

**Education for Sustainable Development Competencies  
in a Community-Engaged Art Workshop**

by Amy Schmierbach

A dissertation submitted in partial fulfillment  
of the requirements for the degree of  
Doctor of Education

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EDUCATION FOR SUSTAINABLE DEVELOPMENT COMPETENCIES IN A  
COMMUNITY-ENGAGED ART WORKSHOP

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Doctor of Education

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## **Abstract**

In this case study, I aimed to help solve community sustainability problems through a university-led, community-engaged art workshop called First Responder Art Collaboration Training (FACT) that led students and first responders in learning and transformation through education, dialogue, and weaving. I used a framework of cultural-historical activity theory (CHAT) to examine expansive learning in communities and how this knowledge is interconnected to cultural and historical frameworks such as education for sustainable development (ESD). I found an intersection between the CHAT points of consumption, exchange, and community and the EDS strategic, future, value, interpersonal, and intrapersonal competencies. I recommend incorporating an experiential and expansive learning model into every discipline and further studies to show how the FACT workshop impacts different types of communities.

## **Acknowledgments**

The past three years of my studies at the University of Wisconsin–Stevens Point have been transformative. It has rejuvenated my teaching and research in ways I did not think possible. I am thankful for the dedicated instructors in this program who presented me with new outlooks and pathways to move forward to guide change in my community. I especially want to thank my committee chair, Dr. Henry St. Maurice, for his unwavering support and valuable knowledge as he supported my research and dissertation. I am also grateful to my other committee members, Dr. Angela LaPorte and Dr. David Barry, for their support and inspiring research that helped me find my path.

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This research would not have been completed without my dedicated and caring community engaged art students at Fort Hays State University. My students believed in me and this research more than I could have ever imagined. You are the reason I wholeheartedly believe we will have a better future. This research would not have been possible without you.

## **Dedication**

This research is dedicated to my son, Lucas. He is why I want to make our world more inclusive and supportive of him and others with autism. Lucas has challenged me to be a better person every day. He deserves all of the love, support, and experiences of anyone else on this earth. I will continue to work to create these opportunities for the rest of my life. I also want to thank my husband for his support on the endless nights and weekends of homework and writing. Lucas and I appreciate your endless love.

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## **Chapter 1. Introduction**

Arts participation can expand empathy and cognitive growth capacity while creating a social bond and communal meaning (McCarthy et al., 2004). As an art instructor for over twenty years, I have witnessed the bonds that can be created through collaborative art experiences. These bonds are nurtured from a space of equity and inclusion. Teaching a community-engaged art course can bring these qualities into the community, allowing university students to use their art skills in real-world applications to impact society through experiential learning art practices. Making art with others allows us to help others build empathy and social bonds that can directly create the well-being of community members.

In 2016, a man with autism from my community was killed by a police officer after a minor traffic violation. The breakdown in communication between both individuals led to an unnecessary death due to fear and misunderstanding in a crisis. As a parent of an autistic child, these miscommunications and lack of awareness and knowledge about how a person with intellectual and developmental disabilities may react to stressful situations are terrifying.

In 2022, I created the First Responder Art Collaboration Training (FACT) to bring together first responders, persons with intellectual and developmental disabilities, and college students to build empathy and friendship with each other through an interactive art experience. The first part of the workshop educates first responders about the sensory and information processing of a person with an intellectual and developmental disability, which aids the safety of this vulnerable population. The second half of the workshop is a collaborative tapestry weaving experience, providing persons with intellectual and developmental disabilities with opportunities to interact with university students and first responders in full uniform to break down stereotypes and barriers to better communication.

In this case study, I examined the FACT participants' experiences through pre-and post-surveys, along with post-workshop interviews through the expansive learning lens of cultural historical activity theory (CHAT) framework. Expansive learning happens in a community of learners, each with its own rules, procedures, and organization (Engeström, 2016). Incorporating the views and importance of each FACT participant illustrated the importance of collaboration between the university and the community organizations and members to help address equity issues in our society.

### **Problem Statement**

The United Nations Sustainable Development Goals (UN-SDGs) were created in 2015 as an urgent call to action for all countries to address life-threatening and environmental issues (United Nations Department of Economic and Social Affairs, n.d.). In this study, I provide evidence of competencies developed within the following two UN SDGs:

- UN-SDG 4 Quality Education “ensure[s] inclusive and equitable quality education and promote lifelong learning opportunities for all” (paragraph 4).
- UN-SDG 16 Peace, Justice, and Strong Institutions “promote[s] peaceful and inclusive societies for sustainable development, providing access to justice for all and building effective, accountable and inclusive institutions at all levels” (paragraph 16).

People with disabilities have been associated with sub-optimal education performance toward the SDGs and increased risk of violence “as a result of stigma, discrimination and exclusion from society” (UN DESA, 2018, p. 16). Without proper training for first responders about people with IDD, more deaths will continue to occur (The Arc, 2023; Wolf-Fordham et al., 2014). Without

more education about the lack of funding for vital support services for people with IDD, this community will struggle to live a purposeful life (Interhab, 2021).

According to Harrell (2017), in 2015, 163,880 persons with disabilities experienced violence two and a half times more than persons without disabilities, and the highest rates of violence were against persons with cognitive disabilities (p. 10). This data was collected from a self-reporting survey, the National Crime Victimization Survey, by the U.S. Census Bureau for the Bureau of Justice Statistics (p. 6). Gilson et al. (2001) suggested that persons with disabilities were susceptible to violent crimes because of denigration and dehumanization, not having access to essential social services, and segregation from the mainstream community (pp. 424-425).

Petersilia (2001) listed six causes for such violence:

- unable to recognize the danger
- unable to protect themselves
- unable to obtain assistance within the criminal justice system
- misinterpret social cues
- desire for acceptance
- dependent on others for personal care (p. 672)

Tournier et al. (2023) concluded that having trustworthy and connected support staff is vital to the health and safety of the IDD community (p. 122).

At the FACT workshop, a police officer specializing in Autism training for law enforcement provided information to first responders and university students. The session covered how individuals with intellectual and developmental disabilities (IDD) may behave in the community or under stress, as well as how first responders should interact with them in such

situations. Understanding why violence and abuse happen helped create empathy for the first responders and the university students for the lived experiences of the IDD community.

### **Purpose Statement & Research Question**

In this case study, I examined participants' competencies in a community-engaged art workshop entitled First Responder, Art, Collaboration, Training (FACT) that brings together first responders, community members with intellectual and developmental disabilities, and college-level art students to build friendship and empathy through a hands-on weaving experience. I collected data in interviews that asked about participants' expectations, experiences, and reflections from the FACT workshops held on May 13<sup>th</sup>, 2024. I posed the following research question: What is the evidence of participants' Education for Sustainable Development competencies in a community-engaged art workshop? To analyze data, I used a theoretical framework of cultural historical activity theory (CHAT) and Education for Sustainable Development (ESD) competencies.

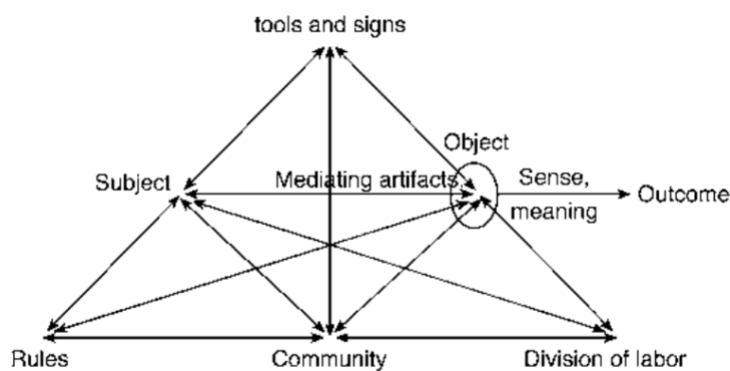
### **Theoretical Framework**

Cultural-historical activity theory (CHAT) is based on expansive learning in communities and how this knowledge is interconnected to cultural and historical frameworks (Postholm, 2019). Expansive learning is when "learning is transformed from the individual to the collective activity system" (Engeström, 2016, p. 25). Utilizing expansive learning and CHAT as the theoretical framework for my case study is important to show how and why my community-engaged art courses and projects are critical to addressing education for sustainability competencies. My case study illustrated the importance of community engagement projects for the vitality and sustainability of higher education and local communities.

Russian psychologists Vygotsky and Leont'ev developed CHAT using ideologies that emphasize people's perceptions are based on historical and social conditions (Postholm, 2019). Leont'ev defined CHAT theory in three sections: activity, what is being made, actions, how the objects are created, and the object's connection to society and history (Postholm, 2019). CHAT has been further expanded in Engeström's (2001) work. Figure 1 shows Engeström's second generation of the structure that includes five principles: artifact/object, division of labor, historical rules, contradictions, and transformations.

**Figure 1**

*Second-Generation CHAT*



*Note.* Engeström (2001).

