

Sustainable Material Pedagogy in the Faculty of Fine Arts at Concordia University

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A Thesis

in

The Department

of

Art Education

Presented in Partial Fulfilment of the Requirements

for the Degree of Master of Arts (Art Education) at

Concordia University

Montreal, Quebec, Canada

April 2022

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CONCORDIA UNIVERSITY
School of Graduate Studies

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Acknowledgements

First, I would like to thank my wife, Anna Timm-Bottos, for encouraging me to take a Master's in Art Education. Without her gentle reminders, encouragement and thoughtful conversations around materials, this thesis would not be what it is today. Thank you as well to my friends, family and classmates who helped me along the way. Lastly, thank you to my supervisor Kathleen Vaughan and my committee members Lorrie Blair and MJ Thompson for your continued support in guiding me through my Art Education degree.

Abstract

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This thesis looks to uncover how studio-based Fine Arts students are learning about sustainable material practices at Concordia University. By investigating current material approaches in art education and interviewing technical support staff and professors in five departments and programs across the university, I set to find out. As I built the case study, four themes emerged: waste, health and safety, time and natural materials. They helped to frame what I learned from my participants, but also guided the recommendations for future directions in material pedagogy and literacy. The goal of my research is to change the culture of sustainable material practice in the Faculty of Fine Arts at Concordia University.

KEYWORDS: Art Education, case study, sustainability, Concordia, materials, time, fine arts, waste, health, safety, material practice, Montreal, Canada

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CHAPTER ONE



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Introduction

We are at a critical point in human history. The Intergovernmental Panel on Climate Change (IPCC), the United Nations body for assessing the science related to climate change, published a report on October 8th, 2018 that said we only have until 2030 to reduce “net human-caused emissions of carbon dioxide” by 45 percent so that we could reach ‘net zero’ by 2050 (IPCC Newsroom, 2018). It is fundamental that we make drastic changes so that we can reduce “extreme weather, rising sea levels and diminishing Arctic sea ice” (IPCC Newsroom, 2018). By 2021, a new report was released by the IPCC that had the press calling it “code red for humanity” (United Nations | Meetings Coverage and Press Releases, 2021). All the more reason why we should assess how we teach students sustainable material practices in art creation, meaning that from the conception right through to potential disposal, the art educator and artist are taking into account their health and the health of the planet with their artistic material choices. Through a case study analysis building from a series of interviews with five staff and professors in studio-based fine arts programs at Concordia University, I hope to discover how the Faculty is currently teaching students about the impact of their art practices and to develop a material pedagogy that is people and planet-friendly. Taking time for exploring this new pedagogy is of utmost importance. Ultimately, these approaches to sustainable material pedagogy will spread across the Faculty. The goal of my research is to change the culture of sustainable material practice in the Faculty of Fine Arts (FoFA) at Concordia University. I hope to do so by celebrating best practices, raising awareness amongst faculty, staff and students and facilitating policy change within the FoFA.

Research questions

The main question I address in my thesis in Art Education is: “How are studio-based fine arts students learning about sustainable material practices at Concordia University?”

Three sub-questions to this would be:

What and how are we teaching students about their material choices and safe use and disposal of said materials?

In their coursework, are students given time to explore materials or rushed to production in ways that hamper sustainable material choices?

How might we encourage teaching a slow practice that mindfully engages materials and presents natural alternatives?

In other words, this thesis clusters around issues of pedagogy, waste, health and safety, time (slowness), and natural materials.

Background to the questions

I think of myself to be a multidisciplinary sustainable designer. What does this mean? It means I consider the environmental impact, the social justice and the economic integrity of the designs I make whether they be digital or physical.

I had been searching for a program to support my Master's studies for the last few years, but nothing quite fit. Initially, I was looking at the Master's in Design at Concordia, but after discussions with students going through it, I felt it would likely be a repeat of my undergraduate degree. I even had family friends suggest that I do a degree elsewhere in order to have more credibility in the future job market. I understood their reasoning, but I wasn't thinking about my future employability, I was thinking about how I could help make a culture shift in sustainability. I was introduced to the Art Education department through my colleague Anna Timm-Bottos as a potential avenue for change. Upon further discussion with professors within the faculty, I found what better way to create that shift than through the education of art. But let's start at the beginning.

Dawson College as a student

In 2001, as I entered my last year of studies in Industrial Design at Dawson College, I enrolled in my final English class. The course was titled, “Writing for the Environment” and had as its main course reading Rachel Carson's *Silent Spring* (1962). As I read through her seminal work, I realized that I was about to enter into one of the most polluting professions on the planet, product design. I started to change my path to a more sustainable one. I did as much as possible in that final year to shift my projects, but I had very little information to work from and the sustainable design movement (citation) was very new to me at that time. I would soon discover The Hannover Principles: Design for Sustainability. The Hannover Principles were “prepared in 1992 by William McDonough Architects and Dr. Michael Braungart; commissioned by the City of Hannover, Germany, as design principles for Expo 2000, The World’s Fair” (*The Hannover Principles: Design for Sustainability* (1992), 2016). These principles would become the foundation for the Cradle-to-Cradle movement, further described below. Of particular note for me at that time and still to this day is the waste principle:

Eliminate the concept of waste. Evaluate and optimize the full life-cycle of products and processes, to approach the state of natural systems, in which there is no waste.

Post-Dawson / Pre-Concordia

I spent the next year or so reading and attending conferences that centred around sustainable design. Most notably was the EnvironDesign 2002 conference in Minneapolis/St-Paul. I met many designers, researchers and students from across North America who were making strides in the field. The most memorable of the encounters was listening to and meeting with Janine Benyus (Biomimicry) and William McDonough and Michael Braungart (Cradle-to-Cradle). Benyus came to talk about biomimicry, it “is about valuing nature for what we can learn, not what we can extract, harvest, or domesticate. In the process, we learn about ourselves, our purpose, and our connection to each other

and our home on earth” (*What Is Biomimicry*, 2022). A solar panel is a good example of this in that it is mimicking the functions of a leaf by turning the sun’s energy into electricity. McDonough and Braungart were at the conference to launch their newly published book, *Cradle-to-Cradle: Remaking the Way We Make Things* (2002). It encouraged designers to get away from the cradle-to-grave way of making things and look at how “everything is a resource for something else” (*Cradle to Cradle*, 2022). The conference was a very inspiring place to be at that point in my early design career. I felt as though there wasn’t much happening in sustainable design in Quebec or even Canada, so my thoughts shifted to going back to school. I first looked at Europe, because of my Dutch roots, and came upon a school in the south of Holland that seemed, at first glance, to focus on sustainability in design. The school labelled the degree as a “Master” in design. But as I communicated more with the school, it seemed that they didn’t go into the kind of depth I was looking for in sustainable design education. So I continued my search for a school. I then came upon Concordia’s Design Art department, now the Design and Computation Arts department. It promoted itself by offering a wide array of sustainable design classes. Compared to Eindhoven, it seemed to go into more depth.

Concordia as an undergraduate student

I applied and was accepted into the program and started in the fall of 2003. It would only be after my first year that I would discover that the course offerings did not go as deep as I had been led to believe. That summer my family and I visited Holland and I was able to get my portfolio back from the school there. We also visited an eco-house in the town where my mother spent most of her childhood. It was very progressive, even for the Netherlands. It got me inspired to work on designing a new building on a property where my family had been spending our summers for the previous 10 years. So, I developed an independent study with a few of my classmates and a willing professor to research and design the initial plans of an eco-house in the Eastern Townships of Quebec. It was a challenging

project in that not a lot of designers and architects were building in sustainable ways at that time in the province. Material sourcing was difficult because not a lot of material certifications had arrived here and, in some ways, the house broke ground in these areas. We decided to dismantle the old summer cottage on the property with the goal of reusing as many of the materials as possible in the new house. This, you could say, started my foray into working with reused materials. We literally broke ground in the fall of 2005 and would have it closed in by March of 2006. One of the ways that I reused the parts of the old house was to cut the old 2x4s into ½ inch strips and cover the ceiling with them. I even used the old floors and single-pane windows to build some of the kitchen cabinets. It would be my work as staff at Dawson that would give me access to more used materials for the house.

Dawson as technical support staff

In the summer of 2008, I began working/teaching as a shop technician in the Industrial Design Department at Dawson College where I had shifted my path six years previously. As the semesters went by, I started to notice the material waste that came out of that department, but most noticeably, the Fine Arts department. By the summer of 2009, I was able to build whole kitchen cabinets with the Russian plywood scraps I pulled out of the dumpster being thrown away by studio art classes. I began talking to the students about their impact when using materials. I even gave lectures on sustainable design practices in my own department. It would be here that my practice would again shift. However, I wouldn't be able to shift material use in my own department because of the dynamics between professors and technical support staff.

Part of Sustainable Concordia

Around the same time that I began working full-time at Dawson, I was having to shift my work at Sustainable Concordia to part-time. In the year previous, I had co-organized a week-long sustainability conference at Concordia and had helped the organization rebrand and build a new

website. As my time at Dawson ended in 2011, I was able to transition into a regular paid position at Sustainable Concordia. I would work there until 2016, becoming a mentor to many students discovering sustainability, and learning a lot about myself and how to make lasting change in the process.

Concordia as staff

In the year after my “retirement” from Sustainable Concordia, I was again searching for what was next. I came across the Concordia Centre for Creative Reuse (CUCCR), a central repository for cast-off artistic and pedagogical supplies that Concordians might otherwise throw in the dumpster, made available free to student and community members since March 2017. My transition to the Centre for Creative Reuse would start with a question of skill. Could I turn a storage cage into a “free store” in the span of a month? As I began to build the space for CUCCR, I started to see what I had seen in my time working at Dawson College. In one case, materials that had been stored for long periods of time because departments did not know what to do with them, or they did not want to dispose of them. In the other case, an overwhelming number of materials and projects were left behind by students in studio-based fine arts departments. This is truly where I started to question what was going on. How had we gotten to this stage of wastefulness? What was happening at the project level that there was seemingly disregard for projects and materials post critique? Was I misreading this? Is there an issue with the pedagogy? Are we teaching art to students in such a way that there is little regard for what happens once an assignment is finished? Or are we teaching in such a way that students value their “final” projects so little that they dispose of them? Can we teach technique in a way that allows materials to be available for the next student to explore and learn? All these questions brought me to write this thesis.

The following pages are broken down into chapters to frame my research into the theoretical framework behind my inquiry, the methodologies used in conducting the research, the literature to

support my investigation, the case study involving my participants, the impact of COVID and lastly future directions based on my findings.

Theoretical framework

Defining and situating sustainability at Concordia

Since my time at Sustainable Concordia and starting my master's degree, a lot has happened on the sustainability front at Concordia University. On December 14th, 2016, the university launched its long-awaited sustainability policy (Concordia University, 2016). It includes the following “Guiding Principles” that I think are most in line with the direction I wanted to take my thesis in

Health and quality of life

Embracing the symbiotic relationship between a healthy environment, human health, and quality of life.

Responsible production and consumption

Recognizing and adjusting production and consumption practices to be both socially and environmentally responsible.

At the same time, Concordia launched its definition of sustainability. It is as follows:

“Sustainability” at Concordia is a mindset and a process that leads to reducing our ecological footprint and enhancing social well-being while maintaining economic viability both on and off-campus.

This process of sustainability is developed through a governance system based on shared vision and responsibility that fulfils Concordia's current needs without compromising the needs of future generations.

To be sustainable in our decisions and activities is to take a long-term perspective, recognize resource capacities and balance the interconnected nature of our environment, society, and economy (Concordia University, 2016).

On October 27, 2020, Concordia launched its Sustainability Action Plan. The plan is the next step in Concordia's vision for a more sustainable institution. It encompasses strategies around food, waste, climate, research, and curriculum. In the years leading up to the launch, I worked to develop the Zero Waste Plan with colleagues across the university. I also participated in public consultations on all five streams with the aim of creating inclusive plans going forward. Later in my Hopes for the Future chapter, I try to connect strategies within the stream plans to my suggestions for how we can approach sustainable material practice in Fine Arts at Concordia.

