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The Impacts, Implementation, and Sustainability of Service Learning in the Classroom

Amber Gerrits

**August 7th, 2018
Honors Senior Project: HNR 499
Grand Valley State University**

Abstract

This honors senior project focuses on service-learning in the classroom. Specifically, it uncovers the benefits, harms, and common potential challenges that service learning educators face when implementing community engagement activities in their schools and classrooms. The three areas surrounding this pedagogy research were: (1) impacts of the practice, (2) logistical implementation in the classroom of such projects, and (3) a look into how to suitably sustain this type of involvement for students in a post K-12 education setting.

To ascertain the answers about the impacts of service-learning, literature was compiled into a review, which unpacked terminology and answered the big questions of this research:

- What are the potential benefits of a curriculum focused around service learning?
- What are some of the common potential challenges and harms of service learning in the classroom?

Next, a partnership was formed with the Center for Economicology (CFE), a theme school in Grand Rapids Public School District (GRPS) for observations of service learning projects, the opportunity to teach an elaborated service-learning lesson, and for formal interviews. The Groundswell Initiative also served as a partner in researching current student service-projects and initiatives.

Finally, the idea of sustaining this community involvement was explored and shared with students through a presentation of active citizenship at Grand Valley State University (GVSU) with CFE students.

Defining Terms

Service-Learning Pedagogy

Service Learning has its roots in John Dewey's progressive model of education.

Dewey believed that education at its core should be experiential and related to citizenship (Thomsen, 2006, p. xi). Scholars also note that service-learning supports constructivist ideas, because students are 'constructing' their own understandings of the world through meaningful interactions (Billig, 2006, p. 27). Cathryn Berger Kaye defines service learning as:

"A research-based teaching method where...classroom learning is applied through action that addresses an authentic community need in a process that allows for youth initiative and provides structured time for reflection on the service experience and demonstration of acquired skills and knowledge." (Kaye, 2010, p. 9)

The National Youth Leadership Council denotes that the standards for quality service-learning in grades K-12 are meaningful service, link to curriculum, reflection, diversity, youth voice, partnerships, progress monitoring, and duration and intensity (Kaye, 2010, pp. 14-15). These elements can be applied to several different environmental and social issues that students recognize in their own communities. Projects can range from literacy to politics and government to the environment (Lewis, 1995, p. vi-vii) and fall along a continuum from direct service, to indirect service, to advocacy (Thomsen, 2006, p. 25). Examples of actions students can take within service projects include creating public service announcements, creating surveys, fundraising, or even making fliers (Lewis, 1995, pp. vii-viii).

Additionally, in order to be considered a student-centered quality project, the five stages of service learning must also be present. These essential and interdependent stages of successful service learning in the classroom are: Investigation, Preparation &

Planning, Action, Reflection, and Demonstration (Kaye, 2010, p. 15). Students must take ownership over their projects and meet these 5 stages in order to constitute a critical, effective, and rewarding process. Cathryn Berger Kaye also includes a blueprint for teachers of service-learning projects to ensure that all standards are being met and that all issues within the process are addressed. They include points of entry, review the -12 Service Learning Standards, map out your plans, clarify partnerships, review plans and gather resources, begin the process of service learning in action, and assess the service learning experience (Kaye, 2010, pp. 22-23) These steps should involve student voice and participation, as well as other stakeholders, such as colleagues, parents, and community members. (Kaye, 2010, p. 22) They will ensure success when planning a service learning project for a class of students.

Place-Based Education:

Place-Based Education is a term sometimes interchanged with service learning. The core ideology at the heart of each of these pedagogies is very similar. Both emphasize the importance of hands-on, real-world learning experiences, and developing strong ties to the community. David Sobel describes this approach as enhancing “students’ appreciation for the natural world, and [creating] a heightened commitment to serving as active, contributing citizens” (Sobel, 2005, p. 7). Sobel also emphasizes in his book the importance of teaching across all subjects, including language arts, math, social studies, science, ect. and simply using the community and environment as a starting point to teach them. Communities do not only include the environment, but also “built communities,” including history, culture, economics, and

constructs (p. 9). Collaboration is also an invaluable piece of place-based pedagogy (p. 19).

The distinction between this pedagogy and service learning is primarily the focus on place within the students' community. The place-based model builds on the idea that a student is a resource to their community and is an asset to the health of the community overall. Education must be local and is in a sense, a preparation for citizenship and scholarship alike. The student is within their world, acting on its many elements, rather than standing outside looking in, which is typical in the traditional class setting (pp.11-12). Often times, place-based education focuses on service projects, but those projects will *only* exist within that school's community. Place-based classes will accept the concept of limited resources and look for ways to enhance economic vitality, environmental quality, and school improvement locally (p. 17).

Community:

Community has several definitions and can be defined widely depending on context. Some measure a community of people by levels of shared proximity and affinity. For the purposes of service-learning and place-based pedagogy, community can be defined as a local area that is developed and built through "interaction, reciprocal relationships, and knowledge of people, places, organizations, governments, and systems" (Kaye, 2010, p. 10). Some schools only doing work around the school campus might only consider the school to be "community," but some service-learning educators might define community as extended to the surrounding neighborhood, city, or region. Kaye argues that some communities are international by nature, even if students stay on school grounds (2010, p. 10). Students have the potential to act, and

raise money or awareness for communities in other states, countries, or continents. As mentioned previously, community becomes more specific and important to place-based educators, who might see community as the region within their region's boundaries, and local above all else.

Service:

Service is defined separately from service-learning. While service learning focuses on broad benefits, such as “self-confidence, interpersonal skills, social responsibility, citizenship, and connection to school,” as well as learning goals, where curriculum content is enhanced through the service (Thomsen, 2006, p. 43), service can be defined more broadly and plainly. When educators refer to their “service” they mean the implementation of a plan or project that is student-designed and meets an authentic need. “Service” in the context of service learning typically falls into 4 categories: direct service, indirect service, advocacy, and research (Kaye, 2010, pp. 10-11).

Literature Review

What are the potential benefits of a curriculum focused around service learning?

- Authentic alleviation of community problems
 - Student development in terms of social-emotional growth, interpersonal skills, leadership, and intercultural competence
 - Increased respect and collaboration between the community, parents, and students
 - Increased depth of understanding, motivation, and retention with curriculum content
 - Career exploration and college preparedness
-

Cathryn Berger Kaye defines service learning as an approach which

“Connects school-based curriculum with the inherent caring and concern young people have for their world—whether on their school campus, at a local food bank, or in a distant rain forest. The results are memorable, lifelong lessons for students and foster a stronger society for us all.” (1998, p.8)

Her book, *The Complete Guide to Service Learning: Proven, Practical Ways to Engage*

Students in Civic Responsibility, Academic Curriculum, & Social Action, presents

readers with rationale for implementing service learning projects in the classroom.

Some of these compelling reasons include: authentically addressing and alleviating community problems, creating student growth in regards to decision making and civic participation, cultivating a deep understanding of students’ selves, their communities, and their society, and developing and empowering leadership. Kaye goes on to advocate that service learning can be within reach of all students, it is nearly always successful when implemented correctly, and is tied to the curriculum.

