

At Soka University, the student body consists of approximately 40% international students.

My first-year composition course, which focuses on global citizenship, dedicates the second half of the semester to this action research project. Student diversity produces lively discussions on the interconnectedness of all people and the natural environment. We learn from our differences. Students share with each other what they are learning about their varied SDG6-related topics as well as personal experiences, reflections, and steps to improve water and sanitation. Through these dialogues, students make connections between the different water and sanitation topics their classmates are working on. The discussions heighten awareness of peoples and places where there is limited infrastructure for access to water and sanitation. In turn, students are motivated to make a difference in their home communities.

Assignment Overview

The project starts with readings that contextualize SDG6 within the framework of global citizenship. The first reading is an appeal to youth to have hope and resilience as “humankind confronts a vertiginous dynamic of change” (Esquivel & Ikeda, 2018, p. 1). In conjunction with the appeal, students explore Ikeda’s (2010) concepts of global citizenship education, in which he presents three key aspects:

- the wisdom to perceive the interconnectedness of all life and living;
- the courage not to fear or deny difference, but to respect and strive to understand people of different cultures, and to grow from encounters with them;
- the compassion to maintain an imaginative empathy that reaches beyond one’s immediate surroundings and extends to those suffering in distant places (pp. 112–113).

These concepts underscore how the attainment of SDG6 emulates “the interconnectedness to all life and living,” requires courage to try “to understand people of different cultures,” and brings forth empathy for those “suffering in distant places.” That everything is interconnected permeates the three aspects of wisdom, courage, and compassion. In other words, what we do in our day-to-day lives connects even to those geographically distant. Most importantly, our personal gain in profit, pleasure, or convenience potentially produces consequences for others. Therefore, raising awareness of these interconnections becomes indispensable to progress on SDG6.

The next readings argue that equilibrium with Mother Earth cannot be achieved through an anthropocentric lens; rather, humans are intimately interconnected with nature in a dynamic relationship that equally values humans, animals, plants, rocks, and water, connecting all life and Earth (Jarrell et al., 2016; Jiménez et al., 2014; Lupinacci, 2017). What I have learned from working alongside my students on this assignment is that SDG6 relates not only to environmental justice but also to racial, economic, gender, and myriad interconnections of (in)equity. Indeed, clean water and sanitation connect to social, economic, and environmental life.

Connecting Across Genres

The two aspects of this action research assignment work together and build upon each other to highlight action and reflection. Students engage in the assignment as a form of action research: “Action research brings together action and reflection, as well as theory and practice, in participation with others, in the pursuit of practical solutions to issues of pressing concern” (Bradbury-Huang, 2015, p. 1). The Wikipedia edit asks students to research a topic related to SDG6 and update a Wikipedia article by adding or revising content. Through navigating the Wikipedia edit, students learn about topics related to the SDGs along with writing strategies such as avoiding biased language and paraphrasing. As part of the article editing process, students

collaborate with other Wikipedians¹ to improve the accuracy and thoroughness of content, links, references, and visuals for their selected articles. Such an assignment provides students with opportunities for learning outcomes such as evaluating sources, public writing, synthesis, and digital literacy, among others (Vetter et al., 2019).

After spending some time editing their SDG6-related Wikipedia article, students focus on a related issue for their opinion papers. Often, students use sources cited in their Wikipedia article when crafting their opinion paper. In both genres, students analyze exemplar writing samples, critique socio-environmental injustices, search for solutions, reflect on what they learn, and share their knowledge. Through their public knowledge contributions, students' work continues to advance SDG6 beyond the immediate course context and to the betterment of themselves, their communities, and the world.

This two-fold writing assignment can be adjusted to a singular assignment according to time, comfort level, and pedagogical aims, but I find that the two genres pair nicely together over a six- to eight-week time frame. Either way, during both the Wikipedia edit and the opinion paper writing process, students reflect in both small groups and larger class discussions in order to recognize how they can take steps toward access to clean water and sanitation for all.

Wikipedia Small Group Edit

The Wikipedia small group edit follows a sequence as follows:

- 1) familiarization with the genre;
- 2) selection of an article related to SDG6;
- 3) identification of academic sources to develop the article;
- 4) edits to the selected article according to the conventions identified in the WikiEdu² online training modules.

Improving social, economic, or environmental SDG6-related articles accelerates advancement toward access to water and sanitation for all by contributing accurate and reliable knowledge on a related topic.

