Hope in the Anthropocene: Empowering Students in Environmental and Sustainability Education

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Table of Contents

List of Figures

List of Tables

List of Abbreviations

ESE: Environmental and Sustainability Education

HEIs: Higher Education Institutions

IPA: Interpretative Phenomenological Analysis

IPCC: Intergovernmental Panel on Climate Change

ROL: River of Life

TA(s): Teaching Assistant(s)

UNESCO: United Nations Educational, Scientific and Cultural Organization

Contributions of Knowledge

All chapters of this thesis are original, unpublished, independent work by the author, Daphne Chalmers.

Abstract

This thesis explores hope and empowerment within a novel climate change course at McGill University in Montréal/Tiohtià:ke. Given the urgency of the climate crisis and the high rates of eco-anxiety among young people, it's vital to understand what pedagogical approaches in higher education environmental and sustainability education (ESE) empowers students to act. Thus, the study addresses two central questions: RQ#1) How does *active hope* manifest in the content and instructional practices of professors and assistants teaching about climate change [at McGill University]? RQ#2) How do these hopeful pedagogical practices affect students' sense of empowerment? Active hope is conceptualized through the lenses of diverse disciplines and scholars (Freire, 2003, 2004; Giroux, 2007; Grain, 2022; Snyder et al., 2002) and empowerment is defined using Zimmerman's (2000) *psychological empowerment theory*. Following a constructivist paradigm and employing interpretative phenomenological analysis (IPA), data collection involved a two-step process. First, to understand active hope in pedagogy (RQ#1), the study conducted a syllabus analysis and semi-structured interviews with course instructors and teaching assistants. Subsequently, to examine the resulting effects on students' sense of empowerment (RQ#2), reflective journals and student focus groups were employed. Data analysis, using reflexive thematic analysis (Braun & Clarke, 2006, 2022), revealed three pillars of hope in education: the plurality of perspectives, connecting the climate crisis to self and emotions, and planning for change through community and localized action. Each theme provides tangible pedagogical practices for active hope. Additionally, the study proposes three avenues for enhancing active hope's engagement: embracing negative emotions, considering positionality, spirit, and discomfort, and fostering "ongoing resistance". Furthermore, the

research demonstrates how these hopeful pedagogical approaches contribute to students' sense of empowerment, with recommendations for deepening the interactional element. Therefore, this study showcases a pedagogy of active hope, empowering students as agents of change in addressing the climate crisis.

Résumé

Cette thèse explore les notions d'espoir et d'autonomisation dans le cadre d'un nouveau cours sur le changement climatique à l'Université McGill, à Montréal/Tiohtià:ke. Compte tenu de l'urgence de la crise climatique et des taux élevés d'éco-anxiété chez les jeunes, il est essentiel de comprendre quelles approches pédagogiques, dans l'enseignement supérieur de l'environnement et du développement durable (EEDD), permettent aux étudiant.e.s de passer à l'action. L'étude aborde donc deux questions centrales : QR1) Comment l'espoir actif se manifeste-t-il dans le contenu et les pratiques pédagogiques des professeur.e.s et des assistant.e.s d'enseignement qui enseignent le changement climatique [à l'Université McGill] ? QR2) Comment les pratiques pédagogiques fondées sur l'espoir affectent-elles le sentiment d'autonomisation des étudiant.e.s ? L'espoir actif est conceptualisé à travers les lentilles de diverses disciplines et chercheur.e.s (Freire, 2003, 2004 ; Giroux, 2007 ; Grain, 2022 ; Snyder et al., 2002) et l'autonomisation est définie à l'aide de la théorie de l'autonomisation psychologique de Zimmerman (2000). Suivant un paradigme constructiviste et utilisant l'analyse phénoménologique interprétative (IPA), la collecte des données s'est déroulée en deux étapes. Tout d'abord, pour comprendre l'espoir actif dans la pédagogie (RQ#1), l'étude a procédé à une analyse des syllabus et à des entretiens semi-structurés avec des professeur.e.s et des assistant.e.s d'enseignement. Ensuite, pour examiner les effets résultants sur le sentiment d'autonomisation des étudiant.e.s (QR n° 2), des journaux de réflexion et des groupes de discussion composés d'étudiant.e.s ont été créés. L'analyse des données a été réalisée à l'aide d'une analyse thématique réflexive (Braun & Clarke, 2006, 2022). Celle-ci a révélé trois piliers de l'espoir au sein de l'éducation : la diversité des voix, le lien entre la crise climatique et soi-

même/ses émotions, et la planification du changement par le biais de la communauté et de l'action localisée. Chaque thème fournit des pratiques pédagogiques tangibles pour l'espoir actif. En outre, l'étude propose trois pistes pour renforcer l'engagement de l'espoir actif : accueillir les émotions négatives, tenir compte de la position, de l'esprit et de l'inconfort, et encourager la « résistance continue ». En outre, la recherche démontre comment ces approches pédagogiques de l'espoir contribuent au sentiment d'autonomisation des étudiant.e.s, avec des recommandations pour approfondir l'élément interactionnel. Par conséquent, cette étude présente une pédagogie de l'espoir actif, qui permet aux étudiant.e.s de devenir des agent.e.s de changement dans la lutte contre la crise climatique.

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1 Introduction

> There is a time and place in the ceaseless human endeavor to change the world, when alternative visions, no matter how fantastic, provide the gist for shaping powerful political forces for change. *I believe we are precisely at such a moment.*
>
> - David Harvey, *Spaces of Hope*

Climate change may be society's most pressing challenge (Intergovernmental Panel on Climate Change, 2023) and there is a Canadian-wide understanding that we are experiencing a climate emergency (Schwartzberg et al., 2022). While awareness of these issues is rising, 64% of Canadians think that education should be a doing "a lot more" to educate young people about climate change (Schwartzberg et al., 2022). Furthermore, there are calls to go beyond traditional teaching methods that perpetuate doom and gloom narratives, and rather foster empowerment in students (Cross & Congreve, 2021; Hathaway, 2017). Thus, higher education must strengthen capacities for students to transform themselves, others, and societal structures (Wals, 2012, pp. 87–88). Therefore, it is critical to understand how to facilitate this process of empowerment for students in environmental and sustainability education (ESE) (Tassone et al., 2017).

To empower students, it's crucial to acknowledge the emotional dimensions tied to the climate crisis. There is a growing recognition that learning about the climate crisis is an inherently emotional experience (Ives et al., 2020; Pellitier et al., 2023; Verlie, 2019; Vogel & O'Brien, 2022). This emotional experience often encompasses feelings of eco-anxiety and powerlessness (Pihkala, 2020b). Notably, half of Canadians believe the climate crisis is causing or making mental health worst and 59% of Canadians want teachers to address anxiety and

other emotions brought on by climate change (Schwartzberg et al., 2022). Thus, ESE pedagogy should incorporate and recognize various eco-emotions in the learning processes.

Hope has shown potential to help to mitigate these difficult emotions and could act as a catalyst to empowerment. Furthermore, hope motivates action, climate change policy support and intentions to engage politically with the issue (Marlon et al., 2019). Research suggests that some educational approaches used by educators can foster hope and thus elicit empowerment in students (Li & Monroe, 2019; Ojala, 2012a, 2015). Therefore, we need to better understand the role of hope in the context of ESE pedagogical methods. In particular, we need to understand how these pedagogical practices around hope can generate feelings of empowerment in learners by centering student perspectives.

1.1 Research Questions

Thus, the primary purpose of this thesis is to explore *active hope* in postsecondary ESE and how this affects students' sense of empowerment. Specifically, my research questions ask: RQ#1) How does active hope manifest in the content and instructional practices of professors and assistants teaching about climate change [at McGill University]? RQ#2) How do these hopeful pedagogical practices affect students' sense of empowerment?

1.2 Personal Background

> Let it go,
> Let the sky take it.
> Let the water
> carry it.
> Let the earth
> hold it.
> because you don't
> have to
> Anymore.

- Victoria Erickson, *Rhythms & Roads*

I'd like to offer personal reflections on my learnings with hope, empowerment, and eco-emotions that brought me to this work. I'm a sociologist, but sociology has always made me angry and overwhelmed. Coming out of my undergraduate degree, armed with a passion for theoretical framings and the sociological imagination (the ability to understand ourselves in relation to the wider societal and historical context), I still felt defeated and disempowered. I perpetuated this same disempowering discourse to the students I interacted with. I was once asked by my student, now that we've learned about these issues, what do we do? *I was at a loss for words. I didn't know what to say.*

That conversation was the catalyst, I decided to pursue the discipline of education, hoping to put theory into practice. When I got to graduate school, I began to understand I wasn't the only young person who felt disempowered from what they learned about in the classroom. At a time when I felt we so desperately needed young people to apply their learning for societal transformation, I began to wonder about what teaching methods could serve as this catalyst for action.

I thought hope might be the answer. I theorized that we needed more hope in how we taught, while simultaneously being in desperate need of hope myself. But I wondered about hope, how it might feel, what it might do, how it might function. How do we have hope when some days the darkness of the world feels all encompassing? Do I even deserve hope considering the amount of privilege I inhabit? And, *did me feeling hopeless make me the wrong person to study this, or exactly the right person*?

Thus, this thesis is about hope and empowerment in the classroom. But it's also about pain. It's about the reality of being a learner, an educator, a dreamer, a young person, "when the coming decades start looking like the end of the world" (Johnston, 2021, p. 263).

1.2.1 Positionality

Who I am deeply affects this research. I am a friend, sister, daughter, partner, activist, community member, learner, settler. Scholar Kari Grain speaks about hope's entanglement with the body and land, urging us to "situate ourselves more deeply in the places and communities where we live and learn" (Grain, 2022, p. 71). To have hope is to connect ourselves to the land, to root ourselves down in where our bare feet touch the soil and to recognize that we are visitors to this land.

I currently live in Montreal, Tiohti:áke, where I study on the traditional territory of Kanien'kehá:ka (Mohawk) Nation. In my life thus far, I have lived in a multitude of places. I was born in Waukesha, Wisconsin, around the area that my mom's grandmother immigrated to from Slovakia, but traditional territory of the Menominee and Potawatomi Nations. As a baby, we moved as a family to Seattle, Washington, traditional land of the Coast Salish People, to be closer to my dad's relatives in Vancouver, BC. Upon high school graduation, I moved to Vancouver to attend the University of British Columbia, which is the traditional territory of the xwməθkwəy̓əm (Musqueam) people. I am shaped by my connections to both places and people. Living in diverse locations has taught me the significance of forging deep connections with others; to me, belonging entails actively engaging within a community.

I am settler of British, Scottish, Slovakian, and Polish descent. As an uninvited settler in the various places I've lived, I am entangled within systems of oppression, and have learned within these resulting settler models of education. These educational models that prioritize "rationality" have historically worked in my favor, and at the expense of other forms of knowing and being. That means that hope and empowerment is situated within these colonial knowledge systems and influenced by my own colonized way of thinking. And while I often draw from critical scholars, this work is still built on "canonical" western knowledge, which is often theories and perspectives from white men.

Furthermore, my positionality as a young cisgender white female also affects this work. While I am often drawn to work by females, this lens sometimes takes precedent over other analytical, intersectional lenses, and is often still imbued within a western and positivist context. Doing this work as a young person means the research intersects with my feelings of anger, sadness, and anxiety, and thus I prioritize speaking to the mental health of other young people. I hope that instead of a closing or definitive ending point, this work invites a plurality of lenses and perspectives to take up hope and empowerment.

And finally, I am writing and researching from a place of extreme privilege. It's a huge privilege to be *feeling* climate change, rather than being directly displaced or affected by it. Hope itself carries a connotation of privilege, as those who have been entangled within systems of oppression see *their* world ending. AJ Hudson (2021) powerfully asks "The End of the World, for Whom?" I feel drawn to hope because as a white settler, climate change forces me to confront that these systems do not work. It is within the context that created and upholds the climate crisis that this work of hope is situated, an extreme paradox. Those that have been

systemically oppressed by colonial and imperial systems have been sounding the alarm bells while powerfully resisting for centuries. These are who we should be looking to for models of resilience and hope. But it's time for us all to wake up, "to change everything, we need everyone". We as young people have a responsibility to the earth. We must advocate for system changes, to hold those in power accountable, to collectively raise up our voices and demand a more just, sustainable, and beautiful world.

1.3 Overview of the thesis

This thesis comprises six chapters. Chapter one presents a literature review, offering insights into the current landscape of ESE. The chapter advocates for a transition towards empowerment within ESE, underscores the importance of eco-emotions in learning, and explores the definitions and connotations of hope. After establishing the significance of hope and empowerment in ESE settings, I dive into my methods chapter. This chapter has two parts. First, building from the literature review, it presents the conceptual frameworks of *active hope* and *psychological empowerment theory*. It then proceeds with an outline of my methodology, methods, and data analysis. Transitioning to my findings, I present the three foundational themes of active hope and their impact on student empowerment. In the discussion, I utilize these three pillars to offer insights on the identified hopeful pedagogical practices and their influence on student empowerment. Lastly, the conclusion offers theoretical reflections, study limitations and final personal reflections.

Grounded within a constructivism paradigm (Vygotsky, 1962) and employing interpretative phenomenological analysis (IPA), this study investigates hope and empowerment within a new McGill University climate change course. In pursuit of comprehending the role of

hope in post-secondary ESE pedagogical practices (RQ#1), I conducted a syllabus analysis and semi structured interviews with course instructors and teaching assistants (TAs). Subsequently, to understand the resulting effects on students' sense of empowerment (RQ#2), I employed reflective journals and focus groups. Finally, I used reflective thematic analysis (Braun & Clarke, 2022) for data analysis, resulting in three themes around hope and empowerment.

The study yields three significant findings. Regarding RQ#1, it identifies three pillars of hope in education: the plurality of perspectives, connecting the climate crisis to self and emotions, and planning for change through community and localized action. Within each pillar, it provides tangible pedagogical practices for active hope. However, I further propose that there are three additional avenues for enhancing active hope's engagement: embracing negative emotions, incorporating positionality, spirit, and discomfort, and fostering "ongoing resistance." Pertaining to RQ#2, the study demonstrates how these hopeful pedagogical approaches contribute to students' empowerment, primarily within two of the identified hopeful pillars, with calls to deepen engagement with the interactional element. Thirdly, active hope emerges as a novel theoretical conceptualization that surpasses disciplinary confines, integrating various perspectives to redefine hope for the purpose of individual and collective transformations. Thus, this study transcends disciplinary boundaries and begins to understand how to teach with hope, and what the effects of this pedagogy are on students.

2 Literature review

"What would it mean to be hopeful in this world, here and now? For what, and for whom, do we have hope?" (Ahmed, 2014). This chapter will work through these questions, grappling with why we, as young people, desperately need hope, what this hope might look like, and why our education systems need to shift their practices toward hope and empowerment. Firstly, I present the case for a pivotal shift in ESE models, emphasizing empowerment-oriented teaching for systemic transformation. Next, I will explore how this empowering ESE model must consider how learning about the climate crisis is entangled with varying eco-emotions. And finally, I explore how hope is one of these complex emotional states that can act as a motivator for empowerment. However, understanding definitions, outcomes and pedagogies of hope is complex and multifaceted. Therefore, I assert that we must understand specific pedagogies of hope in ESE spaces to build these models of education that empower and transform.

2.1 Overview of Environmental and Sustainability Education Models and Perspectives

> Higher education is duty bound to do all it can to transform prevailing epistemic assumptions and to liberate human and social development in the further pursuit of the considered and inclusively responsible life. (Bawden, 2008, p. 65)

Amid the climate crisis movement, youth stand as both its driving force and among its most vulnerable participants. The stakes in meeting the Paris Agreement targets to keep warming below 1.5 degrees Celsius (UNFCCC, n.d.) are particularly high for youth, "who will have to live with and manage future risks and uncertainties associated with climate change"

(O'Brien et al., 2018, Introduction section, para. 1). While a climate-altered future is the reality for young people today, they are fighting back fiercely. Youth globally are leading the way on grassroots climate justice activism. For example, Friday's for the Future (FFF) has become the largest protest movement to date, organizing millions across the world to walk out of school and strike for change (Fridays for Future, 2023). The Intergovernmental Panel on Climate Change (IPCC) (2023) recognizes the importance of youth in the climate movement, calling for youth-led leadership and mobilization to address these encroaching challenges, "youth… can facilitate climate resilient development and has allowed for locally appropriate and socially acceptable solutions" (p. 110). Thus, as the energy and determination of youth continue to shape the climate movement, it becomes clear that higher education institutions (HEIs) must play a pivotal role in supporting and harnessing this momentum.

Despite this urgent call, HEIs are facing criticism for their inadequate response to the challenges presented by the climate crisis (Bieler & McKenzie, 2017; Macintyre et al., 2020). And while HEIs are uniquely qualified to provide education on diverse dimensions of sustainability (Coops et al., 2015), ESE is critiqued for its failure to equip students for action (Mogensen & Schnack, 2010; Pellitier et al., 2023). Thus, this section will explore these critiques of traditional ESE models and detail the prominent calls for reform.

2.1.1 The Deficit Model and Doom and Gloom

One of the main critiques of ESE is that traditional deficit models are rooted in presenting "doom and gloom" scientific facts (Kelsey, 2016). This "deficit" model, which addresses a perceived lack of knowledge as the primary objective of climate change education, leads to an educational model that largely promotes "climate literacy" (Jones & Davison, 2021,

p. 192). However, it has been argued that focusing on knowledge shifts alone does not impact behavior (Kollmuss & Agyeman, 2002), but rather has the opposite effect.

These facts often present the harsh realities of the climate crisis and can lead to impasse, inaction and disempowerment (Eriksen, 2022). Elin Kelsey (2016) argues that doom and gloom has become the de facto environmental narrative and is disempowering for students. This narrative is supported in the literature, with a study of 21 young adults (aged 18-24) finding that the majority of participants found their educational experiences of climate change disempowering, and that the classroom provided no avenue for taking action and contributing to change (Jones & Davison, 2021, p. 197). Thus, filling the perceived knowledge gap with doom and gloom facts in ESE is insufficient.

2.1.2 System Level Shifts

In addition to the disempowering nature of a deficit model of ESE, scholars are calling out the unsustainable values underpinning the higher education system as a whole. The overall purpose of education remains focused on preparing students to contribute to long-term economic growth (Wals & Benavot, 2017). HEIs are too often "preparing learners to function well in a globalizing economy that is based on continuous growth and expansion, this unwillingly at best, accelerating unsustainability" (Macintyre et al., 2020 p. 2). Rather, scholars argue that HEIs must place sustainability at its center, and focus on transformative approaches that involve "significant personal, institutional, and political resistance" (Sterling, 2013, p. 34). However, Canadian HEIs often fail to implement these transformative visions. For example, Bieler and McKenzie (2017) examined 41 strategic sustainability plans in Canadian HEIs and state that none have these paradigm-shifting visions.

Environmental and Sustainability Education (ESE) can play a critical role in these paradigm-shifting strategic visions. However, Maria (n.d.) argues that the focus on economic centered education has led to an individualized and colonial version of ESE. This version teaches students they are separate from ecological webs and strips them of understanding belonging and reciprocal relationships. In the same vein, Wals and Benavot (2017) call for ESE models that deepens relations with place and the non-human world, critique societal structures and specific attention to agency and empowerment. ESE, therefore, must get to the root of the issue by focusing on deeper leverage points (Abson et al., 2017), aiding HEIs in targeting these unsustainable paradigms, mindsets, and practices (O'Brien, 2018).

2.1.3 Towards Teaching for Empowerment in ESE

Empowerment has become increasingly important as a learning objective to equip students for these system level shifts and societal transformations. The United Nations Educational, Scientific and Cultural Organization (UNESCO) continuously stresses the intersection of education, empowerment and system-level shifts: "we will need to continue and step up support for those learning processes that challenge, empower and enable people (young and old, living under sometimes dramatically different circumstances) to reorient systems and lifestyles towards sustainability" (Wals, 2012, p. 88). Empowerment becomes even more critical at the university ESE level. Knowing that university students are on the frontlines in policymaking, research, communication, education and activism (Neubauer & Matthieu, 2017), there have been calls for creating "possible alternative environmental futures" (Tilbury, 1995, p. 207) through empowerment learning models since the 1990's. Thus, the evidence

reviewed here showcases the importance of empowerment for ESE models and the potential to contribute to system-level shifts.