Cathryn Berger Kaye is not the only one to advocate that service-learning is good for helping students develop while simultaneously aiding the community in an authentic way. Other scholars and organizations, including the Safe and Responsive Schools Project address the effects of engaging in service learning experiences. They discuss some of the positive outcomes of service learning related to student development, such

as students engaging in less “risky” behaviors due to their involvement and motivation in their studies. Their article also notes the positive effect on a student’s interpersonal development and the ability to relate to diverse groups of people (Strom, Miller, & Connelly, 2003). This outcome is echoed in other scholars’ research, including Kate Thomsen. She notes that “service learning engages students in learning about their communities, participating in active citizenship, and developing their personal social-emotional attributes” (Thomsen, 2006, p. Xii).

Not only do service experiences alter the perspectives of community to students, but Thomsen notes that due to service projects, the community in turn develops positive perceptions of youths, cultivating a deeper sense of community and connectedness (Thomsen, 2006, p. 9). Through collaborative efforts in the classroom and with increased ownership of learning, students involved in service projects are also found to have better, mutually respectful relationships with their teachers (Thomsen, 2006, p. 9). This is apparent not only in the literature about service learning, but also in my observations and interviews at City High Middle School in the Center for Economicology (CFE) in Grand Rapids, Michigan. In my qualitative research, the respect and connection students had with the teacher and each other was strong and evident in classroom culture and management (see demographics). One last way in which service learning helps cultivate personal development and connection to the community is to involve parents in the classroom, in various service learning experiences, and at home. In order to help students cultivate self-awareness, initiative, and responsibility through service-learning, it is important to encourage parents to be role models in this process. In *Parent Involvement in Service Learning*, Cathryn Berger Kaye notes the different

ways parents can get involved in their student's service learning and education. Some family action steps include doing service as a family, recycling at home, and engaging in diverse communities and events whenever possible (Kaye, 1998, p. 26). At school, parents can contact community organizations, document activities, or even help by writing grants (Kaye, 1998, pp. 16-19).

Another high impact reason for educators to commit to service-learning pedagogy is the increased depth of understanding in the learning process. The benefits of students being engaged in their learning through service include active engagement with the material, frequent feedback, collaboration, cognitive apprenticeship, and practical application (Billig & Eyeler, p. 4). Research proves that engaging in service learning helps increase motivation, improves retention, and helps students connect with classroom content. Billig notes this research in her article, *Lessons from Research on Teaching and Learning: Service-Learning as Effective Instruction*: "Research has repeatedly shown that participation in high-quality service-learning can result in improved attendance, increased test scores, greater problem-solving skills, and better acquisition of skills and knowledge related to reading/language arts, mathematics, science, and social studies" (Billig 2006, p. 25). She reports on high-quality learning and instruction, and ultimately presents 5 factors of quality service-learning that are most highly correlated with significant impact on students: strong link between service activities and content standards, direct contact with those being served, challenges reflection practices, youth choice in planning, implementation, and reflection of service activities, and the duration of at least one semester. Public demonstration of learning

and respect for diversity were also identified as related to impacts on students (2006, p. 30).

A final benefit of hosting a service-learning curriculum as noted by scholars and professionals is the opportunity students have to explore career opportunities through community and civic engagement. Ryan Huppert, the principal of City Middle School in GRPS notes, "Service-Learning gives students a taste of serving their community. They will know if this is something they will continue doing into their adult lives. Service learning projects will also give students a sense of different available careers which is really important for kids in school" (R. Huppert, personal communication, June 13, 2018). Mike Boosamra, a teacher in the Center for Economicology echoes this idea, and stressed in his interview the correlation between college readiness and service initiative in his classroom. The Creativity, Action, and Service (CAS) hours that students must complete as a part of their experience at City Middle school requires that a student gets connected in their community, and this involvement sets students apart when applying to universities and vocational schools.

What are some of the common potential challenges and harms of service learning in the classroom?

- Lack of quantitative research on the topic, specifically in test score correlations
 - Lack of resources and support for service-learning educators
 - The difficulty in finding relevant, safe, and engaging experiences for students
 - Providing authentic experiences in such a tight and restrictive curriculum
 - The overwhelming workload some service projects can pose
 - The possibility of conflicting community and student interests, resulting in stereotyping and 'othering'
 - Balancing teacher control and student independence
-

Given these potential benefits of implementing a service-learning curriculum, several challenges often times limit educators from implementing true service-learning projects that are effective and impactful. Although there is awareness about service learning, there are problems with the research surrounding the topic, in that most of it exists as anecdotal evidence, rather than based on statistics surrounding academic achievement (Billig, & Eyeler 2003, p. 26). Many of the benefits of service-learning are focused on interpersonal growth, community advancement, and readiness for active citizenship, and these do not necessarily correlate to academic achievement or improvement in test scores. This lack of research is potentially a limiting factor of its widespread practice.

Coupled with this issue, there is also often a lack of resources and support for service-learning teachers, especially outside of service-dedicated programs like the Center for Economicology. This became clear through my interviews with service-learning professionals and observations, and through data presented in Thomsen's

work. She notes that although 83% of teachers in the U.S. implementing service projects received support, this support is not necessarily long-term or systematic. Only 15% of these teachers received extra planning time for service activities, only 11% had their course loads reduced, and only 3% were hired on as full-time service-learning coordinators (Thomsen, 2006, p. 6). It is clear that starting a service-learning project can be difficult, and without the support of outside professional development organizations like the Groundswell project in Grand Rapids, can be nearly impossible.

Another challenge that was noted by service learning professionals such as Dr. Kevin Holohan and Mr. Mike Boosamra were issues of the students making connections in their communities. When looking for service projects that are connected to school curriculum and which are standards-based, it is sometimes difficult to find relevant and engaging experiences for students (K. Holohan, personal communication, April 23, 2018). This is also made difficult when student voice is valued, but students are not producing suitable options for their own projects (Billig & Eyeler, 2003, p. 65). Another genuine concern for interactions within the community are the ages of students and the resources of the parents. There are parents and community members who often question if the 6th graders in the CFE are too young to be so involved in the community. Access to transportation also limits several urban families who are expected to support their student's service-learning projects and education (M. Boosamra, personal communication, June 1, 2018).

And finally, one of the most common challenges that educators face when attempting to integrate service projects in their classrooms is the issue of time and room in the curriculum. Kate Thomsen reports that Scales and Roehlkepartain found only 3 in 10 U.S. schools utilize service learning, and that 70% of principals who don't implement these programs indicated the reason was that service learning is not required by any standards. That, along with lack of resources and pressure to comply with national programs like No Child Left Behind make it difficult to prioritize service-learning (Thomsen, 2006, p. 1). Balancing standardized and experiential education is difficult for all teachers who want to try service learning because as mentioned previously, student growth is not necessarily academic. Additionally, teachers struggle in deciding whether or not to allow low-achieving students to participate and miss out on standards-based content in the classroom (Billig & Eyeler, 2003, pp. 61-63).

Another important distinction to make is that volunteering always has the potential to be harmful for students, families, and communities for a variety of reasons. Before implementing a service-project, it is important to be aware of these different dilemmas and pitfalls, so that teachers can avoid harmful actions and support both their students and their community partners simultaneously.