My sustainable material definition

During the winter of 2018, I conducted a small case study on the state of sustainable materials in two shop spaces in the Faculty of Fine Arts at Concordia, specifically, the Digital Fabrication and the Fabrication shops. As an anchor point of my interviews, I developed a definition of sustainable materials that I borrowed from the book *The Upcycle: Beyond Sustainability – Designing for Abundance* (McDonough & Braungart, 2013). Dr. Michael Braungart is a chemist and William McDonough is an architect. They created the Cradle to Cradle Certified™ Product Standard.

The definition is as follows:

A sustainable material becomes either a technical or biological nutrient at the end of its useful life.

A technical nutrient can go back into the creation stream as a material for creating something “new.”

A biological nutrient is a renewable material that goes back into the biosphere.

Although the results of the study were quite interesting in terms of what materials were being used, it became clear that to truly understand how sustainability was part of Fine Arts teaching, I would have to expand my research to discern the approaches taken by professors.

However, this earlier definition doesn't seem to hold the same weight it did when I started developing my research. It is possibly too broad and not focused enough on studio-based arts practice. I have begun to think of sustainable materials practice in the fine arts educational process in this way:

The materials used are from the earth and they can either go back to the earth, into a new project or remain as the artwork.

In more recent months, I have also started to question what we are trying to achieve as art educators. Do we want to create environments of exploration, but that form active planetary citizens? Are we encouraging students to fall in love with their practice? Or do we simply teach some skills and send students on their way out into the world to do what they will? Or do we simply want them to produce and hope that through that they learn something? Have we come to a point where the quantity of production has become more important than the quality of work being produced?

CHAPTER TWO

Methodology

Building off my earlier case study research I interviewed two technical support staff on what they thought the state of sustainable material use was in the areas where they worked within the faculty. The purpose of the study was to validate the feasibility of a larger case study in the Fine Arts. Out of this study, I realized that I should get perspectives from faculty members as well.

Leading up to the main interviews for my thesis research, I conducted, as part of a 2019 independent study, interviews with professors in studio-based fine arts institutions across Canada. My aim was to get an overarching idea of how their schools, departments, and programs approach sustainability in the curriculum.

In those preliminary inquiries and here, the case study is the overarching research method. It is best suited because I am investigating “a contemporary phenomenon (the “case”) in depth and within its real-world context” (Yin, 2014, p.16). I can only truly understand how we are teaching studio arts students about material practices by conducting thorough research of what they are currently being taught by the professors teaching them.

To develop my case study, I will draw on three methods: interviews, observational research, and document analysis.

Procedures for interviews

Identifying participants

When choosing my participants, I used several criteria to determine who I should interview.

Existing working relationship

I work with people at all different levels of the university: students, staff, faculty and administrators. Through these relationships, I've come to know which staff and faculty members in studio-based fine arts programs and departments are doing things differently when it comes to sustainable material practice. Some might say that this existing relationship might compromise the data, but it's important to "form authentic relationships with your participants" (Van den Hoonaard, 2012, p.59). It helped me as a researcher to treat my "participants as valued partners in the research process" (Van den Hoonaard, 2012, p.59). I think that this led to better data because the participants felt more at ease in sharing their approach(es).

Heard it through the grapevine

For other participants, I chose them based on what I had heard about their pedagogy when it came to materials from students or colleagues. I found it important to have at least some connection to the participant, whether directly or indirectly. Going blind into participant selection would have been very time-consuming and might not have produced the best results.

Setting

All interviews were conducted pre-pandemic (March 2020) except one follow-up interview. I met participants either in their office or studio space on campus, so again, they felt like they were in a comfortable and safe space for sharing. The main five interviews were conducted between October and December 2019, with a follow-up interview with one participant in December of 2020.

Semi-structured Interview

I chose to use the semi-structured interview approach because they “resemble guided conversations rather than structured queries” (Yin, 2014, p.110). Yes, I did have a set of questions (see Appendix X), but they acted more as checkpoints through the conversation to make sure I was getting consistent data from all participants. I found this conversational format really allowed “people to explain their experiences, attitudes, feelings and definitions of the situation in their own terms and in ways that are meaningful to them” (Van den Hoonaard, 2012, p.102). I did have to remember to come back to the questions if a participant strayed off track too much. And to be careful to “engage in passive listening” (Van den Hoonaard, 2012, p.102), to let the participant’s voice be heard. I also found that an advantage of a semi-structured interview was the more casual nature. This was particularly helpful because I was interviewing participants about their teaching practice, which can sometimes feel invasive. And again, that was not my intention of the study. I wanted to celebrate what my participants were doing, how they were engaging in sustainable material practice with their students.

Question break-down

In my opening questions, I inquired specifically about how long a participant had held their position. This would help later to understand whether or not time at Concordia had an influence on the implementation of sustainable material practices. I divided up my questions into three main themes: pre-art making, art creation and post-art creation. In design, my main academic and professional background, we will look at the lifecycle of an object or even material. The hope with these three themes was to better understand how staff and faculty are engaging their students in thinking about art creation from start to finish and even after work has been shown. Since the development of the questions was linked closely to my literature review, I explore that process in the next chapter, Literature Review. I delve into the results/outcomes/answers to these questions in the Case Study

chapter. In my closing questions, I inquired more about the future, about how my participants felt they could be supported in continuing to integrate sustainability into their classrooms and studios. I bring their answers into the Future Directions chapter.

Transcribing

“Transcribing can be a very time-consuming, tedious process, but it also bears the fruit of deep familiarity with your data and can include euphoric moments of discovery” (Van den Hoonaard, 2012, p.115). I would have to agree with her that the process is time-consuming, which is why I took a slightly different approach to transcription. When I conducted interviews of studio-based professors in universities across Canada, I used an emerging recording technology that uses artificial intelligence (AI) to simultaneously transcribe the interview while it was being conducted. It worked with relative success, so I decided to use that same technology in my transcription process. It is not a perfect transcription, by any means. It has a hard time understanding people speaking English with an accent and doesn’t always get the words right even for people whose mother tongue is English. However, it was able to differentiate between speakers and timestamps all the way along. This all became very helpful when it came to time to coding.

Coding

Post-interview, I went into the transcription of each interview and played back the recording. As I was listening, I would pull key themes related to the questions I had asked. Initially, I pulled quotes and their timestamps into two main themes, materials, and pedagogy. As I continued into coding the next interview and the next, more overarching themes emerged and I started a new document of key themes. This document would become the foundation for the Case Study chapter with four themes emerging: waste, health and safety, time, and natural materials.

Participant Follow-up

Once I wrote the Case Study chapter later in this document, I contacted my participants to have them read their sections and make any corrections if needed. By doing so, I not only got their validation of the content, but it also put them at ease to see what came out of our interviews.

Literature Review

So, what prompted this research, beyond seeing piles of waste? Initially, I split my questioning into three themes: pre-art making, art-making and post-art making. This gave me ways to assess participants' approaches as they guided students through the creation process. Following the interviews, four larger themes emerged that upon reflection I realized were the basis for my initial line of questioning. I frame my discussion of relevant literature around the new themes of waste, health & safety, time and natural materials. I look first at the Concordia context and then look at what is happening globally to understand what might be influencing what we are seeing on campus.

Before we begin digging into the origins of my line of questioning, let us explore what a sustainable material practice is and at the same time, what a sustainable material pedagogy might be.

First, let us come back to the definition of sustainable material established earlier:

A sustainable material becomes either a technical or biological nutrient at the end of its useful life.

Next, let's explore that in terms of art creation:

Sustainable art practice is the exercise of creating work at a reasonable pace using materials in a way that is not extractive, but rather restorative to the earth.

From there we can establish what sustainable material pedagogy might be:

Teaching how to think about, select properly, use intelligently and, where applicable dispose of materials in such a way that either returns them to the earth or places them back into the creation cycle.

I think that by practicing the type of creation we are looking for from our students, in front of our students, we inspire them to create as we do. Hopefully, by showing them our own sustainable material practice, we can instill that same practice in them, and they can adopt it and make it their own.

From there we can establish what sustainable material pedagogy might be:

Waste

There is no 'away'.

As I have stated a few times already, the impetus for this thesis was seeing the amount of still usable materials that were being thrown out by departments and programs in the Fine Arts at Concordia. It seems now that with each passing day we are seeing how much of what we throw away, never really goes away. A good example of this is a new type of material that is a blend of both natural and synthetic materials. It was first spotted on the beaches of Hawaii by a sea captain and oceanographer Charles Moore. "The significance of that discovery was not realized until 2012, when Patricia Corcoran, an earth scientist at Western University in Ontario, invited Mr. Moore to give a lecture about plastic pollution. He included the plastiglomerates in one of his slides, although he had no name for them. Intrigued, Dr. Corcoran decided to fly to Hawaii to see the strange anthropogenic stones for herself" (Nuwer, *Future fossils: Plastic stone* 2014). Thinking that she had found a new type of rock, Dr. Corcoran became very excited. However, as she investigated further, she discovered that the object was made up of sand and plastic particles. The "rock" would form after people would have a beach fire.

The discovery shows how many microparticles of plastic have integrated themselves into our natural landscapes. What is more alarming, is a recent paper in *Nature* titled “Global human-made mass exceeds all living biomass” (Elhacham et al., 2020, p.442). More simply put, all the stuff we have produced outweighs all living plants on the planet. They define anthropogenic mass as “the mass embedded in inanimate solid objects made by humans (that have not been demolished or taken out of service, which we define as ‘anthropogenic mass waste’)” (Elhacham et al., 2020, p.442), meaning everything that we are still using, not considering the enormous quantities of landfill waste. “The accumulation of anthropogenic mass has now reached 30 Gt [a gigatonne or one billion tonnes] per year, based on the average for the past 5 years. This corresponds to each person on the globe producing more than his or her body weight in anthropogenic mass every week” (Elhacham et al., 2020, p.442), a number we should aim to reduce but also rethink in terms of future extraction. “If current trends continue, anthropogenic mass, including waste, is expected to exceed 3 Tt [a teratonne or one trillion tonnes] by 2040--almost triple the dry biomass on Earth” (Elhacham et al., 2020, p.443).

With the weight of the impact of the human-made material on the planet in mind, I established a few questions to understand how my participants teach their students about their own impacts.

Pre-art making

1. How do you talk to students about materials before they begin a project?
2. How does the environmental impact of materials affect the way you teach?

Art creation

1. How do you talk about the life cycle of artworks to students? Meaning, talk to students about how to create their work so that, if applicable, it can come back apart to be reused by them or a future student?

Post-art creation

1. How do you invite students to consider whether they can re-use materials from one project to another? That is, how do you wrap up a project with students so that they are thinking about “what’s next?”, with the materials that they’ve used?
2. Do you talk/demonstrate to your students about the different types of disposal? What do these include?

Health & Safety

I am particularly sensitive to this subject, for several reasons. The first is that I partially lost my hearing due to not taking safety measures while working as a technician in the shop in Industrial Design at Dawson College. Ever since that time in my life, I wear hearing protection, always, even when I vacuum at home. Although not directly material related, my experience strengthened my stance on health and safety. Even before my hearing loss, when working for long periods of time with wood, I would put a heavy-duty respirator on with the appropriate filters. As a CEGEP student, I was required to have a ‘fit test,’ meaning I was fitted for a half facepiece respirator and instructed what filters to use when. As I have come to work more closely with staff in the Environmental Health and Safety Department at Concordia, I have come to learn that fit tests are also required at Concordia, when working with hazardous materials. Concordia defines these types of materials “as a combination of waste, which because of its quantity, concentration, physical or chemical characteristics may pose a substantial present or potential threat to human health or the environment when improperly treated, stored, disposed of, transported, or otherwise managed” (*Hazardous Waste Disposal*, 2021). Monona Rossol, author of “The Artist’s Complete Health and Safety Guide”, would agree. “Respirator programs should be instituted in schools, universities” (Rossol, 2001, p.78).