The WikiEducation Foundation (Wiki Education Foundation, 2017) prides itself on easily accessible training modules that aim to increase global participation in the Wikipedia project. Students contribute to and improve this global knowledge resource and, in doing so, are able to work with their small groups and with the Wikipedia community towards the transformation of public awareness and knowledge regarding SDG6. I see this contribution as a form of action research. Contributions aligned with SDG6 exemplify what Whitehead (2019) calls “the global, transformative influences of action researchers, in enhancing the flow of value and understandings that carry hope for the flourishing of humanity” (p. 226).

Heuristics embedded in the process of learning how to edit a Wikipedia article also align with Adler-Kassner and Wardle (2015)'s threshold writing concepts,³ which aid in transfer to multiple interdisciplinary writing contexts. The Wikipedia edit component engages students in Adler-Kassner and Wardle's social dimension in several ways. First, it is completed in small groups. The small group design mitigates fears affiliated with what for most students is an unknown genre. Furthermore, in Wikipedia, students converse with other Wikipedia editors about how to improve their articles through the Wikipedia Talk pages. The Talk pages reinforce the message that college writers are entering into a dialogue with various communities of practitioners. In conversation with other Wikipedians, students experience the social nature of Wikipedia editing and writing in general. Importantly, recognition of writing as a social endeavor transfers to other forms of writing students encounter. In fact, the social and collaborative characteristics

of Wikipedia—the world’s largest encyclopedia—has led some to argue that Wikipedia editing itself is a social movement (Konieczny, 2009).

Students make substantive improvements to their chosen articles by adding 200–300 words of content, connecting sources to each new piece of information, adding links, and adding photos when it improves article quality. By checking sources for accuracy, updating information where needed, and providing information where gaps exist, students make an important step in attaining SDG6. While working on this assignment, my students have edited an array of articles, such as “Flint Water Crisis,” “Human Right to Water and Sanitation,” “Water Crisis in Iran,” and “Menstrual Cup” (as a potential solution to gender, economic, educational, and environmental injustices connected to a lack of access to clean water and sanitation). Because students realize that the articles they improve have the potential to be read by thousands around the globe, motivation and engagement increases; their work benefits others.

Opinion Paper

After familiarizing themselves with SDG6 by evaluating Wikipedia articles for their suitability to edit, students begin research for their opinion paper on a narrowed topic of their choice related to their small group Wikipedia article edit. In other words, students tackle two writing projects simultaneously, while teasing out differences in genre, purpose, audience, and format. Students draw upon their Wikipedia research to inform their opinion papers. Students work on their opinion papers individually, so they can home in on their unique interests and take full ownership of the project. Wikipedia writing is neutral and fact-based whereas the *Consilience* opinion paper is persuasive and solution-oriented. Paired together, these two genres build rhetorical dexterity. Lunsford (2015) explains the process this way: “When writers can identify how elements of one writing situation are similar [or different] to elements of another, their prior knowledge helps them out in analyzing the current rhetorical situation” (p. 54). Rhetorical dexterity, then, means having the flexibility to write for various audiences and purposes. In this case, as students write about SDG6 for different audiences (i.e., Wikipedia and *Consilience*), they become aware of the need to be flexible in their writing strategies. Anson (2015) explains that “such awareness is said to help writers study and reflect on what they must do in their writing to succeed by the standards of the community” (p. 78).

Like the Wikipedia edit, the *Consilience* paper’s purpose, audience, and format is determined by the journal’s publicly accessible guidelines (Consilience Editorial Board, 2020). This extends the assignment beyond the classroom boundaries toward authentic academic publication and allows me to work alongside my students as coach, breaking down teacher-student hierarchies. More importantly, their work advances progress on SDG6 in real life and real time throughout digital space. *Consilience* seeks “compelling arguments regarding controversial topics in sustainable development.” Students’ SDG6-related topics have included reviving the Gulf of Mexico’s dead zone through looking at the corn belt region’s agricultural practices; heightened vulnerability to sexual violence in India due to women’s lack of access to water and sanitation hygiene; violence and oppression against Indigenous Peoples of Bolivia through the corporatization of water; and financing complications in smallholder irrigation in Sub-Saharan Africa. In the spring of 2020, one student wrote about consequences of US involvement in Ghana’s water issues related to COVID-19. Another tackled how COVID-19 highlights the urgency of SDG6.