One of the most substantial issues that teachers often face with service learning projects is overwhelming themselves with ambitious projects, and not following the proper service-learning steps. In his interview, Principal Ryan Huppert voiced the

concern that many inexperienced teachers choose huge, expansive projects, when they should really be focused with local issues first (R. Huppert, personal communication, June 1, 2018). This worry was echoed in Professor Holohan's interview, and he also discussed the danger of limiting student voice for the sake of maintaining long-standing relationships with community partners. Both service-learning experts expressed concern in limited the ownership of students, because limiting students in this way lowers motivation, participation, and it makes for a weaker service connection and less impactful reflections (K. Holohan, personal communication, April 23, 2018). Student voice should be considered whenever possible, to increase retention in programs and to allow students the opportunity to have discussions, practice compromising, make observations, and do preliminary research. The investigation stage of a service project is invaluable to students, who will have opportunities to design surveys, conduct interviews, and create a "social analysis" for the community and discover authentic community needs (Kaye, 2010, P. 16).

Even if a facilitator follows all of the stages of service learning, there is still the opportunity for some harm to occur for the students and community members. Some examples of issues with service projects in the community are that students and the community could have conflicting interests and values, stereotypes can be reinforced, and the service-learning can promote a charity model, rather than one built on reciprocity, justice, or empathy (Billig & Eyeler, 2003, p. 15). Without a properly guided

reflection and an emphasis on empathy and cultural humility, it is very easy for a white savior complex or an “othering” mentality to be established in young students. Adam Davis writes about the potential harm in volunteering in his article, *What We Don't Talk About When We Don't Talk About Service*. Davis highlights the issue of inequality, and how service can accidentally reinforce that narrative instead of act as an empowering and equalizing force. He writes about the complexes the server sometimes takes on: “I serve you because I want to. You received my service because you have to” (2006, p. 5). This imbalance of power is a dangerous dynamic that must be explained and authentically prevented in students. Education surrounding diversity and intercultural competence is necessary in this work, and conversations surrounding power, privilege, and oppression must be commonplace, even early on.

One of the dilemmas with service-learning projects explained in *Deconstructing Service-Learning* is reconciling the needs of the server and needs of the served. This addresses that both the service site and the teacher will have a set of expectations for the service project, both to meet an authentic community need, but also to have students gain valuable knowledge and skills. Tensions will often result if the goals of the teachers and the service site are not closely aligned. This can manifest in issues selecting service sites, problems meeting all the needs at the service sites, and maintaining good relationships with the sites (Billig, & Eyeler, 2003, pp. 55-59).

The last common dilemma experienced with service learning described by Billig and Eyeler is balancing teacher control and student independence. Student choice and voice have already been mentioned as essential for an effective service-learning project, but even when students are allowed to make choices about their projects, harm can be done. The most common issues with the objective of student ownership are student attitudes and motivations to service, independence and trust, and addressing the level of difficulty in projects (2003, pp. 65-67). It is important to educators to make choices based on content standards that students might not take interest in. Additionally, it can be awkward and demeaning to forcibly change a student project if they choose an initiative that is outside of their skillset or developmental readiness.

Service-Learning is an engaging pedagogy that many scholars, administrators, and classroom teachers have already adopted. There is copious amounts of qualitative data and anecdotes in favor of this strategy in the classroom. At its core, community engagement, student voice, and real-world application should be present in any service-learning endeavor. From the summation of data, the opinion of scholars, and observation and interviews with CFE, it is apparent that service-learning should be handled delicately as to avoid harm for students and community partners. Quantitative data on statewide assessment improvement and grade point averages must be attained to provide a better framework for educators. Additionally, community members

(including local organizations, parents, and students) must always be considered as crucial stakeholders before they become champions of this educational practice.

Center for Economicology, Groundswell, and Alternative Breaks Context

For this research project, I partnered with the Center for Economicology within Grand Rapids Public School (GRPS) district, Groundswell, a place-based environmental education program housed in the College of Education at Grand Valley State University (GVSU) in Grand Rapids, Michigan, and I utilized resources from GVSU Alternative Breaks (GVAB), a Grand Valley State University service and advocacy student organization. In the context of my service-learning research, their missions, histories, and demographics are important to note to convey their commitment to service learning and education. The partnerships with these organizations was at the core of my research and experiences with students.

Center for Economicology (CFE)

The Center for Economicology is a sixth grade theme school connected to City Middle School within GRPS that offers “an integrated curriculum that encourages social responsibility, environmental stewardship, and academic excellence” (Grand Rapids Public Schools, 2018). Economicology is a term coined by Peter Wege, an environmentalist, philanthropist, and the founder of CFE, and can be described as “reasoned, respectful, engaged stewardship of the Earth” (Grand Rapids Public Schools, 2018). The 6 tenets of Economicology are: ecology, economics, empathy, environment, ethics, and education. In *Economicology 2* by Peter Wege, he shares he stresses the need for education, and compiles the ideas of several leading environmentalists to reinforce the idea that collectively, society ought to “do all the good we can for as many people as we can for as long as we can” (Wege, 2010, p. 15) CFE

boasts project-based learning and several service learning experiences, which focus on camping, field studies, recycled art, green homes, shelter building and survival, water studies, wind farms, renewable energy, and youth engagement (Grand Rapids Public Schools, 2018).

CFE is ranked as in the top 5% of all Michigan Schools on combined measures of student achievement and growth over time. *Parent and Child Magazine* also ranks it in the top “Coolest Schools in America” (Grand Rapids Public Schools, 2018). Another notable statistic within CFE and GRPS in general is the amount of racial diversity in the students. GRPS schools have the following breakdown of Ethnicities represented in 2017-2018 (Michigan Department of Education, 2018):

- .34% (55) American Indian
- 1.37% (224) Asian/Pacific
- 32.12% (5259) African American
- 36.94% (6048) Hispanic
- 22.32% (3654) White
- 6.93% (1134) Multiracial

With enrollment at 16374 this past year, 77.68% of students were labeled minority status. This was reflective of the diversity in the roughly 60 students attending CFE this past year. This is significant when considering student engagement in the community. The diversity within the school and program mirrored the surrounding community of West Grand Rapids.