Yet, the definition of empowerment varies across disciplines. One conceptualization of empowerment used commonly within ESE is *psychological empowerment theory* (Chang et al., 2022; Padilla Murcia & Flores Hinojos, 2022; Tassone et al., 2017). Zimmerman's psychological empowerment theory, has both individual and collective elements, with a focus on "gaining control and mastery, within the social, economic, and political contexts" (Jennings et al., 2006, p. 33; Zimmerman, 2000). Furthermore, psychological empowerment theory has been used in youth-focused studies. These studies define youth empowerment as highlighting youth's strengths instead of their weakness, and building "increased skills, critical awareness and masters of the environment" (Jennings et al., 2006).

However, this psychological model of empowerment has been the subject of critique and debate. Community psychologists claim this model is individualistic in nature (Riger, 1993). Furthermore, development scholars point to the lack of attention to power and politics. Batliwala (2007) argues that *empowerment* originally emerged from historical struggles for social justice with a strong influence from feminist theories, and ultimately sought to shift power across individuals and social groups. Conversely, other scholars argue that psychological empowerment theory does consider these collective processes and is attuned to power. It does so through the *interactional* component of psychological empowerment theory, which seeks to build one's critical understanding of their environment and cultivate resources for change, ultimately leading to shifts in power (Speer, 2000, p. 52).

A critical youth empowerment perspective builds on this interactional element. These scholars argue that empowerment must build "the capacity to address the structures, processes, social values and practices of the issues at hand" (Jennings et al., 2006, p. 48). Therefore, I echo Jennings et al.'s (2006) assertion that in addition to internal processes, empowerment must build understanding of the underlying processes and practices of the environment and how to influence them. With this critical understanding of empowerment in mind, we turn to the factors that foster this proactive engagement in the classroom (Vandaele & Stålhammar, 2022).

There have been some studies that outline what this pedagogy of empowerment could entail. Through testing their own pedagogical tool, Tassone et al. (2017) find that empowerment is cultivated through 1) creating and executing a real-life action project, 2) communicating own perspectives about sustainability and engaging in dialogical interaction, 3) students expressing their own ideas and 4) studying various worldviews and perspectives around sustainability. Additionally, Wals & Jickling (2002) state that an emancipatory pedagogy will showcase a diversity of viewpoints to build critical orientations for sustainability. Given the existing evidence on empowerment pedagogies, further exploration is essential to equip educators in facilitating these processes (Tassone et al., 2017, p. 342).

2.1.4 Section Conclusion

Taken together, it's clear that ESE in higher education needs models that empower young people to continue to tackle the most wicked issues of our times. This will require a transition from facts-based, deficit-oriented models to transformative systemic changes in HEIs

and ESE. The next section will explore how this radical shift towards empowerment will require understanding and incorporating emotions into teaching and learning around the climate crisis.

2.2 Climate Change as Emotion Laden

A focus on shifting ESE models towards empowerment must include attention and attunement to students' emotions. Historically, higher education has reinforced a perceived duality of reason from emotions, prioritizing cognitive knowledge systems over more embodied and affective ways of knowing, essentially divorcing the "mind, reason and objectivity from body, affect and subjectivity" (Jones & Davison, 2021, p. 191). This duality is present in ESE, in 2006 environmental education scholars Elin Kelsey and Richard Kool stated "The environmental education literature is strangely silent about dealing with the emotional implications of the environmental crisis" (Kool & Kelsey, 2006, p. 54) and in 2016 further claimed "Words such as "hope," "optimism," or even "emotion" are still rarely encountered in environmental education research literature" (Kelsey, 2016, p. 26).

However, the importance of engaging emotions for action and empowerment is well researched (Ojala, 2023; Pihkala, 2020b; Vogel & O'Brien, 2022). Scholars from a wide range of fields and backgrounds, including Buddhism, systems thinking and deep ecology repeatedly emphasize the importance of emotions in making sense of our world and constructing our realities (Hathaway, 2017; Macy et al., 2014). Sociological accounts detail the role of emotions in motivating or inhibiting individual action, collectively creating or destroying social structures (Davidson, 2019; Turner & Stets, 2005) and neuroscience has shown us that we make decisions emotionally (Bechara et al., 2000).

The significance of emotions is beginning to be understood in ESE spaces. In the broader context of sustainability, there's a growing emphasis on "inner worlds" to transform self and society towards equity and justice (Ives et al., 2020). Furthermore, this shift towards affective ways of knowing is beginning to take hold in ESE (Pellitier et al., 2023; Verlie, 2019), including calls to understand the role of emotions in the learning processes (Pihkala, 2020b). Moreover, Vogel & O'Brien (2022) advocate for the connection to bodies, soul and heart as the catalyst for transformative ESE.

Collectively, these studies call for an attention to the kinds of emotions that can be experienced in climate education spaces. This following section will explore eco-anxiety, the most widely studied emotion in the climate sphere.

2.2.1 Eco-Anxiety

> Sometimes it's a safe 6 feet away
> It's outside of me
> It's other, it's out there
> Let's talk about it objectively
> In a classroom, with its four walls of security
> How horrible and sad, I think
>
> But sometimes, it's inside of me
> Seizing control of my inner being
> My soul
> Intrinsically taking control of my insides
> The pain, interwoven into me
> Crushing me
> Making it hard to breathe
> It's too heavy
> I think
> As it becomes me
> -Grief for our world
>
> -Chalmers, *poetry*

There has been growing attention to varying climate emotions, affects and moods related to ecological issues (Pihkala, 2020a). According to Nigerian youth climate activist Jennifer Olachi Uchendu (2022), “eco-emotions refers to varying emotions a person can feel because of direct or indirect impacts of ecological breakdown, climate change, and biodiversity loss” (p. 545). However, it’s important to recognize that this emerging field of eco-emotion is diverse, and there are varying conceptions and frameworks, leading to “multiple nuances in people’s understandings of these terms” (Pihkala, 2020a, p. 9). Exploring this diverse field of eco-emotions is outside of the context of this thesis. Instead, I will focus on eco-anxiety and youth.

One of the most prominently studied eco-emotions is eco-anxiety. The American Psychological Association defines eco-anxiety as: “A chronic fear of environmental doom” (Clayton et al., 2017). Eco-anxiety is often seen as entangled with other eco-emotions (Pihkala, 2020a; Sangervo et al., 2022) including guilt (Jensen, 2019), climate-grief (Cunsolo et al., 2020; Cunsolo & Ellis, 2018), trauma (Woodbury, 2019), despair (Kelly, 2017; Nairn, 2019), and anger (Stanley et al., 2021).

2.2.2 Eco-anxiety and Youth

Many young people are feeling the extreme weight of living in the era of potential global collapse and are particularly vulnerable to eco-anxiety (Clayton & Karazsia, 2020; Coffey et al., 2021; Whitmarsh et al., 2022). From a survey of 10,000 youth aged 16-25 from 10 countries, 60% said they felt “very” or “extremely” worried about climate change, and over 45% said their feelings about climate change negatively affected their daily lives (Hickman et al.,

2021). Hickman et al. (2021) summarize their account that youth are vulnerable to eco-emotions with the words of a 16-year-old "I think it's different for young people. For us the destruction of the planet is personal" (p. 9).

It is personal for us. Accounts of youth experiencing eco-anxiety are often in connection to perceptions of government betrayal and adult non-commitment to climate action (Hickman et al., 2021). Uchendu (2022) details her experience of eco-anxiety resulting from governmental betrayal and inaction during COP25, "It was also my first time being grossly tokenized as a young person passionate about climate action. I cried most nights feeling completely overwhelmed and powerless in the face of the enormity and complexity of the climate crisis" (p. 546). Scholars have referred to this gross inaction at times of crisis from those in power as "moral injury" to youth (Griffin et al., 2019) or more simply, as "blah, blah, blah" by youth activist Greta Thunberg (Carrington, 2021).

The accounts presented so far provide insight into eco-anxiety, the vulnerability of youth, and the common sources of anxieties for these young people. ESE must address the difficult emotions that are so prominent in young people, including confronting the sources of the problem.

2.2.3 Eco-Anxiety, Race and Privilege

However, it's critical to understand that while youth are particularly vulnerable to climate emotions, this risk is also interconnected with race. It's clear the effects of the climate crisis are not universally felt and the communities suffering most are disproportionately Black,

Indigenous and People of Color (Intergovernmental Panel on Climate Change, 2023; Ray, 2021). Those most vulnerable to climate emotions are also on front lines of this crisis, “who retain close living, working and cultural relationships to the natural environment” (Cunsolo & Ellis, 2018, p. 275). This includes Indigenous groups, due to their “dependence on the natural environment” and the “irreparable loss of cultural and spiritual heritage connected to the natural world” (Coffey et al., 2021, p. 4). However, the most vulnerable groups are underrepresented in the literature, with a scoping review of 1523 articles on eco-anxiety finding that “none of the included studies specifically examined eco-anxiety from an Indigenous point of view” (Coffey et al., 2021, p. 4) rather the studies were derived from Australia, Finland, and the United States.

Furthermore, this connection of eco-anxiety to whiteness and privilege is beginning to be made explicit. Upon writing her book “A Field Guide to Climate Anxiety” and the overwhelmingly white response, Sarah Jaquette Ray (2021) draws links between anxiety to privilege, politics and “white fragility”. She states that white accounts of eco anxiety can lead to furthering centering white voices rather than those most affected and vulnerable, “sucking up all the oxygen in the room and devoting resources toward appeasing the dominant group.” Uchendu (2022) takes this up in her writing about the implications of eco-emotions and power and privilege, detailing how the actual emotional entanglements of eco-anxiety are experienced differently in her interviews with British, White climate activists. These interviewees often related their eco-anxiety to their “understanding of their privilege and power which has mostly shielded them from the direct impacts of climate change for most of their lives” (p. 546).

There is a clear lack of critical perspectives on eco-emotions. The effects on the most vulnerable groups, the interconnections with privilege, and how the emotions are felt depend one's positionality. This critical perspective is an important element we will return to when we define hope in chapter 3.

2.2.4 Implications of Eco-Anxiety

> Practical "what you can do about climate change" articles are important, but if we can't metabolize new ideas about hope and meaning, then lists of ways to engage will fall radically short when we're grieving- and we'll lose our chance to find or make possibility within that grief.
>
> - Emily Johnston, *Loving a Vanishing World*

The effects of eco-anxiety are varying, it can be both a healthy motivator and lead to unhealthy responses. Studies that investigate climate anxiety and behavior have shown that it has led to both action and paralysis (Budziszewska & Jonsson, 2021; Clayton & Karazsia, 2020; Hickman, 2020). This range of impacts could be due to the varying definitions and connotations of eco anxiety in the literature (Sangervo et al., 2022). However, Pihkala concludes that eco-anxiety is usually "an adaptive response to the vast socio-ecological problems of our time" (Pihkala, 2020b), and other scholars agree is a "rational" (Verlie, 2022, p. 50), healthy response to the threat. The issue might instead be how to productively handle these non-pathological eco-emotions, rather than the emotions themselves, "practically all the recommendations are

geared towards ways in which to live with anxiety and how to harness the adaptive potential in these emotions or conditions" (Pihkala, 2020b, p. 15).

The importance of productively coping with emotions is not only emphasized within the field of psychology. Joanna Macy in "The Work that Reconnects" takes up eco-emotions as a way to connect to the web of life and to see ourselves as "compassionate" beings (Macy et al., 2014). Through this lens, difficult emotions arising from the current state of the world are critical for acting and transforming systems:

> We may not be able to respond effectively to the ecological crisis, then, unless we first thoughtfully and carefully engage the emotions in a fashion that enables us to both understand and work through fear, denial, and grief while simultaneously discovering emotional resources that can empower us to act. This process could be understood as one of developing emotional intelligence. (Hathaway, 2017, p. 177)

Therefore, eco-emotions could be a vehicle for action. The question then becomes: what do our education systems need for these emotions to transform?

2.2.5 Section Conclusion

This section has explored the definitions and impacts of eco-anxiety. With students learning about global issues heavily affected by eco emotions (Kelly, 2017), we must account for them in ESE. Could hope be what is needed to work through these difficult emotions and empower students to act? As Orr (2011) says, hope is an imperative in the face of global environmental changes. In the next section, we will explore the potential and diversity of hope.

2.3 Hope

> Something Other, something better, something not yet, is an inherent element in the human condition and one of the deep components of human creativity. It is hope which allows us to go on when conditions look bad or even impossible. It is hope which keeps possibility open. (Hicks, 1998, p. 167)

Thus far, I have argued for the importance of empowerment in ESE, and we've seen that "many emotions are at play in environmental education" (Russell & Oakley, 2016, p. 15), including eco-anxiety. Thus, empowering students is to consider the varying emotions that are present in the learning process around the climate crisis. Hope is receiving increasing attention as an important element in ESE spaces (Hicks, 1998; Kelsey, 2016; Ojala, 2012a, 2016). This section will explore hope's potential to stimulate action in young people, its varying definitions, and the educational implications.

2.3.1 Possibilities and Sources of Hope

Hope shows the potential to motivate pro-social behavior. However, there are also many disparities and differences between how hope is defined, which can affect hope's influence on behavior. Generally, there are several dimensions of hope: affective, cognitive and behavioral (Sangervo, et al., 2022, p.2). Studies investigating the cognitive dimension of hope, which emphasizes "pathway thinking" (thinking through several ways to reach one's goals) and are correlational (Ojala, 2023) have found links between hope and pro-environmental behavior (Finnegan, 2022; Kerret et al., 2016; Li & Monroe, 2018; Stevenson et al., 2018). Additionally,

hope can be viewed primarily through the emotional dimension, where hope is seen through participants' subjective feelings. This emotional-focused view on hope has contrasting connections to behavior. For example, Smith and Leiserowtiz (2014), find that hope is correlated with policy support, while Hornsey & Fielding (2016) claim that hope is not linked to pro-environmental behaviors. Therefore, there are disparities between how hope is defined, which affect hope's outcomes on behavior.

Furthermore, what causes hope (the source of one's hope) can also affect hope's impact on behavior. As seen above, there are varying outcomes of hope (pro-environmental behavior or lack thereof) and this could be linked to the source of appraisal, "one reason for the disparate findings may be the type of appraisal individuals are making about climate change that led them to feel hopeful" (Marlon et al., 2019, p. 2). The sources of hope that are linked to proactive behavioral outcomes include building trust in societal actors (for example having trust in local governments, or the belief that common humanity will act together to make change) (Geiger et al., 2021; Ojala, 2012b; Renouf, 2021; Vandaele & Stålhammar, 2022), positive re-appraisal of the issue (acknowledging the issue but focusing on what is being done) (Ojala, 2012b; Renouf, 2021), and building self and collective efficacy (Geiger et al., 2021; Li & Monroe, 2018; Ojala, 2012b). Thus, sources of hope point us to ways that hope can be elicited to promote action.

Another important element to understand regarding hope and action is hope's intertwinement with other emotions. Psychological studies have shown that hope, alongside other emotions, is linked to action. For example, Stevenson et al. (2018) argue that both hope

and concern predict environmental behavior. Furthermore, Marlon et al. (2019) find that doubt, seen as "recognition that humans are not doing enough" and hope predict political action (p.1). Other scholars showcase the interconnected or mediating role that hope can have with other emotions. Sangervo et al. (2022) find that both hope and climate anxiety were correlated with climate action, and hope and anxiety were "strongly intercorrelated" (pp. 7-8). Furthering this, qualitative studies with climate activists show us that hope is interconnected with emotions such as worry and fear (Kleres & Wettergren, 2017; Nairn, 2019) and hope can play the "meditating" factor between paralyzing emotions such as fear to propel action (Kleres & Wettergren, 2017, p. 517).

Therefore, three important themes have arisen in connection with hope and action. Firstly, hope is defined in various ways, and this variation influences its perceived impact on prosocial behavior. Secondly, this diversity in impacts might be due to the sources of hope, pointing to the importance of understanding the "why" behind hope. And thirdly, hope's connection to action is intertwined with other emotions such as concern and anxiety, again showing the importance of considering various eco-emotions in ESE spaces. Next, we will explore how varying scholars define hope and the resulting pedagogical implications.

2.3.2 Defining Hope and its Educational Implications

We've explored the possibility of hope affecting action. However, hope is an extremely difficult thing to define. Hope has been the subject of study for philosophers, psychologists, poets, spiritual leaders, and others, leading to a multitude of varying definitions due to their diverse perspectives (Kelsey, 2020, p. 46; Webb, 2013). Considering these varied definitions, it

becomes apparent that grasping the role of hope within pedagogical practices is a complex endeavor. In the subsequent discussion, I will delve into the diverse conceptualizations of hope and the implications for pedagogy. Investigating the core nature of hope and exploring existing teaching methods is crucial for understanding how hope might function in ESE.

Passive or false hope

Passive hope can hinder action (Ojala, 2023). Patient or passive hope creates a positive glow of the journey (Webb, 2013) and often originates from belief in a higher power to bring about solutions. Furthermore, this form of hope teaches us to accept circumstances as they are, as "hope allows one to relax and to let life take its course" (Webb, 2013, p. 399). This hope, often seen as hope based on denial in psychology, is negatively correlated with action (Marlon et al., 2019).

Kelsey (2020) argues that this passivity is not hope, but rather wishful thinking. While hope increases one's sense of agency and ability to show up to make change, wishful thinking puts the outcome as out of one's hands and demands no effort to get there. While this more passive hope might be real by construction of individual's definitions, I tend to agree with Kelsey, hope has been co-opted to be disguised as wishful thinking. Therefore, this study will not focus on this passive or wishful thinking hope. Transitioning from a passive notion of hope, I will now delve into models of hope that emphasize the capacity to enact change.

Snyder's Hope Theory

Psychologist Rick Snyder coined *hope theory*, which focuses on goals and cognitive pathway thinking. Hoping is a cognitive process, "*we can think our way into feeling hopeful*" (Kelsey, 2020, p. 48). To feel hopeful, argues Snyder, we must set individual goals and envision

different pathways to achieve them. This achievement also requires motivation, as hope reflects “the belief that one can find a pathway to desired goals and become motivated to use these pathways” (Snyder et al., 2002, p. 257). Therefore, Snyder’s hope process is threefold, 1) positive future goals, 2) pathway thinking: finding ways to reach desired goal and 3) agency thinking to motivate oneself to use the pathways (Snyder et al., 2002).

Snyder’s hope theory has been applied to environmental education settings in several ways. Firstly, it has been embraced through a goal-oriented and solution-focused approach to the climate crisis. Snyder himself argues that a key way to increase hope in education is goal setting (Snyder et al., 2002). This perspective is shared by Maria Ojala in her work on hope within environmental education. Ojala advocates for an approach that emphasizes solutions, suggesting that educators should communicate about environmental challenges in a manner that is more solution-oriented (Ojala, 2015).

In addition to goal setting and solutions, Ojala recommends several other hopeful pedagogical practices. She emphasizes promoting hope by showcasing individual and community action (Ojala, 2023), thus cultivating hope and trust in societal actors (Ojala, 2012b, 2013a). Furthermore, she underscores the importance of emotional awareness among educators. This awareness enables teachers to create an environment where students can express their challenging emotions so they can worked through in a productive manner (Ojala, 2013b, 2016). Therefore, Snyder’s hope theory provides a framework for various pedagogical practices centered around hope.

While Snyder’s hope theory offers valuable insights, it’s essential to acknowledge its limitations. Snyder’s hope theory is criticized due to its individualized nature. This form of hope,

with such a strong focus on individualized goals and pathways, thus lacks consideration of wider sociopolitical transformations. This is a private hope that creates the personal conditions for change relating to one's goal, "the resolute hoper strives to take control and create the chances" (Webb, 2013, p. 407). It assumes that the world can be fluid and molded by one's agency. And while these goal settings and actions can be personally transformative (Webb 2007), hoping in this mode does not immediately lead to wider societal transformations as the goals are individualized.

Critical and Transformative Hope

Moving beyond an individualized psychological model of hope are what Webb (2013) categorizes as *critical* and *transformative* hope. The concept of critical hope is guided by philosophers like Ernest Bloch and critical education scholar Henry Giroux. This hope embodies an "openness in spirit" towards the future, with an affective dimension of suffering and longing coupled with a fierce criticism of the present (Webb, 2013, p. 399).

Distinct in naming but similar in components, Webb (2013) outlines transformative hope, which finds its roots in the work of critical education scholar Paulo Freire. At its core, transformative hope is realized through praxis, a process that combines reflection and action upon the world for transformation (Freire, 2003, p. 51). Thus, the cognitive element of this hope is this ability to reflect, to envision a better future, a utopian vision, a dream. This journey includes conscientization, requiring critical reflection as a precursor to intervening and altering social structures for transformation. The action element of transformative hope is a movement towards a "qualitatively different organization of a society and new way of being" (Webb, 2013, p. 409), realized through this purposeful and directed social praxis.