Appendix A is a matrix of the FACT workshop based on Engeström (2001) that combines the five principles in the CHAT framework with the following four questions of expansive learning:

- Who is learning?
- Why do they learn?
- What do they learn?
- How do they learn? (p. 138)



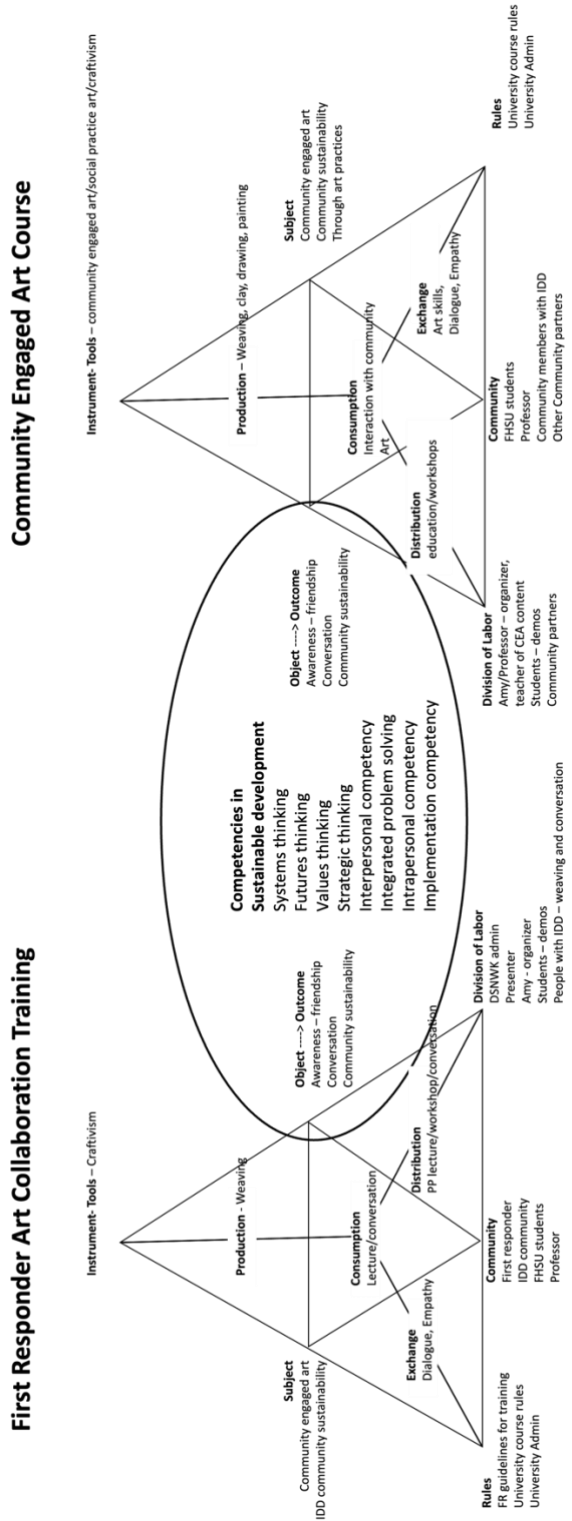
Using this matrix, I plotted the collected qualitative data from the FACT workshop to show the connectedness of the learning with the cultural and historical activities.

As a model for this case study, I adapted Engeström's CHAT diagram to illustrate how my FACT workshop and community-engaged art class align with ESD competencies as the outcomes (Figure 2).



**Figure 2**

*Model for FACT Workshop and Community-Engaged Art Class*



As a means of achieving the United Nations Sustainable Development Goals, Redman and Wiek (2021) presented the following eight key competencies in education for sustainability:

- Systems Thinking – to analyze sustainability problems and actions across social, economic, and environmental systems
- Futures Thinking – to understand how sustainability problems and actions will be addressed in the future
- Values Thinking – to understand sustainability current problems and goals
- Strategic Thinking – to understand strategies to address sustainability problems
- Interpersonal Competency – to collaborate and communicate with diverse stakeholders to address sustainability problems
- Integrated Problem Solving – to develop and implement programs to solve sustainability problems
- Intrapersonal Competency – to implement self-care while working on sustainability problems
- Implementation Competency – to implement sustainability solving problems (Redman & Wiek, 2021)

My community-engaged art courses address these sustainability competencies through readings, discussions, hands-on community projects, and reflections. University students are encouraged to imagine a world they would like to live in that correlates to their values through future thinking. They investigate barriers and solutions through group research, brainstorming, and discussions. Understanding how the arts can contribute to a sustainable world is the key to my study.

After collecting the qualitative data from the pre-, and post-surveys, along with post-interviews, I used Engeström's matrix in Figure 2 and my CHAT diagram in Figure 3 to sort the data. Afterward, I compared and contrasted the data to ESD competencies.

### **Positionality**

I do not have an intellectual disability, but I have recently been diagnosed with attention deficit hyperactivity disorder (ADHD), which is considered a developmental disorder. My 17-year-old son has autism and will need significant assistance for the rest of his life and will not be able to live alone. We have encountered many obstacles to obtaining adequate education and therapeutic services. The lack of resources and opportunities in rural areas for people with intellectual and developmental disabilities is frustrating and demoralizing. These struggles have served as motivation for advocacy and awareness of this population.

Through my research and encounters with first responders over the past two years, I have understood some of their concerns about safety in the community. Through this dialogue, I have confronted my biases and comprehended situations more clearly. Learning that most first responders are continually working to improve their skills and policies has allowed me to soften and not be defensive.

Besides being a mother, I am also an artist and educator. Since 2017, my community-engaged art class has created art with the IDD community called The Collaborative Art Project (CAP). In preparation, students learn how to communicate with someone with low verbal skills and learn about obstacles some people with IDD endure. During CAP, my students are instructed to make art with persons with IDD instead of teaching art skills. The students and I go to the IDD center and learn about the interests of the persons with IDD and create different art stations (drawing, painting, collage, weaving) where all participants can choose the type of art they want

to make. As in most university art studios, discussions about their everyday lives occur. University students quickly learn that their IDD partners have similar interests in pop culture, music, movies, and activities. Breaking down the barriers of differences leads to friendships.

One of my major outcome observations of the CAP project was when the university students worked in other studio art courses. These students learned to play and experiment in CAP and let go of perfectionism, which they brought into their own artwork. The university students gained confidence in their communication skills in and out of CAP. They grew more assured in their own work and were more supportive of their university peers. They became more active in other social causes and used art to build bridges of communication with others.

The CAP project showed me that community-engaged courses are expansive, where each participant's historical and cultural experiences cross boundaries and are integral to learning and change. My university students then showed me how this knowledge was applied to other aspects of their lives as they tackled other sustainability issues. I also witnessed changes within the community. The IDD support organization participating in CAP has since opened a store to sell creative products made by persons with IDD, creating new job opportunities for IDD and non-IDD individuals.

### **Contribution of the Study**

This case study illustrated how a community-engaged art project contributes to the learning of sustainability competencies by university students and community members. The most significant research in this area was by Heras (2022), who reviewed how thirteen published art projects connect to education for sustainability competencies. She found experiential and action-based learning were important factors in achieving self-awareness and belonging or interpersonal competency (pp. 152-154). The interpersonal communications between other students and the

community members in these art projects led to strategic and integrated thinking (p.154). My study will add to the quality of the university art curriculum in learning sustainability competencies.

### **Summary**

In this case study, I examined my FACT workshop, a product of a university community-engaged art course. The FACT workshop was designed to address sustainability issues in education and peace and justice in organizations among people with intellectual and developmental disabilities, first responders, and college art students. My use of CHAT theory as a framework to analyze the pre- and post-surveys along with post-interviews showed the interconnectedness of all stakeholders and artifacts and the importance of community-engaged art projects in addressing education for sustainability competencies.

## **Chapter 2. Literature Review**

In this project, I aimed to examine how a community-engaged art project addresses sustainability competencies. I posed the following research question: What are participants' Education for Sustainability competencies in a community-engaged art workshop? In this chapter, I review studies on sustainability, critical pedagogies of place, experiential learning, craftivism, and action research studies.

### **Sustainability**

The United Nations Sustainable Development Goals (SDGs) were developed at the Rio de Janeiro United Nations conference in 2012 (United Nations Development Programme, n.d.). The SDGs main objective was to address the critical climate and social changes happening in our world with hopeful transformations to be made by 2030. Since the first iteration of UN goals in 2000, scholars have been working to create a set of guidelines and competencies to help educators form curricula to help solve these problems.

Sterling and Orr (2001) emphasized the need for “critically reflective learning” or second-order learning to address incorporating sustainability initiatives into education systems (p. 15). First-order learning emphasizes information knowledge, which is how most of our education is based. Second-order learning instructs the students to critically reflect on the why’s and how’s of the first-order information (Sterling & Orr, 2001). Along with second-order learning by students, third-order learning in “cultural and educational systems” needs to reflect and change to reach the transformation needed to address the sustainability problems.

Bonnet (2002) stated that to teach education for sustainability, teachers need to avoid problems in nature by concentrating on teaching how students relate to their world. His theory is that if students learn how nature is a part of who they are on a metaphysical level, humans will be

able to flourish because “If we love (value) ourselves, we will love (value) that which we believe supports us” (p. 14).

Brundiers et al. (2021) developed competencies in higher education sustainability programs. They started with the following six competencies developed by Wiek et al, (2016):

- Systems thinking
- Futures thinking
- Values thinking
- Strategic thinking
- Interpersonal competency, and
- Integrated problem-solving (p. 242).