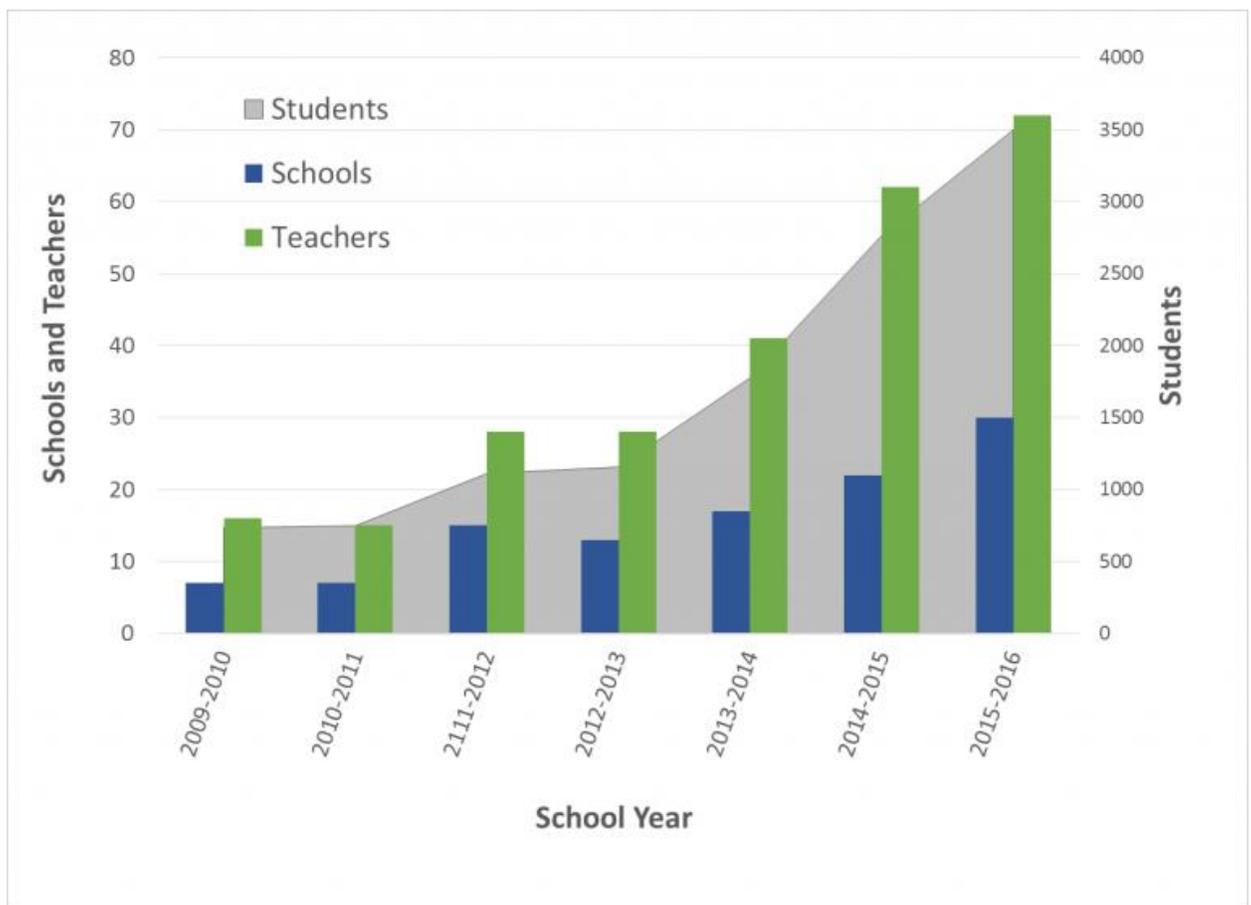
The staff members that I worked closely with were Mr. Michael Boosamra, a Spanish, Geography, and Science certified teacher, Mrs. Heather Phillips, an English and Social Studies certified teacher, and Mr. Ryan Huppert, the principal of City Middle School, and the lead administrator overseeing the service-learning curriculum. I was also able to work with all 60 sixth-grade students in CFE in several capacities. I observed their normal class twice, chaperoned and assisted in facilitating a service-learning project, taught a service-learning lesson, and presented on ways to sustain community involvement into college during their sustainable career presentation week. I was also able to do several interviews. I interviewed Mr. Boosamra, Mr. Huppert, and Mr. Kevin Holohan, a full-time professor in the College of Education at Grand Valley State University. These interviews were able to present three different perspectives on service-learning in the classroom: a theoretical perspective, an administrative perspective, and a daily operation perspective. Unfortunately, I was unable to collect quantitative research from students about their experiences, due to privacy reasons. My observations of their experiences serve as my qualitative data. *All observations and interviews are included in the appendix for reference.*

Groundswell

Groundswell was an educational program that I also used in my research of service-learning in the classroom. This program supports K-12 educators who wish to engage in place-based and service-learning environmental work. The focus of this work is based around environmental stewardship in the Grand River and Great Lakes watershed. They “provide free teacher training, project funding, connections with community partners, and additional support depending on the school’s individual needs

and interests” (Groundswell, 2017). Groundswell is housed within GVSU, and partners with a coalition of community organizations.

Groundswell is one of the nine local networks (hubs) of the Great Lakes Stewardship Initiative (GLSI) in Michigan. It originally was called the “Kent County Grand River Watershed Hub” and was launched with seven schools in 2009. The program was rebranded in 2010 and expanded greatly. To illustrate Groundswell’s expansion and popularity, view this graph, published on their website (Groundswell, 2017):



GVSU Alternative Breaks

GVAB is a service and advocacy organization that originally sparked my interest in service learning pedagogy. This program is a registered student organization which grew out of the parent organization, Breakaway. GVAB “promotes active citizenship within the student body through community-based service-learning projects that focus on social and environmental topics” (Grand Valley Alternative Breaks, 2018). Week-long service-learning trips are the logistical focus of the organization, and encourage college students to educate themselves about social issues, identity, and social structures, complete direct service projects within the topic, and reflect on how the education and service intersect.

I used my experiences with Alternative Breaks as a connection between the work students do at CFE and potential sustainability of community involvement. CFE focuses on college and career readiness, and during their sustainable career week, I presented to the 60 sixth grade students about GVAB and the importance of social justice and civic engagement post high school. We discussed the importance of service-learning, some of their passions within the realm of service and social justice, and researched as a group different involvement opportunities at universities across Michigan and the United States.

Acid Rain and Carbon Footprint Service Learning Lesson Plan

Explanation of Lesson: *While working with Mr. Boosamra, we decided that I should attempt creating and teaching a lesson that would fit in with their classroom content. We collaboratively decided that I should focus on their current Geography unit, specifically with European and Russian Transboundary pollution. I created this lesson with the intention of focusing on the first stages of service learning projects, and identifying student voice. While no service project takes place within the timeframe of this lesson, the brainstorming and ultimate poster making of the students serves as indirect service (advocacy), or the beginning of a great class project with the goal of reducing carbon emissions. After teaching this lesson, I reflected on what went well, and what could have gone better.*

Your Name(s): Amber Gerrits

Class: Center for Economicology, City High, 6th grade

Length of lesson: 1 hour

Title of Lesson: How can we reduce our carbon footprints, especially related to pollution?

Subject(s): *Geography, ELA, Science*

Overview:

This lesson will begin with a focus on Chemical disasters In Europe and Russia such as Chernobyl, and will connect these disasters and individual actions to air pollution, specifically acid rain. Students will then learn about nonprofits combating this issue, and learn more about their own carbon footprints. The lesson will culminate in a brainstorm of ways that students can decrease their carbon footprints and contributions to air pollution at home in Grand Rapids. This lesson will have a service learning component, and will potentially serve as the first step in creating a service learning project. It will also connect to the service trip scheduled for the next week at GVSU, where students will be doing data collection on the DJ Angus and noticing PH levels present in Lake Michigan.

Standards:

CCSS.ELA-Literacy.RI.6.1

Cite textual evidence to support analysis of what the text says explicitly as well as inferences drawn from the text.

MS ESS 3

Apply scientific principles to design a method for monitoring and minimizing a human impact on the environment.*

Objectives:

- The Student will gather information about chemical disasters and their acid rain, and articulate these in class discussion by filling out the KWL chart.
- The Student will use “The Battle for Clean Air” resource and the Carbon Footprint quiz, and brainstorm ways in which we can reduce our own carbon footprints and reduce pollution.

Anticipated student conceptions or challenges to understanding:

While students have already read about this chapter, I think they will struggle with connecting the ideas from Chernobyl to individual actions, and I think we will have to have a conversation about that. I also think that without the actual results from the Carbon Footprint quiz would facilitate their brainstorming, but the site does not give us these direct results.