Within the realm of education and sustainability more specifically, several scholars have embraced the concepts of critical and transformative hope, channeling them into educational approaches. However, this can be complex endeavor, with some ambiguity (Webb, 2013). Namely, *critical hope* translates to pedagogical practices rooted in critique, individual and collective action and utopian visioning (Giroux, 2003; Webb, 2013). Furthermore, one could see transformative hope through hooks' (2003) educational approach, which draws on Freire. hooks emphasizes critical engagement with societal issues and solutions, care, love, and the creation of diverse and inclusive communities.

These hopeful pedagogical practices find further resonance in the realm of ESE in several ways. Firstly, critical and action-oriented education. Wals (2020) views a hopeful pedagogy as critical, action oriented and relational. Furthermore, promoting utopian visioning and dreaming through the inclusion of transformation stories in the classroom, with the aim of nurturing hope by highlighting the potential for positive change (Veland et al., 2018). Lastly, in the context of transformative hope, scholars take up Freire's principles to shape learning processes that promote sustainable practices. They argue for facilitating interactions between people and places, enabling dialogic interaction and creating space for ontological pluralism (Souza et al., 2019). Therefore, using a variety of disciplines and scholars, we can begin to stitch together varying ideas of what a pedagogy of hope might look in ESE.

2.3.3 Section Conclusion

Hope has various behavioral implications, sources, and emotional intersections. Continuing from this, definitions and orientations of hope are vast and vary across disciplines. These diverse definitions lead to a wide range of pedagogical approaches to hope, offering

insights into how a hopeful pedagogy might manifest in ESE. However, gaining a deeper comprehension of how hope's multifaceted nature can be effectively integrated into ESE pedagogical practice remails essential.

2.4 Conclusion: Hope and Empowerment

> Education is about healing and wholeness. It is about empowerment, liberation, transcendence, about renewing the vitality of life. It is about finding and claiming ourselves and our place in the world. (hooks, 2003, p. 43)

Up to this point, our discussion has encompassed higher education in the realm of ESE, delved into the literature on eco-anxiety, and explored the multifaceted dimensions of hope. As previously addressed, scholars within the ESE field advocate for pedagogies that empower. To realize empowerment, comprehending the role of hope within the classroom becomes crucial, as hope and empowerment share an intricate connection. On an individual level, embracing hope translates to empowerment; it involves recognizing one's capacity to envision plausible paths toward desired goals and to accomplish those objectives (Snyder 2000, as cited in Webb, 2013). Conversely, empowerment is inherent within the process of praxis, which fosters hope. Praxis, characterized by ongoing reflection and action to transform both oneself and society, serves as an enabling evolution that establishes an individual as the author of their own narrative (Freire, 2003). When combined, the concept of hope might just hold the potential for the radical shift toward empowerment for transformation that is urgently needed in the realm of ESE.

3 Methods

Thus far, we have explored the literature around higher education ESE, eco-anxiety and the varying definitions and pedagogical implications of hope. In the following chapter, I will outline my conceptualization of active hope and empowerment building on this review of the literature. Then, I will explore the methodology and resulting methods used to investigate how active hope manifests in the instructional practices (RQ#1) and how these practices affect students' sense of empowerment (RQ#2). Finally, I provide the key aspects of reflexive thematic analysis.

3.1 Conceptual Frameworks: Hope and Empowerment

> I do not understand human existence, and the struggle needed to improve it, apart from hope and dream. Hope is an ontological need. (Freire, 2004, p. 2)

The subsequent discussion develops the framework for the two central concepts of this study: active hope and psychological empowerment theory. Hope serves as a catalyst for empowerment. For Freire, empowerment emerges as we engage in the act of re-creation, naming the world for transformation (Freire, 2003, p. 83). It is through the act of hoping for something better, something Not-yet (Bloch, 1986), that we are empowered towards its realization. Thus, this study perceives hope and empowerment as deeply interconnected.

3.1.1 Active hope

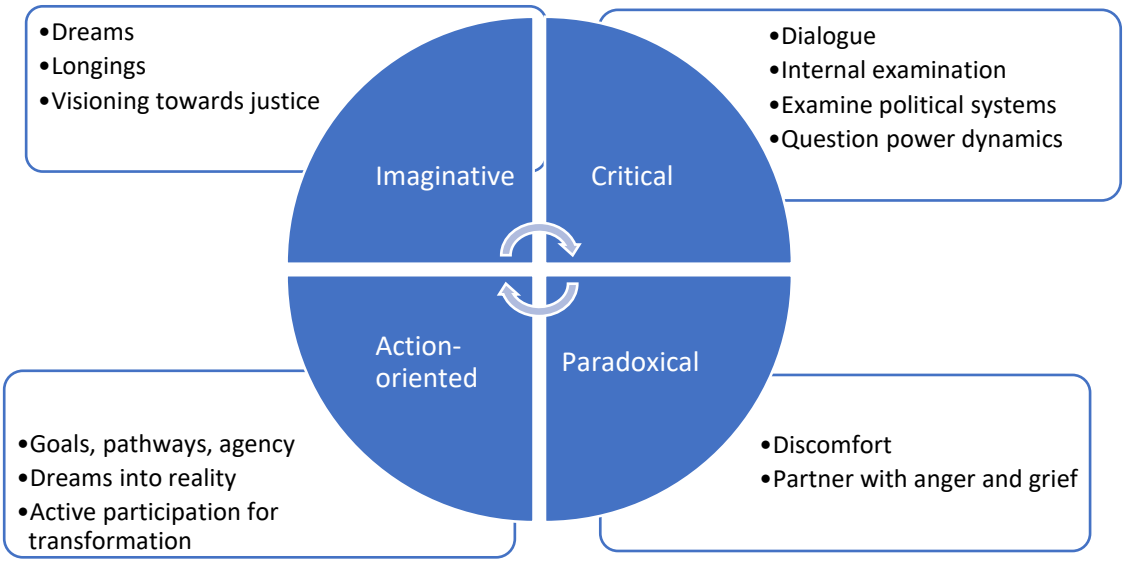
> a multifaceted chorus of hope, [with] critical dialogues with power and exclusion, and creative visions of possibility and transformation (Hammond, 2017, p. 14).

In the preceding literature review (section 2.3.2), I provided definitions of hope from various scholars and disciplines. By bringing together these diverse perspectives, I define active hope as an action-oriented concept that encompasses both individual and collective dimensions. Philosopher Ernest Bloch emphasizes hope's active nature, as hope is, "not… only as an emotion… but more essentially as a directing act of a cognitive kind" (Bloch, 1986, as cited in Levitas, 1990, p.14). Therefore, active hope emerges as combination of several conceptualizations of hope across bodies of literature, disciplines, and time spans, all unified by their emphasis on action.

This conceptualization draws on several notions of hope. Firstly, I incorporate both individual and collective notions of action by using Freire's model of praxis and Snyder's psychological hope model. To augment these ideas, I use Giroux's elements of utopia and social critique and philosopher Ernest Bloch's conception of "Not-yet" (1986). Lastly, I draw from newer hope thinkers Elin Kelsey and Kari Grain who built on the aforementioned scholars. From this, I argue that this active hope is imaginative, critical, and action oriented. Additionally, I add paradoxical to speak to the emotionally messiness and emotional complexity of hope. These four facets and their brief explanation are displayed below in Figure 1 Active Hope.

Drawing from these varying disciplines and scholars is uncommon and at times contradictory. However, sustainability scholars repeatedly underscore the importance of cross disciplinary collaboration (Vogel & O'Brien, 2022) inspiring me to transcend boundaries to understand the complexities and intertwinements of hope. Therefore, I believe we must consider the multiple facets, shapes, and contours of hope to fully understand its role in education spaces.

Figure 1 Active Hope



Imaginative

Hope is the catalyst for "unveiling the world", and within this transformative journey, the concept of imagination and dreaming plays a pivotal role. Hope lives in between the reflection and action of praxis, as students must reflect on their world, dream about how it can be different, and thus act upon that dream. Freire tells us hope is the key component in this transformation, "There is no change without dream, as there is no dream without hope" (Freire, 2004, p. 77). Furthermore, Kelsey (2020) seems to agree with this notion of hope as the middle catalyst for transformation, arguing that between criticality and transformation lies hope, "this middle step is where creativity, innovation, and imaginative visioning happens" (p. 56). Philosopher Ernest Bloch contributes further, arguing that hope is born from the incompleteness of humanity, and our deepest whispers of "Not-yet" (Bloch, 1986). Not-yet are we complete, not yet are we finished. We can transform ourselves through ideas in our imagination, our desires, dreams, and longings for a more just world.

Critical and Political

Embedded within imagination is the significance of Freire's concept of *conscientization*, which involves cultivating a critical consciousness for engaging in praxis. To redesign and transform society, we critically reflect on the current systems. These reflection processes are inherently political, as we "make visible the need…to attend to the ways in which institutional and symbolic power are tangled up with everyday experience" (Giroux, 2007, p. 33). Being critical of our current system is difficult as we have been socialized to see it as implicit. Henry Giroux (2007) powerfully argues that "it has become easier to imagine the end of the world than the end of capitalism" (p. 25). Hence, hope involves questioning our systems and analyzing power dynamics to dismantle and create anew, achievable through problem-posing education and dialogue (Freire, 2003). In this way, hope is a beautiful dance between resistance and possibility (Giroux, 2007, p. 31).

Furthermore, conscientization requires internal reflection. To foster the rigorous critical thought that conscientization demands, one needs space for bodily "interiority and reflexivity" (Todd & Vamvalis, 2022, p. 221) to move individuals towards their inner worlds (Ives et al., 2020). This paves the way for outward examination of external systems. This introspection also involves nurturing a connection to land, and the "more than human world" (Grain, 2022; Todd & Vamvalis, 2022, p. 222) and thus develop abilities to focus outward.

Action Oriented

Hope is not only an imagining of what could be, it is *active.* Freire (2004) asserts, "Just to hope is to hope in vain" (p. 2). Hope demands active participation in the cocreation of this envisioned world (Freire, 2004). Furthermore, Bloch views hope as the makings of a revolution

(J. Brown, 2003) critically reimagining something different than the current systems, and acting upon these, we engage in this act of revolution (Freire, 2003, p. 83). Thus, hope is participatory, it is a call to action for us to revolt against the oppressive social structures and create something *better* through our own envisioning. Grain (2022) argues that this participation is ongoing, and hope is something to practice, an explicit choice we make day after day.

Active hope accounts for both individual and societal level actions. As we have explored, a psychological perspective on hope pertains to individual action, developing one's goals, establishing pathways to reach them, and engaging in agency thinking to motivate oneself to reach those goals (Snyder et al., 2002). A Freirean approach centers on a more collective and societal transformation lens.

Paradoxical

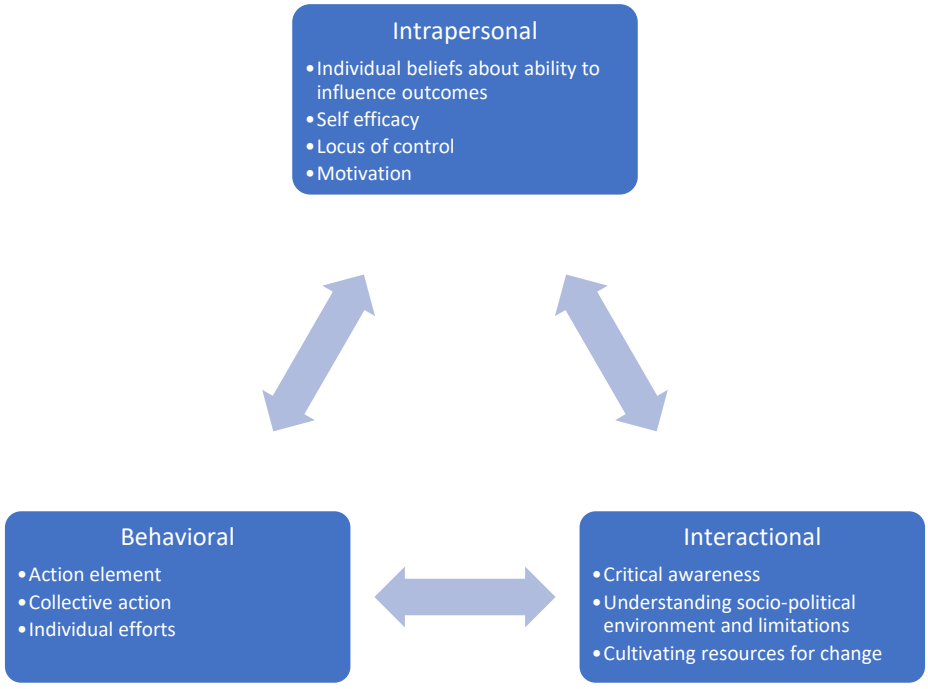
Lastly, modern hope is paradoxical by nature. It holds space for conflicting emotions and discomfort. This hope is not about turning our backs to the harsh realities, it's about doing the work despite the anger, grief, anguish, and despair we feel every day (Grain, 2022). In many ways, hope is more difficult than just feeling despair, because it forces us to feel deeply and further immerse ourselves in these traumatic realities. Yet, amid these painful emotions, hope coexists, "anger and hope are not opposites. They have a symbiotic relationship" (Kelsey, 2020, p. 44). These emotions work together to give us the capacity to tear down and rebuild back better.

The process of reconstruction requires us to grapple with discomfort. Uncomfortable as it may be, we are forced to reckon with difficult truths about taken-for-granted realities and

question our familiar worldviews (Grain, 2022). Thus, hope demands anger, grief, and discomfort have a seat at the table, to engage in a mutual partnership for transformation.

3.1.2 Psychological Empowerment Theory

Figure 2 Psychological Empowerment Theory



We now shift to conceptualizing empowerment. The present study adopts psychological empowerment theory because it is both individual and collective, an internally cognitive and externally political process (Zimmerman, 2000). Scholar Barry Zimmerman defines psychological empowerment theory as having three connecting parts: intrapersonal, interactional, and behavioral, displayed above in Figure 2 Psychological Empowerment Theory. Together, these parts create an empowered individual, "empowered individuals have some combination of a sense of control, critical awareness of their sociopolitical environment, and involvement in their community" (Zimmerman, 2000, p. 50).

Intrapersonal

The *intrapersonal* component of psychological empowerment focuses on perceived self-competency, individual's beliefs about their own competency to influence outcomes (Zimmerman, 2000). To understand self-competency, we turn to elements of perceived control: locus of control and self-efficacy, and how these influence motivation. *Locus of control* pertains to one's beliefs regarding their role in the outcomes of their life (Zimmerman, 2000, p. 48). Furthermore, *self-efficacy* involves one's beliefs about their abilities to reach their desired goals (Bandura, 1997). These perceived control beliefs influence one's motivation to act. Therefore, the intrapersonal element is about one's individualized and cognitive beliefs around competencies and motivations to enact change.

Interactional

Shifting from individualized self-competency beliefs, the *interactional* component of psychological empowerment theory is about developing critical awareness. One must understand how the social and political environment affects individual abilities and one's own competencies (Tassone et al., 2017). This critical awareness includes understanding who has power over the environment, how best to approach goals based on these limitations, and cultivating individual and collective resources for action (Zimmerman, 2000, p. 50; Kieffer, 1984, p. 32).

Behavioral

This critical awareness is vital for the *behavioral* component, as comprehending systems enable individuals to effectively challenge structures and political influences (Kieffer, 1984). This behavioral element is the action component. These actions can be individual or collective,

such as participation in collective action or solitary efforts to influence the sociopolitical environment (Zimmerman, p. 50). Thus, empowerment is within individuals and facilitated by collective processes, “While empowerment, is, at root, an individual demand, it is nurtured by the effects of collective effort” (Kieffer, 1984).

3.1.3 Conceptual Framework Conclusion

This section outlined the two central concepts of this study: active hope and psychological empowerment theory. It is through hope that we are empowered to act in and on the world (Freire, 2003). I defined active hope through the combination of several definitions and disciplines. Next, I described empowerment through psychological empowerment theory. Establishing these conceptualizations was pivotal for shaping the subsequent research methodology, methods, and data analysis. We will delve into these concepts in the following section of this chapter.

3.2 Methodology

3.2.1 Constructivism and Interpretative Phenomenology

As previously examined in chapter 2 (section 2.3.2), hope is multidimensional and spans epistemic and ontological beliefs. Snyder's cognitive psychological perspective views hope through a positivist lens, enabling objective observation and measurement. In contrast, affect scholars, critical theorists, and philosophers highlight the more transcendent aspects of hope. They discuss the "affective intra-actions" between bodies and the environment (Bladow & Ladino, 2018; Verlie, 2019) and conceptualize hope as a process of bearing worlds. This process involves mourning our present circumstances while envisioning something that is "Not-yet" (Verlie, 2019). My view of hope is more closely aligned with this latter position.

I view hope as a multifaceted, subjective, evolving concept, that reaches beyond individual, cognitive level-emotions. Rather, it drives, digs, and bears on us at a deeper and spiritual level. After all, our ideas, stories and states of being are never objective, but rather shift and "live through our bodies… Our bones and flesh speak for us, they sing our truths" (Grain, 2022, p 17). This orientation towards hope shapes my research methodology.

Consequently, I situate my study in the constructivist paradigm (Vygotsky, 1962). This paradigm views reality as subjective and socially constructed, acknowledging the existence of multiple truths (Lincoln & Denzin, 2000), and the influence of researcher and participant on co-creating understandings. Within this paradigm, hope and empowerment are understood as subjective experiences. This aligns with my view of hope as multifaceted and evolving (as stated above). Therefore, understanding these subjective experiences requires examining in depth constructions of these processes by instructors, TAs and students.

Furthermore, I employ interpretative phenomenology analysis (IPA). IPA is a qualitative research approach that is committed to explore in depth how participant's make sense of their experience (Smith & Osborn, 2008), it is a "detailed and systematic analysis of consciousness" (Tuffour, 2017, p. 3). Through IPA, I explore hope and empowerment through personal and in-depth constructions of learning and feeling (Van Manen, 2016). Additionally, IPA views research as a "dynamic process with an active role for the researcher in that process"(Smith & Osborn, 2008, p. 53) creating space for research reflexivity. This is particularly important to me, as explored above through my own personal experiences struggling with hope and anxiety, I cannot pretend that this is an objective subject for me.

3.2.2 Ethical Considerations

Banana Nut Bread Recipe (*given to study participants*):
¾ cups roughly chopped raw walnuts or pecans
1/3 cup melted coconut oil or extra virgin olive oil
½ cup honey or maple syrup
2 eggs
1 cup mashed overripe bananas (from about 2 ½ medium or 2 large bananas)
1/3 cup milk of choice or water
1 teaspoon baking soda
1 teaspoon vanilla extract
½ teaspoon fine sea salt
½ teaspoon ground cinnamon, plus more to swirl on top
1 ¾ cups white whole wheat flour or regular whole wheat flour

- Kathryne Taylor, *Love Real Food*

Establishing authentic relationships with participants constituted a paramount aspect of my research process. Recognizing the tendency for research to be extractive, I endeavored to foster a reciprocal and mutually beneficial approach for all involved. Indigenous research methodologies, such as those discussed by Kovach (2015) provided inspiration for highlighting the significance of these relational dynamics. Shared vulnerability was a cornerstone in forging these connections. Echoing Eriksen's (2022) call for "compassionate climate change research," I acknowledged vulnerability's pivotal role in lessening perpetuated power imbalances and creating genuine connections with research subjects. Acknowledging vulnerability enabled us to connect through our shared humanity (Eriksen, 2022). This shared humanity held special importance when delving into topics as delicate as the precarious nature of hope.

Alongside prioritizing relationships, I created spaces of care and safeguarded against potential power dynamics. Drawing from what my mom has taught me, I used food to connect with people, expressing gratitude through homemade banana bread (recipe above) and gifting each student a propagated plant. Though seemingly small, these gestures were essential to

"create spaces for care and caring relationships amidst the demands of the neoliberal university" (Temper et al., 2019, p. 10). Additionally, I safeguarded against the sensitivities of the topics and the power dynamics that existed between students and their course instructors. I offered support to students through McGill resources and made clear that participating in the study would not affect their outcome in the course in any way.

In the ensuing section, I will illustrate how constructivism, IPA, and the emphasis on relationships and vulnerability influenced both my data collection and subsequent analysis.