Rossol describes two approaches to fit testing:

“*Qualitative fit testing* depends on the wearer’s ability to sense and odour, taste, or irritation from one of four approved chemicals delivered in a controlled way to an enclosure around the user’s head. (2001, p.80).

“*Quantitative fit testing* is done by measuring and comparing the pressure or contaminants inside and outside the mask or respirator.” This type of testing is “applicable to all types of respirators, and are more accurate” (2001, p.80)

I learned, speaking with colleague Lina Filacchione in the Environmental Health and Safety Department at Concordia, that fit testing is “a course requirement based on their use of hazardous materials or potential exposure to dust (ex. most Ceramics and Fibres classes)” (L. Filacchione, personnel communication, January 14, 2022).

From here, I set out to discover how health and safety are taught at Concordia and more specifically in studio-based fine arts departments and programs by first evaluating what I could find on the Concordia website. The first document I found that seemed to have good information was the “Standard Operating Procedures – General Laboratory Work” (Concordia, 2018). I only found this document by searching within the main Concordia website and did not find it when navigating through the Fine Arts sub-site under the Health and Safety menu. This is concerning as this kind of information should be easily accessible for students in any department that deals with potentially harmful materials. But I digress. What I appreciated about the document is that it breaks down considerations before, during and after working on a project. What I am curious about is when is this document used and by whom? It is fairly generalist so it could apply across several departments.

The second document I came upon was the “Studio Arts Chemical Safety Guidelines” (Concordia, 2019). It outlines that:

Students, faculty members, technicians and visitors working in Concordia University studios or workshops with artist materials must be aware of the hazards associated with art supplies and equipment. They must know where to obtain more information on the products they use, how to interpret this information, how to protect themselves and how to properly dispose of hazardous waste materials.” (Concordia, 2019)

Most useful in this document is the review of the WHMIS 2015 Hazard Pictograms & Classes.

WHMIS stands for the Workplace Hazardous Materials Information System. It is required training for anyone, student, staff or faculty working with hazardous materials. “During “normal” times, *WHMIS for Fine Arts* training is provided live (about 10 sessions/year since 2018, 4h/training) by me. The validity of the certification is 3 years” (Y. M. Chabre, personnel communication, January 17, 2022).

The remainder of the document outlines the different hazards per studio-based arts department/program or common materials used in their corresponding studios. But I question how much this document is read. How does this document complement or repeat information is given during a WHMIS training? Has this document been made into short videos and/or is it printed on posters in studios and workshops?

There is very little information on disposal in this document and upon further reading of the different types of disposals, I can understand why. Depending on the type of material, it must be disposed of in a very particular way. However, why not include a section for each material type that includes disposal procedures?

The last document I found was the “Environmental Health and Safety (EHS) Guideline for Training Requirements” (Concordia, 2016). It more clearly lays out what types of training faculty, staff or students need to handle hazardous materials. Of most interest is the section that pertains to “Studio Arts Personnel”. As you can see when “Studio Arts Personnel” need to work with “chemicals, biological or other hazardous materials”, they need to have taken the WHMIS 1988/2015 for Fine Arts

training. Furthermore, if they need to use a half-face respirator based on the type of materials they are handling, they are required to take a fit test, which is valid for one year.

Health and Safety elsewhere in Canada

Knowing what I knew now about how Concordia approached health and safety, I was curious how other studio-based fine arts institutions compared in terms of their publicly available procedures on their respective websites. I set to find out and was quite surprised by the results. I searched extensively the websites of The Ontario College of Art and Design University (OCADU), Emily Carr University of Art and Design and Nova Scotia College of Art and Design University (NSCAD U). Of those three comparable institutions, OCADU had the most publicly available information. Both Emily Carr and NSCAD U seemed to have that type of information behind login pages, so not publicly accessible.

OCAD University

OCADU's website was similar to Concordia's, in that it took some time before I got to the page where they laid out their "Shop and Studios Safety Program". What I did find most useful was the "Safe Operating Procedures (SOP)" (*Shops & Studios Safety Program, 2020*) and "Chemical Matrix" (*Shops & Studios Safety Program, 2020*) documents. Each department/program has its own SOP guide that is specific to the equipment used. This is true of the Chemical Matrix guide as well. Most useful in both documents are the personal protective equipment (PPE) guidelines that either state they are required or recommended. Most useful in the Chemical Matrix documents were the columns on disposal, dividing up into non-hazardous disposal, hazardous waste disposal and sanitary drain. Maybe it is the designer in me, but I found that the Chemical Matrix documents really bring all the relevant material handling information into a clear, although slightly overwhelming, grid format. I especially appreciate the Key Hazardous Properties, Storage Location, Recommended Personal Protective

Equipment and Disposal sections. These offer some suggestions to explore in my Future Directions chapter.

With all the health and safety procedures in mind, I developed the following questions for my participants with regards to health and safety:

Pre-art making

1. How do you talk to students about materials before they begin a project?
2. How does the environmental impact of materials affect the way you teach?

Post-art creation

1. Do you talk/demonstrate to your students about the different types of disposal? What do these include?

Time

Prior to beginning my master's thesis, I developed a perception that studio-based fine arts departments and programs were all about constant and regular art production, rather than fostering/cultivating artists. I saw what I thought to be a disregard for what one produced as an artist in the discarded canvases I picked up in my material recuperation rounds in my work at CUCCR. I was having regular conversations with students and technical support staff colleagues about the number of projects on students' plates, that were seemingly affecting their decision-making when it came to material choices. Students were opting for something toxic, but that accomplished the goal of their project, rather than having more time to explore more planet-friendly alternatives. It made me wonder, where was this need for speed coming from? Were professors to blame or was there a larger systemic issue at play here. In *The Slow Professor* (Berg & Seeber, 2017), Maggie Berg and Barbara K. Seeber ask a similar question, "what is wrong with the academic system?" Charles Kamwisher and Katerina Rüedi Ray provide an answer in their 2018 article, "Out-of-phase: Studio Art, Time, and

Professionalization in the Academy – A Conversation:” “Studio practice requires the temporal and physical space to play, experiment, and reflect—conditions difficult to maintain within colleges and universities increasingly driven by market forces and performance measures” (p. 66). So, is the commercialization of the art field driving the need for speed? I got a sense of these “market forces” when, a number of years ago, I was invited to a meet-and-greet with those soon-to-be graduating students from the Design and Computation Arts department at Concordia. At first, I felt at ease as I watched the students present their projects. However, as I started to interact with them in the networking part of the session, I came to understand that most if not all were going to go work for giant marketing companies, hoping to be the next design star, for lack of a better term. It made me uncomfortable because it made me think that this was not the way I remember that department fostering young designers, ones that wanted to sell their souls to big multinationals.

With all this in mind, I wanted to understand how time played with production in studio-based fine arts courses by asking the following question:

1. How many projects do you usually ask students to complete in a semester?

Although simple in its asking, this question, will, I hope, lead to an ongoing discussion about how the number of projects assigned leads to the quality of work received.

Natural materials

Foraging in Shaughnessy Village

So why did I want to understand more about natural material used in studio-based Fine Arts courses? I believe it all stemmed from a project in a 2017 graduate Art Education studio course entitled, The Right to the City. The course was set at the Atwater Library and asked us to explore the

Shaughnessy Village, which stretches east from the library to Concordia's downtown campus. It is one of the most densely populated areas in Montreal with a lot of history. In my final project, I set out to see if I could find edible plants on public land. What I discovered was a wide variety of fruiting and medicinal plants, that were either recently planted or well established before much of the downtown was built.



Figure 02: URGNforaged – sumac Photo: A. Weeks, 2017

Foraging for ink

Inspired by my foraging for edible plants, I wanted to know what was out there in the city to make art supplies. One example I found is Jason Logan of the Toronto Ink Company. In 2018, he published the book *Make Ink: A Forager's Guide to Natural Inkmaking*. The book follows Logan as he forages through Toronto finding different objects and materials to use as the base for inks. This foraging also led him to start a small, what you could call artisanal, ink company. I have yet to make any of the inks based on the recipes in his book, but I believe I first came upon his work when I was searching for black walnut ink. In a conversation with a colleague at McMaster University in Hamilton, Ontario, I learned that they have students use ink made from black walnut shells. The ink is made locally in Guelph, a material sourcing recommendation for students in Printmaking. The fact that you could make ink from walnuts was news to me, so I started to look around for sources and came upon Logan's *Make Ink*. I have continued the search here at home in Montreal and I am just waiting for nearby black walnut trees to mature, which could take many years. A resource I found helpful in my search was a tree map of Montreal which shows all public trees and their characteristics, including their diameter when they were planted. Every spring and summer, I consult the map once more and go on walks to see how the walnuts and other ink potential trees are growing.

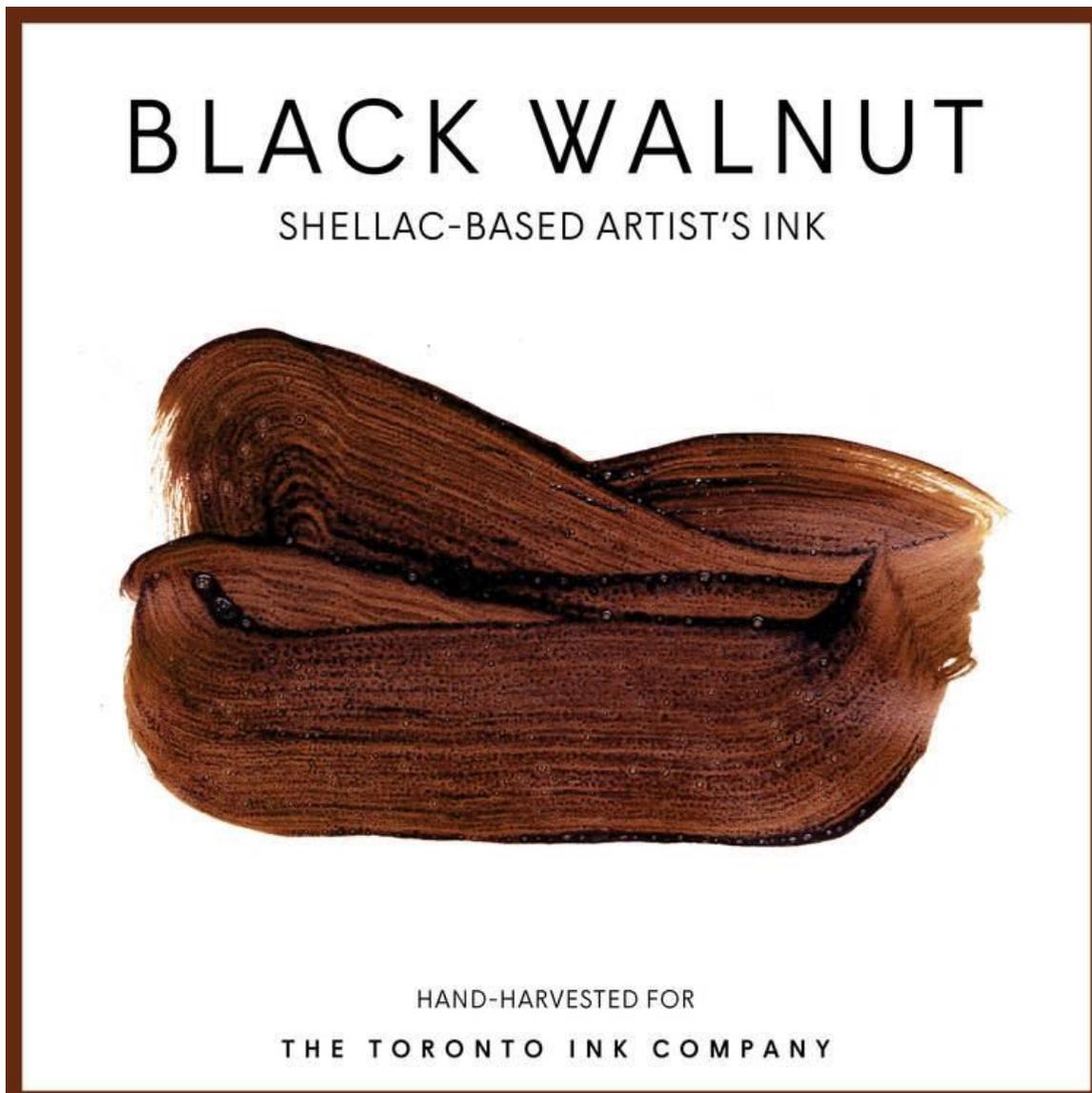


Figure 03: Black Walnut Photo: Toronto Ink Company 2021

Artist pallet in nature

Another book that is a little more back-to-the-land is *The Organic Artist* (2015) by Nick Neddo. Neddo is based in Vermont and is both author and an earth-based artist. What I appreciate about his book is that he goes a step beyond inks and shows artists how they can make most of their art supplies and tools with materials found in nature. I will explore this subject further in the Future Directions chapter.