Accommodations:

Students who have challenges reading the information about acid rain and comprehending will be permitted to read with a partner and fill out their graphic organizer with a partner. I also could read the articles aloud to those students, or allow some students to read less about the topic than others, and simply engage in conversation and discussion later. If students need more time in general to read the documents or take the quizzes, I will provide this information to Mr. Boosamra and can email the students as well.

Materials/Evidence/Sources:

- Chromebooks
- Projector/Computer
- <https://www.youtube.com/watch?v=ojSlrED1xEk&t=65s> (YouTube Video)
- Hart, D., & Teachers' Curriculum Institute. (2011). *Geography alive!: Regions and people*. Palo Alto, California: Teachers' Curriculum Institute.
- Map of Europe & Russia/Stick
- 30 KWL Graphic Organizer Sheets
- Pencils/Pens
- <https://ypte.org.uk/factsheets/acid-rain/what-is-acid-rain#section>, (Acid Rain Nonfiction Text & Fact Sheet)
- <https://friendsoftheearth.uk/clean-air> (British Resource & Video)
- <https://www.earthday.org/take-action/footprint-calculator/> (Carbon Footprint Quiz)

Assessment:

This lesson will only have formative assessment implemented. I will be observing the conversations between students, as well as checking their KWL sheets for filled out columns (at least three facts on each sheets).

Instructional Sequence:

- **(3 Minutes)** Teacher will introduce unit and learning objectives. Then she will play the YouTube hook video: Chernobyl “Hook” video:
<https://www.youtube.com/watch?v=ojSlrED1xEk&t=65s> (0:00-0:52)
- **(8 minutes)** Rereading of text from Chapter 16 (Global Connections, pg. 248), and review of Ukraine’s Geography and Chernobyl on the map to review

concepts (using ruler to review Ukraine and surrounding area). Discuss how far radiation could permeate with wind and ocean currents.

- **(15 Minutes)** General discussion of the spread of pollution and acid rain: Read more about Acid Rain <https://ypte.org.uk/factsheets/acid-rain/what-is-acid-rain#section>, the effects of the rain and what we can do to help. Have students discuss these readings, and do a KWL chart (Gradual Release Model-I do, We do, You Do by reading a segment and demonstrating writing a fact), then share in their small groups and to the class.
- **(5 minutes)** Review what nonprofits in Europe are already doing: <https://friendsoftheearth.uk/clean-air>, play “The Battle for Clean Air” video and discuss in groups.
- **(15 Minutes)** Students take carbon footprint quiz: <https://www.earthday.org/take-action/footprint-calculator/>. They must log in with an email address, and can use mine: amber.gerrits2057@gmail.com if they need one. If they get done early, they are welcome to read more about the quiz and carbon footprints if they scroll down the page.
- **(10 minutes)** Students should brainstorm ways that they can reduce their carbon footprints, and take action against air pollution. They will write these ideas on the back of their sheets and discuss in their small groups.
- **(5 Minutes)** Wrap up and connection-making Relate the lesson to PH balances they will be collecting on the ship, and connect how acid rain affects the water sources.

Handouts:

Topic: _____ Source: _____

Know	Wonder	Learned

Reflection of Lesson:

Successes:

This lesson went more smoothly than I thought it would go. Students were engaged the entire time, even when problems arose. Although at first, the video on Chernobyl would not load due to GRPS restrictions, the cooperating teacher (CT), Mr. Boosamra, and I found an alternative video that really drew students in and interested them! This was great practice in being flexible with students. Switching between the projector and the ELMO document camera also proved to be a bit tricky, but we were able to successfully utilize the technology when we needed it!

I specifically thought that students were interested in their carbon footprint quiz- some students even found more information that the quiz presented. I was really impressed that they were so engaged and invested in it! Before doing this quiz, I

observed that they all were able to find the acid rain articles, and they were filling out the graphic organizers really well! I think that my gradual release modeling really benefited students that needed that layer of comprehension.

Finally, I was impressed with the great ideas that students came up with. They weren't extraordinary deep or far reaching (which actually makes them more implementable than if they were grandiose and impossible), and students got really creative! I was excited to hear that the CT was interested in hanging these posters in the hallway as a reminder of their work. At the end of the lesson, these posters and acidity of water in general tied in nicely with the class's upcoming service project with the GVSU's DJ Angus steam ship. It was beneficial to collaborate and co-teach with Mr. Boosamra in order to make that tie to service even more explicit!

Areas of Improvement:

There are several improvements that I would make to this lesson. While the lesson was tied into the geography unit on transboundary pollution, I wish that I could have done more of a review on that material. I was not as familiar as I wanted to be with the actual geography of Europe and Russia, and it would have been interesting and impactful to study exactly how air currents move pollution across boundaries. This could have even been tied into other science standards, such as convection, air currents, and water systems.

Additionally, I think that I was a little too ambitious with the amount of activities I gave to the students. While I think it is positive that there were so many videos and other engagement pieces, students could have spent more time on their acid rain

graphic organizer, and we could have engaged them a lot more with the carbon footprint quiz. For example, one of the students found out that that tool offered more of a complete analysis for us to look at, as far as a breakdown by category. Mr. Boosamra mentioned that in the future, we could print a pie chart for students, and allow them to reflect more deeply about their carbon footprints, and breakdown what everything means. I think they could have had more guidance with that.

Although I mentioned that the posters were exciting, I wish that I would have scaffolded this step of the lesson more. While I considered this the second step of the service learning model: preparation and planning, I did not model well enough for the students what the poster should/could look like, and so I believe we got more superficial ideas. Again, this could be due to the lack of time with the material. There should have been more emphasis and time dedicated to the first step in a service-learning project, which is investigation. I think if we even had them research their own information about carbon footprints, this could have been beneficial in guiding their posters and ideas.

Interviews

Professor Holohan: Theoretical Perspectives on Service Learning

Holohan Interview

4/23/2018

12:00pm

What are your experiences with service-learning?

When a high school teacher, he didn't do much of anything like this-wasn't on radar at that point in time. Got exposed to activism in college-graduate school started to study another school in Chicago and saw a concerted effort to get students out into the community, using schools to help them to identify and address issues in the community-graceful dance between what's going on in school and the community-school did a really masterful job to help kids see connections to connect what they see in their everyday lives and what they are studying. This was what first spoke to him.

Worked at a soup kitchen in his Christian school-seemed not as authentic-could have been more reflection, more substance. In the school he worked with, it was more significant and the kids knew what they were doing

Ex: Food desert was identified by the students in the neighborhood. They mapped it, saw what was available-brainstormed ideas about how to address this-connection between food desert and high levels of obesity and diabetes-decided to create a community garden and year round farmers market-after receiving a grant to build a rooftop greenhouse. This became part of the required curriculum in urban agriculture-learned about food production, soil, distribution, ect.

Ex: sex trafficking, police brutality, HIV/AIDs awareness, racial profiling, understanding of how colonialism works, and how things inside of the community is driven by folks outside the community-affordable housing-this was in 9th through 12th. This was in Chicago. All primarily youth of color, low income, high school 'dropouts' alternate school. This level of engagement was high for all the obstacles.

How do you think service learning prepares students to be citizens in our pluralist society?

At a basic level, you have to learn how to work with others-even if it goes smoothly, you have to be able to listen, compromise- at the more intense end of the spectrum, there could be severe disagreements about what can be done-compromise it needed. It requires that you consider a problem from multiple perspectives-engaged citizens. When you engage in a SL project, you can see that you can make a difference in your community-a huge piece of citizenship that people don't see-they feel defeated and overwhelmed because they feel like they can't.