3.2.3 Data Collection

Table 1 Overview of TAs and Instructor Participants

Role	Name	Degree level	Mode of Data Collection
TA	Myles	PhD	Interview
TA	Harper	Masters	Interview
TA	Jade	Masters	Interview
TA	Sage	Masters	Interview
TA	Taylor	Masters	Interview
TA	Ana	Masters	Interview
TA	Ian	PhD	Interview
TA	Allison	PhD	Interview
Instructor	Kianna	NA	Interview
Instructor	Dorothy	NA	Interview
Instructor	Joanna	NA	Interview

Table 2 Overview of Student Participants

Name	Year	Discipline [Major]	Mode of Data Collection
Grace	3rd year	Environment and Development	Focus group, reflection journal
Jake	4th year	Math	Focus group
Thomas	3rd year	Math	Focus group
Paulina	3rd year	Poli Science and Environment	Focus group, reflection journal
Riley	4th year	International Development and Urban Studies	Focus group, reflection journal
Mateo	2nd year	Economics and Psychology	Focus group, reflection journal
Bexley	2nd year	Environment	Focus group, reflection journal
Paige	4th year	International Relations and Environment	Interview

The primary aim of this study was to provide a deeper understanding of how hope operates within the realm of environmental and sustainability education, while also exploring the empowering impact of hope through the perspectives of students. Acknowledging the paramount importance of hope, I purposefully selected a course that explicitly framed itself around hopeful ideals in relation to the climate crises. Consequently, I conducted my study

within the context of a novel, university-wide undergraduate climate course, centered around "climate actions and potential solutions." I have removed the exact name of the course for ethical purposes. This course was significant not only for its emphasis on hopeful themes but also for its innovative design process. According to an informational interview with one of the key course designers, the course design process entailed collaborative efforts across disciplines and alongside Indigenous communities, and consultations with students.

The course studied was co-taught by five core instructors and 12 TAs. There was a coordinator for the course, who was important for recruitment of instructors and TAs. Through multiple conversations regarding the purpose and goals of the research, the coordinator proposed study participation to the instructors and TAs. Together, they collectively agreed to allow me to contact them. Upon the request of the coordinator, I did not recruit instructors outside of the five core members of the teaching team, despite their being several guest speakers as well. Upon this approval, I sent out a recruitment email to all five core instructors and 12 TAs. From this, I interviewed all that agreed: three instructors and eight TAs.

I recruited students through TAs' workshops. Upon the approval of the TA, I visited each workshop and gave students an overview of the research, its purpose, and what students' participation would entail. From this, 12 students indicated their interest to participate in the study through a Microsoft form. In the end, I held two focus groups, one with four students and the other with three students, and conducted one individual interview, as the other students did not show up for the intended focus group. From these students, I collected six reflection journals, and used five. Two students did not send their journals, and one student sent the incorrect prompt.

3.2.4 Methods

Document Analysis

I now turn to detailing my methods. Firstly, I conducted a syllabus analysis. I deductively analyzed the course syllabus for elements of active hope in pedagogy. This process informed the formulation of my interview questions for instructors and TAs and enabled me to probe into the identified hopeful pedagogical practices during the interviews and gain deeper insights. The pedagogical practices that were identified in the syllabus and explored in the interviews include reading choice, assignments, lecture topics, and discussion styles.

Semi-structured Interviews

I then conducted semi structured interviews (Van Manen, 2016) with three instructors and eight TAs. The interviews lasted 45 minutes to 1 hour. The method of semi-structured interviews was chosen because it allowed me to understand the rich, personal experiences of the individual instructors and allowed for close, confidential, and honest conversations with participants (Smith & Osborn, 2008). As I asked questions around participants' own feelings about hope and teaching about the climate crisis, it was important that I conducted one on one interviews to create a safe place. Semi-structured interviews allowed me enough flexibility to be candidate with the participants about my own eco-emotions, which helped build an open and vulnerable space for conversations. These interviews worked to understand elements of hope in the course (RQ#1) through questions about the pedagogy of the course generally, and more targeted questions around elements of active hope.

Reflective Journaling

To better understand the impacts of these hopeful pedagogical practices on students, I engaged students in reflective journaling. Journaling was chosen for three reasons. Firstly, it provides an avenue for students to work with experiences to extract meaning from them and make sense of the world (Boud, 2001), thus allowing them to deeply reflect on the impact of the course. Secondly, reflection journals were utilized as a complementary method to the focus groups. This approach allowed each participant to express their feelings individually, free from the apprehension of judgment within a group setting. This strategy addressed the challenge inherent in focus groups- distinguishing between the individual view and group view (Litosseliti, 2003, p. 21). And lastly, journaling was used as a form of triangulation, so that I could have a more comprehensive and reliable understanding of student's empowerment beliefs (Flick, 2020). The purpose of these journals was to gain insights into the individualized and personal feelings around empowerment that emerged from the course's pedagogical methods (RQ#2).

Focus Groups

Next, at the end of the course semester, I conducted two student focus groups (Litosseliti, 2003) (and one individual student interview, as explained above). Focus groups were chosen for two reasons. Firstly, focus groups allow for a space to explore sensitive topics such as the climate crisis, and hear multiple perspectives in participants own words, which was particularly important for genuine and raw conversations with students about their learning experiences. Additionally, from being a student myself, I believed that being in this group setting alongside peers would allow more comfort and ease to share feelings and experiences.

The questions in the focus groups targeted general reactions to the course and more specific elements of psychological empowerment theory (RQ#2).

3.3 Data analysis: Reflexive Thematic Analysis

> For reflexive TA, you need to be psychologically ready for a rich, unexpected, sometimes frustrating, but ultimately achievable adventure. (Braun and Clarke, 2022, p. 76)

For my data analysis, I followed Braun and Clarke's six-stage process for reflexive thematic analysis (TA) (Braun & Clarke, 2006, 2022). Two things resonated throughout this process for me. Firstly, research positionality, "the researcher's positioning inevitably shapes their research and engagement with data" (Braun & Clarke, 2022, p. 14). Secondly, patience, "being tolerant of uncertainty is an important skill to practice for good reflexive TA" (p. 11). Therefore, throughout the process I was mindful that (1) I have biases and they cannot be separated from the analysis process, and (2) I needed time and patience as I worked through this difficulty and (at times) very frustrating process.

Additionally, I was aware that the type of TA I conducted was closely tied to my chosen methodology. According to Braun and Clarke, it's important to clearly explain the rationale for using the specific type of TA. They state, "researchers should always reflect on and specify the philosophical and theoretical assumptions informing their use of TA" (Braun & Clarke, 2021, p. 338). Consequently, I adopted an experiential orientation to TA, aligning it with interpretative phenomenology analysis (IPA). This orientation to TA "centers the meaning and experiences articulated by the participants" (p. 159). Given that IPA values the lived experiences of participants (Smith & Osborn, 2008), it was crucial to attune to their experiences in the analysis. This orientation impacted the ensuing coding process, which will be detailed below.

I engaged in an iterative and evolving process of coding and theme development. To begin, I familiarized myself with the data (stage one) through transcribing all interviews, highlighting, and taking notes on potentially relevant codes. Then, for code generation (stage two), I undertook a two-stage, evolving, reflexive and iterative coding process (Braun & Clarke, p. 54). In the first round, I used initial coding (Saldaña, 2016) which "breaks down qualitative data into discrete parts, closely examines them, and compares them for similarities and differences" (Braun & Clarke, 2022, p. 115). In this round I attempted to focus more on inductive, semantic level codes (Braun & Clarke, 2022), paying attention to participant's voices and the surface language meaning. However, my own biases around theories were inevitably present throughout.

Having completed the initial coding, I progressed to the second round. For this round, I conducted pattern coding, which groups together initial codes to create a smaller number of categories (Saldaña, 2016). This style of coding is especially helpful for large data sets like mine (Saldaña, 2016). Throughout this process, I began to build an ongoing "codebook" (Braun & Clarke, 2022). Finally, I conducted a thorough re-coding of all documents using MAXQDA and my developing codebook, again engaging in the iterative and ongoing process that reflexive TA demands.

As I transitioned to creating, reviewing, and naming themes (stages three, four and five), I continued to engage in the reflective processes. These themes did not "emerge" (Braun & Clarke, 2019), but were instead molded by my experiences as the researcher with preexisting notions of analytical categories of hope and empowerment, and the imperative to weave a narrative within the research. The process of shaping these themes encompassed numerous

rounds of grouping together codes, checking it against the rest of the data set, speaking with colleagues, and then doing another round of combing and creating. Eventually, this iterative process yielded three themes that I believed spoke to my research questions and the participants' contributions.

3.4 Methodology & Data Analysis Conclusion

> Any victory is a huge victory. We work for the public good – we are duty-bound to carry on. We scientists have to work on radical sustainable transformative solutions, and escape from this highly competitive and paper-oriented scientific system that's disconnected us from reality.
>
> -Jose Luis, *Hope? and how to grieve for the planet*

This chapter section has done several things. Building from the conceptual frameworks of active hope and psychological empowerment theory, it explored the methodology of constructivism and IPA. Next, it detailed the resulting methods of the study. And finally, it explained the data analysis process of reflective thematic analysis. In the forthcoming chapter, I reveal the three resulting themes of the study, addressing how hope manifests itself in pedagogical practices, and the resulting empowerment effects on students!

4 Findings

This study asked: (1) How active hope manifests in the content and instructional practices of an ESE course at McGill University and, (2) the resulting effects of these pedagogical practices on students' sense of empowerment. This chapter is organized around the three themes of the study findings. Each thematic section is separated into two parts. Firstly, I showcase evidence of pedagogical practices to illustrate the elements of active hope addressed. Then, I present an analysis of how I used psychological empowerment theory to gain insights into how hopeful pedagogical practices affected students' sense of empowerment. Table 3 provides an overview of the structure of the chapter.

Table 3 Overview of Findings Section

Theme	**Pedagogical Practices**	**Elements of Active Hope Addressed**	**Elements of Empowerment Engaged**
4.1 "There Really is a Place for Everyone in it": Finding Your Role in the Climate Crisis through the Plurality of Perspectives	Interdisciplinarity Guest speakers Spotlight interview Indigenous knowledge	Pathways to Action Imagination Criticality	Interactional Intrapersonal Behavioral
4.2 Connecting the Climate Crisis to Self and Emotions	Sensitivity to emotions River of Life (ROL) Journaling	Paradoxical Criticality	No significant relationship found
4.3 "There's a Bit More Fuel to the Fire than you Thought": Planning for Change through Community and Localized Action	Workshops: Creating Community Workshops: Dialogical Approach Action plan	Action: Agency thinking	Intrapersonal Behavioral

4.1 Theme 1: "There Really is a Place for Everyone in it": Finding Your Role in the Climate Crisis through the Plurality of Perspectives

> The emotion of hope goes out of itself… it looks in the world itself for what can help the world; this can be found.
>
> - Ernest Bloch, *The Principle of Hope*

The course provided a platform for multiple perspectives to be heard through the pedagogical practices of interdisciplinary teams, guest speakers, spotlight interviews and Indigenous knowledge. This created varying avenues for action and imagination, while also prompting critical examination of conventional models of scientific knowledge. The practices described in this theme encompass several elements of active hope: action, imagination and critical and then explores the resulting empowerment effects on students. It is noteworthy that several of these pedagogical practices span various hope elements. As a result of these pedagogical practices, students experienced empowerment as they were able to expand their own definitions of sustainability (interactional), find their own unique role to contribute to action (action) and feel motivated to act through excitement and interest (intrapersonal).

4.1.1 Elements of Active Hope in Theme 1: Pathways, Imagination and Criticality

The plurality of perspectives was an important pillar of the course and key for active hope. The course syllabus illustrates this: "we will hear and learn from people with a wide range of knowledge and experiences of the climate crisis. This includes multiple ways of knowing- from data-rich science to quantitative climate and socio-economic models to Indigenous knowledge." In the same vein, many instructors, TAs (TAs) and students emphasized the inclusion of varying perspectives within the course. For example, one instructor commented,

“But I do think one thing that we're getting right is holding space for many, many voices" (Kianna, instructor). Below, I highlight how the pedagogical practices of interdisciplinarity, guest speakers, spotlight interviews and Indigenous knowledge illustrate this plurality and engaged active hope.

Pathways to Action: Interdisciplinary, Guest Speakers and Spotlight Interview

By incorporating different perspectives, the course fostered active hope through various pathways to action. As explained in chapter two (section 2.3.2) Snyder’s hope theory entails pathways to reach goals (Snyder et al., 2002). Firstly, the course built pathways to action through the intentional design of composing an interdisciplinary teaching team. All three instructors and half of the TAs spoke of the significance of the interdisciplinary team. The instructor team included faculty members from social and natural sciences, guest speakers, and TAs from fields such as geology, engineering, sociology, and digital humanities studies. In the workshops, whenever possible, one natural science TA was paired up with one from social science.

This varied teaching team brought their backgrounds into the course, showcasing the plurality of pathways to actions in the climate sphere. When asked about how they came to be a TA for the course, Jade, Ana, and Ian emphasized the importance of their disciplinary background. For example, Harper said that she came to be a TA for the class because “they wanted to have a pool of TAs who could speak about different aspects of the climate crisis.” Likewise, Kianna, while speaking about her own contributions to the course states, “you'll talk to all the different instructors, and they will bring their priorities forward.” Further contributing to interdisciplinarity, the diverse guest speakers contributed to pathways to action. Students

learned about various policies and practical solutions, such as community solar projects, and agriculture and food system initiatives.

In addition to this interdisciplinary teaching team, students were further exposed to varying ways to act in sustainability spaces through the "spotlight interview" assignment. As outlined in the course syllabus, the midterm assignment required students to conduct an in-depth interview in small groups with "someone with specialized climate knowledge" and then share their interviews with their peers. This again presented an opportunity for students to be exposed to varying actors and perspectives, as the interviewees were "some very, very different people" (Sage, TA) from government officials to McGill graduate students, to folks in education nonprofits.

Significantly, it was important to instructors and TAs that students found their own role in the climate crisis. When I asked instructors what they wanted students to walk away from this course with, all three instructors commented on the importance of students finding their place to act.

> I hope that students can see what they bring to the table. What is their lens? What do they like doing? What are they? What do they know about? What skills could they bring to the table? And then how to sort of start from where you are, and take a step forward, towards the world that you want to be in. (Joanna, instructor)

The majority of TAs echoed a similar sentiment: Jade states, "I think I'm hoping that they kind of find, like a sense of confidence, in a way like that they have like, a power to enact some change" (Jade, TA). Similarly, another TA, Ana, hoped students would come out as "actors of change".

Students could find their place through the various perspectives shared. Allison comments on the significance of showcasing various roles for students:

> Not everybody has the same role in the climate crisis. I think that's also one of those things. Like people are like if we are not super sciency, that's fine, we have a law student. Or, oh, you don't like writing but you like talking to people? Okay. Great. There's advocacy work, right. There's on the ground protesting you can do right. So everyone, the fact that everyone has a different role, and these different roles have been highlighted in the course. (Allison, TA)

In a similar vein, Ian speaks about finding common goals and contributions through the course, "Like, we're all following a common goal. This is what I contribute. This is what I contribute, this is gonna contribute, we can find middle points, maybe not" (Ian, TA).

These results suggest that the course engaged in the action element of active hope by showcasing multiple pathways to action, highlighting distinct actions and roles for students. However, these pedagogical practices did more than just encourage action, they also inspired active hope through imagination and criticality.

Imagination: Showcasing Different Ways of Being

Incorporating a plurality of perspectives through the pedagogical practices of an interdisciplinary teaching team, guest speakers, spotlight interview and Indigenous knowledge elicited hope through the action element. These practices also engaged hope through the *imagination* element. Through "holding space for many voices" (Kianna, instructor), the course opened multiple perspectives of ways of being "explaining the now, in different ways" (Harper, TA). The following quote illustrates how these varying perspectives contributed to imagination:

> I think that the hope has been that it's shown a different way of thinking about the crisis or how people can coexist with each other and with other beings. And it's also something, which is why it's so important to have these panels with activists and land defenders, because it is people actively seeking and living a different way of being. (Dorothy, instructor)

Likewise, another instructor noted that hearing from multiple voices gave students ways to imagine themselves in various roles:

> because I think youth talking to youth about this is just another piece that's so so, so important. And I just don't inhabit the subject position to do that. Like, we got to get people in the room that are closer in age and experience. And able to kind of open up that imaginative potential like, wait a minute, this person, this person just graduated, and they're doing that, like, wow, you know, like, wait a minute, wait a minute, it gives examples. I mean, this is always true in teaching, right? Like, you need examples, to see, to see something play out. (Kianna, instructor)

Additionally, some TAs and instructors commented on the inspiring, imaginative potential of the spotlight interviews, where students would have an opportunity to learn from someone working in a climate field and envision their own future roles:

> Think it's gonna be interesting for them to like, actually talk to someone who's in like, a different, like stage of life potentially than them. Like, sort of like someone who's like, engaging as a career in climate issues. So I hope it's like inspiring in some sense, like, maybe they can imagine themselves in that position in the future. (Jade, TA)

Thus, these diverse expressions engaged active hope through the imagination of different roles and spaces to act.

Criticality: Indigenous knowledge

Additionally, many respondents emphasized that the inclusion of varying perspectives contributed to the critical element of active hope. These perspectives showed "contrasting" (Joanna, instructor) ideas and exposed students to different experiences with the climate crisis other than their own (Taylor, TA).

Specifically, Indigenous knowledge emerged as a way that the course fostered the critical element of active hope, which is about developing a critical consciousness through reflection on oppressive systems and power dynamics. Indigenous knowledge was integrated via course readings, the youth Indigenous land defenders panel, medicine wheel journaling, and a recurring Indigenous Faithkeeper instructor. Four TAs and two instructors pointed out Indigenous knowledge as a hopeful and critical element of the course. The element of critically came through by elevating Indigenous knowledge to the same height as western scientific knowledge:

> Just like the use of indigenous knowledge as like, like, concrete knowledge equal with science is a big thing. And I think it does a great job of doing that. And from what I've seen, it's really, like, gotten to like, that message has gotten across to a lot of students. (Taylor, TA)

Furthermore, Indigenous knowledge situated the climate crisis in colonial structures:

> I think, elder [omit name] chat a little bit talked about, like, social systems that need to be recognized in terms of like, colonialism. And the role of like, why land back is so

> important, and stuff like that. So there definitely been some political and economic criticism, for sure. (Sage, TA)

The presence of an interdisciplinary teaching team with varied backgrounds opened additional avenues for critical analysis through specific lectures and workshop discussion. One instructor's input, which resonated with TAs and instructors alike when prompted about criticality, was a lecture that focused on the "roots" of the climate crisis such as colonialism and capitalism. An instructor, Kianna, elaborates on the lecture, "It's really, really important that that system is identified and explicitly deconstructed, those aspects that are extractive need to be seen and known and named." Additionally, there was some evidence that the workshops cultivated critical discussions. Dorothy, an instructor, mentioned that the lectures created a platform for further critical conversations in the workshops. A few TAs also detailed these critical conversations. Taylor spoke about challenging students to "think critically about the university itself" in relation to the Divest McGill movement (Divest McGill, n.d.), and Jade elaborated on a conversation around "where knowledge is generated".

However, despite these elements, some TAs and students felt as if there was not enough focus on criticality within the course. One TA noted there was more of a focus on solutions rather than acknowledging the root causes (Sage, TA), and some would prefer a more "post-colonial lens" as the underpinning of the course (Allison, TA). Despite this critique, Paige, a student, acknowledged the limitations of a singular course and its ability to go so deep into these more critical approaches, "I think the criticality aspects is missing a little bit. I mean, I feel like that throughout all the topics that we kind of talked about. That also considering it's like, it's a 100-level course."

In summary, these practices illustrate active hope through the critical elements of varying perspectives, particularly Indigenous knowledge, and specific lectures.

4.1.2 Elements of Empowerment in Theme 1: Interactional, Behavioral & Intrapersonal

As explored above, the plurality of perspectives through an interdisciplinary teaching team, guest speakers, spotlight interview and Indigenous knowledge manifested hope through pathways to action, imagination and critique. We now turn to how the hopeful practices in theme one contributed to students' sense of empowerment across the three elements of psychological empowerment theory*:* interactional, behavioral and intrapersonal.

Interactional: Critically Expanding Definitions to Cultivate Resources for Change

The varying perspectives in the course allowed students to expand their understanding of the socio-political environment around sustainability and find their place within the landscape. Students expanded their definitions of sustainability, critically analyzed their own abilities, and cultivated resources for change, all important elements of the interactional element of empowerment (Zimmerman, 2000).