Brundiers et al. (2021) added two more competencies:

- Intrapersonal competencies
- Implementation competencies (p. 26)

They claimed that values thinking is the foundation of all other competencies.

Heras (2022) reviewed thirteen art education programs to learn how art projects intersect with sustainability and environmental education initiatives. For this study, she used key search words in the Scopus search engine, examined art projects, assessment methods, and outcomes and then used qualitative content analysis to show intersections. She found that data from participants was summarized in the following three themes:

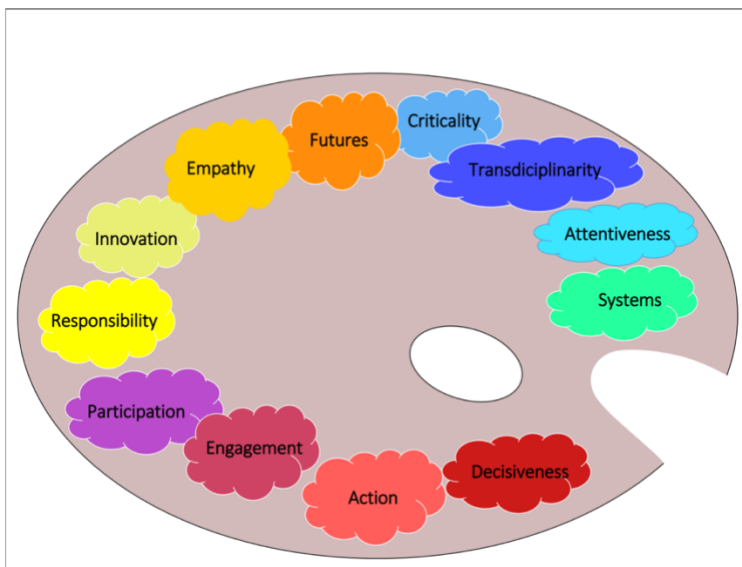
- awareness of sustainability challenges
- connections with the environment
- sense of agency (p. 152)

Heras noted the following two challenges to art-based sustainable education: the value of artmaking may be compromised by directing it to sustainability, and that art educators leading these projects may need help to sustain the projects and themselves (p. 155).

Vare et al. (2019) in the rounder sense of purpose (RSP) project conducted Delphi studies of five hundred European experts and users. They developed twelve competencies for education for sustainable development (ESD) from the United Nations Economic Commission for Europe's (UNECE) thirty-nine identified competencies. They then conducted Delphi studies to test the effectiveness of twelve competencies. Figure 3 shows the twelve sustainability competencies developed in the RSP project.

**Figure 3**

*Sustainability Competencies*



*Note:* Vare et al. (2019)

They used the painter's palette for this graphic to show how creativity can be used to combine competencies for different projects (p. 9).



I used these frameworks for education for sustainable development (ESD) in my project. Each case study outlined in this section contains specific skills, traits, and learning outcomes to achieve ESD.

### **Critical Pedagogy of Place**

Critical pedagogy of place combines critical pedagogy and place-based learning. Gruenewald (2003) combined these two educational theories to help educators tackle sustainability issues through social justice and environmental initiatives. He laid out the following two goals of a critical pedagogy of place: “identify, recover, and create materials spaces and places that teach us how to live well in our total environments (reinhabitation);” and “identify and change ways of thinking that injure and exploit other people and places (decolonization)” (p. 9). Through reinhabitation and decolonization, critical pedagogy of place creates a social transformation in a place.

Gruenewald was influenced Freire (1970/2018) who developed a concept of critical pedagogy and stressed the importance of educating underserved and underrecognized people to be humanized and liberated. Although place-based learning is not a new educational concept, many scholars use place-based curriculums to create an understanding of ecology and the conservation of local environments. Gruenewald and Sobel (1996) echoed Freire’s “act of love” to create commonality in one’s empathetic understanding of place (p. 49). However, empathy cannot be the only important factor in place-based learning. Daffron and Cafferella (2021) said that collaboration allows all stakeholders to participate in creating the curriculum and contributing feedback (p. 167).

Art can be an effective bridge to enter a community with a critical pedagogy of place curriculum. Bertling (2015), as well as Sesigür and Edeer (2020) documented two case studies that brought together art, social justice, environment, and place in their classrooms. Students learn

skills and learn about the community through collaboration (Lawton, 2019, p. 206). Both studies illustrate the impact of sustainability in their classrooms by interacting in their community.

Bertling (2015) discussed a mixed-method case study of middle-school art students' ( $n = 18$ ) connections to the ecological world. She developed an art curriculum that explored nature's harmony, place, and transformation. In each unit, the teacher discussed artists related to the theme, and then they left the classroom, took walks, and discussed how these artists and concepts related to their community. Students completed pre- and post-drawings and pre- and post-tests about their connection with nature. Afterward, the students wrote about these connections and were interviewed. Her findings indicated that students improved "ecological paradigms" and improved empathy for the environment (p. 1). These findings met the sustainability competencies of values and strategic thinking.

Sesigür and Edeer (2020) analyzed the effectiveness of place-based critical art education among ten preservice art teachers. A preservice art education course curriculum was split into the following four units:

- the natural environment
- cultural journalism
- dense of place
- social justice (p. 7)

The course instructor prepared classroom observations and interviews with the students, and students kept a journal throughout the course, writing about their activities. The findings of this study highlighted the importance of place-based critical pedagogy in art education and independent thinking through storytelling that connected students' lived experiences to the environment and preserved local history, culture, and social relations by learning about their communities (p. 20).

The connections students made in this study meet values thinking and interpersonal sustainability competencies. Both studies documented neurotypical students in their classes. Critical pedagogy of place creates a social transformation in a place.

### **Experiential Learning**

Experiential learning is the foundation of all adult learning and is shaped by the learners' past experiences (Merriam & Bierema, 2013, p. 104). Dewey (1934) said, "Learning is a life-long process involving applying and adapting previous experiences to new situations" (p. 105). Kolb and Kolb (2013) said that self-directed learning and transformative learning make meaning about experiences. Alexander and Murphy (2020) conducted a mixed-methods study that spanned seven years of service-learning projects with preservice art educators in higher education and a community organization that served adults with intellectual and developmental disabilities. They used pre- and post-surveys of students' ( $n = 87$ ) knowledge and awareness of social issues and the meaning of art in their community organization. They also asked the students to reflect using Kolb's theories of experiential learning questions about personal experiences, their goals, and how they connected teaching to social justice issues. They found the following evidence of participants' reflections:

- Skill development;
- Breaking down barriers, challenging stereotypes, and building relationships; and
- Plans for future teaching and civic engagement (p. 319)

They said these students made "global connections between teaching and civil and social engagement" within a community-engaged project (p. 325). In a quantitative phase, they found that understanding the benefits of inclusion and creating connections meets the interpersonal and values thinking competencies.

Güler (2021) applied a visual phenomenology model to analyze data from student reflection and interviews. She gathered information about how individuals visually perceived their experiences (p. 529). First, she asked the students ( $n = 35$ ) to define social justice and how and why they came up with it. (p. 517). Second, she asked students to journal how they saw and experienced social justice in art and pop culture for two weeks. She found that the following four themes emerged:

- association
- questioning
- transformation
- reflection (p. 521)

She concluded that art education about social-justice issues created more awareness among the students, they could connect their lives to social justice movements, and that “injustice can be eliminated by education, awareness, and state policies” (p. 541). Güler’s results show that her study meets values thinking and systems thinking because of the association and questioning themes.

LaPorte (2019) implemented two service-learning projects in a community-based art course. Seventeen students made art with adult clients with mental, physical, or learning disabilities, collaboratively told stories, and formed clay to make action videos (p. 46). The community-based art students were given pre- and post-surveys, wrote daily reflections, and participated in focus groups about how they viewed disability and their experiences in the workshop (p. 45). She reported that participants showed more confidence in teaching, creating more inclusive classrooms, and a broader sense of social justice.

## **Craftivism**

Craftivism was defined by Greer (2014) as follows: “The creation of things by hand leads to a better understanding of democracy, because it reminds us that we have power” (p. 7). This post-humanistic practice intends to generate community transformation with introspective artmaking practices. Taylor (2016) called this process “edu-crafting” that puts ideas, projects, and the human into action (p. 21).

In an example of a study based on craftivism, McGovern (2019) explored definitions and origins of craftivism along with health care, environmental, social justice, and gendered violence. She concentrated on yarnbombing motivation and criminal or guerrilla-style approaches artists make to have their work out in community spaces. Through an undetermined number of interviews, she learned that some artists who yarn bomb said they wanted to beautify spaces, but others were more politically minded and wanted to make political statements about their views. She reported that all participating artists found yarnbombing a “pleasurable act of defiance” while using materials that brought them joy (p. 117).

Through fieldwork and interviews, Tacchetti et al. (2021) explored ethnographic stories of four communities of women and craftwork in war-torn areas of Columbia. They said that the textile making in these communities was not just about craft and war but about “repairing the art of existence” (p. 1390). To recover from war and terrorism, women came together to make food and textiles in their communities and to take back ecological displacement. The researchers found that participating women did not have space initially and were stigmatized and threatened for documenting the violence they experienced on paper and fabric. But they persevered. The textiles they created were sold to purchase food and supplies for their families, creating independence for these women so they did not have to rely on the government. The Columbian woman and

researchers met the strategic thinking and implementation competency by building a new space and way to support their families.