Students who opt to submit their opinion papers to *Consilience* for publication report that the experience provided multiple, unanticipated benefits. Clearly, students learn about the publication process itself. Additionally, reading and responding to the journal editors’ feedback provides students with other perspectives for improving their writing. For example, one student reported that they learned a new level of organizing their writing after revising their paper

according to the journal editors' feedback. Students have also reported that they gained a better handle on how to thread their paper's theme throughout the piece. As an instructor, I found that supporting students in their revisions that were suggested by someone else allowed me to foster a "guide-from-the-side" rather than a "sage-on-the-stage" pedagogy.

Adaptability

This action research project arose from my quest to promote global citizenship while navigating various writing conventions. The topic of SDGs attracted me because of the aim of "transforming our world" with the understanding that "ending poverty and other deprivations must go hand-in-hand with strategies that improve health and education, reduce inequality, and spur economic growth—all while tackling climate change" (United Nations: Department of Economic and Social Affairs. Sustainable Development., n.d., para. 1). The 2020 pandemic and increased awareness of systemic racism and other forms of violence fortifies the relevance of engaging students in these SDGs. This interconnectedness of SDG6 with multiple SDGs provides students with room to choose from a wide array of topics that can align with their interests and academic or career goals while participating in the advancement of access to water and sanitation.

Educators, as Bosio and Torres (2019) put it, have a responsibility to "promote not only skills but, most importantly, also values and actions, engaging, rather than evading, problematic questions about global disparities" (pp. 746–747). I join my students by participating in the reflections and determinations embedded in the progression of the assignment; each semester I improve at least one small aspect of my life. For example, I have eliminated disposable and plastic drink containers by bringing my coffee to my morning classes in a hand-made (by my daughter) reusable ceramic mug. Last semester, one of my students chose to write about the beef industry and its connection to global warming; his passion convinced me to return to a beef-free diet. With little prompting, students voluntarily share their own strategies for improvement.

I see the adaptability of this assignment as a benefit for courses that involve writing across the disciplines. After all, the UN's SDGs aim for social justice, so there are opportunities for students to explore a wide variety of disciplines (e.g., anthropology, sociology, biology, or business). Wikipedia editing, too, covers unlimited topics. And, while the editing can be done individually, I value group work for Wikipedia editing to lower the anxiety for some students and heighten the enjoyment that comes with learning something new with friends.

Going Forward

In the future, I plan to modify this assignment to include the wisdom of Indigenous perspectives. This will importantly disrupt a potentially Western-centric viewpoint that can fracture notions of interconnectedness with Nature and water itself. Jiménez et al. (2014) highlight the value Indigenous cultures place on water—the lifeblood of Mother Earth. Indigenous people around the world deeply connect physical and spiritual health to the health of the water and the land. Inspired by the water protectors' work at Standing Rock in North Dakota, the Acjachemen Nation is increasingly advocating and educating for protection of their land near our campus (Jarrell et al., 2016). Going forward, I hope to invite Acjachemen Nation people to share their stories and visions with my classes. Perhaps, we could learn about their struggles and offer to work with them in our local context as allies in the fight for Acjachemen water and land rights. Nikolakis and Grafton's (2014) participatory action research work collaborating with Indigenous groups in Australia to promote just water access could be included in the course readings to serve as an inspirational model. Recently, the 2019 United Nations Climate Change Conference (Stockholm International Water Institute, 2020) called to include Indigenous ontological perspectives in

both water policy and practice in order to mitigate our current climate crisis. Deeply integrating the Indigenous voice in this project will be crucial for ensuring sustainable outcomes for this assignment and for the accomplishment of SDG6.

This project could help advance social justice through any of the SDGs. An economics class, for example, could focus on reducing poverty (SDG1) or decent work and economic growth (SDG8), a biology class could focus on life on land (SDG15) or life below water (SDG14), or a literature class could focus on quality education (SDG4) or gender equality (SDG5). Each goal can connect to virtually any discipline.

When social distancing became the tool to flatten the coronavirus curve, educators around the world moved their face-to-face courses online. I had only taught this assignment face-to-face until then. Fortunately, the transition was virtually seamless. Students still posted summaries and reflections on the introductory readings in our discussion boards. The Wikipedia training modules were already online. The small group Wikipedia edits were accomplished through Zoom breakout rooms. The opinion papers were still written individually, but peer edits moved to screen shares through Zoom. I found that great progress on SDG6 can still be made in an online course. In fact, the exigence of COVID-19, including the move to online courses, has highlighted the social and environmental urgency of the assignment.