Firstly, as a result of the course, students expanded their definitions of sustainability:

> And I think this goes back to once again, breaking this idea that sustainability and environment is all about, like, only like trees, with carbon dioxide, and all that stuff. But then there really is a place for everyone in it. And yeah, those are kind of my things. I think the things from the class that kind of inspired me to kind of at least reminded me is like, once again, the all-encompassing definition of sustainability. (Riley, student, focus group)

When students in the focus groups were asked a word to describe what they were taking away from the course, they answered with things such as “all encompassing” (Grace, student, focus group), “universal” (Thomas, student, focus group), and “holistic” (Riley, student, focus group), further showcasing how the course opened new perspectives and understandings of sustainability.

Furthermore, in addition to perspective expansion, the interactional element of empowerment is about taking a critical lens on one’s own abilities (Zimmerman, 2000). This understanding of one’s own lack of knowledge can be seen in the quote below:

> I actually put that as one of the things I want to do, I want to learn more about like Indigenous communities their knowledge in the climate crisis. Like I said, this is my first time in Canada I've never like heard about like Indigenous struggles before like not educated on it at all. And I think it's like crazy how much knowledge there is that we can get like those communities and kind of like opening my perspective. (Bexley, student, focus group)

Thus, students expanded their understanding of sustainability and engaged with Indigenous knowledge systems, gaining valuable insights on non-hegemonic approaches to sustainability. This process allowed them to cultivate their resources for change, another aspect of the interactional component of empowerment (Zimmerman, 2000). There were “so many options”, some that they “didn’t even know existed” (Paulina, student, journal):

> I like I would never have touched base on half of these, I never would have thought about half of these approaches. So it was a great way to like, look at different lenses and

different aspects, because there's so much that goes into it. (Mateo, student, focus group)

Therefore, the interactional element of empowerment was seen through student's widening their perspective on sustainability, critically analyzing their own abilities, and cultivating resources for change. I will return to how we can deepen this interactional element in the discussion section.

Behavioral: Planning for Action

Widening perspectives and cultivating resources for change directly connects into the behavioral element of empowerment (Kieffer, 1984). Students were significantly impacted by the various perspectives showcased, leading them to express a wide range of actions they wished to pursue to contribute to change. Paulina, a student in a focus group, mentioned her interest in policy internships for the summer after being influenced by the policy professor. Thomas expressed his desire to be involved in his local community garden, after gaining knowledge about food systems. Paige, a student in the interview, emphasized that the exposure to various perspectives reminded her sustainability "should be integrated into everything. And so, no matter what I do, should be integrated into what I'm doing." Thus, students expressed both individual and collective action they wished to partake in, showcasing the behavioral element of empowerment.

Intrapersonal: Building Motivation to Act Through Excitement

Lastly, students felt excited and interested about learning in this expansive and diverse way. This excitement contributed to their motivation and fostered the intrapersonal dimension of empowerment. For example, Riley expressed how instead of feeling "numb", the class had

“so much energy and excitement around it” (Riley, student, focus group). In the same vein, Grace states, “And I enjoyed like the content. And I found that even the things I had been presented before in other classes, they like, put different context to it, or I learned something new that wasn't actually talked about in the other classes I'd taken” (Grace, student, focus group). Furthermore, Bexley reveals how this enjoyment translated to thinking about her actions:

> there's so many options, so you can still be a part of it even and I like, like you can do your small part, and still do what you enjoy and what not. I got that from the lectures and from the interview that we have. (Bexley, student, focus group)

Therefore, cultivating interest and excitement played a role in enhancing students’ motivation to act, ultimately leading to empowerment through the intrapersonal aspect.

4.1.3 Theme One Summary

The inclusion of a plurality of perspectives through the interdisciplinary teaching team, guest speakers, spotlight interview and Indigenous knowledge contributed to spaces of hope through action, imagination and critique. These hopeful pedagogical practices lead to student’s empowerment as they were able to expand their perceptions and understanding of sustainability (interactional), plan to participate in action (behavioral) and feel motivated through interest and excitement (intrapersonal).

4.2 Theme 2: Connecting the Climate Crisis to Self and Emotions

> We are never far from the answer to the problem we have created- it is within each of us.
>
> -Tara Houska, *Sacred Resistance*

This theme discusses how students related the climate crisis to their whole selves, their personal journeys, and their emotions, thus engaging the paradoxical and critical elements of active hope. First, the teaching team embraced the paradoxical element of active hope by the sensitivity to emotions in the classroom. However, the expression of hope and the emotions it entails differed among interviewees. Some viewed hope as closely intertwined with optimism, while others emphasized the significance of anger among students. Additionally, some interviewees pointed out the absence of a critical lens in the course that considers positionality and privilege. Second, the course further engaged with emotions through reflective practices like journaling around spirituality and the river of life (ROL) activity. Despite some student struggles, these practices further demonstrated the critical and paradoxical elements of hope.

4.2.1 Elements of Active Hope in Theme 2: Paradoxical & Criticality

Paradoxical: Sensitivity to Student Emotions in the Classroom

The course illustrated the paradoxical element of active hope through validating students' emotions in the lectures. When asked about the kinds of emotions arising in the course, all three instructors stressed acknowledging difficult emotions during the learning process. For instance, Dorothy spoke about the course's invitation to students to engage as whole individuals, "they're invited to come to the course as a whole person, and whole people have feelings about things." Similarly, another instructor mentioned the emotional challenges of discussing the IPCC report in class, stating, "we recognize this might be difficult, kind of holding space" (Kianna, instructor). To engage these emotions, the instructors regularly checked in during lectures. Joanna explained: "we, you know, we asked students, how are you

feeling today and had fill out on like, the optimistic, pessimistic or, like, action disconnected kind of a line?" (Joanna, instructor). These check-ins happened throughout the semester.

Despite these check-ins, a few instructors and TAs vocalized that optimism and positivity was important in fostering hope. For example, one instructor spoke about building hope by lessening the emotional impact of learning about the climate crisis,

> because hope is so important to everyone in the teaching team, we've all taken quite a lot of care to make sure that we deliver our urgent devastating information in a way that is not as devastating as it might be, you know, like, we really tried to unpack the essentials without making it too brutal. (Kianna, instructor)

Sometimes TAs took a similar sensitive approach, bringing optimism or positivity into how they taught. For example, Jade expressed the need to maintain optimism for hope, even when not feeling that way personally:

> Like sometimes like students can be like super optimistic and like, 'oh, like we can make like such a big difference'. And like sometimes I feel like that's like, it can be either, like, inspiring, I don't want to like burst their bubble if they're like thinking like, yeah, something super hopeful. So yeah, I sometimes like don't say everything that I'm thinking as well when I'm like, feeling like, yeah, not as hopeful. (Jade, TA)

Like Jade, Allison (TA) also discusses instilling hope in students through positive statements:

> A 19 year old kid this who has like big ideas about what they can do in the world, like, I don't want to discourage them right? So I try not to let it like if I do make statements like that, I try to buffer them with an equally positive statement that sort of gives them hope.

In summary, for some study participants, fostering optimism, positivity and sensitive communication were components of cultivating a hopeful atmosphere within the course.

Despite these efforts to foster positive outlooks, there were varying opinions concerning emotions in the classroom. Contrastingly, a minority of interviewees discussed anger and equity as factors related to emotional engagement. One TA argued that the course's soft and optimistic nature led to students not feeling angry enough, "they're not being panicked enough I think is the problem" (Myles, TA). This TA believed that anger was necessary for political organizing, and without this emotion, students would be too comfortable with the present systems, "like just nothing, just feels like no resistance at all" (Myles, TA). Moreover, one student pointed out the inequalities surrounding climate emotions:

> And I understand that, like, climate anxiety and feeling helpless, is a real concern. But I almost feel like it's overstressed to the point that, like, it doesn't realize enough, the fact that like the inequities in the distribution of how the climate crisis is felt. (Paige, student, interview)

Three findings emerge from the reported results on the paradoxical elements within theme two. First, the course embraced the paradoxical aspect of active hope by acknowledging students' emotions through check-ins. Secondly, for certain participants, positivity and optimism were important pillars of hope. Lastly, a minority of participants advocated for anger and the consideration of privilege. I will return to this discussion regarding engaging emotions in the subsequent chapter.

Criticality and Paradoxical: Emotions and Self Reflection in ROL and Journaling

The course incorporated emotions and self-reflection via the ROL activity and weekly journaling, furthering engaging the paradoxical and critical elements of active hope. Through the ROL activity, students reflected on their own personal journeys with the climate crisis through a visual storytelling exercise (Gonsalves et al., 2023) In this activity, they drew a metaphorical river, showcasing their "life's engagement with environment and climate change" (Ana, TA). Several instructors and TAs spoke to this reflection. For example, Dorothy mentioned that students deliberated their actions, saying they "sort of frame their thinking for what kind of actions they're interested in" (Dorothy, instructor). Similarly, students considered their positionality (Ana, TA), in addition to their cares and values:

> And I think that assignment was really good for helping the students kind of think about their own values, and what personally, at the outset, because there's so much information, they're not going to retain everything, but they're going to really pay attention to what relates to like, what they care about, and knowing their values at the outset, I think was really important. (Harper, TA)

In addition to engaging in reflective practices, students expressed emotions through the ROL activity. This illustrates the paradoxical element of active hope. Positioned in the beginning of the course, students contemplated "on the importance of their emotion as they've come through that trajectory" (Dorothy, instructor). The descriptions provided by interviewees regarding the activity made it evident that students were struggling with many difficult emotions and varying levels of eco-anxiety. TAs commented on the kinds of emotions that students metaphorically included in their rivers. For instance, there were mentions of "a pit of

despair just like at the end of the river" (Sage, TA), "a ton of eco anxiety" (Taylor, TA), "powerlessness", "worry" and "depression" (Ana, TA).

Students further engaged with reflection through the weekly journaling. After the lectures, students journaled around the Indigenous concept of the medicine wheel which asks: "what did you respond to emotionally, spiritually, mentally, and physically"? Several instructors and TAs brought up journaling as a space for students to process (Ana, TA; Kianna, instructor; Joanna, instructor) and connect with what they were learning,

> I think having this time to journal is like, content, content, content content, and then you're like, stop, stop, you know, and then you like, take some time to, like, reflect about it and reflect about, like, you how it makes you feel, you know. (Ana, TA)

Moreover, it was evident that students explored their emotions through journaling. Seven out of eight TAs discussed the journaling process and its link to emotional engagement. For instance, Allison (TA) detailed how journaling allowed for students to process their emotions, "But the journaling provides a different way for the students to engage with these topics, and one that does center emotions, right… it's built in to try to manage a lot of these feelings that come up." However, connecting to emotions was not an easy process. Harper (TA) spoke about how students had to learn to "grapple" with climate issues in "an emotional sort of way". Furthermore, Sage (TA) noted that when students were upset from the lecture content, it was difficult for students to discuss their journaling, "it's just like quiet when we like, talk about our journals". However, Taylor and Ian (TAs) commented that as the semester went on, students felt more comfortable journaling around emotions and spirituality. As Ian put it,

"emotionally, they have been like, amazingly, very, like, have deepened a lot in the emotional component."

According to the majority of the TAs, students also found the spiritual aspect of journaling difficult. For example, Harper states "the spiritual side really threw them off". Taylor, Allison and Anna commented that students felt that relating to the climate crisis in this way was "challenging" (Taylor, TA) because of its novelty in a university science classroom. Anna explained that many students expressed they had never had any engagement with spirituality, even outside of the classroom. As Allison put it: "this is the first time I think I've ever been in a university course where spirituality is even incorporated in the material, let alone connected to environmental issues" (Allison, TA). She continues to say that in addition to the novelty, not all students valued the journaling, "they don't understand why they're being prompted to engage with climate change on a spiritual level, they don't see the connection, they don't see the value". This dislike is echoed by Ana's comment that after a review of the course content, some students said they didn't really like the journaling, while others wanted more time with it.

These results imply that the course fostered the critical and paradoxical elements of active hope through emotional reflection. However, students struggled to connect to the climate crisis both emotionally and spiritually, a discussion we will return to in the following chapter.

4.2.2 Elements of Empowerment in Theme 2: Lack of Student Perspectives

Student commentary on the ROL activity, journaling and the emotional engagement in the course was minimal. However, one student noted that the journaling helped him think

through his emotions and resulting action, detailing how he dealt with guilt and feelings of never doing enough, and had to work through these things to effectively take action:

> My, my perspective is more on the like, you can't solve it all. Like, like, sometimes you can feel like you really, I mean, I have like ups and downs, or I feel like there's nothing I can do or I can do everything or like, I need to be doing better that all the time. This helped me like, especially the journaling made me reflect like, my journey with this. And like, I realized, like, you can't do it all like you have to stress less times about, like what you're doing now. (Mateo, student, focus group)

I will return to this relative lack of response from students in the discussion chapter.

4.2.3 Theme Two Summary

The inclusion of emotions through classroom sensitivity, the ROL activity, and weekly journaling engaged the paradoxical and critical aspects of active hope. Nonetheless, participants held differing views on how to approach emotions, and students encountered challenges when engaging with the emotional and spiritual aspects of journaling. Furthermore, it was unclear how these hopeful pedagogical practices impacted students' empowerment.

4.3 Theme 3: "There's a Bit More Fuel to the Fire than you Thought": Planning for Change through Community and Localized Action

> Together, we are a climate citizenry. We wade collectively through the paralysis of fear, grief, shame, and hopelessness and into action that brings feelings of strength, possibility, and even joy. For this is noble and necessary work, and it is impossible to do alone.

- Kate Knuth, *Becoming a Climate Citizen*

This third theme centers around promoting hope through community involvement and local initiatives. The course manifested the hopeful elements of agency thinking, criticality and action through the workshop's dialogical nature and the local focus of the action plan. These hopeful practices contributed to students' sense of empowerment by building self-efficacy through support, motivation, and excitement (interpersonal) and avenues for action (behavioral). However, tensions arose regarding this local action lens, especially within the constraints of an institution like McGill.

4.3.1 Elements of Active Hope in Theme 3: Agency thinking, Criticality & Action

Agency thinking: Hope in Localized Action and Community

Recalling that agency thinking involves believing in one's ability to persist towards desired goals (Snyder et al., 2002) a crucial aspect of hope is what drives this perseverance. Inquiring about these sources of motivation, I asked instructors and TAs if they had hope towards the climate crisis and why. The majority spoke about drawing hope from others: through creativity, connectedness, and as sources of inspiration:

> When I want to tap into my sense of hope- that's where I look to is like, connectedness, you know, that's where I see people reconnecting, being connected, finding those relationships, tending them. That's, that's when I'm like, oh, yeah, we're gonna be okay. (Kianna, instructor)

Furthermore, interviewees often drew hope from others in the context of local action. In contrast to several participants' comments that the larger, more scientific realities of the climate crisis were overwhelming, focusing on local, individual action rooted them in

hopefulness. Harper, a TA, expressed this connection between community and localized action: “And I think I have hope that enough people will try and band together to do some of those local solutions for local problems.” In the following two sections, I will show how the course cultivated this hope rooted in community and local actions through the workshops and action plan.

Criticality: Dialogical Approach in Workshops

The course seemed to cultivate these hopeful spaces of community in the weekly workshops in three ways: collaboration, dialogue, and disrupting power norms. Firstly, the workshops were small and focused on group work, creating a social and collaborative atmosphere. Each 1.5-hour workshop had two TAs, and anywhere from 3-12 students. Many TAs and students felt that this contributed to a more social (Jade, TA), collaborative (Allison, TA) and supportive space (Sage, TA). For example, Ana spoke to the social aspect of the course:

> But I do think it's definitely like an engaging class. Like, I think in terms of like connections, and like network like, so it's not just me, but the fact that they're in a small workshop and they're the same students always together, like they know each other. (Ana, TA)

This collaborative space set the stage for dialogue and disrupting power dynamics in the workshops, important elements of criticality for active hope.

The workshops had a dialogical atmosphere, in line with Freire’s notion of problem-posing education (Freire, 2003). Several TAs commented on the workshops as a “space to share” (Ian, TA) where students could express “emotional opinions” (Sage, TA). Furthermore, the workshops encompassed cross disciplinary dialogue, further contributing to this critical

space of dialogue. Students' backgrounds ranged from mathematics to environment to psychology, "they just bring different perspectives to the problem." (Allison, TA). A few TAs and instructors also pointed out that this diversity enhanced discussions by showcasing a broader spectrum of sustainability viewpoints:

> And the best conversations I've ever had about sustainability are when there's the most diverse set of students in the room, because then you have the law student and the engineer, pointing out the different aspects of sustainability that make it so urgent, you know, and folks who are coming from different parts of the world saying, well, hey, wait a minute, this looks really different where I'm from. And so it holds us to account and it opens up possibilities, super generative. (Kianna, instructor)

Additionally, these workshops disrupted traditional power dynamics between students and TAs. Some TAs spoke about how they valued students' knowledge, considered "colleagues" by one TA, in the contributions they brought to the table:

> I get really excited every week to be able to actually like, have conversations and discussions with students and like to be able to lead a conversation in a way that makes them reflect on things and then just hearing from them too, because they all have so much knowledge already, which is really impressive. (Taylor, TA)

In summary, the workshops cultivated the critical element of hope through a community that emphasized a dialogical atmosphere.

Action: Planning for Local Action

Shifting our focus to the local dimension of hope, I found that the course promoted action through the implementation of the action plan and an emphasis on local solutions. This approach aligned with a common teaching philosophy that individual students can make a difference. All three instructors highlighted this empowering notion:

> I think from that perspective, the hope that you can make a difference is always there. So it's not a hope that are we going to meet 1.5 degrees or not? Well, I mean, that's maybe like, maybe not at this point. I think it would be a stretch, but that doesn't mean that 1.6 isn't possible or you know, a little bit, the hope that you can make a difference. Yeah, people can make a difference. (Joanna, instructor)

In the same vein, a few TAs underscored the importance of these small, individual actions:

> And I feel like by sharing those stories, it can maybe communicate that you don't have to, like take down like Shell or like, you know, destroy like the oil industry to solve climate issues, like any of these like big grandiose things, like there's lots of like small things that you can do that can have very real and impactful results. (Harper, TA)

Furthermore, the concluding assignment, known as the action plan, specifically centered on local initiatives and actions. In this assignment, students wrote a mock funding proposal to the Sustainability Funding Initiative. In this proposal, students applied a local lens to a project that addressed community needs. Allison provides an insight into the process of the action plan:

> And so if they come up with a they have to identify a need with regards to sustainability either on campus or in the city. And they need to come up with a plan to address this

> including like a budget so as if like, to identify the problem and then to go through the actions as if you were going to make a change. (Allison, TA)

The kinds of proposals that students submitted included things like an open mic night for climate action, installing in-residence composting, a McGill farmers market education component and an app that addressed eco anxiety by showcasing spaces for collective action.

Nonetheless, some TAs raised concerns about the localized focus of the action plan. For example, Myles questioned the extent of impact achievable through localized projects, “Yeah, they love to talk about like recycling and that kind of shit. Which is like good but you know, it's like fighting a forest fire with a garden hose” (Myles, TA). Additionally, Allison questioned the interplay between privilege and individualized actions:

> Whereas people who grew up here and maybe don't necessarily have ties to less privileged places. They're like, Oh, yeah, like, you know, I recycle sometimes. And it'd be nice to like, the solution to this would be a farmers market on Campus, right? Like the actual approach solutions are very much different depending on people's privileges. (Allison, TA)

Furthermore, Allison, Taylor and Kianna spoke to the paradox of encouraging this local action in a university that has yet to completely divest from investments in fossil fuels:

> Also don't want to be fake in your approach where you're like, well, we can fix this. You're sitting in a classroom at McGill. And our university hasn't even divested yet. Like, What an embarrassment. Yeah, right. So it's like this weird juxtaposition. We're like

> here, apply to the McGill fund, but the university is already telling you they don't give a shit. And that's a fact. (Allison, TA)

We will return to these tensions around localized action in the following chapter.

4.3.2 Elements of Empowerment in Theme 3: Intrapersonal & Behavioral

Hope was fostered through connections and dialogues in the workshops, as well as the emphasis on local action in the action plan. Now shifting our focus to student empowerment, participants expressed that the course enabled them to see that others cared, provided motivation, and rekindled enthusiasm for action (intrapersonal). Additionally, students detailed their plans for action (behavioral).