Figure 04: Handmade brushes

Photo: Susan Teare 2021

Paint from the earth

In my most recent searches for naturally made art supplies, I came upon family-run and Indigenous-owned Beam Paints in M'Chigeeng First Nation on Manitoulin Island. Anong Migwans Beam, who was raised by artist parents, has been collecting pigments for paints since she was a child.



Figure 05: Neebin Giizis'aande Summer Sun Red Photo: Beam Paints 2021

All this natural material exploration led to ask the following questions to my participants:

Pre-art making

- How do you talk to students about materials before they begin a project?
- How does the environmental impact of materials affect the way you teach?

- How do you talk to students about what will happen to their artwork/project after it is complete?
 - Do you talk about value?
 - Do you talk about reuse, recycling, biodegradability?
- Do you allow students to use non-conventional mediums? (i.e., using wood instead of canvas for painting)

Going on an assumption that natural materials are more readily available, I also asked my participants this as one of my closing questions:

- If art supplies were no longer commercially available, how would you teach material practice?

My hope was and is to see how resilient and flexible they could be in finding different approaches to materiality without global access.

CHAPTER THREE

Case study Research

In my case study research, I decided to conduct interviews with support staff technicians and faculty members, because, as a former technician myself I believe that support staff can often have just as much to offer pedagogically as professors do. I chose participants from one department and five programs within the Studio Arts department because they are the most hands-on when it comes to materials. That is not to say that Art Education, Photography, Art History, Intermedia, the Mel Hoppenheim School of Cinema, Contemporary Dance, Creative Arts Therapies, Music and Theatre don't warrant investigation as well. My hope is that what I have uncovered and the directions that people are taking can be used and applied in departments and programs across the Faculty of Fine Arts. My previous independent study research also guided me in my selection process. In those studies, I not only spoke to the technical staff here at Concordia but also to fine arts professors at McMaster University and the Ontario College of Art and Design. Through this preliminary research, it led me to want to dig deeper into what was happening in my own backyard. How are we teaching sustainable material practice at Concordia University? Through the process of coding my interview transcripts with participants, four themes came to the surface: waste, health and safety, time, and natural materials. I will write about each, in turn, integrating the relevant observations made by those I interviewed, categorized by the various sub-themes that emerged.

But first, I wish to present to you my participants or at this point, my colleagues, in sustainability:

Elaine Denis - Technician, Fibres and Material Practices / Studio Arts

Denis has been a technician in Fibres and Material Practices since 1985. In her role, she not only introduces new students to the tools and techniques in the Fibres studios but also helps to guide students through the making process as they make their way through the program. I have been working with Denis over the last few years as part of my work at Concordia University's Centre for Creative Reuse (CUCCR). As the Centre became established, we started to work with technicians and faculty members like Denis to identify and collect materials from Fine Arts programs and departments at the end of each semester. Campus reclaim-a-thons, as we now call these events, are one of the main ways that we get "new" materials on the shelves at the Centre, but they also are the main way that departments and programs have been able to reduce their landfill waste. The Fibres program, thanks to Denis and her colleagues, is now a regular material donor to CUCCR.

Joseph Siddiqi - Part-Time Faculty, Painting & Drawing / Studio Arts

Siddiqi has been teaching in the Painting and Drawing program since 2007. Apart from his work at Concordia, he is a practicing painter, mainly with oils. I heard of him through a student who volunteered at CUCCR and described the hands-on approach that Siddiqi was taking by teaching students how to make paints from scratch. Through the interview process, I got to know more about those processes and Siddiqi's approach to teaching as well as the shift he made in his own artistic practice.

Kelly Jazvac - Associate Professor, Sculpture / Studio Arts

Jazvac has been teaching in the Sculpture program since 2018. I believe I heard of Jazvac before she even started teaching at Concordia, through conversations in a sustainability meeting. All

good things. She was bringing a new perspective to the Sculpture program, and you'll read more about that below. I first connected with Jazvac in the spring of 2018 when we were conducting our second campus reclaim-a-thon. With Jazvac's help, we really focused on the sculpture studios as a source for reusable materials. Since that time, reuse has become more normalized, and the studios now have their own internal reuse process.

Marie-Pier Laverdière, Technician, Ceramics & Sculpture / Studio Arts

Laverdière has been a technician in Ceramics and Sculpture programs since 2015. By covering two programs within the Studio Arts department, she has the potential to influence a lot of material choices as students make their way through Ceramics and Sculpture. Much like Denis and Jazvac, I work with Laverdière in recuperating materials from the ceramics and sculpture studios. Through working together, we have started to inspire each other to find new ways to think about the waste coming out of Fine Arts studio spaces.

Martin Racine, Professor & Graduate Program Director / Design & Computation Arts

Racine has been a professor in the Design and Computation Arts since 1999. He was one of my professors when I did my undergraduate degree in Design in the early 2000s. When I was a student, I appreciated his approach to design and sustainability and through the interview process, I was able to catch up on what's happening in Design at Concordia.

Waste

A natural place to start is the subject that occupies my daily professional life. But it was also the impetus for this master's degree. "Why was there so much usable waste coming out of the fine arts?" In the accounts below I aim to highlight what my participants are doing in their respective programs and departments to curb waste or look at it in new ways.

A big pedagogical shift

In the summer of 2019, materials, or rather a large amount of ceramic waste caused a pedagogical shift in the Ceramics program. As Laverdière describes it, “We reached a breaking point” (M-P. Laverdière, personal communication, November 4, 2019). For years there was almost no limit to how many projects students could fire in the kilns. Once raw clay is fired, it is no longer reusable. But that summer, 500 kilos of fired clay had taken over the ceramic studios. It was a collection of glaze experiments, shape and form explorations, and mainly unwanted projects. Something had to change. But how? The main change was to focus on creating a glaze library to reduce trial and error in glazing. A library already existed, but the idea was and is to expand it with each passing year. The library is meant to be the reference so that when a student is ready to finally glaze, they can get a sense of how their piece will turn out before firing their whole project. So far, it seems to be working in reducing wastage caused by making what are considered ‘mistakes’ in glazing.

This new direction has also changed pedagogy in another way. Students now spend much more time experimenting with shape and form. This way, by the time they are ready to fire, they have spent a lot of time with their piece and are more likely to value it once it is fired. “As long as we stay raw and natural, there’s no waste at all,” says Laverdière. Beyond the clay itself, students get creative with making tools too. Laverdière describes students even making their “own carving tools out of old windshield wipers” or other scraps of materials around the studios. You could say that the ceramics program has really made big strides to close the loop on their material waste.

However, the sculpture program was still a big question mark in my research until I interviewed Jazvac, an associate professor in the program. In my time working in the Creative & Applied Arts at Dawson College, I saw so much waste coming out of the Visual Arts department. It was as though no

thought had been given to how students were creating. When I began recuperating materials from departments at the end of the school year at Concordia, I felt much the same way. So much glue. So many seemingly unnecessary holes through once usable objects. But then Jazvac showed me an alternative approach.

Collapse, dissolve, care

In her introductory class, Jazvac presents a project called, “Collapse, dissolve, care.” The sculptural installation project is pretty open, but it has to abide by two rules. “It has to be free from cliché and it can’t end up in the garbage afterward” (K. Jazvac, personal communication, November 11, 2019). To a first-year sculpture student, that might be a daunting task. But Jazvac gives them strategies for success. “Maybe they make something that dissolves. Maybe it's made out of salt and they do a performance where they pour water and it disappears down the drain” (K. Jazvac, personal communication, November 11, 2019). For the “collapse” part, “they make something kind of like a tent that can get really large, but they can take it apart and transport it easily” (K. Jazvac, personal communication, November 11, 2019). This echoes a shift that Laverdière sees with the pedagogy that Jazvac is bringing to the program. That as a “sculpture artist, you have to create while thinking about disassembly, transportability and storage” (K. Jazvac, personal communication, November 11, 2019).

The care scenario was most appealing to me in that Jazvac encourages students to make something “that they are so invested in that they don't want to throw it out” (K. Jazvac, personal communication, November 11, 2019). This draws a parallel to an approach that Racine, professor in Design & Computation Arts, takes with many projects in his department. He encourages students to think that “you’re designing your dream object. You are both the designer and the client” (M. Racine, personal communication, October 31, 2019). By taking this approach he sees that students not only put

more care into the making of their work but that they hold onto their project once they've been graded on it because it's literally theirs.

Create for disassembly

To echo back to Jazvac's "collapse" approach is the ethos of "design for disassembly" which Racine embeds in his curriculum. It's quite a simple concept and it is reinforced by the fact that Racine has banned the use of "glues and toxic materials" in his courses. So "students need to come up with ways to assemble their projects in different ways" (M. Racine, personal communication, October 31, 2019). And this means thinking about how their project will come apart in the end too. An interesting concept that we could be embedded in the curriculum across Fine Arts, is "creation for disassembly".

Salvaging for supplies

There is this sense from both Jazvac and Racine of, why do students need to buy materials to make something? At a conference she attended in September 2019, Jazvac remembers "presenter after presenter getting up and saying that we have reached the point where most resources on Earth are now out of the ground rather than in the ground" (K. Jazvac, personal communication, November 11, 2019). Sculpture, Jazvac exclaims, "is an area that's very amenable to recycling" and that she's seeing the shift that's happened in students' work since places like the Centre for Creative Reuse opened on campus. Racine says, "we favour the reuse of materials." And in most of the projects he assigns, "students are not allowed to buy any materials, they have to find their materials" (M. Racine, personal communication, October 31, 2019). This approach tackles the waste issue, but it also tackles an issue that often affects a lot of students: the expense of buying materials. I find that it also extends the classroom or studio out into the rest of the city. The challenge of the material hunt can be quite

invigorating. Jazvac sees that “salvaging is going to be the future”, and with now more human-made mass out of the ground than there is left in the ground, she is quite right.

Clothes the cycle

In the Fibres department, Denis describes, “students will often wear what they make, incorporate it into something else, felt wool garments to make art or make paper from the fabric they wove or dyed.” So, taking Jazvac and Racine’s idea of care and extending it even further by being so proud of their work that they celebrate it by showing it off to the world. “They are very aware. I think it comes naturally”, Denis says of students’ understanding of where their waste might go if they don’t think about the whole lifecycle of their project. Siddiqi, a part-time professor in Painting and Drawing, is also trying to instil this in his students, but in a slightly different way. He puts an emphasis on well-made tools and materials, and even shows students how to build their own wooden canvases (stretchers). “If a stretcher is well made, you just keep using them”, Siddiqi often reiterates in the studio. But this approach also harkens back to Jazvac’s emphasis on care. By having a student learn the basics of making a painting, truly from the frame up, they become so much more invested in the stretcher, but especially what gets painted on it. Siddiqi also opens students to the possibility of re-stretching their canvas by taking the “canvas off the structure, turning it around, painting on the backside, for example, some never think of doing that.”