### **Action-Research Findings**

Studies of people with intellectual and developmental disabilities can be difficult due to the lack of communication skills and manipulation of researchers with a vulnerable population, but participatory and emancipatory research methods have been used so that people with disabilities have input in their experiences, problems, and solutions (Coons & Watson, 2013, p. 14).

McDonald and Stack (2016) studied health equity in participatory research with people with intellectual and developmental disabilities and scientists in a five-member coordinating team with nine scientists and twelve community members with intellectual and physical disabilities, along with their support members, served as an advisory board. McDonald and Stack found that “members felt they learned by observing and listening to others,” “improved understanding and compassion for others,” and communication skills development between all stakeholders (p, 201). Systems and futures thinking drove this project to create better health equity. Interpersonal competency emerged as the core of this project because of the understanding and connections created in this project.

Darragh et al. (2016) examined the benefits of artmaking at the Tutti Arts organization in South Australia of five artist participants aged eighteen through thirty with an intellectual disability. With signed guardian consent, the artists were asked to recommend a trustworthy person to provide more perceptions of their participation in the study. The artist participants engaged in singing and visual arts during this study and were invited numerous times into the community to perform and show their work Darragh et al. found as follows:

- (a) engagement, satisfaction, and feeling positive
- (b) positive aspects of choir singing, participation, and public performance
- (c) excitement of public acknowledgement
- (d) enjoyment of developing friendships
- (e) positive outcomes of social and community inclusion (pp. 25-26)

They concluded that the arts-based programming for people with intellectual disabilities promoted “emotional wellbeing and sense of belonging” (p. 30). Day programs do not need to emphasize therapies for people with intellectual disabilities but create inclusion in current community programming.

### **Summary**

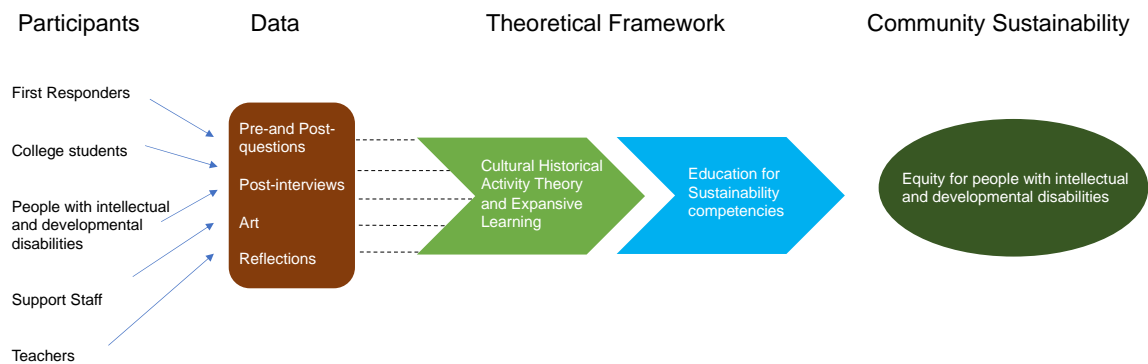
In this chapter, I reviewed studies that addressed sustainability, critical pedagogy of place, experiential learning, craftivism, and action research. I utilized these studies in my project to understand the relationship between community-engaged art projects and how higher education and communities meet education for sustainability competencies.

## Chapter 3. Method

In this case study, I examined participants' competencies in a community-engaged art workshop entitled First Responder, Art, Collaboration, Training (FACT) that brought together first responders, community members with intellectual and developmental disabilities (IDDs), and college art students to build friendships and empathy through a hands-on weaving experience. I collected qualitative data and analyzed them with a theoretical framework of cultural historical activity theory (CHAT) and education for sustainability competencies (ESD). Figure 4 shows the sequence of my method.

**Figure 4**

### *Method Sequence*



### **Participants & Setting**

I used convenience sampling to select twenty participants. Convenience sampling “collect[s] information from participants who are easily accessible to the researcher,” allowing me to ask for volunteers from the participants at the workshop. (Etikan et al., 2016, p. 2). This sample of volunteers comprised the following five stakeholder groups: first responders, people with intellectual and developmental disabilities, college students, teachers, and support staff, as follows:



- First responders included police, fire, emergency medical services, emergency room nurses, and county sheriff departments. Some first responders had experience with people with intellectual disabilities, but most had not. Most first responders had no experience with weaving before this workshop.
- Adults with intellectual and developmental disabilities (IDD) that manifest varied needs and skills. Some of these individuals had weaving experience from previous community art workshops. The IDD support staff observed the weaving workshop and attended to their client's personal needs but did not participate in the weaving.
- College art students were charged with setting up the weaving looms and demonstrating weaving techniques to first responders and IDDs. Students also facilitated discussions and storytelling for all of the participants.
- Teachers organized and led the lectures and the weaving workshop.

The FACT workshop was held at a small regional state university with an on-campus population of approximately 5,000 students that serves a population 20,000 that is the economic hub of the 18 counties in its state. Children with intellectual and developmental disabilities lack inclusion in and out of school programs. Adults with intellectual and developmental disabilities are welcomed at community events but lack the inclusion and acceptance that people without disabilities have. Integrated community programs are necessary to address sustainability issues for people with intellectual and developmental disabilities.

### **Procedure**

After I obtained a letter of institutional approval and approval from the University of Wisconsin – Stevens Point Institutional Review Board (Appendix B), I solicited participants by

emailing the directors of the local first responders and the organization's administrators who support people with intellectual and developmental disabilities.

### **Data Collection**

To address my research question, I collected qualitative and narrative data of the following four types:

- questionnaires before and after the workshop
- interviews
- observations by myself and students

At the beginning of the workshop, I asked participants one question, "What are your expectations for this workshop?" At the end of the workshop, I asked participants, "What were some memorable moments or conversations?" I asked them to hand-write their responses. One month after the workshop, I asked for volunteers to interview in person or via Zoom and asked them how the workshop impacted their lives and jobs (Appendix C). I interviewed participants who are IDD and their support staff.

A third party collected data from student volunteers to ensure non-biased course assessments. All data were stored on a password-protected server and not released to participants until after this study was published. The lecturer, the IDD support staff, and I provided written observations about each workshop phase.

The post-interview questions were based on Gelmon, Holland, and Spring's (2018) Assessing Service Learning and Civic Engagement principles. I adapted their questions to align with the CHAT and ESD competencies theoretical framework (Appendix C). All data will be stored on a password-protected server for seven years

## **Data Analysis**

I analyzed data using a theoretical framework of cultural historical activity theory (CHAT) and education for sustainability competencies. CHAT is based on expansive community learning and how this knowledge is interconnected to cultural and historical frameworks (Postholm, 2019). Expansive learning is when “learning is transformed from the individual to the collective activity system” (Engeström, 2016, p. 25). Utilizing expansive learning and CHAT as the theoretical framework for my case study is important to show how and why my community-engaged art courses and projects are critical to addressing education for sustainability competencies.

I used Engeström’s (2001) analysis of expansive learning to plot a matrix of activities from the FACT workshop (Appendix A). I then made a codebook (Appendix D) to connect this matrix to the ESD competencies to show how the activity system of FACT related to them.

## **Validity & Reliability**

This one-shot, short-term case study cannot offer external validity, known as generalizability. As Creswell and Creswell (2023) said, “The value of qualitative research lies in the detailed description and themes developed in the context of a specific site. Particularity rather than generalizability ... is the hallmark of good qualitative research” (p. 215). I ensured internal validity by asking participants to member-check their data after the workshop ended and grades were posted. I will ensure at least 80% inter-rater reliability by asking an independent researcher to cross-check data to control for my biases.

## **Summary**

I collected qualitative data during a weaving workshop enrolling a convenience sample of up to 26 participants who represented three different community groups. I used CHAT as a theoretical framework to analyze findings in a codebook based on Engeström’s (2001) matrix to

analyze expansive learning. I aligned my findings with my research question about evidence of ESD competencies.

## Chapter 4. Findings

This was a qualitative case study of participants in a community-engaged workshop titled First Responders Art Collaboration Training (FACT) among first responders, college students, people with intellectual and developmental disabilities (IDDs), and their support staff. I collected the data with pre- and post-questionnaires along with one-month post-workshop interviews from participants who represented each group of stakeholders. This data was analyzed using cultural-historical cultural theory (CHAT) and Education for Sustainable Development (ESD) competencies (Brundiers et al., 2021). The research question was: What is the evidence of participants' ESD competencies in a community-engaged art workshop?

Using my cultural-historical activity model, I analyzed how the different stakeholders showed evidence of ESD competencies. I placed these stakeholders into the following three groups:

- first responders ( $n = 3$ )
- people with IDD ( $n = 2$ ) along with their support staff ( $n = 1$ )
- college students ( $n = 4$ )

Figure 5 shows all FACT participants sitting around the tapestry looms weaving in the FHSU Center for Art and Design building. Sitting at each loom is a first responder, a person with an intellectual and developmental disability, and a college art student.