Intrapersonal: Self-Efficacy through Support, Motivation and Excitement

Recalling that the intrapersonal element of empowerment is about building self-efficacy, one's beliefs about their abilities to reach desired goals (Bandura, 1997), I found that the course fostered self-efficacy through support, motivation, and excitement. Firstly, creating a supportive space was important for instructors, TAs, and students. TAs Allison, Ana, Jade and Sage state the importance of building spaces of support. For example, when I asked Ana about what she hoped students would gain from the course, she responded:

> I'd like them to feel like they're not alone like in this fight of climate change and that they know, like more what the other students in their class like that are working on this that they care too and how they care and that like the TAs we care, and that the profs we care and that like. Yeah, like we're not alone, I guess in this and that kind of hope aspect of like, working together. (Ana, TA)

Many students echoed that the course enhanced their sense of connection and support. For example, Riley states:

> But I think when you just like kind of find a community that also like, shares that perspective with you that like that's something they want to tackle, you just feel like a bit stronger in numbers. And yeah, just feels like there's a bit more fuel to the fire than you thought there was. (Riley, student, focus group)

The facets of the course that students identified as contributing to these feelings of support and connection included the dialogical nature (Grace, focus group), diverse TAs and instructors (Mateo, focus group), like-minded people (Grace, reflection journal, Thomas, focus group; Paulina, focus group), "developed network" (Mateo, focus group), and community- based actions (Bexley, focus group).

Secondly, many students detailed how the focus on community and local action bolstered their motivation and addressed their eco-emotions. For example, Bexley reflected on feeling powerless to make a difference until working with others on the action plan:

> As a result, I felt a bit powerless towards the climate crisis, it seemed too large of a problem for me to make any impactful change whatsoever...After talking to some of the other students that took [course name] and working with some of them in the action plan I feel more motivated to get involved with sustainable initiatives at McGill…I feel more capable. (Bexley, student, reflection journal)

In the same vein, Grace wrote about her experience in other environment classes and feeling "depressed" until this course:

> But all of these classes have just given me the facts, which are honestly quite depressing most of the time. None of them have ever really made me feel hopeful about what I can do or about what we can do. And I know there are examples that exist. (Grace, student, reflection journal)

In addition to the support and motivation cultivated, the excitement generated during the learning process also played a role in nurturing motivation. Motivation further contributed to self-efficacy and the intrapersonal aspect of empowerment. Several TAs emphasized interest and excitement in the action plan:

> we want people to, like, be proud of what they're doing. Yeah, like, really pick something that is close to their heart. Like, yeah, like something they actually feel excited about kind of thing. (Sage, TA)

Notably, students echoed this enthusiasm in relation to the action plan. Even if the specific project they devised for the action plan didn't materialize, they found themselves more motivated to explore alternative avenues of action:

> I'm really happy that this class like, introduced me to it because like, now I have like, plans brewing in my head at what I want to implement at McGill, not necessarily what we did, like with my group, but just it just got me excited on what I could do. (Jake, student, interview)

Together, these results provide insights into how the course fostered students' intrapersonal sense of empowerment through building self-efficacy in support, motivation, and excitement.

Behavioral: Students Plan for Action

During the focus group sessions, I asked students what kinds of actions they would like to take to contribute to the fight against climate change. In addition to planning for hypothetical action through the action plan, students had a variety of other avenues for action in mind. These included more individual level actions such as “washing out zip locks” (Grace, student, focus group), “flying less” (Mateo, student, focus group), and listening to more media (Paige, student, interview). Additionally, students reflected on community level actions such as, “Greenpeace, Divest [McGill], Extinction Rebellion” (Mateo, student, focus group), “getting involved in groups or communities or clubs” (Grace, student, focus group) and “more McGill sustainable initiatives” (Bexley, student, focus group). Thus, students were empowered to act by envisioning their local plans for action and further planning subsequent behaviors.

4.3.3 Theme Three Summary

The course manifested the hopeful elements of agency thinking, criticality and action through the workshops and action-plan. These hopeful practices contributed to students’ sense of empowerment by building self-efficacy through support, motivation, and excitement (interpersonal) and avenues for action (behavioral).

4.4 Chapter Conclusion

This chapter has provided a comprehensive exploration of the study’s findings regarding hope and empowerment within the context of an ESE course at McGill University. The chapter sought to provide evidence for the two research questions: 1) the manifestations of active hope within the course content and instructional practices, and 2) the subsequent influence of these hopeful pedagogical practices on students’ empowerment. The chapters’ structure revolved

around three central themes from the process of reflexive thematic analysis (Braun & Clarke, 2006, 2022), with each theme dissected into two segments. In the initial segment of each theme, I showcased tangible instances of active hope emerging from particular pedagogical practices. Following this, I employed psychological empowerment theory to understand students' sense of empowerment that resulted from the nurturing of hope.

In the first theme, students encountered a plurality of perspectives via interdisciplinary teaching, guest speakers, spotlight interviews and Indigenous knowledge. These practices prompted active hope by offering various paths to action, cultivating imagination, and encouraging critical thinking. These hopeful practices led to student empowerment by expanding sustainability perspectives and planning for action, although we will expand on the interactional element in what follows. The second theme engaged active hope through reflective and emotion-centered activities such as the ROL and weekly journaling. We'll delve deeper into these critical and paradoxical aspects in the following chapter. And lastly, in the third theme, active hope manifested through community centered workshops and the localized nature of the action plan assignment. Students felt empowered to act through support, building motivation and excitement, and planning for actions. In later discussions, we'll scrutinize the tensions tied to local lens.

5 Discussion

Thus far we've investigated the hopeful pedagogical practices in the course and the resulting empowerment effects on students, however, what does this mean for how we teach for hope and empowerment in ESE? This chapter discusses the findings of the study by centering on the three themes. Within each theme, two interrelated aspects are addressed. First, I explore RQ#1, emphasizing the importance of the theme's findings in relation to cultivating active hope in the classroom. By drawing connections to the conceptualization of active hope and relevant scholarly discourse, I illuminate the ways in which these findings expand our understanding of how hope is cultivated within ESE. Secondly, connecting to RQ#2, I illuminate how a pedagogy of hope affects students' sense of empowerment, ultimately showcasing the intrinsic connection between these two concepts.

5.1 Theme 1: Engender Hope and Empowerment through a Plurality of Perspectives

> The question of how to transform is not meant to be answered. Instead, we can sow and nurture the seeds for "greening the landscape of idea," including the idea that transformations are, in fact, possible. (Vogel & O'Brien, 2022, p. 657)

The findings reveal how hope is cultivated in ESE through the intentional pedagogical practice of a multitude of perspectives. These practices include an interdisciplinary teaching team, guest speakers, spotlight interview assignment and Indigenous knowledge. Drawing from psychologist Rick Snyder, this course effectively builds "pathways to action" (Snyder et al., 2002). Similarly, scholars from diverse disciplines, such as Hicks (2002), Ojala (2015) and Veland et al., (2018) have repeatedly argued that learning about and acting on diverse possibilities to sustainable development is vital in developing hope. These findings expand this literature by

providing tangible examples of hopeful pedagogical practices that address the calls for diverse possibilities.

Furthermore, this study extends past these individual notions of hope by showcasing that different perspectives cultivate hope through imagination and critique (Freire, 2003; Giroux, 2003). The inclusion of Indigenous knowledge nurtures critique of current systems and imaginative potential. This inclusion of “ontological pluralism” is repeatedly emphasized by ESE scholars (Kayumova & Tippins, 2021; Souza et al., 2019; Wals & Jickling, 2002). However, here we see how this call for ontological pluralism can create hopeful spaces of teaching and learning.

Thus, we see how this pedagogy of hope authentically embraces and explores the inherent complexity and uncertainty of wicked issues. These hopeful pedagogical practices answer the calls for engaging the evolving and changing process of solutions (Cross & Congreve, 2021). Intersecting with philosophical notions, these hopeful pedagogical practices mirrors Bloch’s (1986) conception of "Not-yet” . We hope because Not-yet are we finished, Not-yet are we complete. Alternative-futures can emerge, and we can dream them into existence (Hammond, 2017).

Furthermore, this study demonstrates that these hopeful pedagogical practices foster students’ sense of empowerment. As evident by student responses, these hopeful practices broaden understandings of sustainability and guide students towards action. This belief in the empowering nature of diverse perspectives is supported by other sustainability scholars. For example, Wals advocates for an “emancipatory” model of education that showcases the

breadth of sustainability, equipping students to transform this complex world (Wals & Benavot, 2017; Wals & Jickling, 2002). Furthermore, Tassone et al. (2017) arrive at comparable conclusions regarding the empowerment effects of varying perspectives. They argue that through studying various sustainability worldviews, students develop "new lenses of perception" and refine one's personal sustainability perspectives thus resulting in empowerment (p. 11). This study extends these notions, connecting hope with empowerment.

5.1.1 Stimulate Critical Interactional Empowerment

However, there appeared to be a lack of deep cultivation of the interactional element of empowerment. Recall that this interactional element is also about understanding the underlying processes and practices of the environment, including specific attunement to power processes. While students expanded their definitions of sustainability, there was a lack of data that supported that the students gained understanding of *why* they held constrained views of sustainability in the first place. Drawing from Freire (2003) critical youth empowerment scholars argue that "if people are not critically aware of the visible and invisible structures and processes that make up social institutions and practices, there is little room for empowerment" (Jennings et al., 2006, p. 47). Thus, there must be more explicit understanding of the ways that Indigenous knowledge systems have been systematically oppressed and excluded within the university, why specific forms of involvement and emotional engagement are praised over others within a colonial and capitalist system, and how this affects one's course of action. This is particularly important to equip students to engage in the necessary "significant personal, institutional, and political resistance" (Sterling, 2013, p. 34) that moves HEIs to address deeper leverage points and catalyzes societal transformations.

Ultimately, this study bridges diverse disciplinary literature to highlight specific hopeful pedagogical practices. Additionally, it provides empirical evidence about the interconnectedness of these hopeful practices with students' sense of empowerment and offers recommendations for deeper engagement into the interactional element.

5.2 Theme 2: Deepen Hope by Acknowledging Negative Emotions

> Love for our world is an easy thing to claim but following that love into places of grief and pain is the next essential step to honoring the real meaning of this elemental connection. (Atkinson, 2022, p. 49)

Theme two "Connecting the Climate Crisis to Self and Emotions" examined how the course engaged with the paradoxical and critical elements of active hope. This was achieved by providing space for emotions in the classroom, ROL activity, and journaling. Students expressed a plethora of negative emotions, many spoke about "despair", "worry" and "depression". Underscoring these results, Ojala (2013b) argues for the acknowledgement of difficult emotions in sustainability courses as an important hopeful pedagogical practice. Thus, this study demonstrates several pedagogical practices that foster active hope by engaging emotions.

While the course accommodated challenging emotions, the paradoxical nature of active hope, supported by scholars (Grain, 2022; Hathaway, 2017; Macy et al., 2014; Ojala, 2013b), emphasizes the need to engage with difficult feelings directly. The findings reveal differences between which emotions hope entails. Some TAs and instructors shifted toward optimism or trying to reduce the emotional burden of learning about the climate crisis. Others believed the course did not engage enough with anger or privilege. These results reveal the conflation of hope with positivity or optimism.

As evident from the discussion in chapter two (section 2.3.1), hope is intertwined with difficult emotions (Kleres & Wettergren, 2017; Marlon et al., 2019; Nairn, 2019; Sangervo et al., 2022; Stevenson et al., 2018). However, this interconnection is not always recognized in educational spaces. Thus, it becomes imperative to reconceptualize "negative emotions" as an integral facet of hope within ESE courses. ESE educators should strive to delve further into difficult and challenging emotions. This can reveal how these emotions can be a powerful tool for cultivating hope and empowering change makers (Atkinson, 2022, p. 36; Macy et al., 2014). By incorporating these emotions into the classroom while concurrently exploring them more profoundly, ESE courses can embrace fully the complex and messy nature of active hope.

Engaging directly with negative emotions is challenging, especially given the long-standing tendency of higher education to assume a "duality" of reason and emotion (Jones & Davison, 2021), a trend reflected in TAs' observations of students "grappling" with emotions for the first time. Furthermore, environmental education has often overlooked the emotional implications of learning about the climate crisis (Kelsey, 2016, p. 20; Kool & Kelsey, 2006). Thus, acknowledging emotions in a science classroom is a novel and challenging endeavor in and of itself. Delving deeper into the messy and complex nature of these emotions for transformation requires system level shifts around what is considered rationality and knowledge. However, equipping young people to connect to their emotional selves in novel ways is essential to engage fully with active hope.

5.2.1 Enrich Hope through Positionality, Spirit, and Discomfort

Furthermore, the second theme "Connecting the Climate Crisis to Self and Emotions" highlights the engagement in self-reflection through the ROL activity and journaling. These

practices embrace active hope by addressing critical and paradoxical aspects. Scholars such as Ives (2020) stress the importance of reflection of “inner worlds” such as values, worldviews and emotions in sustainability. Yet, this self-reflection must incorporate additional elements of criticality and positionality (Giroux, 2007; Grain, 2022; hooks, 2003) to go deeper into a pedagogy of active hope.

Engaging critically with active hope entails reflecting on privilege, place, and their interplay with emotions (Grain, 2022; Giroux, 2007). While active hope requires “interiority and reflexivity” (Todd & Vamvalis, 2022), the study findings reveal a lack of critical self-reflection, with only one student and TA discussing inequity and privilege concerning the experience of the climate crisis. This absence is noteworthy, but perhaps not surprising considering colonial academic institutions have traditionally encouraged learning through positivist knowledge over decolonial critiques of systems of oppression. As previously mentioned in chapter two (section 2.2.3), emotions such as hope and eco-anxiety are intertwined with whiteness, power, and privilege (Coffey et al., 2021; Ray, 2021), and are studied predominantly by Western scholars (Coffey et al., 2021; Cunsolo & Ellis, 2018). Thus, a pedagogy of active hope must consider the dynamics of power, privilege, and ensuing inequities when addressing emotions, prompting students towards critical self-reflection (Giroux, 2007). This includes scrutinizing their own positioning within these inequitable systems.

Connecting to spirituality through journaling offers a means to foster the critical and paradoxical facets of active hope. Although students grappled with the unfamiliarity of spirituality in the classroom, this situation presents a chance to transcend current ways of being and doing (Vogel & O’Brien, 2022, p. 657) through exposure to non-hegemonic knowledge.

Lingley (2016) reminds us “situating spirituality within educational discourse acts as a counter-narrative to a vision of learning that privileges Eurocentric rationality, empiricism, and binary thinking” (p. 7). By rejecting Eurocentric Cartesian and capitalist knowledge models through spiritual connection, avenues open for deeper inner exploration (Ives et al., 2020) and the development of critical consciousness (Freire, 2003). As Todd & Vamvalis (2022) elaborate, “we come to understand how we are immersed in these capitalist, colonial, patriarchal, and racist systems and structures that inflict profound wounds and traumas upon our psyches, minds, hearts, and bodies” (p. 231). Thus, incorporating spirituality into education allows for hopeful spaces of transformation and is a necessary element for deeper critical and inner exploration.

Exploring novel concepts like spirituality provides students with opportunities to confront the necessary discomfort for fostering the paradoxical dimension of active hope (Grain, 2022). The challenges students faced with spiritual and emotional journaling underscore the essence of hopeful endeavors. These practices necessitated the development of “emotional stamina” to navigate the discomfort and difficult emotions inherent in understanding power dynamics and personal roles in perpetuating harm (Stein, 2019, p. 682). Furthermore, discomfort arises in truly transformative learning (Vogel & O’Brien, 2022) when students are engaging in work that shifts their usual paradigms and understanding of the world (Taylor, 2008). Therefore, the creation of “pedagogies of discomfort” is vital. These uncomfortable pedagogical approaches, such as journaling, play a crucial role in engaging deeply with the paradoxical element of active hope and establishing spaces for more extensive critical internal examination.

While hopeful pedagogical practices have been established, there was a lack of connection to students' sense of empowerment. This gap in students' commentary on the ROL activity and journaling is interesting. This could potentially stem from the novelty and challenge students experienced when engaging emotionally and spiritually with the climate crisis, requiring sustained exposure to reshare their perspectives and beliefs about the value of affective knowledge systems. Furthermore, it is plausible that my inquiries did not adequately probe into these pedagogical methods enough, warranting further investigation to comprehend the impact of such practices on students' sense of empowerment. Future research can investigate these questions using different methodological approaches. For instance, arts-based inquiries can help create a more open and secure space for discussing emotions, or a longer-term project can reveal the effects over an extended time.

All in all, this theme forges connections between critical education, ESE, psychology, and hope. Firstly, it provides examples of pedagogical practices that introduce emotions into the classroom. Next, it emphasizes the importance of recognizing the interplay of negative emotions as a fundamental step in cultivating active hope. Lastly, it illustrates how journaling practices, especially those centered on spirituality, can build hopeful spaces of critical self-reflection and discomfort.

5.3 Theme 3: Cultivate Hope and Empowerment through Community and Local Action

The results indicate that to foster active hope and cultivate students' empowerment we must consider the origins of hope (Marlon et al., 2019). As observed in the third theme, "'There's a Bit More Fuel to the Fire than you Thought': Planning for Change through Community and Localized Action" TAs and instructors voiced that they drew hope from two

interrelated sources: from others and through a local perspective. The psychological literature underscores the significance of hope's intertwinement with community and connections, as numerous sources demonstrate the link between hope built through trust in societal actors and subsequent behavioral outcomes (Geiger et al., 2021; Ojala, 2012a; Renouf, 2021; Vandaele & Stålhammar, 2022). Expanding from this psychological literature, fostering hope through connection and community becomes pivotal in the classroom.

Thus, this study unveils practices for cultivating this hope in the classroom. As demonstrated, the workshops fostered hope through community and connections in the workshops, cross disciplinary dialogue, and horizontal power relationships. In the context of ESE studies, scholars emphasize the role of social connections in cultivating hope (Li & Monroe, 2019; Swim & Fraser, 2013; Vandaele & Stålhammar, 2022) and scholar bell hooks (2003) calls for creating hope through community in the classroom. Thus, this study shows the value of bridging disciplinary gaps to fully understand a pedagogy of hope.

Furthermore, community and local action are often intertwined. Building trust in societal actors also demonstrates to students that there are others engaged in local actions, inspiring them to believe in their capacity to make a difference. Echoing the findings that the action plan contributed to hope, Geiger et al. (2021) assert that considering individual and collective action contributes to hope in solving issues (p. 14). Hence, this study reveals that active hope is built through planning for localized action such as in assignments like the action plan.

These hopeful pedagogical practices that emphasize community and localized- actions contributed to student's sense of empowerment. As demonstrated, feeling that others cared and planning for local action elevated support, motivation, and enthusiasm for acting. Furthermore, this action-lens helped students work through difficult emotions. Tassone et al. (2017) corroborate this notion that contributing to real-life solutions empowers students. Their research on sustainability education finds that the pedagogical practices of creating and executing a real-life action plan led to student empowerment. Once again, this study builds on these findings to show the interconnection of hope and empowerment.

5.3.1 Engage with "Ongoing Resistance"

However, the findings reveal novel tensions regarding the impact, context, and privilege surrounding this local lens on action. Active hope requires students intentionally and critically situate their actions within the larger societal context. Henry Giroux (2007) speaks to this interconnection: "any politics of hope must tap into individual experiences while at the same time linking individual responsibility with a progressive sense of social agency" (p. 33). Therefore, in order to delve deeper into the critical aspects of active hope and to encourage action, it is essential to engage in upfront and open conversations that involve "ongoing resistance" (hooks, 2003). These discussions should focus on the tensions that arise when addressing wicked problems, interconnectedness between individual and collective level changes, and the nuances of power at play.

Conclusively, this theme demonstrates we must foster a sense of hope through community and localized action, through pedagogical practices such as workshops and action plans. These hopeful pedagogical practices contribute to students' sense of empowerment.

However, to further engage with active hope, there must be upfront conversation regarding the politics and power surrounding these actions.

5.4 Chapter Conclusion

Throughout all three themes, the discussion has unveiled two significant results. Firstly, extending calls from a myriad of disciplinary perspectives, this study has provided an in-depth account of hopeful pedagogical practices that address various elements of active hope, as well as recommendations for deeper engagement. Secondly, it has been demonstrated that a pedagogy of hope often fosters a student's sense of empowerment. However, within this, there remains space for a more critical examination of the interactional component. Drawing on these insights, we can begin to understand how to teach with hope, and what the effects of this pedagogy are on students.