Racine in Design has come to realize that “we can’t teach design as we did at the Bauhaus.¹ It was the model and has been the model forever. And it’s still a great model. At one point there’s something that’s left behind. You know, we need to consider materials, the selection of materials,

¹ The Bauhaus was a German art school model operational from 1919 to 1933 that combined arts and crafts approaches, became notable for its modernist, geometric approach to design, and whose aesthetic and approaches have been very influential in teaching and making art/design, now even 100 years later. *[feel free to rephrase or add, but we need a potted description here, for uninitiated readers.]*

transformation, and then what happens after?” A more of a whole life cycle approach to design, that could also apply to other studio-based arts pedagogy.

Health & Safety

Naturally, health and safety are a big part of the pedagogy in these programs often deal with materials that have the potential to be hazardous. Here, I describe how each sustainability colleague handles being safe and healthy in the studios, outline challenges students faced and suggest how the practices learned can be used outside school.

Starting on the right foot

One of the first things that Denis does when she meets first-year students is have a “safety talk”. This seminar takes place in “week three, once the class group has stabilized” (E. Denis, personal communication, November 1, 2019). These kinds of seminars are common across the studio-based fine arts programs at Concordia. Over time, Denis has developed a very comprehensive health and safety talk. It centres on health risks, minimizing exposure, PPE (personal protective equipment), studio procedures, WHMIS, and waste disposal. She even uses the old angel and devil on one's shoulder analogy in a video to make it clear what gets disposed of where. A Fibres student recently completed an apprenticeship on natural dyeing techniques, with Denis playing a supervisory role. While the results of using natural dyes on natural fibres were quite beautiful, the alum mordanting baths could not be poured down the drain and were considered hazardous waste because of “[their] quantity, concentration, physical or chemical characteristics may” have posed “a substantial present or potential threat to human health or the environment” (*Hazardous Waste Disposal*, 2021).

A shift in the air

For Siddiqi in Painting Drawing, a shift in health and safety came for him when trying to save money on studio space. By moving his painting studio into his home, he came to realize that some of the materials he was using in an open studio space were not well suited for a small home studio. “I was living and working in the same place. And very quickly, I realized that I needed to, to get a handle on all the vapours and all the fumes that were coming off the solvent, these turpentines” (J. Siddiqi, personal communication, December 1, 2020). So, just like many students learning to paint, he started experimenting with different techniques, varnishes, and solvents. It took some trial and error, but he came upon solutions. One was to “use smaller brushes and make sort of smaller paintings too” (J. Siddiqi, personal communication, December 1, 2020). He has been seeing great results from using a “damar painting medium made with citrus thinner,” product made by a Canadian company called Eco-house (J. Siddiqi, personal communication, December 1, 2020). He was even able to replace the turpentine for cleaning with a low vapour mineral spirit for artists. He is now teaching these new techniques in class, and it is reducing the health risks of his students, especially those that have set up their own home studios.

Denis applies a similar approach in Fibres. Students are shown how to select products that have a limited environmental impact, water-based inks for example. They are taught how to prepare their pastes and dye baths themselves on an as-needed basis. By pigmenting their own inks instead of buying large amounts of pre-pigmented colours, students save money and materials. These are valuable skills that they take with them into their studios and the workplace after graduation.

Not safe? Don't buy that!

For Jazvac, there's a very simple approach to health and safety that she presents to students early in the school year. There are so many toxic materials available to students and she tells them, "If they are not good for you, they're not good for me, they're not good to have in the school." All undergraduate sculpture students are required to take the WHMIS training. The "premise of WHMIS is, first look for a substitute" (K. Jazvac, personal communication, November 11, 2019). This has become a regular discussion point in the studio. If you are thinking of using something that is toxic or will end up in the landfill, can you find "another way to approach it"? The training helps students, among other things, to identify the hazardous nature of materials based on their SDS sheet. This stands for Safety Data Sheet. Required by law from the product manufacturer, this sheet describes the chemical composition of the material as well as the health precautions when using it. It gives students the "tools to recognize what's happening", Jazvac says. To make conscious decisions. Racine in Design has also been struggling to find alternatives, in particular, for plywood. "In this school, Russian plywood is quite popular for fabrication of furniture and so on. It's a great material, obviously a great finish. But it still uses glue, toxic glues that use formaldehyde" (M. Racine, personal communication, October 31, 2019). But he didn't give up hope and recently found a wood product from Columbia Forest Products called Purebond. This plywood product uses soy-based adhesives instead of formaldehyde adhesives, so it could theoretically go back into the biosphere at the end of its useful life.

Time

Throughout my research, the topic of time has come up, whether prompted by a question or just as part of an approach. The specific question I asked was "How many projects do you usually ask students to complete in a semester?" (Interview Questions Appendix C). A few common themes arose.

Time for technique

An underlying theme that ran through most of the interviews was the importance of teaching techniques. A lot of techniques are taught through a project-based approach, largely because it can often be difficult to teach a technical skill without it being centred around a project. Across the programs and departments interviewed the first year seems to be a foundation year where they get “that technical base” (E. Denis, personal communication, November 1, 2019). This helps students to be more autonomous as they move into the later years of their studies. Even though students get this technical base early on, it “takes practice to know how much print paste to mix” (E. Denis, personal communication, November 1, 2019). To know the “proper dye application method so the dyestuff is not going down the drain” when it comes to dyeing your new weaving (E. Denis, personal communication, November 1, 2019). In Painting and Drawing, Siddiqi will go over the basics: “how to stretch a canvas, how to mix colours, how to arrange a picture, colour wheel, things like that” (J. Siddiqi, personal communication, November 1, 2019). And he usually does a refresher at the beginning of the term for returning students, but more specifically for a student that might just be joining the program. It’s important to take the time to have everyone on the same page so that they can move forward, learning together. This first-semester technical base allows Painting and Drawing students, just like Fibres Students, to be more self-directed by their second semester, applying techniques to a work of their own. In sculpture, it’s about techniques and ideas. Showing the basics of how to use and handle materials and ideas about why you might use wood over metal or the other way around.

Time to experiment

A common theme was leaving time for students to experiment, especially in foundational years. Although it can often clash with concepts of waste reduction, material experimentation is critical for students to form a relationship with a chosen art form. Experimentation is especially needed when

learning new techniques. Siddiqi takes the time in his Materials and Techniques class to show students how to make egg tempera paint. It's a practice in patience. "So, the egg tempera takes time to prepare these panels, which are made with traditional gesso and then learning how to use the tempera which is a very sort of delicate and kind of difficult material to work with. That takes time and then preparing oil grounds on linen also takes time for that to dry before they even get started" (J. Siddiqi, personal communication, December 1, 2020).

Time to think, but not too much

Given time, students can really delve deep into a project as Racine has seen. "Students always need more time". Whether that's for more research, to refine their project or rush because they've left things to the last minute. But this idea of giving more time for a project is a "pedagogical strategy" for Racine. Having regular check-ins and evaluations with students during a long project can give him and students a good sense of trajectory and where adjustments need to be made. This can be adjustments to the direction of the project, the material used or more particularly that it might be time to stop experimenting and move to the next phase. But sometimes, too much time can set off a panic mode in some students. Siddiqi has often seen that giving more time for projects leads to uncertainty about grades, that students would like more frequent feedback if a project is longer. But more often than not, he sees that "they like having more time" (J. Siddiqi, personal communication, November 1, 2019). Denis sees how some students thrive on time. They "start the following day, they'll be researching, working and they'll come to every workshop, they'll make samples, you know, and when the work is ready," it shows (E. Denis, personal communication, November 1, 2019).

Natural materials

When first exploring this theme in my analysis, I wanted to think that going back to using natural materials was the way to go. But through the health and safety theme, I learned that sometimes natural materials can do more harm than good, especially if little care is given them. Here we celebrate nature and the new directions it is taking programs in.

Getting hands dirty

Interestingly enough, one of Concordia's strategic directions encourages students to "Get your hands dirty," encouraging experiential and real-life learning. In the Ceramics program, they really embrace "using rich experiences outside the classroom to deepen learning and effect change (*Get Your Hands Dirty*, 2021). They have started to take field trips to farms outside of Montreal, where there are natural clay veins. The students literally get their hands dirty by "digging up clay on a farmer's land" exclaims Laverdière (M-P. Laverdière, personal communication, November 4, 2019). They then "recondition it back in the studio" and produce new work with the raw Quebec clay. Two students, one Sculpture student and one Ceramics MFA student took harvesting local clay a step further. They noticed that the hole of a construction site close to the building where the Ceramics program is, had what looked like clay at the bottom. They got permission from the construction company and were able to dig up enough clay from the "Crescent Street clay body" to produce several pieces for their thesis project. If that wasn't enough, they even used the "clay as a glaze". The glaze that clay slurry produces is usually brown, "but it's a very efficient glaze," says Laverdière (M-P. Laverdière, personal communication, November 4, 2019). This approach put a new meaning on sourcing materials locally. In this case hyper-locally.

Growing materials

The Design and Computation Arts department has welcomed a new set of materials over the last few years, and its use is really growing. Students at the undergraduate and graduate level are integrating invasive milfoil aquatic plants, kombucha's symbiotic culture of bacteria and yeast (SCOBY) and mycelium into their projects. Rather than starting with a raw material to build their designs, students are growing their materials. They might use a SCOBY to make translucent edible or compostable packaging. Or they will grow mushrooms to become the structure of a metro car. The possibilities seem endless, but there is a growing challenge to using these materials. Space. "It's a tricky thing though, you need a lab environment," says Racine (M. Racine, personal communication, October 31, 2019). The lab spaces in which these biomaterials need to be grown are very makeshift at the moment. They are not controlled like a lab you might see in chemical engineering. This leads to uneven results. The floor space required to grow large sheets of material is also limited. "You need a lot of space" (E. Denis, personal communication, November 1, 2019), who saw student interest in growing indigo plants or using things like SCOBYs in creating alternatives to animal leather. At her previous school, Jazvac had a student that literally grew all materials for her thesis project. "She convinced these agricultural researchers at the university to let her use a plot of their research field" (K. Jazvac, personal communication, November 11, 2019).

Nature over plastic

When it comes to the actual fibres that the Fibres program uses, they prefer all-natural materials, especially when it comes to making paper and for printing and dyeing. This could be cotton, wool, silk, hemp, etc. Synthetics or blended fabrics, besides not being suitable for many fibres processes, "cause big issues" when it comes to recycling (E. Denis, personal communication, November 1, 2019). Not to mention that as synthetic materials break down, they end up as

microplastics in the environment. But Denis gets “a lot of leeway when making purchasing recommendations”, like “dyes and materials for the Art Store” (E. Denis, personal communication, November 1, 2019). This ensures that high-quality materials and dyes that are dependable are available to students. Siddiqi in Painting and Drawing also prefers natural materials, especially when it comes to tools like brushes. There’s something about brushes made with real hair, weasel hair in this case, that “really are able to hold water and kind of deliver the water in a way that's unique and special” (J. Siddiqi, personal communication, November 1, 2019). What he also finds is that natural brushes often last longer, unlike “synthetic nylon brushes”, that “don't last” (J. Siddiqi, personal communication, November 1, 2019). Siddiqi goes a step further and teaches a class where he shows students how to make their own paints. More recently he’s been showing students how to apply fine linen to thin plywood panels to get a nice surface to apply homemade gesso to. A gesso made with “chalk and animal glues”. “You realize how these are very basic materials” and the painting world opens up even more for students (J. Siddiqi, personal communication, December 1, 2020).

In keeping with what my participants are already doing to make changes in the respective areas, I propose, based on their feedback and my research in alternative materials and approaches, directions for the future.

CHAPTER FOUR

COVID

As I sit here approaching the final words of this thesis, the Omicron variant is spreading quickly through the province of Québec. How many months have we been in this pandemic now, almost two years? It feels much longer than that. We, as a society have experienced a huge collective loss. Loss of loved ones, employment, feeling safe walking down the street.