Scientists agree that the world is facing an urgent environmental crisis. Few deny the evidence of climate change, deforestation, urban sprawl, waste disposal, and water pollution. But those who want to take action can unite toward social and environmental justice as outlined in the SDGs. In this way, writing for global environmental justice accelerates the transformation of our world.

ASSIGNMENT

SDG6 Wikipedia Small Group Edit and Opinion Paper

*streams push through
layers of dirt
as veins embrace waters and soil
growing the life blood of Our Mother
the Earth*

—K. Dawn Martin, Six Nations of the Grand River

Overview

The United Nations' 17 Sustainable Development Goals (SDG) were constructed to address global crises including poverty, inequality, climate, environmental degradation, and peace and justice. SDG6 sees that too many people still lack access to safe water supplies and sanitation facilities. Through your contribution of knowledge to two public online audiences, you will accelerate progress on securing access to water and sanitation for all.

In small groups, you will perform research on a topic of your choice related to the UN SDG #6 and edit a Wikipedia article, which you will complete in designated steps over the remainder of the semester. You will also submit an opinion paper on a topic related to your small group Wikipedia edit.

Purpose

This project provides you an opportunity to grow as a global citizen through increasing access to clean water and sanitation and developing your effectiveness as a writer. It is about communicating, convincing, and sharing with others about the importance of SDG6 by contributing to two online venues.

Connection to Course Learning Objectives

- Contribute scholarship to urgent socio-environmental issues related to water and sanitation that affect citizens of the world.
- Analyze texts in a variety of genres and disciplines, identifying main ideas and details, drawing inferences and conclusions, and differentiating between neutral and persuasive rhetorical moves.
- Revise content, organization, and language according to two different sets of purposes, audiences, and formats through multiple drafts.
- Evaluate and provide feedback among peers.
- Expand competence in and understanding of digital literacy.

Wikipedia Group Edit

In small groups, you will work collaboratively to create article edits according to Wikipedia training modules and through in-class practice. With teamwork, maximize everyone's strengths, compensate for each other's weaknesses, and give more than you get. Also, conquer and divide as you proceed through the project.

Purpose and Audience

The purpose of this project is to expand your own awareness of this critical global issue, inform your classmates about your topic, and provide access to your research through the global Wikipedia platform. Through such scholarship and public contribution, this project aims to support and make headway on this UN goal of sustainable development in water and sanitation.

Engaging in Wikipedia provides an opportunity to write for a global audience of anyone who has access to the Internet. Wikipedia provides free content “anyone can use, edit, and distribute” (“Wikipedia: Five Pillars”) in an encyclopedic format.

Task

1. Choose an article that meets the following criteria:
 - Article's quality rating “important” and C-class to ensure that it is in need of further development
 - Article is of interest to you (either academically as a topic related to your major, or more personally)
 - Article is on a topic notable enough that relevant published research is available (i.e., find at least 5 reputable sources [journal articles, UN documents, academic books, etc] to draw from).
2. Evaluate the article to determine how it could be improved and what content could be added.
3. Submit a short (150-300 words) proposal in which you do the following:
 - Identify specific content that could be added to your article
 - Identify other improvements and/or revisions that could be made to the article
 - Locate and make a list of at least 5 secondary sources you plan to use in the development of your article in a group sandbox. You should make a list of

these sources with as much citation information as you can find (so you'll be ready to add them to your article)

4. Edit approved article collaboratively according to Wikipedia conventions.
 - Style: Neutral, third person, objective, easy-to-understand
 - Well-sourced: Uses secondary sources/references to back up knowledge claims
 - Structure: Consistent with Wikipedia article conventions (lead, section headings, etc.)
 - Editorial contributions should make substantive improvements to the article: between 200-300 words, citations for each concept, copyedits, links, organizational improvements, and photos if appropriate.
5. Groups will present their article edits to the class (visuals are encouraged).
 - talk about conversations within the Wikipedia community
 - share your group process
 - showcase your contributions

Wikipedia Sample Articles to Edit

- SDG6
- Rainwater Harvesting
- Water Issues in Developing Countries
- Menstrual Hygiene Management
- Water Scarcity in Africa
- Pollution of the Ganges
- Yamuna (River in India)
- Water Supply
- Sustainable Sanitation
- Water Quality
- Water Supply and Sanitation in Costa Rica
- Water Treatment
- World Toilet Day
- Human Right to Water and Sanitation
- Reuse of Excreta
- Hygiene
- Waterborne Diseases
- Water Privatization
- Swachh Bharat Mission
- Recycling by Product
- Greywater
- Compost
- Water Supply and Sanitation in Cuba