**Figure 5**

*FACT Participants Weaving around Tapestry Looms*



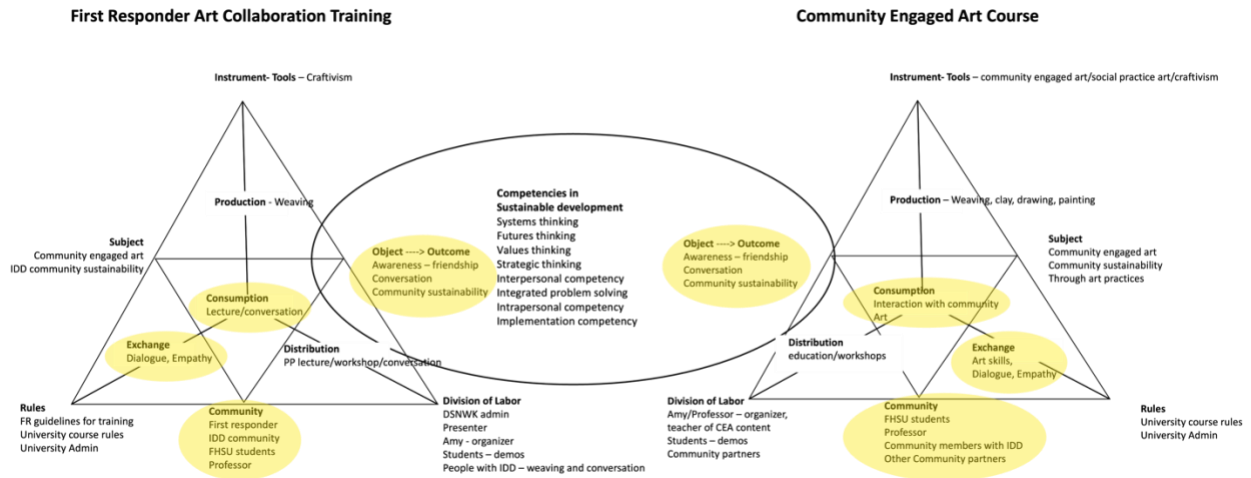
*Note:* Photo used with permission.

### **Intersections**

The expansive learning matrix in Figure 6 shows points of intersection with the CHAT model. Highlighted areas indicate most data intersections.

**Figure 6**

*FACT CHAT Model*



Three points from the FACT CHAT model took precedence in the data in both the FACT workshop and the Community Engaged Art course: consumption, exchange, community, and object. Consumption is the knowledge gained during the workshop. Exchange is the transfer of information between stakeholders through dialogue and empathy. Community is the importance of each stakeholder engaged in the community engaged art activities. These three points culminate to show the object or outcome of both the FACT workshop and the Community Engaged Course. Table 1 shows examples of codes I used to designate consumption, exchange, and community, the outcomes of IDD awareness, friendship created through friendship building, and community sustainability outcomes created through the workshop.

**Table 1***CHAT Points*

CHAT point	Codes	Instances	Examples
Consumption	Leadership Skills Learned	9	“leading conversation and an artistic expression”
	Teach to Others	36	“firsthand experience of working with people who in the community who might have different disabilities”
	Communication Skills	19	“it [art] just kind of opens people up to like starting conversations easier”
	Learn about People with IDD	102	“it’s hard to watch sometimes what those with autism go through”
	Learn about First Responders	58	“not to always judge a book by its cover and how to handle those situations and after how to kind of deescalate”
Exchange	Communication Skills	19	“I hated small talk, but I kind of like it now...it humanizes people”
	Conversation	109	“the connection and collaborating with it [weaving], you kind of like opening up conversation”
	Empathy for First Responders	28	“stigma kind of went away after this lecture”
	Empathy for People with IDD	61	“to have... an opportunity to share with people that you don’t just interact with and then there’s a connection”
	Value in Art	47	“I honestly think that art is at the core of so much like how we relate to people and how communities are kind of held together”
Community	Building Relationships	21	“to sit down and you actually get to talk to them [person with IDD], and you get to get on a more personal level with them than us, just coming into their house”
	Safe Environment	16	“a safe environment, where you’re making art or do something they may have done before”
	Systemic Issues	19	“just being aware of the injustices and things that are happening to people around you”



CHAT point	Codes	Instances	Examples
	Collaborate	37	“it created that opportunity because we [person with IDD and support staff] got to partner with your students”

## **Interviews**

I coded interview data for all three groups (Appendix D). The ESD competency of strategic thinking (182) had the highest number of codes, followed by interpersonal (175), intrapersonal (139), values thinking (136), and futures thinking (104). College students had the highest number of volunteers for the post-workshop interview, which yielded more codes per category. Two organizations within the first responder category volunteered: fire and EMS. The Sheriff’s department is not represented in this data. I combined interview data from people with IDD and their support staff because the support staff was present when I interviewed the person with IDD. In the following subsections, I analyze data from each group.

### ***First Responders***

The three first responders I interviewed volunteered to participate in the FACT workshop and be interviewed one month later. Each of them was enthusiastic about talking with me and helping find ways to improve the workshop and communications between their organizations and the IDD community. I think it is important to note two of the three first responders interviewed with me when they were not working, showing their personal dedication to helping build awareness for the IDD population. Figure 7 shows a sheriff deputy and fire chief sitting with people with IDD and college art students weaving around three tapestry looms.

**Figure 7**

*FACT Participants Weaving*



*Note:* Photo used with permission.

**Strategic Thinking Competence.**

Building on the idea that communication is key to strategic thinking, one first responder shared the importance of communication between different first responder agencies when responding on the scene. He shared an example of understanding the importance of FACT training in on-the-job events. He elaborated that it only takes one of them to recognize signs of intellectual or developmental disabilities and mention to the other first responders, “Do you think maybe this person has autism?” This question may alter the mindset of the other collaborating first responders on the scene to reevaluate the situation.

A first responder acknowledged the importance of the educational lecture addressing how people with IDD communicate to help her in her day-to-day operations. With this newly gained awareness of IDD issues, she stated that weaving with people with IDD “helps [the IDD community] integrate with us” and allows them? to experience their communication styles

firsthand. Bringing groups together to help address communication breakdowns is key to strategic thinking.

### **Futures Thinking Competence.**

When asked how the FACT workshop created new career opportunities, one first responder spoke about how they wanted to bring this information to everyone in their department. He expanded, “What was presented was really different information” than what they usually learn. Embracing future thinking, this first responder expanded with, “You’re gonna have to deal with something of that nature” in their line of work, and it “would be beneficial to everyone in the department.”

Reflecting on better communication methods is an example of futures thinking. During the interview, one first responder spent ample time brainstorming how her first responder agency could work closer with the IDD support organizations to improve future communications in times of crisis. One suggestion was to bring a pre-prepared medical history sheet with them, something they could reference when on the road.

### **Values Thinking.**

One first responder embraced values thinking when asked how they would use the knowledge gained in the FACT workshop. She explained that these strategies could be used with “anyone with an altered state of mind.” Applying this knowledge to other patients helps address problems in communication with other folks, “not just those with special needs”.

Another first responder addressed isolation in many community groups. He acknowledged that many people with IDD in our community might not have many personal interactions because they may not have “many people come over to their house unless they’re like working for them.”

He valued his time getting to know the community members in a peaceful space and building friendships.

### **Interpersonal Competence.**

Communication was important to each of the interviewed first responders. They appreciated the weaving experience and stated, “I 100% think the interaction with our guests was needed.” They appreciated this time because “you [get] to sit down and you actually get to talk to them, and you get to know them on a more personal level, than just coming into their house.”

### **Intrapersonal Competence.**

First responders spoke highly about their conversations with the person with IDD while they were weaving during the FACT workshop. However, I found more codes for intrapersonal competency. Each first responder I interviewed spoke about the importance of self-care as a first responder and how they found the weaving experience relaxing. One first responder said that weaving with community members with intellectual and developmental disabilities gives him a more positive outlook on life. During the conversation with the person with IDD, they both shared their personal stories and were able to “open up to a complete stranger and telling them what makes them happy.”

Referencing the educational presentation at the beginning of the FACT workshop, one first responder appreciated the presenter’s professional experiences about how his early career misperceptions about people with autism changed as he interacted more with that population. This first responder appreciated the presenter's humility and how he “doesn’t want to be dismissive” to the IDD community. He wants to ensure the new hires in the first responder agency know it is important to grow and reflect on their experiences.

### ***People with IDD & Their Support Staff***

When I interviewed two participants with intellectual and developmental disabilities, their support staff was in attendance. Therefore, it seemed appropriate to combine the community members' data with IDD and their support staff into one data category. Both participants with IDD were very communicative, but only one of them could effectively answer my interview questions. The other person with IDD and I had fun conversations about his hobbies and job experiences. However, it was not about this case study; it enlightened me about future art collaborations. The IDD support person is currently working to support those with intellectual and developmental disabilities, but it is important to note that she was a former student who took several semesters of my Community Engaged Art course when she was in college. Like the first responders, this group coded highly in strategic and intrapersonal thinking but also found their interpersonal communication very valuable.

#### **Strategic and Futures Thinking Competence.**

The following statements summarize the strategies for addressing sustainability problems and how to address these problems in the future. Both the person with IDD and their support staff have had negative experiences regarding the perceptions of people with disabilities.