6 Conclusion

> Hope is grabbing the world by the throat and insisting there is more to life than you ever imagined.
>
> - Richard Rorty

This study has delved into the multifaceted landscape of active hope and empowerment within the context of ESE. I set out to answer two questions: (1) How active hope manifests in the content and instructional practices within an ESE course at McGill University and (2) the resulting effects of its pedagogical practices on students. Using thematic analysis, the study has identified three ways that active hope appeared in an ESE course: through engaging a plurality of perspectives, connecting students to emotions and self in the learning journey, and building community and connections with a focus on local action. In each theme, the results revealed tangible examples of pedagogical practices that manifest hope. Yet, I propose that there are avenues for enhancing active hope's engagement by embracing negative emotions, enriching hope through positionality, spirit, and discomfort, and fostering "ongoing resistance". Moreover, the strong connection between hope and empowerment is evident through students' increased sense of empowerment derived from the identified hopeful pedagogical practices, with recommendations for deepening the interactional element.

Thus, this study showcases how we might implement a pedagogy of active hope in higher education. This pedagogy ignites the spark of radical possibility, driving students to become agents of change.

6.1 Study Limitations

There are several limitations that should be acknowledged. Firstly, limitations related to access to the course under investigation. Although I worked diligently to speak to as many course instructors and TAs as possible, I was not able to directly attend the courses. I believe this would have afforded a clearer and more profound comprehension of hopeful pedagogical practices within the course.

Additionally, there were limitations related to the student data: the sequence of data collection and follow-up discussions. Ideally, I would have completed my analysis of hopeful pedagogical practices prior to conducting student focus groups. However, due to the time constraints of a master's thesis, I conducted these data collections consecutively. As a result, during the focus groups, I lacked a complete grasp of the hopeful pedagogical practices. This might explain why certain pedagogical practices students did not comment on, such as the reflection journaling. And lastly, I was not able to follow up with participants. Again, given the master's thesis timeline, I was unable to conduct follow up discussions that could have shed light on topics such as the empowerment effects of reflection journaling.

6.2 Theoretical Implications: Reimagining Hope

This study presented a novel transdisciplinary conceptualization of hope: active hope. I argued that we must understand how hope works interconnectedly on both an individual and societal level. The scholars, theories, and disciplines behind the conceptualization of active hope, as well as the melding of literature that provided the contexts and discussion of this thesis were unique in that they drew from a wide range, and often contradictory, bodies of literature. However, to address the inherent complexity of wicked issues, we must "move

across intellectual and disciplinary silos and inspire new thinking" (Vogel & O'Brien, 2022, p. 654). Thus, we must approach sustainability in all its diversity, bringing various actors together to explore ways to conceptualize these complex notions of human experience.

The third theme reveals this, hope pathways are not isolated but rather interconnected. The interconnection between individual and societal hopes can be seen with students' proposed action-plans. For instance, proposed projects like the McGill farmers market educational component and an eco-anxiety addressing app exemplify individual actions within broader societal changes. And while students did list some "individual" level actions such as "washing out zip locks" and "flying less" they also expressed interest in joining activist groups, clubs and McGill sustainability initiatives.

This interplay emphasizes that we must reconceptualize hope in a way that acknowledges the interplay between individual and collective hope pathways. Psychologist Maria Ojala (2023) similarly advocates for this paradigm shift, urging researchers to consider the interconnection of individual and collective pathways of hope, stating, "in comparison with Snyder's original hope theory and its rather individualized account of pathways, researchers in relation to a collective problem like climate change also need to take into account collective pathways" (p. 4).

Thus, I assert we must broaden our theoretical comprehension of hope to encompass individual and collective perspective and to recognize the intricate interrelationships among various hope models.

6.3 Closing Words

Don't let this darkness fool you, all lights turned off can be turned back on.

- Noah Kahan, *Call Your Mom*

In the introduction of this thesis, I wrote about the beginning of my own hopelessness. As this thesis comes to an end, I'd like to offer reflections on how I have experienced hope throughout this process:

> I feel as if this feeling, this feeling of actual hope, is something I have truly never fully felt. And I know it's layered and complex and multifaceted but it also feels so fresh and new and that it truly is a driver and a catalyst to stay and commit to this… But I also think about how I may be small, but I'm still sharing my nutrients, maybe I'm breathing life and oxygen into someone else, I'm actively contributing to be part of the change, and I don't really think I was doing that before. Maybe the answer lies right here in front of us, in loving, in community, in feeling, in sharing, in listening, in our shared humanity. Maybe we can transcend not only ourselves as individuals but also the boundaries that trap us into being and existing as one singular kind of person, and within this we become part of the network. (Chalmers)

Hope is probably not what you expected it to be. And now that I've experienced it**,** me neither. It's raw, real, painful, something to be practiced every single day. I've learned it's in community, alongside others, within joy and despair. It exists in the cracks of light, the discomfort, the resilience, the getting up day after day when it's almost too painful. Considering all this, I think it's the perfect way to express the reality of being human: our complexity, our incompleteness, "Not-yet" Ernest Bloch tells us.

As I was writing this thesis in the summer of 2023, we've experienced even more climate extremes. The world saw the hottest July on record. In Canada, we've burned more hectares of

forest than any other wildfire season. The climate crisis is here, and I'm terrified every single day. Hope doesn't take any of this reality away. It doesn't stop the pain or the suffering. What it does do is force me to grapple, to struggle, to face down the inherent complexity, and despite all of this, *to not give up.*

7 References

Abson, D. J., Fischer, J., Leventon, J., Newig, J., Schomerus, T., Vilsmaier, U., von Wehrden, H., Abernethy, P., Ives, C. D., Jager, N. W., & Lang, D. J. (2017). Leverage points for sustainability transformation. *Ambio*, *46*(1), 30–39. https://doi.org/10.1007/s13280-016-0800-y

Ahmed, S. (2014). Feminist attachments. In *The cultural politics of emotion* (NED-New edition, 2, pp. 168–190). Edinburgh University Press; JSTOR. http://www.jstor.org.proxy3.library.mcgill.ca/stable/10.3366/j.ctt1g09x4q.13

Atkinson, J. (2022). Eco-grief and climate anxiety in the classroom. In G. Gaard & B. Ergüner-Tekinalp, *Contemplative practices and anti-oppressive pedagogies for higher education: Bridging the disciplines* (1st ed.). Routledge. https://doi.org/10.4324/9781003201854

Bandura, A. (1997). *Self-efficacy: The exercise of control*. W.H. Freeman and Company; WorldCat.org.

Batliwala, S. (2007). Taking the power out of empowerment – an experiential account. *Development in Practice*, *17*(4–5), 557–565. https://doi.org/10.1080/09614520701469559

Bawden, R. (2008). The educative purpose of higher education for human and social development in the context of globalization. *Higher Education in the World 3: New Challenges and Emerging Roles for Human and Social Development*, 65–73.

Bechara, A., Damasio, H., & Damasio, A. R. (2000). *Emotion, decision making and the orbitofrontal cortex*. *10*(3), 295–307. https://doi.org/10.1093/cercor/10.3.295

Bieler, A., & McKenzie, M. (2017). Strategic planning for sustainability in canadian higher education. *Sustainability*, *9*(2), Article 2. https://doi.org/10.3390/su9020161

Bladow, K., & Ladino, J. (Eds.). (2018). Toward an affective ecocriticism: Placing feeling in the anthropocene. In *Affective Ecocriticism: Emotion, Embodiment, Environment*. UNP - Nebraska. https://doi.org/10.2307/j.ctv75d0g8

Bloch, E. (1986). *The principle of hope* (N. Plaice, S. Plaice, & P. Knight, Trans.; 1st American ed.). MIT Press; WorldCat.org.

Boud, D. (2001). Using journal writing to enhance reflective practice. *New Directions for Adult and Continuing Education*, *2001*(90), 9–18. https://doi.org/10.1002/ace.16

Braun, V., & Clarke, V. (2006). Using thematic analysis in psychology. *Qualitative Research in Psychology*, *3*(2), 77–101. https://doi.org/10.1191/1478088706qp063oa

Braun, V., & Clarke, V. (2019). Reflecting on reflexive thematic analysis. *Qualitative Research in Sport, Exercise and Health*, *11*(4), 589–597. https://doi.org/10.1080/2159676X.2019.1628806

Braun, V., & Clarke, V. (2021). One size fits all? What counts as quality practice in (reflexive) thematic analysis? *Qualitative Research in Psychology*, *18*(3), 328–352. https://doi.org/10.1080/14780887.2020.1769238

Braun, V., & Clarke, V. (2022). *Thematic analysis: A practical guide*. SAGE; WorldCat.org.

Brown, J. (2003). Ernst Bloch and the utopian imagination. *Eras Journal*, *5*.

Budziszewska, M., & Jonsson, S. E. (2021). From climate anxiety to climate action: An existential perspective on climate change concerns within psychotherapy. *Journal of Humanistic Psychology*, 002216782199324. https://doi.org/10.1177/0022167821993243

Carrington, D. (2021, September 28). 'Blah, blah, blah': Greta Thunberg lambasts leaders over climate crisis. *The Guardian*. https://www.theguardian.com/environment/2021/sep/28/blah-greta-thunberg-leaders-climate-crisis-co2-emissions

Chang, E., Sjöberg, S., Turunen, P., & Rambaree, K. (2022). Youth empowerment for sustainable development: Exploring ecosocial work discourses. *Sustainability*, *14*(6), 3426. https://doi.org/10.3390/su14063426

Clayton, S., & Karazsia, B. (2020). Development and validation of a measure of climate change anxiety. *Journal of Environmental Psychology*, *69*, 1–11. https://doi.org/10.1016/j.jenvp.2020.101434

Clayton, S., Manning, C., Krygsman, K., & Speiser, M. (2017). *Mental Health and our changing climate: Impacts, implications, and guidance* (pp. 1–70). American Psychological Association, and ecoAmerica. http://doi.apa.org/get-pe-doi.cfm?doi=10.1037/e503122017-001

Coffey, Y., Bhullar, N., Durkin, J., Islam, M. S., & Usher, K. (2021). Understanding eco-anxiety: A systematic scoping review of current literature and identified knowledge gaps. *The*

Journal of Climate Change and Health, *3*, 1–6. https://doi.org/10.1016/j.joclim.2021.100047

Coops, N. C., Marcus, J., Construt, I., Frank, E., Kellett, R., Mazzi, E., Munro, A., Nesbit, S., Riseman, A., Robinson, J., Schultz, A., & Sipos, Y. (2015). How an entry-level, interdisciplinary sustainability course revealed the benefits and challenges of a university-wide initiative for sustainability education. *International Journal of Sustainability in Higher Education*, *16*(5), 729–747. https://doi.org/10.1108/IJSHE-04-2014-0059

Cross, I. D., & Congreve, A. (2021). Teaching (super) wicked problems: Authentic learning about climate change. *Journal of Geography in Higher Education*, *45*(4), 491–516. https://doi.org/10.1080/03098265.2020.1849066

Cunsolo, A., & Ellis, N. R. (2018). Ecological grief as a mental health response to climate change-related loss. *Nature Climate Change*, *8*(4), Article 4. https://doi.org/10.1038/s41558-018-0092-2

Cunsolo, A., Harper, S. L., Minor, K., Hayes, K., Williams, K. G., & Howard, C. (2020). Ecological grief and anxiety: The start of a healthy response to climate change? *The Lancet Planetary Health*, *4*(7), 261–263. https://doi.org/10.1016/S2542-5196(20)30144-3

Davidson, D. J. (2019). Emotion, reflexivity and social change in the era of extreme fossil fuels. *The British Journal of Sociology*, *70*(2), 442–462. https://doi.org/10.1111/1468-4446.12380

Divest McGill. (n.d.). Retrieved September 28, 2023, from https://www.divestmcgill.ca

Eriksen, S. H. (2022). Is my vulnerability so different from yours? A call for compassionate climate change research. *Progress in Human Geography*, 1–19. https://doi.org/10.1177/03091325221083221

Finnegan, W. (2022). Educating for hope and action competence: A study of secondary school students and teachers in England. *Environmental Education Research*, 1–20. https://doi.org/10.1080/13504622.2022.2120963

Flick, U. (2020). Triangulation. In *SAGE research methods foundations*. SAGE Publications Ltd. https://doi.org/10.4135/9781526421036826100

Freire, P. (2003). *Pedagogy of the oppressed* (M. B. Ramos, Trans.; 30th anniversary). Continuum.

Freire, P. (2004). *Pedagogy of hope: Reliving pedagogy of the oppressed*. Continuum.

Fridays for Future. (2023). *What we do*. https://fridaysforfuture.org/

Geiger, N., Gore, A., Squire, C. V., & Attari, S. Z. (2021). Investigating similarities and differences in individual reactions to the COVID-19 pandemic and the climate crisis. *Climatic Change*, *167*(1–2), 1–20. https://doi.org/10.1007/s10584-021-03143-8

Giroux, H. (2003). Utopian thinking under the sign of neoliberalism: Towards a critical pedagogy of educated hope. *Democracy & Nature*, *9*(1), 91–105. https://doi.org/10.1080/1085566032000074968

Giroux, H. (2007). Utopian thinking in dangerous Times: Critical pedagogy and the project of educated hope. In R. J. F. Day, G. De Peuter, & M. Coté (Eds.), *Utopian pedagogy: Radical experiments against neoliberal globalization* (pp. 23–42). University of Toronto Press.

Gonsalves, A. J., Danielsson, A. T., Avraamidou, L., Nyström, A.-S., & Esquivel, R. (2023). Using story-based methodologies to explore physics identities: How do moments add up to a life in physics? *Physical Review Physics Education Research*, *19*(2), 020106. https://doi.org/10.1103/PhysRevPhysEducRes.19.020106

Grain, K. (2022). *Critical hope: How to grapple with complexity, lead with purpose, and cultivate transformative social change*. North Atlantic Books.

Griffin, B. J., Purcell, N., Burkman, K., Litz, B. T., Bryan, C. J., Schmitz, M., Villierme, C., Walsh, J., & Maguen, S. (2019). Moral Injury: An integrative review. *Journal of Traumatic Stress*, *32*(3), 350–362. https://doi.org/10.1002/jts.22362

Hammond, C. A. (2017). *Hope, utopia and creativity in higher education: Pedagogical tactics for alternative futures*. Bloomsbury Academic, An imprint of Bloomsbury Publishing Plc.

Hathaway, M. D. (2017). Activating hope in the midst of crisis: Emotions, transformative learning, and "The Work That Reconnects." *Journal of Transformative Education*, *15*(4), 296–314. https://doi.org/10.1177/1541344616680350

Hickman, C. (2020). We need to (find a way to) talk about … Eco-anxiety. *Journal of Social Work Practice*, *34*(4), 411–424. https://doi.org/10.1080/02650533.2020.1844166

Hickman, C., Marks, E., Pihkala, P., Clayton, S., Lewandowski, E., Elouise, M., Britt, W., Catriona, M., & Susteren, L. (2021). *Young people's voices on climate anxiety, government betrayal and moral injury: A global phenomenon*. 1–23. http://dx.doi.org/10.2139/ssrn.3918955

Hicks, D. (1998). Stories of Hope: A response to the 'psychology of despair.' *Environmental Education Research*, *4*(2), 165–176. https://doi.org/10.1080/1350462980040204

Hicks, D. (2002). Reclaiming the future: What every educator needs to know. In *Lessons for the future*. Routledge.

hooks, bell. (2003). *Teaching community: A pedagogy of hope*. Routledge.

Hornsey, M. J., & Fielding, K. S. (2016). A cautionary note about messages of hope: Focusing on progress in reducing carbon emissions weakens mitigation motivation. *Global Environmental Change*, *39*, 26–34. https://doi.org/10.1016/j.gloenvcha.2016.04.003

Hudson, A. (2021). The end of the world, for whom? *Deep Times: A Journal of the Work That Reconnects*. https://journal.workthatreconnects.org/2021/03/01/the-end-of-the-world-for-whom/

Intergovernmental Panel on Climate Change. (2023). *Climate Change 2023: Synthesis report* (pp. 35–115). https://www.ipcc.ch/report/ar6/syr/downloads/report/IPCC_AR6_SYR_LongerReport.pdf

Ives, C. D., Freeth, R., & Fischer, J. (2020). Inside-out sustainability: The neglect of inner worlds. *Ambio*, *49*(1), 208–217. https://doi.org/10.1007/s13280-019-01187-w

Jennings, L. B., Parra-Medina, D. M., Hilfinger-Messias, D. K., & McLoughlin, K. (2006). Toward a critical social theory of youth empowerment. *Journal of Community Practice*, *14*(1–2), 31–55. https://doi.org/10.1300/J125v14n01_03

Johnston, E. (2021). Loving a Vanishing World. In A. E. Johnson & W. Katharine (Eds.), *All we can save: Trust, Courage, and solutions for the climate crisis* (pp. 256–265). One World.

Jones, C. A., & Davison, A. (2021). Disempowering emotions: The role of educational experiences in social responses to climate change. *Geoforum*, *118*, 190–200. https://doi.org/10.1016/j.geoforum.2020.11.006

Kayumova, S., & Tippins, D. J. (2021). The quest for sustainable futures: Designing transformative learning spaces with multilingual Black, Brown, and Latinx young people through critical response-ability. *Cultural Studies of Science Education*, *16*(3), 821–839. https://doi.org/10.1007/s11422-021-10030-2

Kelly, A. (2017). *Eco-anxiety at university: Student experiences and academic perspectives on cultivating healthy emotional responses to the climate crisis*. 1–48. https://digitalcollections.sit.edu/isp_collection/2642/.

Kelsey, E. (2016). Propagating collective hope in the midst of environmental doom and gloom. *Canadian Journal of Environmental Education (CJEE)*, *21*, 23–40.

Kelsey, E. (2020). *Hope matters: Why changing the way we think is critical to solving the environmental crisis*. Greystone Books.

Kerret, D., Orkibi, H., & Ronen, T. (2016). Testing a model linking environmental hope and self-control with students' positive emotions and environmental behavior. *The Journal of Environmental Education*, *47*(4), 307–317. https://doi.org/10.1080/00958964.2016.1182886

Kieffer, C. (1984). Citizen empowerment: A developmental perspective. *Prevention in Human Services*, *3*(2–3), 9–34.

Kleres, J., & Wettergren, Å. (2017). Fear, hope, anger, and guilt in climate activism. *Social Movement Studies*, *16*(5), 507–519. https://doi.org/10.1080/14742837.2017.1344546

Kollmuss, A., & Agyeman, J. (2002). Mind the Gap: Why do people act environmentally and what are the barriers to pro-environmental behavior? *Environmental Education Research*, *8*(3), 239–260. https://doi.org/10.1080/13504620220145401

Kool, R., & Kelsey, E. (2006). Dealing with despair: The psychological implications of environmental issues. In W. L. Filho & M. Salomone (Eds.), *Innovative Approaches to Education for Sustainable Development* (pp. 120–129). Peter Lang Publishing.

Kovach, M. (2015). Emerging from the margins: Indigenous methodologies. In L. A. Brown & S. Strega, *Research as resistance: Revisiting critical, indigenous, and anti-oppressive approaches* (2nd ed.). Canadian Scholars' Press.

Levitas, R. (1990). Educated hope: Ernst Bloch on abstract and concrete utopia. *Utopian Studies*, *1*(2), 13–26.

Li, C., & Monroe, M. (2019). Exploring the essential psychological factors in fostering hope concerning climate change. *Environmental Education Research*, *25*(6), 936–954. https://doi.org/10.1080/13504622.2017.1367916

Li, C., & Monroe, M. C. (2018). Development and validation of the climate change hope scale for high school students. *Environment and Behavior*, *50*(4), 454–479. https://doi.org/10.1177/0013916517708325

Lincoln, N. K., & Denzin, Y. S. (2000). The discipline and practice of qualitative research. In N. K. Lincoln & Y. S. Denzin (Eds.), *SAGE handbook of qualitative methods* (p. (pp. 1-19)). SAGE.

Lingley, A. (2016). *Democratic Foundations for spiritually responsive pedagogy*. *24*, 1–12.

Litosseliti, L. (2003). *Using focus groups in research*. Continuum.

Macintyre, T., Chaves, M., Monroy, T., Zethelius, M. O., Villarreal, T., Tassone, V. C., & Wals, A. E. J. (2020). Transgressing boundaries between community learning and higher education: Levers and barriers. *Sustainability*, *12*(7), 1–24. https://doi.org/10.3390/su12072601

Macy, J., Brown, M. Y., & Fox, M. (2014). *Coming back to life: The updated guide to the work that reconnects*. New Society Publishers.