How do you think service learning around social topics can be implemented without being too "political?"

One sure way to provide it is to identify student voice-it becomes harder for people to take issue-if teachers don't suggest it then it is harder to complain about. Tells his students that their best defense against complaints for controversy is to be well articulated and have a good rationale for why this will help students develop skills.

How do you think traditional schools can best implement service learning?

One ambitious teacher to start and take the initiative. It becomes compelling and others want to do it. Tells his students that the biggest obstacle that they'll face are colleagues. People will be resistant and resentful. Be prepared for that. Ideally it is a school wide-initiative and not just within one classroom. It is nice if there is a partner to work with and bounce ideas off of.

What are the biggest challenges with PBE/SL?

It is difficult to find opportunities that are relevant/engaging for students. There is also the danger when the teacher develops the learning and teaching activity that there isn't student voice represented. It is difficult to find ways to incorporate student voice/choice into the curriculum. Most educators are less accustomed to working with this type of project. Another issue that we run into is that the work is not always sustainable-not just environmentally, but in terms of being revisited year after year. For example, if students decide they want to work at a soup kitchen. They could have that experience and then never experience it again. It is important to sustain the relationship, otherwise it has the potential to be an exploitative relationship.

For example, at the museum school, they have created a list of community partners and they want these to be ongoing relationships. This problem is often at odds with student voice-we want them to decide, but we also need to sustain community partnerships. A possible solution to this is that the teacher could offer a set of options to students every year to sustain those relationships, but still allow for student voice. .

How do you think we can avoid cultivating a “White Savior Complex” when working with young students?

That is the reason he embraces the place-based approach, because you are not going into another place to help them. It is not bad to help other people. “The missionary position”- see what other people need. If you want to help another community-first step would be to ask them what they need/want help with. Then figure out how you can help to provide that. You respond to what they are telling you and not inferring.

What is the applicability of Service-learning pedagogy across disciplines in your opinion?

These types of projects have the capacity to show how subjects are related to each other. It can introduce an interdisciplinary approach for students. Patterns class-math and science, and Meanings- English and social studies. Place-based design-blurs the distinct boundaries between disciplines.

Cathryn Berger Kaye denotes the 7 service learning standards for quality practice are meaningful service, link to curriculum, reflection, diversity, youth voice, partnership, progress monitoring. Would you add anything to that list?

That captures a lot of it. Sustained partnerships. Frequently checking in with the community that you are serving-frequent check-ins are important.

Is there anything that you would like to add about the benefits or challenges of service learning in the classroom?

The more the better-the way the future in education-helping kids to use the knowledge in school to solve real world problems-careers and colleges will be looking for this skill set.

How does this all fit in with Critical Pedagogy?

This approach can fit in with different pedagogies-can be political (in his observations) That was a particular community-approach in a much more critical way-in a conservative area it might be a lot harder to do things construed as left-leaning. All for inviting people into the conversation as opposed to being overly aggressive because that stops people from listening to what you have to say. Toning down the redirect to help people engage. It doesn't mean we have to compromise beliefs and values- just communicate them in a way that is less off-putting.

Ryan Huppert: Administrative Perspectives on Service Learning

Huppert Interview

6/13/2018

10:37pm

What is your experience with service learning and place based education?

At City, I have been the assistant principal for 6 years, and I became the head principal last year. Overall, I have been an administrator for 11 years in schools that foster service learning. I started in CA Frost Environmental Science Academy, which was adjacent to Blandford Nature Center School, which is a separate non-profit. This school provided a ton of service learning experiences-everything from collecting sap to trail guiding. Before the popularity of place-based education and service-learning existed, these places were already doing it. I was also the principal at the zoo school, where we were able to make authentic relationships with an environmental focus. I have also been in many partnerships with Groundswell. At City Middle school, we have done so many different service project, including native plantings at riverside park, and so many other projects. At CA Frost our school created a greenhouse and sold the produce to local restaurants at a decreased price. This was good for the community and the students. We have also partaken in the Green Apple Day of Service through the green schools initiative.

What are you so passionate and interested in service learning initiatives like these?

I have always had a focus on environmental education and science education. I worked with ideas from David Sorbel and really got to authentically and academically study service-learning. I found that doing service in the classroom was a great way to connect to both your natural and social communities. Those communities are your place, which works directly with place-based education. This pedagogy is all about making learning authentic and engaging in the place you are in, and it is a great way to tie in environmental education.

What do you think is your role as an administrator and advocate for service learning?

On a basic level it is making sure that everyone is aware of the benefits and is able to accomplish their programs and to give them some guiding through the process-the reflection, the planning, the implementation, ect. Additionally, this school is part of the International Baccalaureate program (IB) for grades 7-12. This curriculum has service built in through the framework that lays out steps for planning, implementing, reflecting, and doing all the parts necessary to a service-learning project. The acronym is CAS, which stands for creative, active and service, all for which there are hourly requirements per year. Students have to divide their time in the community equally between the 3 categories. Everyone has to have those hours to graduate and to even continue through City's program.

What do you think are the potential benefits of a curriculum focused around service learning like in the Center for Economicology?

We tend to overthink service projects when we first begin them. However, there are a lot of needs that need to be met in our school only- both environmental and social problems. These local problems are still authentic problems, and they could be as simple as even keeping the school clean. It is important to have students look out the window and ask them if they see any problems they would like to solve. You don't need a PhD or higher degree in service learning to do this stuff (although more people should be researching and learning about this to add to its credibility) but we just need people to be excited about engaging in their community and involving students in that process.

What are some of the common potential harms/challenges you notice with these projects in your school?

People bite off more than they can chew, typically. Additionally, projects could fall into the teacher picking the topic for them, and thereby making students feel like they have less of a voice. It is difficult to come to a compromise on a project between student opinions, and sometimes the teacher struggles in mediating those discussions. Another issue is that sometimes teachers don't follow the process and they fail to reflect and thus students get less out of the project. A huge issue that teachers are constantly facing is that student voice isn't always represented enough. Students should always be given choice within the community partnership, even if the class is obliged to work with that particular community partner.

How do you think service learning around social topics can be implemented without being too “political?”

Any project is always going to be political in dealing with people. Otherwise, you can easily avoid politics as far as policy. An easy way to do that is to start close to home. But it is true that you will always deal with politics with people. An example of this is if you want to do a composting project, it might be difficult to work with the lunch lady who doesn't want to take extra time to do this, while you just want to get it done. But like I said, to avoid policy issues, start even closer to home-start within the school-start smaller, start simpler, focus on things you know you can control. The project could be within your own classroom that benefits your own small community-too often nothing can happen because there are these huge projects, when really teachers should start with their own school grounds and our own families-start small and close to home, and branch outwards from there.

How do you think we can avoid cultivating a “White Savior Complex” when working with young students?

That's a complicated question because it presumes that a specific group of students are the only ones who are doing the work, but a possible solution is that any time that you can get students helping their own communities, do so. For example, white students could engage by helping nearby rural white farmers. If there is a diverse group like at this school, that group could engage with their own diverse neighborhood. This way you can avoid tensions that come up with race, politics, and other issues. If students are

helping their own community, it is easier to explain and work through intentions of that service.