The community members with intellectual and developmental disabilities and their support staff understood the importance of meeting with first responders. The IDD support staff declared that she took it for granted that “cops....should know” how to work with the IDD community. She confessed that she was resentful of some first responders before the FACT workshop, but “that stigma kind of went away after this lecture.” She believed all first responders “should just have this training....but they don’t...not in Kansas.”

The community member with intellectual and developmental disabilities shared that the FACT workshop was important because he does not have many “opportunities with us, like for out in the community with a lot of college kids and other people don't know anything about us.” He was excited to share that being at the FACT workshop and sharing his stories “open[ed] their eyes to say, that's a good job that we're doing, and we're very talented that we do, and I feel very touched by it because a lot of people don't think that with people with disability, does not know much, but we know a lot more.” He appreciated the first responders and the college students “good compliments and good appraise of us.” Figure 8 shows a first responder, a person with IDD, and a college student weaving and talking around a tapestry loom.

**Figure 8**

*A First Responder, a Person with IDD, and a College Student Weaving*



*Note.* Photo used with permission.

### **Values Thinking and Interpersonal Competence.**

The IDD support staff member emphasized the value of bringing the first responders together with people with intellectual and developmental disabilities. She was excited to witness how each stakeholder was able to “experience it firsthand” and converse with each other. Each of them sat around the loom and helped each other learn how to weave as they spoke to each other about their favorite foods and hobbies.

Communicating with the first responders and college students about his jobs and interests was a highlight for the participant with IDD: “We talked about different things, like fishing.” After speaking about his participation in Special Olympics, the first responder was eager to learn how to get involved and volunteer for local athletic events.

The IDD support worker was amused by how some IDD participants showed off their weaving skills to the first responders and the college students. As she listened in on some of the conversations during the weaving activity, she could see the awkwardness disappear as they started to share their “favorite food or what they like to do in their free time. It was fun.”

### **Intrapersonal Competence.**

Intrapersonal communication focuses on self-resilience while addressing sustainability issues. Confidence builds self-resilience. The IDD support person discusses how she learned to communicate better and build confidence through the FACT workshop and my Community-engaged Art course. She shared that she was not good at talking to people in the community before this course, but since she had experience working with people with intellectual and developmental disabilities in this course, she improved her communication skills which “really helped me in my last year of college to talk more with just people in general.” The participant with IDD also built his confidence through the FACT workshop while sharing his furniture-making expertise in this

job. He bonded with the first responder he weaved with as they both had a passion for woodworking.

### ***College Students***

The four college students I interviewed came from different educational concentrations. Three were art majors in education, art history, and drawing, and the fourth was an elementary education major. Each student completed at least one semester of community engaged art before participating in this workshop. One of the four students had completed a nine-credit-hour certificate in community engaged art. Figure 9 shows a smiling student and a person with IDD weaving at a tapestry loom. Two first responders are sitting behind them.

### **Figure 9**

*Smiling Students and Person with IDD at Tapestry Loom*



*Note.* Photo used with permission.



### **Strategic Thinking Competence.**

Strategic thinking was the second highest code for college students, which shows a high understanding of how sustainability initiatives impact the community. When asked about their role in the FACT works, one student stated,

It opened up so many opportunities, I think, just for the rest of my life...if you know how to basically work with people with disabilities, you can work with anyone, because accessibility is, like, such a huge range of like, basically just kind of teaches you how to be an empathetic person.

Another student elaborated on this concept when asked how this knowledge would be used in their future careers,

Well, with our education, I feel like it's allowed me to open up myself...I mean, it's weaving specifically, how accessible it can be. I mean, you're gonna have students that come through your class, as an art educator, that are from all walks of life, you know, whether they have a disability or anything, that can't use their hands as well or something. I'm just thinking about how to make it more inclusive within your classroom...you're more used to being around different types of people and different ways of learning.

### **Futures Thinking Competence.**

Building on strategic thinking and understanding how to address sustainability issues like equity and education impacts the future, several students were grateful for the FACT workshop to be better advocates. One student was eager to “carry it forward” and wanted to sponsor a FACT workshop when she started teaching high school after graduation. Another student stated, “It’s just kind of good to have this knowledge in case you are there at the right time to help somebody.”

### **Values Thinking Competence.**

Values thinking was college students' third highest sustainability competency, showcasing an understanding of sustainability problems and goals. When asked why they think the value of bringing these groups together in this workshop, one student stated,

I think everyone does have some form of art in their life. They don't even know it. But I think putting that right at the forefront and at the center of the workshop makes me really happy, because I honestly think that art is at the core of so much like how we relate to people and how communities are kind of held together, like culture is art and art is culture like. So if you don't have art, then you don't have culture.

When the student was asked about the impact of the weaving art experience on the workshop, another student stated,

That it was important to know, of course, but then they got the first responders own experience talking with the client. So that helped them make more of a connection and like understand that they are there just like everybody else, just with different abilities. Like they all have similar interests they like I know that the first responder finder I was with ... had some more interest that we all talked about.

### **Interpersonal Competence.**

The interview data for the college students with the highest yield of codes was interpersonal, centering on conversation and community building. When asked how the conversation was impactful, one college student stated, "I used to think that I hated small talk, but I kind of like it, just because it like it totally does, just like humanize people." When asked about their role in the FACT workshop, this student emphasized, "doing this workshop allowed me to actually interact with people I never would have socially if I don't go out of my way to so and that was nice."

### **Intrapersonal Competence.**

Intrapersonal competency emphasizes self-care and awareness; resiliency was the third highest of codes for college students. When asked what you learned about yourself through this workshop, a student stated,

I was usually very like anxious socially, like reclusive. I don't want to talk to people. But doing these things and like working at DSNWK and stuff I've really like started to like doing things and talking to new people and just getting out of your comfort zone and ... life's a little more fulfilling that way.

This quote shows the students' self-awareness and self-identified weaknesses. They found purpose while working with others to build their resiliency.

### **Summary**

In the data, I found connections between my CHAT matrix model and ESD competencies. The CHAT points of consumption, exchange, and community were validated in 14 codes plotted in my interview transcripts. Then, my findings illustrate how each research group met five ESD competencies.

## **Chapter 5. Conclusion**

This case study was designed to develop my understanding of the impact of a university-led community-engaged art workshop on education for sustainable development competencies. The First Responder Art Collaboration Training (FACT) was developed using expansive learning of cultural historical activity theory (CHAT). Recognizing the importance of each stakeholder group's knowledge, goals, and rules, the FACT workshop brings together first responders, people with intellectual and developmental disabilities and their support staff, and college students to build relationships and communication skills. I interviewed ten workshop participants one month after the conclusion of the workshop. I connected their experiences to Education for Sustainability competencies to show how a community-engaged art workshop addresses community sustainability initiatives.

My key findings found an intersection between the CHAT points of consumption, exchange, and community and the EDS strategic, future, value, interpersonal, and intrapersonal competencies. This led to the understanding that using a CHAT format in community-engaged art projects leads to meeting education for sustainability competencies in its participants. The evidence suggests that university-initiated community-engaged art projects lead to sustainability by fostering collaboration, communication, and empathy among all stakeholders. This bridges a cooperative gap between universities and the communities in which they serve. This final chapter will explain my research's connections between the CHAT points and ESD competencies.

### **Discussion**

In this discussion, I bring together a CHAT point and ESD competencies to show how they relate to each other and the literature.

### ***Exchange = Interpersonal Competence and Strategic Thinking***

Exchange on the FACT CHAT model (Figure 5) involves information transfer among stakeholders. During the FACT workshop, the exchange was the discussion that occurred during the weaving experience, when each stakeholder shared personal stories about themselves. This exchange of information led to the achievement of ESD interpersonal competence. Each participant realized how these conversations became a strategy to understand each other's differences and overcome the community members disconnect. These powerful exchanges are sparked through the hands-on activities of experiential learning and craftivism. Figure 10 shows a college student assisting a person with IDD in weaving while conversing with a first responder.

**Figure 10**

*College Student Assisting in the Weaving Process*



*Note.* Photo used with permission.

## **Experiential Learning and Craftivism.**

Experiential learning and craftivism are at the core of community-engaged art projects. Students use their art skills in real-world settings outside of an isolated studio while gaining “a better understanding of democracy” (Greer, 2014, p. 7). The college students from my community engaged art courses learned communication strategies before participating in the FACT workshop. They coupled these communication skills with their art skills to engage and interact with the first responders and the persons with intellectual and developmental disabilities around the tapestry loom. Starting conversations by asking each participant personal questions about their favorite hobbies and activities launched each to share personal stories with the group. The act of weaving kept their hands busy and served as a fidget to calm the anxieties of meeting new people. By sharing personal stories, newly formed friendships were formed, leading to empathy.

My case study echoed the Alexander and Murphy (2020) study, that found that community-engaged art projects with preservice art educators and the IDD community led to breaking down barriers and building relationships (p. 319). The CHAT point of exchange had the highest rates in my data (Table 1). The highest of these codes included conversation and empathy for people with IDD. Conversation and empathy are also at the heart of the ESD interpersonal competency. Each participant I interviewed noted the importance of talking with stakeholders to build relationships.