We entered a new pedagogy in the last 22 months. One that asked us to be much more agile than ever before, one that required us, in most cases, to embrace new technology in order to teach and disseminate knowledge and information. In some ways, we are still figuring that part out. Some have embraced teaching over the internet, but many have struggled. Never before in human history have we needed to be on screen for most of our day. It has had a great impact on both teachers and students. However, in some ways, it has made access to education much more flexible. Where once it was a challenge to get to class, now students could be wherever they were and join their classes at their own pace.

Waste

COVID presented a new challenge when it came to studio art projects. How do students create, with little to no access to studio spaces on campus? This was a big challenge in the early days of the pandemic, and it has not completely been resolved.

Some of the ways that students gained access to materials through those early days were the amazing initiative of departments that assembled kits for their students and either mailed them out or

provided pickup appointments for students to come to the converted studio spaces to get their project supplies. For some departments, this was also the case for tools. In the winter semester of 2020, professors saw a big discrepancy when it came to the results they were getting on final projects from students. It was quite clear which students had access to tools and which didn't. So, some departments banded together with the workshops on campus as well as us over at CUCCR to put some tool kits together. To this day, the tool kits are still out in the world, hopefully helping students to better complete their projects.

Health and Safety

Another big concern as students continued to work from home, was how can we as an institution make sure that students are being safe in their dorms, apartments and homes. Unlike working in the well-ventilated studio and workshop spaces on campus, students were now faced with trying to figure out how to convert part of a bedroom into a workspace or where to clean their tools without mixing toxic materials in with their dishes. In August of 2020, the Faculty of Fine Arts, along with the Environmental Health and Safety Department of Concordia, released a guide on how to create art safely at home.

A note on health and safety during COVID

COVID presented a huge health and safety problem, especially during the early days. In a matter of weeks, students were all of a sudden making at home and not in the well-ventilated studios on campus. In response to this, staff and faculty members in Fine Arts worked closely with the Environmental Health and Safety department to develop a web page where students could find the information, they needed to make art at home, safely (*Safety Guidelines for Fine Arts Students Working*

from Home, 2020). The web page is quite extensive, and in a lot of ways, more extensive than the documents previously discussed.

Time

Very quickly, as the reality of how long this pandemic would last set in, did our perception of time change. For me, within the first six months, my mental capacity had reduced by half. Time became elastic. Some days or weeks seemed to drag on forever, but then suddenly it was summertime. In some cases, there was an assumption that we had more time, but that was a dangerous assumption to make. By being thrust into this new reality, many had less time. Now, students, staff and professors who have families, were home full time with little to no childcare support. Workdays became longer as the evenings often became the quiet time when one could more easily concentrate. But it meant, and still means to some extent, that a once-7–8-hour workday was now a 12-14 hour workday. This put a strain on work/education/life balance as nothing has before. And each new wave and variant adds to that strain. This past fall was looking as though we were finally seeing the light at the end of this two-year-long tunnel, but with the Omicron variant making its rounds, it seems as though no end is in sight. In some ways, it feels as though we are back in March of 2020, a place none of us really wants to be.

Materials (some natural)

Students were asked to get creative with their material choices too. With some students experiencing temporary or permanent loss of employment, buying art supplies became more and more of a luxury. But going to the art store became dangerous too, especially in the early days. We didn't know everything we know now about how the virus spread, so the thought of interacting with other humans and touching materials that others touched was very anxiety-inducing. I know it was for me. I

can still remember the strange but somewhat comforting feeling of washing a carton of milk. So, foraging for materials became more of a necessity. At CUCCR, we tried to help too by hosting a webinar on shopping in your own home or seeing the potential in what you already have. When looking in your recycling was a way to get inspired.

Where should we go from here? Well, I think we should continue with a hybrid approach to teaching. It has shown that many classically lecture-based classes don't need to be given in a classroom or hall. They are much more suited to either live or pre-recorded versions of the lecture. The trickiest part of studio-based pedagogy during these times has been studio time. Learning different material transformation or painting techniques is quite difficult by oneself without the professor or technician in the room to guide you. So, what does that mean for the future? More studio spaces and fewer classrooms? Adaptable spaces that can transform from one to another? Do we really need lecture halls anymore? Aren't studio-based arts mostly learning by doing anyways? Apologies, the desks in rows format of teaching just doesn't make much sense in my mind.

Supply chain issues

Another big barrier for students was and still is to some extent as we enter month 23 of the pandemic, is material supply chain issues. These have affected two areas of access to art materials. One is the availability of materials. Because the COVID-19 virus affected people globally, it had an effect on staffing factories globally too. This meant that production slowed down significantly.

And two is the price of materials. Where once a material might have been made in certain parts of the world, now, due to personnel shortages, base material price hikes and other factors, a material must be made elsewhere and in new production facilities and thus the price goes up.

CHAPTER FIVE

Hopes for the future

I have looked most forward to writing this chapter. It is the culmination of all the reading, writing, researching and conversations. As a reminder, my work has been focussed on my research questions: “How are studio-based fine arts students learning about sustainable material practices at Concordia University?”

Three sub-questions to this would be:

What and how are we teaching students about their material choices and safe use and disposal of said materials?

In their coursework, are students given time to explore materials or rushed to production in ways that hamper sustainable material choices?

How might we encourage teaching a slow practice that mindfully engages materials and presents natural alternatives? In other words, this thesis clusters around issues of pedagogy, waste, health and safety, time (slowness), and natural materials. I’ve discussed how these are currently enacted in my Case Study chapter and have in the last chapter just indicated how COVID-19 is affecting sustainable practice in Concordia’s Faculty of Fine Arts. Now, I look forward. I aim to frame each of my four main themes into recommendations based on participant feedback, current student

material practice, connections to Concordia's Sustainability Action Plan and new pedagogical directions.

I would first like to start with what the pedagogical outcome is in the studio-based fine arts departments and programs at Concordia. What types of artists are we trying to form as educators? I posit that the goal, from a pedagogical standpoint, is to help shape earth-conscious artists. Artists that think deeply, select with care, use responsibly and dispose of properly the tools and materials they use in their artistic practices. I think that through how we teach and what we teach, we can help to shape sustainable artists for change.

I wish to use the following from Concordia's Sustainable Action Plan as a guiding principle:

Zero Waste Plan | Waste Management Best Practices | Strategy 11

- Create and sustain a “Zero Waste Culture” at Concordia.

Waste

We have a waste problem, both locally and globally. That much is clear from observations on campus and the numbers presented in *Nature's* journal article, “Global human-made mass exceeds all living biomass” (Elhacham et al., 2020). So how do we approach culture change in waste practices in art pedagogy? I wish to propose 6 Rs to reframe the curriculum: rethink, refuse, reduce, reuse, recycle and rot. Originally 3 R's, reduce, reuse, recycle, the origins are numerous but generally are regarded as being coined by waste management companies in the 1970s. In 2013, author and activist Bea Johnson modified the list and added a few more in her book, *Zero Waste Home: The Ultimate Guide to Simplifying Your Life by Reducing Your Waste*. Her list was and still is: refuse, reduce or reuse, recycle and rot. I would like to bring back a sixth R, to which I was introduced to when I started working in sustainability on campus in late 2006, rethink.

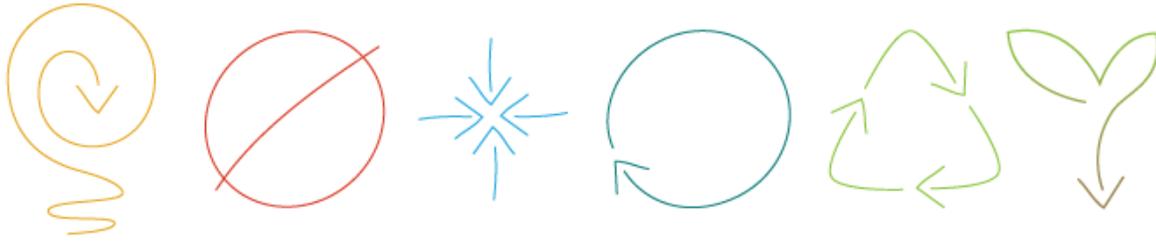


Figure 06: 6 Rs Illustration: A. Weeks 2022

Rethink

This concept might be hard to grasp from a curriculum standpoint because we might think it means we have to throw our syllabi out the window, and maybe in some ways we do. But I'm asking us to rethink how we think about materiality to reduce or eliminate waste. I connect the Ceramics department revamping of curriculum to focus more time on experimentation and less on firing. Using the idea of, "If you're going to make it, make it count" (*PLASTIC HEART: A DIY Fieldguide for Reducing the Environmental Impact of Art Exhibitions.*, 2021). Another way to approach rethink is to change the person for whom the work is intended. By making art for someone other than oneself or a professor, for a loved one, for instance, does your investment in the work increase and thereby your desire to keep it change?

We can also think about it in terms of requiring material life cycle plans from students, particularly in terms of how they are going to deal with waste during the making and post-making processes. It could be as detailed as what they will do with the dust created. Will it become new material? Will it go somewhere to rot? They should be specific. I used a similar approach when teaching in the shop at Dawson College. In order for a student to begin working on their project, they had to present drawings or a storyboard of how they were going to complete it. The drawings not only

helped with their time management and success, but they also cut down significantly on waste because students were making fewer mistakes.

Refuse

Johnson frames this as “refuse what you do not need” (Johnson, *Zero Waste Home*. 2021). This concept can be particularly tricky when considering curriculum shift, especially for art forms that are bound by traditions. But when embraced, ‘refuse’ can help with most of the other Rs. In the fall of 2021, we saw a new influx of students coming into CUCCR. We were so happy to see so many new faces, partly because we had not seen any students in our used material depot for over a year. What we began to learn from discussions with these new student members was that they were required in their Design for the Theatre syllabus, to work with used materials instead of buying new ones. We were very happy to see this shift, one we had seen previously in the Sculpture and Design curriculum, now spreading to the Theatre Department. We also saw many new student members coming in to do their back-to-school shopping. Based on the materials on their list it seemed like they were in the Painting and Drawing program. In particular, they were looking for newsprint, a pretty traditional material for that program. As luck would have it, days earlier we had received some from one of the loading docks. The newsprint was unused, having never been used for a departmental move that didn’t happen. There is enough of it to supply students well into Fall 2022, if they take only what they need, a guiding practice at CUCCR.

Reduce

“By cultivating a cultural interest in fewer, better things, we can reduce our twin propensities toward overconsumption and waste” (Adamson, 2018, p. 136). But how do we know where to reduce? The answer is, to talk about waste. A class might even start by visiting the loading dock area of the building where that class is being held, giving students a real-world understanding of what’s being

thrown away. The curriculum for the given course might even take things a step further and conduct a waste audit of what's in the trash, recycling, and compost bins in or outside the studio. This is not to take the onus off Facilities Management, who normally conducts such audits. It is more about giving students a glimpse at their own and their classmates' waste practices. Are materials ending up in the right places? Are there materials ending up in the recycling or landfill waste that are still usable?

Reuse

An unwritten part of my role in Zero Waste at Concordia is a waste connector, liaison or maybe even matchmaker. In October of 2021, a student in industrial engineering at Concordia reached out looking for materials, materials specifically for a group project to build and test different methods for growing food hydroponically. We scheduled to meet in one of the Centre for Creative Reuse's material depots and during our conversation, I started to understand what they were looking for. Then, it hit me. They needed a growing medium. Often, this is in the form of clay pellets. Who did I know that has a lot of waste clay? Marie-Pier Laverdière in the Ceramics department. I send an email connecting the student and Laverdière together and today, on November 8, 2021, it all came together. Other students on the team came to get specific materials to build their hydroponics system and the student to whom I had originally spoken picks up a whole bucket of ceramic waste from another department down the street. A cycle closes. Some waste gets diverted. New connections are made. Students are thinking differently about where to source their materials from. Is it possible that this pairing has planted a seed in the greenhouse? It was a good day.