How do you think service learning and engagement in the community prepares students to be active citizens?

It is a key component in being an engaged citizen. If your profession, such as teaching, provides no service, then why does the profession exist? Service-Learning gives students a taste of serving their community. They will know if this is something they will continue doing into their adult lives. The service learning projects will also give students a sense of different available careers which is really important for kids in school.

Would you like to see this program grow and change? If so, how?

I hope it will become more of a formal education for teachers in this building. We have had PD for authentic projects in the past, but with teacher turnover, it is harder to formalize it into the curriculum. So I would say it is important to make sure there is an integrated process for these projects, and they are integrated into the curriculum with support for them.

If you could give advice to another school about starting a service-learning curriculum, what would you tell them?

Start close to home, start small-celebrate success frequently and loudly.

Is there anything else you would like to add?

If students are not finding what they are studying to be relevant, they will engage less.

Service Learning is a great way to authentically engage students and give back to your community at the same.

Boosamra Interview

6/1/2018

2:54pm

What do you think about the service project today at Aberdeen Elementary, where the students helped out with field day?

It was important to let students choose their own stations and by doing that, giving them a voice. This project wasn't entirely student derived, but they are still responsible for the project, and the students are definitely looking forward to reflection.

When we did this same project earlier in the week, it really helped students know what it's like to serve other people and to dedicate real time to service, which is new for many of them at this age. It is true that other reflection topics could focus on why parents and other members of the community can't be there for these students' field day. Something I emphasized in my classroom was simply that they made the students' days better.

What is your experience with service learning and place based education?

I started 10 years ago when this program-The Center for Economicology (CEF) got started. That's when I really started diving deeper into place based. The first thing I had to do was read CEG Wege foundation book, and that definitely got me going on these topics and ideas. From there I had to build curriculum for this classroom, and spent whole summer building a curriculum with those ideals in mind. I had to keep making sure he was incorporating those ideas. That was the bulk of my job during the first year. That wasn't my first year teaching, though. Before that I was in a dual immersion

science program, and I was always passionate about getting kids outside, even though I didn't really have the support at the time like I do with CEF.

I learned early on that you have to have strong support to be able to do this work and be able to have a lot of freedom, which is tough to find in the public schools currently.

What do you think is your role as service learning educator? What is your process with implementing these projects?

My role is to try to guide students towards service becoming a normal part of their lives. That involves making it routine and building a passion for it within students. The other huge piece is coming up with all the lessons that will cater to service learning. A huge part of that is to look at standards and grade level and thinking, how do I make standards fit into realistic and helpful service projects?

What do you think are the potential benefits of a curriculum focused around service learning like in the Center for Economicology?

It should be two-fold two fold-benefitting the student because they are developing passion and sense of belonging in the community-second is the outreach, the community should also benefit through the aid of the students.

What are some of the common potential harms/challenges you notice with these projects in your classroom?

Students at City Middle are required to do 15 hours of service during the year, and the biggest kickback is that they are too young. How can they be in the community and be

safe? Parents have fear that students will be exposed to a dangerous part of town to help out the community.

Parents a lot of time also do not have transportation. They struggle with the question: “how do they get students where they need to be YMCA or green space when they don’t have vehicles?”

How do you think service learning around social topics can be implemented without being too “political?”

I think the goal is that students should be able to follow through on service projects that support their own political stance. There should be freedom there for kids to choose what supports their own values. This all goes back to letting students have say in their projects and giving them voice.

How do you think we can avoid cultivating a “White Savior Complex” when working with young students?

Well CFE IS in an inner city school, so due to the diversity in this classroom, this question is not super relevant. To answer, I would say that promoting service learning in urban settings breaks that issue and stereotype. So I think providing more PD on service learning for diverse populations could potentially be the answer to that.

How do you think service learning and engagement in the community prepares students to be active citizens?

I think a big part of it is college readiness-pushing students to be active in their community builds a strong resume and prepares them for what is next. This is why CAS hours increase to 90 hours over the course of high school their relationships in the community should already be built by this point. This is really good for their college applications.

Would you like to see this program grow and change? If so, how?

Change always is good, and we are always adapting to new ideas and technology. I think curriculum should always be changed to keep up with society around us. As far as growing though, this program should not be more than 2 teachers and 60 students just because of energy in trips and outings. It would be harder to reach a larger group of students and make it as effective. So I think what we have is a good setup currently. In other buildings and programs, absolutely a program like this should be developed. Service learning can be grown in multiple buildings and in multiple settings. Student to Teacher ratios should be kept in check, though.

If you could give advice to another teacher about starting a service-learning curriculum, what would you tell them?

It is always easier to start with something you are already doing. You are probably already doing something that is service learning and you don't realize it. Don't feel like you necessarily have to start something new.

Is there anything else you would like to add?

After being a teacher on both sides of the fence, it is so rewarding when you complete service projects and placed based-it gives teachers more of a sense of purpose. It makes you want to get up every morning. You feel like you are involved in something bigger.

Observations

Center for Economicology, Mr. Boosamra's classroom February 2nd, 2018,

9:30am

I scheduled my observation with Mr. Boosamra for 9:30am on this Friday in early February. Preceding this observation, we spoke on the phone and discussed the program. We discussed the focus of the program on sustainability, as well as the different types of service projects that the class engages with. He mentioned the salmon in the classroom project, purple loosestrife removal, GV's research research vessel, and Sweet Tree Park Clean-Up.

After arriving at City Middle School, I was escorted to Mr. Boosamra's room by a student helper. After walking in the hallway designated to Economicology I noticed that there were 2 classroom, Mr. Boosamra's and Mrs. Phillips. We entered a room with a very large salmon tank to the left that was full of small salmon. The classroom was full of student projects, sustainability charts and reminders, Spanish words and phrases, and different types of animals. The classroom appeared to be an open and collaborative space where student work was valued and displayed.

The task at hand during my observation period was for students to observe the salmon's growth and record it. They also were studying the lifestyle of a salmon and creating life cycles about salmon while groups rotated from the tanks. While at the tanks, the 5 different groups also were able to feed the salmon an appropriate amount, taking into account all of the groups that would be feeding them. I spent time with several groups of students, and together we discussed how overfeeding is the leading cause of death in several fish species (bacteria can grow at the bottom of the tank, ect.). After this rotation and completion of the life cycle project, the students all pulled out their

individual laptops and completed an online activity about the layers of the earth. Mr. Boosamra explained that these chromebooks were only given to science teachers who underwent a specific training.

Other projects that I observed in the room were soil studies, biodiversity plots, and other projects pertaining to the natural environment and sustainability. All the students were extremely friendly to me as I rotated and observed the classroom. However, toward the end of class, one student approached me and asked if I spoke Spanish in Spanish. When I responded no, she was very clearly disappointed. When observing the class, I particularly noted the huge amount of diversity and the participation rate among the students. The classroom environment was extremely relaxed, but also engaging and exciting because of the amount of exploration and curiosity.

After my observation, I spoke to Mr. Boosamra about future projects with ties in service learning such as a sustainable home design project and a park clean-up. We briefly discussed the Groundswell project and their support with service learning in the classroom, and then wrapped up by talking about future potential observations.