Consilience Opinion Paper

Beginning with the sources you used in your Wikipedia edit, craft an academic opinion paper on a specific topic related to SDG6, bringing your own critical thinking to this issue. Along the way:

1. Review the resources from your Wikipedia edit article
2. Formulate a problem
3. Determine additional and different resources for your opinion piece
4. Complete a literature review matrix
5. Develop a thesis

6. Brainstorm with classmates, Writing Center, and me
7. Review *Consilience Journal* to note stylistic conventions
8. Draft/submit paper targeting the *Consilience* Opinion section audience
9. Complete peer review
10. Revise, edit, and submit to Dropbox

Audience

Consilience: The Journal of Sustainable Development is dedicated to promoting interdisciplinary dialogue on sustainable development. It aims to bring students, researchers, professors, and practitioners from a variety of disciplines and geographical regions in direct conversation with each other through an online, open access, academically rigorous medium. You will write an Opinion piece (see Brightspace for examples) designed to offer a compelling argument regarding a controversial topic in sustainable development. You may wish to include photographs and figures to illustrate your claims. Although submitting your paper to the journal is not a course requirement, you are encouraged to do so. Whether you choose to submit or not, treat the assignment as if you plan on submitting your paper for publication.

Task

The researched opinion paper is 2700-4000 words, APA-style. Dive deep into a narrow topic within your group's Wikipedia article topic. To inform your paper, analyze published opinion papers in *Consilience: The Journal of Sustainable Development*. The **introduction** should capture your readers' interest in the problem or question you address in the paper, explaining why it is a problem and its importance. The **body** consists of a persuasive answer to the question you pose in the introduction. Include relevant analysis of the literature, argumentation, and evidence through intertextual synthesis. Include a **conclusion** that may call for further research.

Submit: Draft two weeks prior to Final; Final due the last day of class.

Sample Opinion Statements and Topics

- XXX is/is not a way to ensure the availability of water for the people of XYZ
- XXX is/is not a way to ensure availability of sanitation for the people of XYZ
- XYZ can reduce hazardous chemicals/substances in XXX
- XYZ is a way to reduce water pollution of XYZ water body
- XYZ can increase recycling and reuse of XXX product/material
- XYZ can increase cooperation at transboundary waterways
- XYZ can help protect/restore mountain, forest, wetland, river and lake water-related ecosystems
- Select a country and discuss the complexities of women and water supply. Argue for the causes of the issue OR the solution to the problem
- Causes and solutions to environmental racism
- Rainwater Harvesting is/is not a viable solution to water access in XYZ.
- Children and water collection: issues (causes & solutions) in XYZ
- Describe the problem of water involved in the life cycle (production through decomposition) of a product (e.g., silk vs. cotton vs. polyester clothing) or a food (e.g., beef, corn, soy, wheat, etc.) and provide solutions.
- Compare the risks and benefits to reuse of excreta in agricultural fertilization
- Discuss causes/solutions to waterborne disease(s).
- Some cultures value/embrace open defecation. Argue for or against its global implementation.

- Issues of open defecation in XYZ
- Describe the problem of pollution of the XYZ River. Determine what you believe are the primary causes of the problem, create an argument, and provide evidence to support.
- Describe the problem of pollution of the XYZ River and argue for a specific solution to the problem.
- Discuss how to increase global cooperation for issues such as desalination, water efficiency, wastewater treatment, recycling, and reuse technologies
- Expose systemic inequities of access to water and sanitation in a specific location or as a global issue.
- Argue how local communities can engage in water and sanitation access

Notes

¹Wikipedians are voluntary editors of Wikipedia.

²WikiEdu's mission statement reads: "Wiki Education engages students and academics to improve Wikipedia, enrich student learning, and build a more informed public."

³Adler-Kassner and Wardle gathered 29 scholars in the field of composition, rhetoric, and writing studies to name 37 concepts that explain the process of writing and writing pedagogy. Their edited volume, *Naming What We Know*, summarizes many key ideas from fifty years of writing research.

Supplementary Material

For supplementary material accompanying this paper, including a PDF facsimile of the assignment description formatted as the author(s) presented it to students, please visit <https://doi.org/10.31719/pjaw.v5i1.76>.

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