Learning and utilizing craft helps foster handiwork and community to build awareness of social issues. Tachetti et al. (2021) brought women from war-torn Columbia together to bond over food and textiles. These women created connections using craft techniques and helped each other build resilience and independence. In my case study, creating connections and bonds between the first responders and the community members with intellectual and developmental disabilities also

helped create resilience and bonds due to the disconnect of both groups due to isolation and lack of awareness.

### ***Consumption = Value and Futures thinking***

Consumption of the CHAT model in Figure 7 entails the knowledge and experiences consumed in the FACT workshop. Participants consumed information from the educational lecture, and stories shared during the weaving experience. The educational lecture discussed current problems in the IDD community and the first responder agencies addressing the ESD values thinking competence. Most participants were unaware of the problems that either stakeholder group had experienced before the FACT workshop.

Both students and first responders spoke about how the FACT workshop prompted them to think about what they wanted to do in the future to address the problems experienced by the IDD community. Both groups looked forward to more collaborations with the FACT programming. Students spoke about creating inclusive classrooms when they started teaching. First responders were excited to share this information with their co-workers so they could change future training. Meeting the ESD's futures thinking competence was met with excitement and enthusiasm.

My research coded high on learning about people with intellectual and developmental disabilities and first responders. Creating awareness about an underrecognized and underappreciated group of people addresses the UN SDGs of Quality Education and Peace, Justice, and Strong Institutions. Since knowledge about the IDD community is not taught in conventional educational programs, programs like FACT bridge an educational gap in our society. Learning new information about overlooked groups of people creates a sense of agency for the participants to create action.

Heras (2022) found that “a sense of agency” was a key skill when she reviewed 13 art education programs that addressed sustainability problems (p. 152). She found that consuming knowledge about sustainability problems prompted “new perspectives and relationships” (p. 153). Similar to Heras, my data showed a similar outset of futures thinking and the desire to take action to help find solutions to the problems experienced by those with IDD.

One student I interviewed felt relief to be heard and valued as he also has a neurodiverse disability. One of the participants I interviewed with IDD echoed this feeling of being included and accepted. He was excited to share not only his disability but also the successes he has accomplished at work and in the Special Olympics while they weaved together. He met the ESD values competence because he understood how the FACT workshop impacted his future experiences with first responders.

Darragh et al. (2016) found a similar “sense of belonging” when they examined the benefits of artmaking at an art organization’s day program by five people with intellectual and developmental disabilities (p. 30). Making art in a group can be considered action research when some of the participants are underserved. Darragh’s research showed how the participants “developed friendships” and felt “positive outcomes of social and community inclusion” (p. 25-26). Experiencing the benefits of collaboration meets the ESD value and futures competency.

***Community = Interpersonal and Intrapersonal Competence***

Community of the CHAT model in Figure 7 entails building community and safe environments by collaborating with others. The FACT workshop community was created when four people gathered around a loom for conversation and weaving. My data shows that participants felt safe and willing to share personal stories with people they had never met. Some students



expressed anxiety in the beginning because they were in charge of starting these conversations. But the angst waned once they started weaving.

Gruenewald (2003) developed the theory of critical pedagogy of place to address sustainability issues and social justice in the classroom. He elaborated on this theory, including decolonization and reinhabitation. The FACT workshop creates a new space of equality and equity by creating an inclusive environment around the weaving loom, a place that accepts each person for who they are, to learn new skills and make friendships without hierarchy. In some instances, the participant with IDD knew more about weaving and taught the first responder how to thread the needles and weave back and forth through the warp. Flipping this relationship structure helped break down the colonization structures experienced by people with intellectual and developmental disabilities.

Sesigür and Edeer (2020) found that preservice art education students could connect their lived experiences by learning about their communities in a service learning project. Using intrapersonal self-reflection and independent thinking, the Sesigür and Edeer study students understood how critical pedagogy of place creates social transformation.

In the FACT workshop, my students learned many things about themselves after some reflection. One student realized they enjoyed the conversations when, in the past, he tended to be more introverted. Another student learned she enjoyed making art with community members who were not artists. She also declared herself introverted and not very social but invigorated when making art with others for a societal purpose. These students exhibited the ESD intrapersonal competence through introspection of their past behaviors and their willingness to change through the FACT workshop.

## **Implications**

This case study emphasizes the importance of community engagement in higher academic courses to build connections with local organizations and help address sustainability problems within their communities. With the decline in appreciation of higher education as a pathway to knowledge and careers, it will be essential to show its relevance in the communities in which it resides. This case study illustrates how the intersections between higher education, communities, and sustainability will positively impact everyone's growth and safety.

Building on expansive learning strategies, the FACT workshop also acknowledges the importance of including those with intellectual and developmental disabilities in academia and community events. This inclusion builds awareness and activism for those in our population who may not be able to advocate for themselves. It also creates space for those with IDD to share stories of their lived experiences.

## **Recommendations**

My recommendations stem from three areas: education, the inclusion of the IDD community, and the need for more sustainability initiatives. Each of these three areas builds upon the CHAT model of expansive learning and the importance of multiple stakeholders working together to learn from each other and build a better world. While my list of recommendations may not be exhaustive, I believe each is actionable and achievable.

### ***Education***

More time and funds must be allocated to community-engaged programs in all university disciplines. Promoting relationship-building between the university and its community is key to building these programs. Community organizations must share their stories and struggles with university faculty and staff. Above all, university faculty and staff need to listen more to their

community members. Getting out of the classroom and bringing students to the streets will get universities out of the ivory tower mentality. Focusing curriculum development on experiential and expansive learning models will help create reliance and importance to higher education.

### ***Inclusion of the IDD community***

I will build upon Sins Invalid (2019) actionable list to be more inclusive, inclusion of space and activities, including disability in research, and advocating policy change. All universities need inclusive programming and degree programs for people with IDD, creating a non-elitist model that education is for everyone. Academics must include people with disabilities in their research and as active researchers. People with disabilities need a bigger voice in creating and implementing laws and policies. All first responder agencies need to have effective training about people with IDD. Laws must be created, enforced, and funded to provide programming like FACT to all first responder agencies. Figure 11 shows two persons with IDD conversing with a college student and a first responder.

**Figure 11**

*FACT Participants Weaving at a Tapestry Loom*



*Note:* Photo used with permission.

### ***Sustainability***

Because of its impact on communities, sustainability must be essential to university programming. It must be addressed in every department and at every level of governance. Teaching and achieving sustainability will ensure a safe and healthy environment for future generations.

### **Summary**

In this case study, I aimed to help solve community sustainability problems through a university-led, community-engaged art workshop. By finding intersections among CHAT and ESD competencies, I showed the relevance of community-engaged projects like the FACT program, which leads students and first responders in learning and transformation through education,

dialogue, and weaving. I recommend incorporating an experiential and expansive learning model into every discipline. Further studies are recommended to show how the FACT workshop impacts different types of communities.

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## Appendix A. Matrix

	Activity system	Multivoicedness	Historicity	Contradictions	Expansive cycles
<b>Who are learning?</b>	Activity systems: first responders, people with IDD, College students	Voices of IDD community, first responders, and college students			
<b>Why do they learn?</b>			Misunderstanding IDD community or not learning how people with intellectual and developmental disabilities present themselves.	Insufficient training to care for people with IDD.	
<b>What do they learn?</b>	Through education and dialogue stakeholders will learn IDD needs, voices, and communication presentations and the duties of first responders		Historically trainings were designed with a positivist/constructionist model where knowledge was passed from instructor to student.	Challenging pre-conceived ideas about people with IDD. First responders and college students are not required to learn about serving people with intellectual and developmental disabilities.	Post-Positivist model of teaching and learning where each participant learns from everyone in the training: Expanding training for first responders and college students to include the people they are learning about allows them to meet people with IDD and hear their stories in real life.

	<b>Activity system</b>	<b>Multivoicedness</b>	<b>Historicity</b>	<b>Contradictions</b>	<b>Expansive cycles</b>
<b>How do they learn?</b>		In-person communications between people with IDD, first responders, and college students		Challenging old training techniques to require hands-on and real person involvement. Training must bring in voices of the IDD community, allowing First responders and college students to meet people from the community who have intellectual and developmental disabilities.	Experiential learning: Meeting in person and making art and learning from those with IDD expands first responders and college students learning.

## Appendix B. Approvals, Invitations, & Consents



FORT HAYS STATE  
UNIVERSITY

THE GRADUATE SCHOOL AND OFFICE OF SCHOLARSHIP AND SPONSORED PROJECTS

From: Institutional Review Board  
Fort Hays State University  
785-628-4321  
[irb@fhsu.edu](mailto:irb@fhsu.edu)

To: Institutional Review Board  
University of Wisconsin – Stevens Point  
Dr. David Barry, IRB Chair

February 20, 2024

RE: First Responder, Art, Collaboration, Training FACT

To the University of Wisconsin – Stevens Point Institutional Review Board

Amy Schmierbach has the permission of Fort Hays State University's Institutional Review Board (IRB) to complete her project on the Fort Hays State University (FHSU) Campus. The FHSU IRB has approved Amy's project (IRB Reference # 22\_0076) and for her to conduct the research on our campus. Part of the approval process was for Amy to complete the required IRB CITI Training, which she has done.

If you have any questions, please feel free to contact me at [IRB@fhsu.edu](mailto:IRB@fhsu.edu) or [Kabremer@fhsu.edu](mailto:Kabremer@fhsu.edu).