Center for Economicology, Mr. Boosamra's classroom March 6th, 2018, 12:30pm

My second observation in Mr. Boosamra's classroom took place on 3//6 at 12:30 pm. I arrived after lunch. When the students came back into the room, they began by working on a math fact that they could solve for points, Next Mr. Boosamra went over the schedule for the afternoon, which included the career week with a focus on sustainability. It was explained that the speaker would be discussing Latin America studies in depth. As I observed initially, I again took note of the diversity in the class. As students worked on the "warm-up" work, Mr. B went around to all of the desk clusters and checked in students' homework. After all home-work was checked in, Mr. Boosamra went over the answers for the warm-up work and helped elicit student thinking. He collected information and answers from students and celebrated student thinking. He asked several people to share, and complemented students on their hard work. The students then turned this worksheet in for science points.

Next, all of the students reviewed their geography unit, and played a game with a ruler in which they located geographical features on the map. Students were particularly engaged with this exercise. As students pointed out areas on the map, Mr. Boosamra encouraged students by using phrases like, "I understand the nonverbal cues that you're giving me." It was also very intentional that the only speaker was the holder of the ruler, which helped keep behavior under control. Boosamra's classroom management style really encompassed logic and he reminded students how difficult it would be to present to the class, and to give each other the respect they deserved.

After finishing our geography rule game, the class engaged in round-robin reading and we reviewed climate around Europe and Russia. After about 20 minutes of

reading and discussion, we talked about the sustainable career speaker that would be presenting to class. The students asked questions and demonstrated they were very curious about the speaker. Once they had been reminded about the rules and respect they were to demonstrate to the speaker, we left as a class to go to the computer room for a Latin America presentation. This presentation was fairly interactive, and the history professor from GVSU asked a lot of open questions about history, Latin America countries like Paraguay, Brazil, and urbanization in those countries. The presentation mainly focused on the professor's experiences with traveling, and his up-close experiences with deforestation and ecology in these countries.

After this presentation, I left Mr. Boosamra's class, and we began to make plans for a service learning lesson plan that I would create. We discussed that I would focus on geography and tie in the unit of Russia with a potential service or advocacy idea.

Center for Economicology, Mrs. Phillip's classroom and Aberdeen Elementary School, June 1st, 2018 8:00am-2:30pm

The service project that I was able to observe with CFE was Mrs. Phillip's class trip to Aberdeen elementary to help out with their field day. In the morning, all the students and I gathered in the cafeteria to get organized for the trip, and remind students of rules for the trip. We checked to ensure all students had their backpacks, lunches, and sun protection, and then all 24 student, Mrs. Phillips, and I headed out to Aberdeen Elementary.

We walked about a mile to our location, and it was my job to follow the students at the back of the line, to make sure that we had everyone together and that we were crossing roads safely. Students were slightly agitated by the walk, but they still seemed excited for the experience. When we arrived at the destination, we were greeted by the gym teacher who was organizing the field day experience for all students. Students were sent to the spots that they originally signed up for. Each student was able to pick where they helped. We ran about 15 games all together, including the 50 yard dash, 4-square, and tug-of-war.

The service portion of the project was broken into 2 sections. In the morning, we all spent about 2 hours at our respective stations, and we facilitated games for students in grades K-2. The event was carnival style, and students in older grades at that school also helped by rotating to different stations with the younger students. After the first 2 hour shift, we all had a break for lunch, and then switched stations for the older students in the afternoon. It was clear that by the end of the day, most of the students from CFE were getting tired, and moral was overall down.

After our second shift, Mrs. Phillips and I were able to chat a little bit about the program and her thoughts on service learning in her classroom. She explained to me that the 6th grade students in her classroom were part of a program called “Middle Year Program” (MYP) which is similar to IB, and will prepare them for the rigor of that curriculum. This program focuses on protecting the environment, being a good citizen, and completion of CAS -creativity, action, and service hours. Each 6th grader needs 5 hours for each category, and this will increase for them until about 90 are required for high school seniors. Mrs. Phillips went on to explain other service projects that she has been able to complete through this program. One she was particularly proud of was the field trip to the waste to energy facility in ent County. This was a tour of the recycling facility, and provides students with the chance to see a landfill and how waste is actually taken care of. On this trip, they learned that this facility provides electricity for millions of homes.

As we discussed this trip, I asked Mrs. Phillips what the greatest challenges she faces when planning service learning projects have been. For her, she told me that she struggles with getting permission slips returned, and behavior problems primarily. When thinking about challenges other teachers at traditional school would face, she reported that obtaining the funding and facilities for these projects and field experiences would be challenging.

Around 1:50pm, we made sure that all of our students were with us, and we walked back. The students were the least motivated during this part of our service trip. Although I was never able to see them, the next day, Mrs. Phillips distributed reflection sheets for her students to fill out about their experiences.

Groundswell Student Showcase, May 23rd, 2018, 6:00pm

On May 23, I attended the annual Groundswell Student Showcase, where the accomplishments of 5,500 Michigan students were celebrated. Students ranged in age from elementary to high school, and they came from 37 different schools in the Grand Rapids region. Each class or group of students created a video which featured the actions they took to help protect the environment with their respective projects. We began the night in the Celebration! Cinema in Grand Rapids, watching all of the student videos and hearing from select student leaders about their projects. The following were some of the topics that the 37 different schools covered in their Groundswell initiative projects:

- Working with John Ball Zoo to build future improved otter habitats
- Coordinating a Riverside Park clean-up and building buffer-zones to minimize pollution
- Removing invasive plant species such as garlic mustard
- Brainstorming how to protect the watershed and its various rivers
- Researching and advocating how to reduce pollution
- Creating rain gardens which are helpful in cleaning the water
- Researching and preventing runoff
- Orienteering and exploring nature trails
- Cleaning nearby courtyards and other polluted grounds
- Refurbishing waste and unwanted products into instruments
- Advocating for different forms of biodiversity and plant life

- Completing stream chemistry and macroinvertebrates testing to measure water quality
- Raising Chinook salmon and releasing them
- Exploring and studying the GRAM water cycle exhibit and Mark Newman's recycled art pieces
- Creating an LEED inspired playhouse
- Preventing invasive species
- Creating school gardens and bioswells
- Restoring native gardens
- Constructing insect hotels.

After learning about all of these projects, I was able to meet the student representatives at their table displays and get to know even more about their projects. Students handed out several handouts on the dangers of invasive species, flyers about their watershed projects, and one student group from Collins Elementary even distributed milkweed seeds to help increase the monarch butterfly population.

I was also able to stop by the Forest Hills Eastern Middle School table, where the teacher from the project was presenting her work. We discussed her multi-faceted project that included engagement in native garden restoration, culinary experiences with garlic mustard, a watershed exhibition, and general environmental stewardship efforts by exposing students to nature early on.

This student showcase was extremely impactful to me, as it was clear that there are so many options for young students to get involved with. It also proved that all

students, from diverse communities to elementary schools, to montessories can accomplish incredible projects that help make a difference in our surrounding watershed.

Sustaining Involvement: Sustainable Career Week Presentation

In order to connect the work done with these students in service-learning projects, I presented to them about Alternative Breaks. This interactive presentation engaged students in thinking about life beyond middle and high school. As a group, we discussed the program, their passions concerning social issues, and thought about ways to continue civic engagement. (See appendix for presentation)

https://docs.google.com/presentation/d/1aaGgAMr-EFyRI3FJR8HNI4rm-Z6PkdErKP8e63Pga58/edit#slide=id.g2a774fe12b_1_28

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