Sustainability in Research | Enhance Research Impact | Strategy 10

- Connect Research Expertise

Sustainability in Curriculum | Increase Sustainability Related Courses and Programs | Strategy 4

- Include sustainability research content in courses

Recycle

Recycling has become a touchy subject of late with the media spotlighting the fact that it is not working. A big part of the problem in Québec is that “by allowing paper, glass and plastic to mixed in bins, recycling plants are creating problems for themselves” (Brunnette, *This is what a recycling crisis in Quebec looks like*. 2018). The waste problem has gotten so extreme that on January 1, 2021, the United Nations amended the Bassel Convention to include a new clause “that countries receiving shipments of plastic waste for recycling must be informed of its contents and give permission for those shipments to arrive” (*Countries Must Now Consent to Receive Shipments of Plastic Waste*, 2021). The fact of the matter is, and we saw this in the example of plastiglomerates in Hawaii, plastic is here to stay. So, how can we lessen our dependence on a broken system and manage our own plastic waste right here at Concordia? A relatively new interdisciplinary group of mostly students has come up with a solution. Building off a concept originally started in the Netherlands, the Concordia Precious Plastics Project (CP3) aims to close the loop on the plastic produced on campus. By recuperating recyclable plastics from the waste stream and 3D printing labs, they aim to create a new material economy on campus. They are in the process of setting up several machines on campus to transform plastic waste into new material for use by the campus community. The group has already received interest from professors in not only Fine Arts, but Engineering as well with more signing on in the future. Their model would also apply to reducing the need for students to buy new materials from far away, thus reducing emissions to get the material to campus.

Zero Waste Plan | Explore Innovative Solutions to Waste Reduction and Diversion | Strategy 1

- Sorting Centre & Local Materials Economy

Climate Action Plan | Institutionalize Climate Action | Strategy 1

- Adopt emission reduction policies, plans and procedures

Rot

I want to bring us back to Jazvac's "Keep, Dissolve, Collapse" project to talk about rot.

Particularly dissolve. When salt, a potential material for a project that dissolves, is diluted with water it doesn't truly go away. We could apply this same principle to making rot a part of the waste curriculum and it has the potential to help on both ends of a project lifecycle. A rot-based project could instruct students to make sure that all materials they use can completely decompose. The alternative approach to the project would be that by creating rot, the new material that comes from rot is the basis for the project. Although not rotting in the traditional sense, mycelium is fast becoming a common material used or rather grown among students across disciplines at Concordia. The Design department has certainly paved the way for grown materials and there is a growing interest to continue this research in the Fibres and Materiality department and Sculpture program. For instance, in 2019, Théo Chauvirey completed his masters' thesis in Design on using mycelium as the structure for subway seating. He continues this work, and that with kombucha leather as part of Milieux, an interdisciplinary graduate research institute at Concordia. Materials that are grown in and outside of lab settings continue to be explored in the Design and Computation Arts Department course, Critical Materiality. Most recently in Fall 2021, the latest cohort presented a 3-hour session on their experiments using items in the compost as their base materials. The presentation can be found on Youtube (*2072: Mediated Materiality and Possible Futures*, 2021).

Health and Safety

For my approach to health and safety, I would like to use a new set of R's: rethink, reduce, require and resources.

Reduce

The premise behind WHMIS is to reduce or ideally eliminate the need for hazardous materials, an approach that many departments already use. But reduce how? By researching alternative materials that achieve the same or better result than the material being replaced, without the need to be disposed of as hazardous. I bring us back to Racine's discovery of plywood using soy-based adhesives instead of formaldehyde-based ones, PureBond. Theoretically, if there are no inorganic materials included in the adhesive recipe, the plywood is made up of wood and soy, both biodegradable materials. I reached out to Columbia Forest Products to find out more but have yet to hear back. From a waste standpoint, it would greatly reduce the waste coming out of the core technical shops in Fine Arts at Concordia, with the potential to use the waste wood in the garden and food production on campus.

Require

Health and safety is a serious matter, especially when working with materials that have the potential to cause lifelong health problems if not handled correctly. In this regard, I would like to recommend that we take an approach taken in the Fibres and Materials Practices and have students sign off on studio safety protocols. This would ensure that they have at least understood how to be safe in the studios they will be using in their degrees.

The other item I would potentially require is a clean-up plan. If a student doesn't have time to clean-up, then they won't have time to create. Sounds a bit extreme, but I can relate to this from my time running the shop in Industrial Design at Dawson. I would often have students start cleaning up at least half an hour before the shop would close. It meant having to stop students mid-project sometimes, which was not my favourite part, but it meant a clean and safe shop for when the doors opened the next day. It also meant, in most cases that students were not rushing with harmful materials making mistakes and avoiding injury or material mess. A clean studio is a safe studio.

Resources

Unify health and safety signage across all studios, classrooms, shops and labs where materials are being used, particularly hazardous materials. I would recommend text-light and graphic- or image-heavy signage to be as clear and concise as possible. In this same vein, standardize where hazardous waste is temporarily stored for pickup using the same bold colour approach that Concordia uses for identifying buildings and spaces on campus. The same can be said about explaining where all the waste stations are so that students know where to put any waste they might produce. Unifying signage and locations for those would greatly help with reducing contamination.

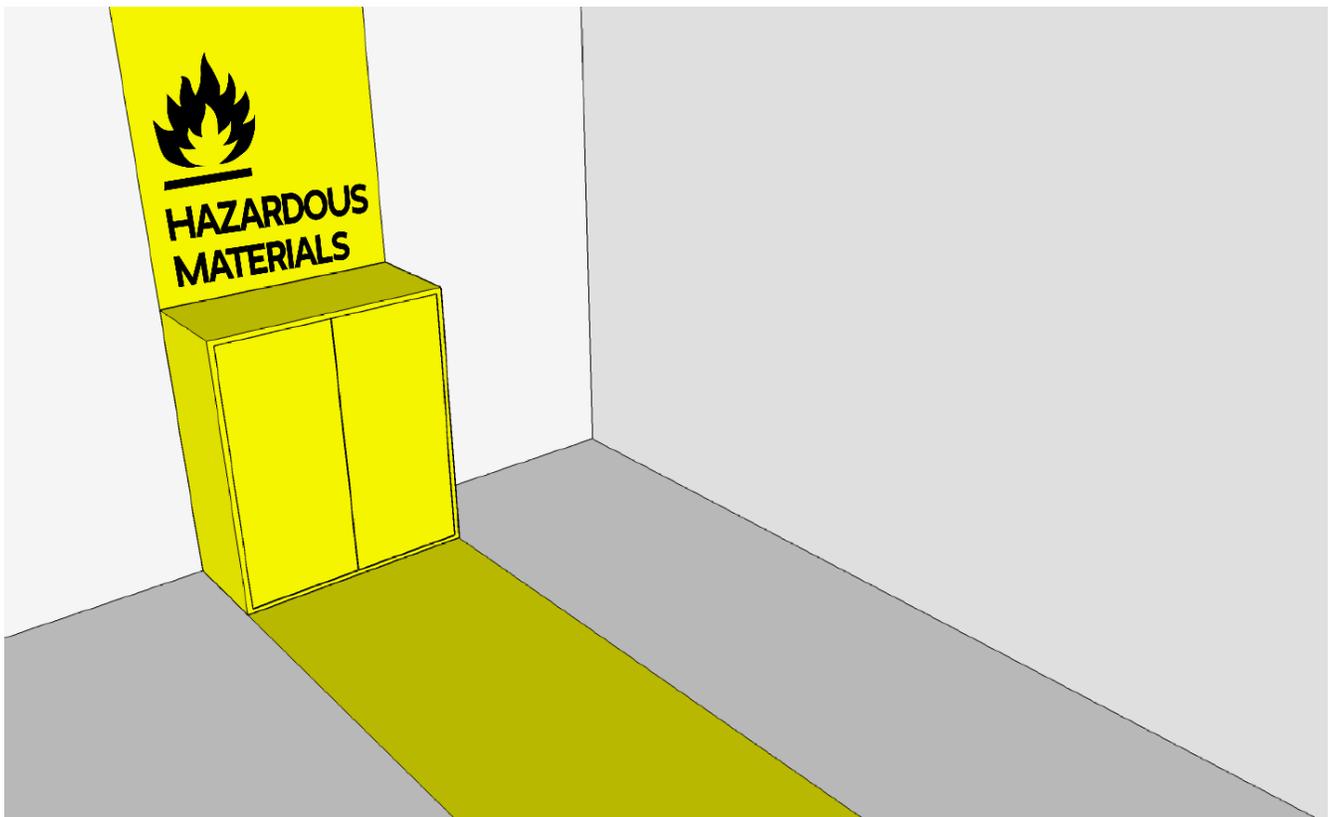


Figure 07: Bold hazardous materials cabinet illustration Illustration: A. Weeks 2022

Beyond a COVID perspective, the ‘creating art safely at home’ web page should continue to exist even after the pandemic subsides. It has, I’m sure, become a great resource for students to strengthen their art practice at home and can only make art creation safer in the long run. I would go a step further and

give time to faculty and staff to create videos, a more digestible format for today's students, on proper use and disposal of materials.

Time & Natural Materials

“The studio can become a radical site; that is, a space in which students learn the value of working out-of-phase, resisting and re-defining narrow notions of productivity.” (Kamischer, C., & Rüedi Ray, K., 2017, p. 67)

Here I would like to use a set of E's instead to tackle the issue of time in pedagogy: empower, embrace, expand and enrich.

Empower

In my closing interview questions, I asked the following question:

- What would you like to see happen in Concordia's Faculty of Fine Arts with respect to the teaching of sustainable practices in artmaking?

The common thread of the answer from participants was “more time.”

Time to learn

For faculty and technical support staff, ‘time to learn’ means remunerated time to improve their skills as educators. This could be working with the Centre for Teaching and Learning at Concordia to find new ways of engaging students in the content. But, when it comes to materials, this could mean attending conferences, workshops, tradeshow, etc, in order to engage students with the latest materials for their art practice. I think this is especially important for educators in studio-based fine arts departments and programs as new materials are being created all the time and artforms are ever-changing.

Time to rediscover

Although the pandemic has taken a toll on us all, Mitch Mitchell in Print Media decided to take time during lockdown to make printing presses. By doing so he not only fell back in love with the press but found ways of simplifying the process, lowering the cost and employing some students in the process. By refining his sustainable material practice he instilled that practice in his students and in fellow printmakers.

Embrace

As an institution that celebrates experiential learning, I would recommend that we embrace time to experiment. This should be at the heart of all studio-based fine arts pedagogy, just look at the motto. “I learned X, by doing Y”.



Figure 08: Experiential Learning logo Illustration: Concordia University 2021

Inspired by the Ceramics field trip to harvest clay from a farmers' field, I suggest a similar approach for the other studio-based departments and programs.

Wood: field trip to Bois Public

Bois Public is a growing Montreal-based company salvaging city trees for reuse in the design and architecture industry in the city. In an ideal scenario, students would visit the site of a municipal tree being cut down for reuse. They would then visit the factory where the trees are cut and prepared to be sold around Montreal and across the province.

[I would even add a reclaim suggestion in here for our own campuses in that we reclaim trees that need to be cut down by partnering with Bois Public]

Climate Action Plan | Institutionalize Climate Action | Strategy 1

- Adopt emissions reduction policies, plans and procedures.

Paper: Field trip to Papeterie Saint-Armand

This activity is already likely on the list of a few paper-centric departments, but It's a good one. Papeterie St-Armand is a family owned and run paper mill that has been operating in the St-Henri neighbourhood of Montreal for over 40 years. They make paper of all qualities, including archival paper, out of natural fibre fabric scraps and they even have old printing presses at the mill. Not only would students see how paper is made start to finish, visiting the mill is likely to inspire students to make their own. A great way to experiment with all types of materials.