Sincerely,



Keith A. Bremer, Ph.D.  
Director of the Graduate School and OSSP  
Assistant Professor, Geosciences  
Fort Hays State University  
Picken Hall 306  
He/Him





Date 5/9/2024

Principal Investigator: Henry St. Maurice  
Co-Principal Investigator: Amy Schmierbach  
Protocol Number: 2024-17  
Protocol Title: Education for sustainable development competencies in a community-engaged art workshop  
Protocol Approval Date: 5/9/2024  
Protocol Expiration Date: 5/8/2029  
Review Category: 2  
UWSP FWA: 00017591

Dear Henry and Amy,

The above-referenced human-subjects research project has been approved by the University of Wisconsin-Stevens Point Institutional Review Board (IRB) Committee. This approval is limited to the activities described in the approved protocol, and extends to the performance of these activities at each applicable site identified in the application for IRB review. In accordance with this approval, the specific conditions for the conduct of this research are listed below, and informed consent from subjects must be obtained as indicated. Additional conditions for the general conduct of human-subjects research may be detailed below.

Additional Conditions:

All individuals engaged in human-subjects research are responsible for compliance with all applicable UWSP Research Policies. The Principal Investigator is responsible for assuring all protocol personnel review and adhere to applicable policies for the conduct of human-subjects research.

The IRB maintains an official protocol file for each study to meet the University's regulatory obligations for record keeping. Principal Investigators are responsible for maintaining all records related to the protocol, and are required to share with the IRB. The IRB is not responsible for maintaining study documents for researchers.

Your project approval expiration date is listed above. Exempt protocols have an automatic 5-year approval period. As a courtesy to you, and to reduce administrative burden, the IRB will request an annual update from the Principal Investigator on the status of this study. It is your responsibility to inform the IRB if the project is complete or still in operation. If the study needs to remain open after year 5, you must submit a new protocol. Lapses in approval should be avoided to protect the safety and welfare of enrolled subjects. When you plan to close your study, submit a Protocol Closure Form to [irb@uwsp.edu](mailto:irb@uwsp.edu).

No changes are to be made to the approved protocol or study documents (i.e., consent forms, surveys, etc...) without prior review and approval of the IRB. To modify an existing protocol, complete the Protocol Modification Form and submit to [irb@uwsp.edu](mailto:irb@uwsp.edu).

If there are any injuries, problems, or complaints from participants, you must notify the IRB at [irb@uwsp.edu](mailto:irb@uwsp.edu) within 24 hours.

If you have any questions, please contact me. Good luck with your project.

Sincerely,

A handwritten signature in black ink, appearing to read "David Barry".

David Barry, Ph.D.  
IRB Chair  
[dbarry@uwsp.edu](mailto:dbarry@uwsp.edu)

## **First Responder Art Collaboration Training**

### **Informed Consent to Participate in Human Subjects Research**

Dr. Henry St. Maurice, Emeritus Professor of Education for Sustainability at the University of Wisconsin-Stevens Point UWSP, and Amy Schmierbach, a doctoral student at UWSP and Professor of Art at Fort Hays State University, would appreciate your participation in a case study that examines the participant reflections about the First Responder Art Collaboration Training (FACT). (FACT) that brings together first responders, community members with intellectual and developmental disabilities, and college art students to build friendship and empathy through a hands-on weaving experience. You are being asked to complete an anonymous pre-and post-question that should take up at most 10 minutes of your time and a follow-up post-workshop interview that should take at most 60 minutes. Your participation is completely voluntary. The benefit of this study is that it will illustrate the importance of collaboration between the university and community organizations and members to help address equity issues in our society.

We anticipate no risk to you due to your participation in this study other than the inconvenience of the time to complete the survey. You could, however, experience some discomfort if you have had an uncomfortable interaction with a participant in the workshop and your completing the survey causes you to remember this.

While there may be no immediate benefit to you as a result of your participation in this study, it is hoped that we may gain valuable information about the importance of community-engaged art workshops that will be of future value to society.

We will use a quick and easy method for obtaining information for the pre-and post-questions taken directly before and after the workshop in the form of hand written comments. The post-interview will provide us with more information and allow you time after the workshop to see how the workshop knowledge impacts your life and work. Each of these data collection methods is voluntary, and you can choose to withdraw at any time.

The information you give us for the pre-and-post questions and interview will be recorded anonymously. We will not release information that could identify you. All completed questions will be kept in a secure, locked university cabinet in Amy Schmierbach's office and will not be available to anyone not directly involved in this study.

Your participation in this study is completely voluntary. If you want to withdraw from the study, at any time, you may do so without penalty or loss of benefit entitled. Only anonymous information provided will be retained. All identifiable information will be removed from the study and destroyed or deleted.

Once the study is completed, you may receive the results of the study. If you would like these results, or if you have any questions in the meantime, please contact:

Dr. Henry St. Maurice School of Education, University of Wisconsin – Stevens Point  
Stevens Point, WI 54481 [hstmauri@uwsp.edu](mailto:hstmauri@uwsp.edu)

or

Amy Schmierbach, Doctoral student in Education for Sustainability  
University of Wisconsin – Stevens Point, Stevens Point, WI 54481  
Professor of Art – Fort Hays State University  
Hays, KS 67601  
[aschm398@uwsp.edu](mailto:aschm398@uwsp.edu)  
[ajschmierbach@fhsu.edu](mailto:ajschmierbach@fhsu.edu)  
785-650-4247

If you have any complaints about your treatment as a participant in this study or believe that you have been harmed in some way by your participation, please call or write:

David Barry, PhD, IRB Chair  
Associate Professor, Sociology  
2100 Main St., Old Main 208  
University of Wisconsin, Stevens Point and Extension, Stevens Point, WI 54481  
715.346.3799  
[irb@uwsp.edu](mailto:irb@uwsp.edu)

Although Dr. Barry will ask your name, all complaints are kept in confidence.

There will be no compensation to participate in this study.

If you require medical treatment during the study, please get in touch with your nearest medical provider immediately. Please also contact the Co-Principal Investigator, Amy Schmierbach as soon as possible.

Where required: a signature and date line for the subject, or the subject's legally authorized representative, documenting that the subject has read and understands the consent given, that participation is voluntary and that no promises or threats have been made to or against the subject to obtain the subject's consent to participate

“I have read and understand the information provided to me; that my participation is voluntary and I may withdraw at any time.”

## **Appendix C. Protocols**

### **Pre-Workshop Question:**

What are your write their expectations of this workshop?

### **After workshop question:**

Please record some memorable conversations and interactions during the workshop.

### **One month Post-workshop interview questions:**

1. What are your expectations of this workshop?
2. Please provide a brief overview, from your own perspective, of the partnership project in which your organization participated
3. Has this created any new opportunities for you?
4. Or how do you use this knowledge in your career?
5. How did this workshop impact your life?
6. Why was it important to weave together? What was the value in bringing these groups together in this workshop?
7. What interaction during the workshop was the most impactful or memorable?
8. What did you learn about yourself as a result of your experiences in this community-based course?
9. How did you help bring these groups together for this workshop?

## Appendix D. Codebook

<b>ESD Competencies</b>	<b>How ESD can be achieved?</b>	<b>Pre-and post-questions</b>	<b>Expansive learning matrix</b>	<b>CHAT categories</b>	<b>How it will be measured</b>	<b>Who will provide the data</b>
Systems thinking	Understand the importance of bringing these groups together	What are you expectation of this workshop?	Multi-voicedness	Subject	Pre-question	Students
		Please provide a brief overview, from your own perspective, of the partnership project in which your organization participated	Histrocity	Community	Post-Interview	First Responders People with IDD Teachers
Futures thinking	Apply FACT knowledge to future or career	Has this created any new opportunities for you?	Histrocity	Outcome/Object	Post-Interview Reflections	Students
		Or how do you use this knowledge in your career?	Expansive			First Responders People with IDD Teachers
Values thinking	Understand how FACT knowledge impacts my life and others that I care for.	How did this workshop impact your life?	Histrocity	Rules	Post-Interview	Students
			Expansive	Outcome/Object	Reflections	First Responders
					Observations	People with IDD Support Staff
Strategic thinking	Understand why communities should come together?	Why was it important to weave together?	Multi-voicedness	Division of Labor	Post-Interview	Students
				Rules	Reflections	

	together to make progress for change	What was the value in bringing these groups together in this workshop?				First Responders People with IDD
Interpersonal competency	Demonstrate communication between all participants.	What interaction during the workshop was the most impactful or memorable?	Expansive	Outcome/Object	Post-question and Post-Interview	Students First Responders People with IDD Support Staff
Integrated Problem-solving	Organizing communities to come together to make progress for change	How did you bring these groups together for this workshop?	Multi-voicedness Contradictions	Instrument/Tools	Post-Interview Reflections	Teachers
Intrapersonal competency	Reflecting of your own bias and stereotypes for others	What did you learn about yourself as a result of your experiences in this community-based course?	Expansive	Outcome/Object	Post-Interview Reflections	Students First Responders People with IDD Teachers
Implementation competency	Facilitating community engaged projects to solve problems	What were the benefits or obstacles of bringing these groups together?	Multi-voicedness Contradictions	Instrument/Tools	Post-Interview Observations Reflections	Students Teachers