Let us embrace time to expand even further in different ways across departments.

Painting and Drawing

Expand on Siddiqi's "Materials and Techniques for the Contemporary Painter" course and go to the extent of making all of one's supplies for a semester-long project. Some might say this would be a punishment to students because why couldn't they just go to the store and buy supplies? But I think this imperative would, just like Siddiqi's approach to egg tempera paint, help students forge a deeper connection with their artistic practice. Nick Neddo's book (Neddo, 2015) could be required reading in this case.

Ceramics

I want to suggest expanding on the experience of the student who harvested clay in Montreal. Is there an opportunity to work with real estate developers in the downtown core to have students harvest clay from job sites before the buildings go up? Or are there clay veins on the island of Montreal that could be explored? Outside of Concordia, I am inspired by Pascal Baudar, who is “a self-styled “culinary alchemist” (*Urban Outdoor Skills*, 2021). But he’s also a wild clay enthusiast. I am hoping that his next book is about creating ceramics with what he forages in the wild.

Design

Continue building on the reuse of furniture history in the department by looking at the older, unwanted furniture at Concordia as a new design challenge for students. During COVID I worked with colleagues in the Planning department to reclaim over 200 classroom chair tops. They have never had legs, so there is indeed a design challenge to create some. There are also a lot of unwanted burgundy desks in the furniture graveyards, that, if looked at differently, can be seen as raw material.

Sculpture

Exploring new materials through new or reintroduced techniques. Could students take over a studio on campus and turn it into a literal living laboratory, growing their sculptures with mycelium, grasses, vines, etc.? If outside, the students would choose for their work to be permanent and sprout back in the spring or more temporary and be left to degrade back into the earth.

Expand

The biggest barrier to most if not all this biomaterial research is the space to experiment. As the field of biomaterials grows, institutions like Concordia are struggling to provide adequate square footage where these materials can thrive in a controlled environment. As the Faculty of Fine Arts heads

into strategic planning sessions to design their future it is critical that they devote time to keeping spaces agile to adapt to changing material interests.

Enrich

As each semester passes, more and more students across disciplines are interested in new materials, especially ones that are grown. As Jazvac described her experience teaching at Western University, before she came to Concordia, “I had a student who convinced these agricultural researchers to let her use a plot in their research field to grow her material, mainly flax, for her thesis show” (K. Jazvac, personal communication, November 11, 2019). And why not at Concordia!? In August 2021, I attended my second Campus Master Plan meeting. In the groups I was in, with key stakeholders from across the university, we focused on green spaces. I remember rallying with others to phase out lawns within the next five years. The main reason for this was that they were not giving anything back to us except for a place to have a picnic, so why not grow plants, native to where Concordia is situated. To bring that a step further, why not grow plants that would be useful for art creation. Grasses that could be used in Sculpture or Fibres and materiality projects. Flowers and vegetables that could be used in new fabric dyeing techniques, creating pigments for bold colours in Print Media or as ingredients in biomaterials in Design. A new project in Concordia’s Textiles and Materiality research cluster has emerged called the “STAIN Lab”. In brief conversations with the people behind the project, while helping them find materials for their mobile dye lab, I learned that the project aims to push the boundaries of natural pigments. I look forward to learning more about their initiative and connecting them to other departments and programs that can use their growing expertise.

Sustainability in Research | Enhance Research Impact | Strategy 10

- Connect Research Expertise

I found it so inspiring to finish with the words above as there is already so much happening here at the university – a great foundation of a sustainable material practice that can only blossom and grow from

here. The key will be to keep those researching and developing these new practices to stay connected and to share with the broader Concordia community. It is when we share positive progress that lasting change happens.

So, how are studio-based fine arts students learning about sustainable material practices at Concordia University? Quite well I think based on my findings. But what I hope is that this last chapter helps to shape within the Faculty of Fine Arts at Concordia a unified approach to sustainable material practice and pedagogy.

With that, I suggest the following reading list:

Why Materials Matter: Responsible Design for a Better World by Seetal Solanki (Solanki & Corbin, 2018).

and visiting these two websites on a regular basis for inspiration:

<https://materiom.org/>

<https://www.futurematerialsbank.com/>

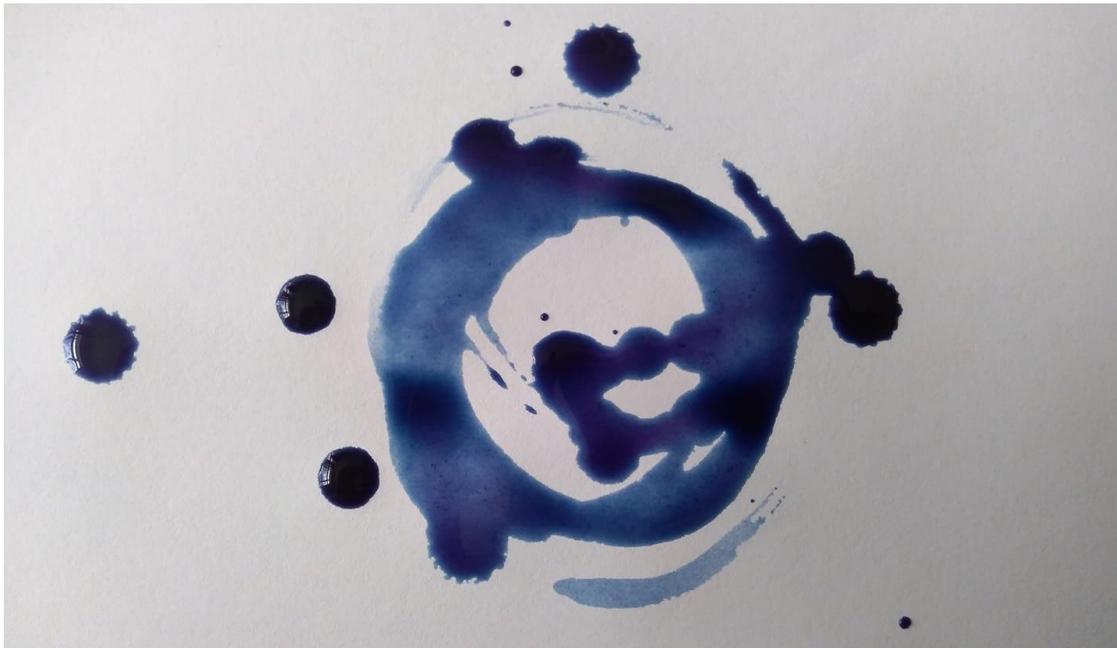


Figure 09: Sauerkraut ink Photo: A. Weeks 2020

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INFORMATION AND CONSENT FORM

Study Title: SUSTAINABLE MATERIAL PEDAGOGY IN THE FACULTY OF FINE ARTS AT CONCORDIA UNIVERSITY

Researcher: ARRIEN WEEKS

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Faculty Supervisor: Kathleen Vaughan

Faculty Supervisor's Contact Information: 514-848-2424, 4677

kathleen.vaughan@concordia.ca

You are being invited to participate in the research study mentioned above. This form provides information about what participating would mean. Please read it carefully before deciding if you want to participate or not. If there is anything you do not understand, or if you want more information, please ask the researcher.

A. PURPOSE

The purpose of the research is to understand how studio-based students in the Faculty of Fine Arts at Concordia University are taught about sustainable material practices and is being conducted as the researcher's MA thesis research.

B. PROCEDURES

If you participate, you will be asked to participate in a one-hour interview, with the possibility of a second follow-up interview.

A follow-up interview will be required if and when reviewing the transcripts an answer is not clear or if the researcher requires more information about a given answer.

You will also have the opportunity to review in advance any quotations attributed to you (or your pseudonym, if you opt for confidentiality below) in the thesis text. You will have the option then of changing or correcting your statements if you wish.

C. RISKS AND BENEFITS

Potential benefits include: sharing your pedagogical approaches with the rest of the faculty. While there is little or no risk to participating in this study, if for any reason you would wish to remain anonymous in your remarks, then you can choose not to be named in the study.

D. CONFIDENTIALITY

We will gather the following information as part of this research:

- Approximately 1 or 2 hours worth of audio recording that addresses your understanding of current sustainability practices in the teaching of Fine Arts at Concordia University, your ideas for best practices, and your statements as to why teaching for sustainability is important.

We will not allow anyone to access the information, except people directly involved in conducting the research. We will only use the information for the purposes of the research described in this form.

We will protect the information by storing it on a password-protected hard-drive.

We intend to publish the results of this research in thesis form and other publications and to disseminate them in conferences, presentations and other talks. Please indicate below whether you accept to be identified in the publications/presentations:

I accept that my name and the information I provide appear in publications/dissemination of the results of the research.

Please do not publish my name as part of the results of the research.

We will destroy the information five years after the end of the study.

F. CONDITIONS OF PARTICIPATION

You do not have to participate in this research. It is purely your decision. If you do participate, you can stop at any time. You can also ask that the information you provided not be used, and your choice will be respected. If you decide that you don't want us to use your information, you must tell the researcher before April 30, 2021.

There are no negative consequences for not participating, stopping in the middle, or asking us not to use your information.

G. PARTICIPANT'S DECLARATION

I have read and understood this form. I have had the chance to ask questions and any questions have been answered. I agree to participate in this research under the conditions described.

NAME (please print) _____

SIGNATURE _____

DATE _____

If you have questions about the scientific or scholarly aspects of this research, please contact the researcher. Their contact information is on page 1. You may also contact their faculty supervisor.

If you have concerns about ethical issues in this research, please contact the Manager, Research Ethics, Concordia University, 514.848.2424 ex. 7481 or oor.ethics@concordia.ca.



CERTIFICATION OF ETHICAL ACCEPTABILITY
FOR RESEARCH INVOLVING HUMAN SUBJECTS

Name of Applicant: Arrien Weeks
Department: Faculty of Fine Arts\Art Education
Agency: N/A
Title of Project: SUSTAINABLE MATERIAL PEDAGOGY IN THE FACULTY
OF FINE ARTS AT CONCORDIA UNIVERSITY
Certification Number: 30011361

Valid From: October 07, 2020 To: October 06, 2021

The members of the University Human Research Ethics Committee have examined the application for a grant to support the above-named project, and consider the experimental procedures, as outlined by the applicant, to be acceptable on ethical grounds for research involving human subjects.

A handwritten signature in black ink that reads "Richard DeMont".

Dr. Richard DeMont, Chair, University Human Research Ethics Committee

Appendix C: Interview Questions

Definition of sustainable material

The materials used are from the earth and they can either remain as the work, become a new work or return to the earth.

Opening questions

1. What is your occupation at Concordia University?
2. How long have you held this position?

Pre-art making

1. How are skills around using materials taught in your department?
2. How do you talk to students about materials before they begin a project?
3. How does the environmental impact of materials affect the way you teach?
4. How do you talk to students about what will happen to their artwork/project after it is complete?
 - a. Do you talk about value?
 - b. Do you talk about reuse, recycling, biodegradability?
2. Do you allow students to use non-conventional mediums? (i.e. using wood instead of canvas for painting)
3. How many projects do you usually ask students to complete in a semester?

Art creation

1. How do you talk about the life cycle of artworks to students? Meaning, talk to students about how to create their work so that, if applicable, it can come back apart to be reused by them or a future student?

Post-art creation

1. How do you invite students to consider whether they can re-use materials from one project to another? That is, how do you wrap up a project with students so that they are thinking about “what’s next?”, with the materials that they’ve used?
2. Do you talk/demonstrate to your students about the different types of disposal? What do these include?

Closing questions

1. If art supplies were no longer commercially available, how would you teach material practice?
2. What would you like to see happen in Concordia’s Faculty of Fine Arts with respect to the teaching of sustainable practices in art-making? What do you see as an instructor’s / technician’s role in bringing this future into being?
3. Are students concerned with questions of sustainability and material value in their own making? Can you elaborate on the values you see being adopted?
4. Do you have anything else to add?
5. Do you have any questions?