Marlon, J. R., Bloodhart, B., Ballew, M. T., Rolfe-Redding, J., Roser-Renouf, C., Leiserowitz, A., & Maibach, E. (2019). How hope and doubt affect climate change mobilization. *Frontiers in Communication*, *4*, 1–15. https://doi.org/10.3389/fcomm.2019.00020

Mogensen, F., & Schnack, K. (2010). The action competence approach and the 'new' discourses of education for sustainable development, competence and quality criteria. *Environmental Education Research*, *16*(1), 59–74. https://doi.org/10.1080/13504620903504032

Nairn, K. (2019). Learning from young people engaged in climate activism: The potential of collectivizing despair and hope. *YOUNG*, *27*(5), 435–450. https://doi.org/10.1177/1103308818817603

Neubauer, C., & Matthieu, C. (2017, May 8). *Global pressing problems and the sustainable development goals*. Global University Network for Innovation. https://www.guninetwork.org/articles/global-pressing-problems-and-sustainable-development-goals

O'Brien, K. (2018). Is the 1.5°C target possible? Exploring the three spheres of transformation. *Current Opinion in Environmental Sustainability*, *31*, 153–160. https://doi.org/10.1016/j.cosust.2018.04.010

O'Brien, K., Selboe, E., & Hayward, B. M. (2018). Exploring youth activism on climate change: Dutiful, disruptive, and dangerous dissent. *Ecology and Society*, *23*(3). https://doi.org/10.5751/ES-10287-230342

Ojala, M. (2012a). Hope and climate change: The importance of hope for environmental engagement among young people. *Environmental Education Research*, *18*(5), 625–642. https://doi.org/10.1080/13504622.2011.637157

Ojala, M. (2012b). Regulating worry, promoting hope: How do children, adolescents, and young adults cope with climate change? *International Journal of Environmental and Science Education*, *7*(4), 537–561.

Ojala, M. (2013a). Coping with Climate Change among adolescents: Implications for subjective well-being and environmental engagement. *Sustainability*, *5*(5), 2191–2209. https://doi.org/10.3390/su5052191

Ojala, M. (2013b). Emotional awareness: On the importance of including emotional aspects in education for sustainable development (ESD). *Journal of Education for Sustainable Development*, *7*(2), 167–182. https://doi.org/10.1177/0973408214526488

Ojala, M. (2015). Hope in the face of climate change: Associations With environmental engagement and student perceptions of teachers' emotion communication style and future orientation. *The Journal of Environmental Education*, *46*(3), 133–148. https://doi.org/10.1080/00958964.2015.1021662

Ojala, M. (2016). Young people and global climate change: Emotions, coping, and engagement in everyday life. In N. Ansell, N. Klocker, & T. Skelton (Eds.), *Geographies of global issues: Change and threat* (pp. 1–19). Springer Singapore. https://doi.org/10.1007/978-981-4585-95-8_3-1

Ojala, M. (2023). Hope and climate-change engagement from a psychological perspective. *Current Opinion in Psychology*, *49*, 101514. https://doi.org/10.1016/j.copsyc.2022.101514

Orr, D. W. (2011). *Hope is an imperative: The essential David Orr*. Island Press; WorldCat.org.

Padilla Murcia, E., & Flores Hinojos, I. A. (2022). Apropiación y empoderamiento en la educación ambiental para la sostenibilidad. *Educación y Educadores*, *25*(1), 1–22. https://doi.org/10.5294/edu.2022.25.1.1

Pellitier, P. T., Ng, M., Castaneda, S. R., Moser, S. C., & Wray, B. D. (2023). Embracing climate emotions to advance higher education. *Nature Climate Change*, 1–3. https://doi.org/10.1038/s41558-023-01838-7

Pihkala, P. (2020a). Anxiety and the ecological crisis: An analysis of eco-anxiety and climate anxiety. *Sustainability*, *12*(19), 7836. https://doi.org/10.3390/su12197836

Pihkala, P. (2020b). Eco-anxiety and environmental education. *Sustainability*, *12*(23), 10149. https://doi.org/10.3390/su122310149

Ray, S. J. (2021). *Climate Anxiety Is an overwhelmingly white phenomenon*. Scientific American. https://www.scientificamerican.com/article/the-unbearable-whiteness-of-climate-anxiety/

Renouf, J. S. (2021). Making sense of climate change—The lived experience of experts. *Climatic Change*, *164*(1), 14. https://doi.org/10.1007/s10584-021-02986-5

Riger, S. (1993). What's Wrong with empowerment. *American Journal of Community Psychology*, *21*(3), 279. British Library Serials.

Russell, C., & Oakley, J. (2016). Engaging the emotional dimensions of environmental education. *Canadian Journal of Environmental Education (CJEE)*, *21*, 13–22.

Saldaña, J. (2016). *The coding manual for qualitative researchers* (3e.). SAGE; WorldCat.org. https://study.sagepub.com/saldanacoding3e

Sangervo, J., Jylhä, K. M., & Pihkala, P. (2022). Climate anxiety: Conceptual considerations, and connections with climate hope and action. *Global Environmental Change*, *76*, 102569. https://doi.org/10.1016/j.gloenvcha.2022.102569

Schwartzberg, P., Stevens, J., & Acton, K. S. (2022). *Canadians' perspectives on climate change & education: 2022 executive summary*. Learning for a Sustainable Future.

Smith, N., & Leiserowitz, A. (2014). The role of emotion in global warming policy support and opposition. *Risk Analysis*, *34*(5), 937–948. https://doi.org/10.1111/risa.12140

Smith, & Osborn, M. (2008). Interpretative phenomenological analysis. In J. Smith (Ed.), *Qualitative psychology: A practical guide to research methods* (2nd ed.). SAGE Publications; WorldCat.org. http://catdir.loc.gov/catdir/enhancements/fy0828/2008295932-t.html

Snyder, C. R., Rand, K. L., & Sigman, D. R. (2002). Hope theory. A member of the positive psychology family. In C. R. Snyder & S. J. Lopez, *Handbook of positive psychology* (pp. 257–275). Oxford University Press, Incorporated.

Souza, D. T., Wals, A. E. J., & Jacobi, P. R. (2019). Learning-based transformations towards sustainability: A relational approach based on Humberto Maturana and Paulo Freire. *Environmental Education Research*, *25*(11), 1605–1619. https://doi.org/10.1080/13504622.2019.1641183

Speer, P. W. (2000). Intrapersonal and interactional empowerment: Implications for theory. *Journal of Community Psychology*, *28*(1), 51–61. https://doi.org/10.1002/(SICI)1520-6629(200001)28:1<51::AID-JCOP6>3.0.CO;2-6

Stanley, S. K., Hogg, T. L., Leviston, Z., & Walker, I. (2021). From anger to action: Differential impacts of eco-anxiety, eco-depression, and eco-anger on climate action and wellbeing. *The Journal of Climate Change and Health*, *1*, 100003. https://doi.org/10.1016/j.joclim.2021.100003

Stein, S. (2019). Navigating different theories of change for higher education in volatile times. *Educational Studies*, *55*(6), 667–688. https://doi.org/10.1080/00131946.2019.1666717

Sterling, S. (2013). The sustainable university: Challenge and response. In *The Sustainable University*. Routledge.

Stevenson, K. T., Nils Peterson, M., & Bondell, H. D. (2018). Developing a model of climate change behavior among adolescents. *Climatic Change*, *151*(3–4), 589–603. https://doi.org/10.1007/s10584-018-2313-0

Swim, J. K., & Fraser, J. (2013). Fostering hope in climate change educators. *Journal of Museum Education*, *38*(3), 286–297. https://doi.org/10.1080/10598650.2013.11510781

Tassone, V. C., Dik, G., & van, L. T. A. (2017). Empowerment for sustainability in higher education through the EYE learning tool. *International Journal of Sustainability in Higher Education*, *18*(3), 341–358. https://doi.org/10.1108/IJSHE-12-2015-0209

Taylor, E. W. (2008). Transformative learning theory. *New Directions for Adult and Continuing Education*, *2008*(119), 5–15. https://doi.org/10.1002/ace.301

Temper, L., McGarry, D., & Weber, L. (2019). From academic to political rigour: Insights from the 'Tarot' of transgressive research. *Ecological Economics*, *164*, 106379. https://doi.org/10.1016/j.ecolecon.2019.106379

Tilbury, D. (1995). Environmental education for sustainability: Defining the new focus of environmental education in the 1990s. *Environmental Education Research*, *1*(2), 195–212. ERIC.

Todd, K., & Vamvalis, M. (2022). Puncturing, weaving and braiding: Integrating spiritual knowing in education. In L. Pipe & J. T. Stepens (Eds.), *IGNITE: A Justice-forward approach to decolonizing higher education through space, place and culture*. Vernon Press.

Tuffour, I. (2017). A critical overview of interpretative phenomenological analysis: A contemporary qualitative research approach. *Journal of Healthcare Communications*, *02*(04). https://doi.org/10.4172/2472-1654.100093

Turner, J. H., & Stets, J. E. (2005). *The sociology of emotions* (1st ed.). Cambridge University Press. https://doi.org/10.1017/CBO9780511819612

Uchendu, J. O. (2022). Eco-anxiety and its divergent power holds: A youth climate activist's perspective. *South African Journal of Psychology*, *52*(4), 545–547. https://doi.org/10.1177/00812463221130586

UNFCCC. (n.d.). *The Paris Agreement*. United Nations Climate Change. Retrieved June 8, 2023, from https://unfccc.int/process-and-meetings/the-paris-agreement

Vamvalis, M. (n.d.). *Regenerating respectful and reciprocal relationships to nature is an educational priority*. UNESCO MGIEP. Retrieved July 25, 2022, from https://mgiep.unesco.org/article/regenerating-respectful-and-reciprocal-relationships-to-nature-is-an-educational-priority

Van Manen, M. (2016). *Phenomenology of practice: Meaning-giving methods in phenomenological research and writing*. Routledge.

Vandaele, M., & Stålhammar, S. (2022). "Hope dies, action begins?" The role of hope for proactive sustainability engagement among university students. *International Journal of Sustainability in Higher Education*, *23*(8), 272–289. https://doi.org/10.1108/IJSHE-11-2021-0463

Veland, S., Scoville-Simonds, M., Gram-Hanssen, I., Schorre, A., El Khoury, A., Nordbø, M., Lynch, A., Hochachka, G., & Bjørkan, M. (2018). Narrative matters for sustainability: The transformative role of storytelling in realizing 1.5°C futures. *Current Opinion in Environmental Sustainability*, *31*, 41–47. https://doi.org/10.1016/j.cosust.2017.12.005

Verlie, B. (2019). Bearing worlds: Learning to live-with climate change. *Environmental Education Research*, *25*(5), 751–766. https://doi.org/10.1080/13504622.2019.1637823

Vogel, C., & O'Brien, K. (2022). Getting to the heart of transformation. *Sustainability Science*, *17*(2), 653–659. https://doi.org/10.1007/s11625-021-01016-8

Vygotsky, L. S. (1962). *Thought and language* (E. Hanfmann & G. Vakar, Eds.). The M.I.T. Press.

Wals, A. E. J. (2012). *Shaping the education of tomorrow: 2012 full length report on the UN decade of education for sustainable development* (pp. 1–102). UNESCO. https://unesdoc.unesco.org/ark:/48223/pf0000216472?posInSet=5&queryId=7d2988d5-cabb-44be-9229-5f0056987f15

Wals, A. E. J. (2020). Transgressing the hidden curriculum of unsustainability: Towards a relational pedagogy of hope. *Educational Philosophy and Theory*, *52*(8), 825–826. https://doi.org/10.1080/00131857.2019.1676490

Wals, A. E. J., & Benavot, A. (2017). Can we meet the sustainability challenges? The role of education and lifelong learning. *European Journal of Education*, *52*(4), 404–413. https://doi.org/10.1111/ejed.12250

Wals, A. E. J., & Jickling, B. (2002). "Sustainability" in higher education: From doublethink and newspeak to critical thinking and meaningful learning. *International Journal of Sustainability in Higher Education*, *3*(3), 221–232. https://doi.org/10.1108/14676370210434688

Webb, D. (2013). Pedagogies of hope. *Studies in Philosophy and Education*, *32*(4), 397–414. https://doi.org/10.1007/s11217-012-9336-1

Whitmarsh, L., Player, L., Jiongco, A., James, M., Williams, M., Marks, E., & Kennedy-Williams, P. (2022). Climate anxiety: What predicts it and how is it related to climate action? *Journal of Environmental Psychology*, *83*, 101866. https://doi.org/10.1016/j.jenvp.2022.101866

Woodbury, Z. (2019). Climate trauma: Toward a new taxonomy of trauma. *Ecopsychology*, *11*(1), 1–8. https://doi.org/10.1089/eco.2018.0021

Zimmerman, M. A. (2000). Empowerment theory: Psychological, organizational, and community levels of analysis. In *Handbook of community psychology.* (pp. 43–63). Kluwer Academic Publishers. https://doi.org/10.1007/978-1-4615-4193-6_2

8 Appendices

8.1 Appendix A: Instructor Interview Guide

Introduction: *Thank you for agreeing to participate in this study. The purpose of the interview is to give the researcher an understanding of the role of hope in pedagogical practices of instructors teaching about climate change. This portion of the study will focus on RQ#1: How does active hope manifest itself in the content and instructional practices of professors and assistants teaching about climate change [at McGill University?]. This interview will be around 45 minutes.*

Data Information*: Please remember your data will be made anonymous and stored on the McGill cloud. I will use this data to answer my research question about the role of hope in pedagogical practices of instructors teaching about climate change.*

I would like to confirm that you all signed the formal consent form. If there are any questions or concerns about that, please let me know now.

Interview format: *This interview will ask questions about your teaching methods and student reaction to content. There will be about 12 questions. I understand that speaking about emotions around climate change and sustainability issues can be difficult, so please do not hesitate to take a break or withhold from answering a question. You can withdraw from the study at any time.*

To confirm, do you consent to have your audio and video recorded today?

Warm up: *Here I would like us to introduce ourselves.*

- *My name is Daphne, I'm a second year student in DISE here at McGill. I came upon the topic of hope and empowerment, specifically in the context of the climate crisis and*

social justice issue, through my background in sociology, community work, and engaging in multiple educational spaces. I became curious about what pedagogical practices are a catalyst for actions, after being a TA in sociology for multiple years, and bearing in mind the current climate of eco-anxiety, despair and apathy. I believe teaching methods can directly affect students and encourage personal and societal transformation. I'm excited to be here and I want to thank you so much for taking the time to speak with me.

- *Could you introduce yourself? What are your research interests? What is your background?*
- *How did you come to teach FSCI 198?*

General: *Here I will ask some general questions about this course, your teaching practices and the design process.*

- *What excites you about teaching this course? [General]*
- *Could you tell me a bit about the design process of this course?*
    - Probe*: What kinds of things did you consider? What were your goals for this course?*
    - *What are your teaching philosophies in this course? [General]*
    - *What do you see as the impact of your teaching on students this semester? [General]*

Hope*: Here I will ask some questions around hope. Please use your own definition of hope to answer the questions.*

- *Do you feel hopeful towards the climate crisis?*
    - *Probe about how this affects their teaching?*

- *Are there any elements within your course that you believe are hopeful?*
    - *To what extent do you believe you teach in a hopeful manner? Why do you believe this? [*Allow for contradictions to my definition*]*

Bulk: *Here I will ask some questions about your teaching methods around different elements of hope. As you may have read in the information I sent you about the study, I conceptualize hope as having four interacting elements: Imaginative, critical, paradoxical and action oriented. Please let me know if you have any questions at any time.*

- *How do you equip students to act in this course?* [Action]
    - *How do you help students prepare for action?* [Synder]
    - *[Probe]I noticed that you have students do a team plan for action. Could you tell me a bit more about this assignment? (Probe for purpose of group element)*
    - *[Probe]: How do the course lectures and content prepare students to write this assignment? For taking action?*
- *How do you engage students in current unsustainable structures?* [Critical]
    - *[Probe]: How do the course lectures contribute to understanding unsustainable structures? How do the course readings and content contribute?*
    - *[Probe]: Could you tell me about any self reflection that the students engage with? What are the purpose of these activities?*
- *How do you engage students in current or possible societal alternatives?* [Imaginative]
    - *Probe: I noticed assignment #2 is the spotlight interview, could you tell me a bit more about this assignment? What do you believe some of the outcomes of this are?*

    - *Could you tell me a bit more about the lectures, such as the "we are all interconnected", and the future youth panel on defending Indigenous land. What are the purpose of these lectures?*

- *What are some of the emotions that come up during this course?* [Paradoxical]
    - *Probe for the purpose of these emotions. Ex: What strategies do you use when these emotions arise? What role do these emotions play in the class?*
    - *I noticed some of the course content even has a trigger warning, how do you approach emotions in the class with students?*

Closure: *We are nearing the end of the interview. I would like to open it up to you to provide me with any details around your teaching methods and hope that you think I may have missed.*

- *Is there anything else I should know in relation to FSCI 198 pertaining to your educational methods and hope?*

8.2 Appendix B: TA Interview Guide

Introduction: *Thank you for agreeing to participate in this study. The purpose of the interview is to give the researcher an understanding of the role of hope in pedagogical practices of instructors teaching about climate change. This portion of the study will focus on RQ#1: How does active hope manifest itself in the content and instructional practices of professors and assistants teaching about climate change [at McGill University?]. This interview will be around 45 minutes.*

Data Information*: Please remember your data will be made anonymous and stored on the McGill cloud. I will use this data to answer my research question about the role of hope in pedagogical practices of instructors teaching about climate change.*

I would like to confirm that you all signed the formal consent form. If there are any questions or concerns about that, please let me know now.

Interview format: *This interview will ask questions about your teaching methods and student reaction to content. There will be about 10 questions. I understand that speaking about emotions around climate change and sustainability issues can be difficult, so please do not hesitate to take a break or withhold from answering a question. You can withdraw from the study at any time.*

To confirm, do you consent to have your audio and video recorded today?

Warm up: *Here I would like us to introduce ourselves.*

- *My name is Daphne, I'm a second year student in DISE here at McGill. I came upon the topic of hope and empowerment, specifically in the context of the climate crisis and social justice issue, through my background in sociology, community work, and engaging*

in multiple educational spaces. I became curious about what pedagogical practices are a catalyst for actions, after being a TA in sociology for multiple years, and bearing in mind the current climate of eco-anxiety, despair and apathy. I believe teaching methods can directly affect students and encourage personal and societal transformation. I'm excited to be here and I want to thank you so much for taking the time to speak with me.

- *Could you introduce yourself? What are your research interests? What is your background?*
- *How did you come to TA FSCI 198?*

General: *Here I will ask some general questions about this course and your teaching practices.*

- *What excites you about TAing this course?* [General]
- *What do you see as the impact of your teaching on students this semester?* [General]
    - *Probe: What do you hope your students walk away from this course with?*

Hope*: Here I will ask some questions around hope. Please use your own definition of hope to answer the questions.*

- *Do you feel hopeful towards the climate crisis?*
    - *Probe about how this affects their teaching?*
- *To what extent do you believe you teach in a hopeful manner? Why do you believe this?* [Allow for contradictions to my definition]

Bulk: *Here I will ask some questions about your teaching methods around different elements of hope. As you may have read in the information I sent you about the study, I conceptualize hope as having four interacting elements: Imaginative, critical, paradoxical and action oriented. Please let me know if you have any questions at any time. If you are not sure how to answer a*

question, or think that it may not pertain to the activities you do in your discussion section, you do not need to answer every question.

- *How do you equip students to act in this course?* [Action]
    - *How do you help students prepare for action?* [Synder]
- *How do you engage students in current unsustainable structures?* [Critical]
    - *How do you engage students in current or possible societal alternatives?* [Imaginative]
- *What are some of the emotions that come up during this course?* [Paradoxical]
    - *Probe for the purpose of these emotions. Ex: What strategies do you use when these emotions arise? What role do these emotions play in the class?*

Closure: *We are nearing the end of the interview. I would like to open it up to you to provide me with any details around your teaching methods and hope that you think I may have missed.*

- *Is there anything else I should know in relation to FSCI 198 pertaining to your educational methods and hope?*

8.3 Appendix C: Student Focus Group Interview Guide

Introduction: *Thank you for agreeing to participate in this study. The purpose of the focus groups is to give the researcher an understanding of how educational methods in ESE (Environmental and sustainability courses) affects students' sense of empowerment. This focus group will be around 1 hour.*

Confidentiality*: By the nature of focus groups, I cannot guarantee that each participants confidentiality will be respected by other participants. However, I would like us to verbally agree to maintain confidentiality to within this group. This means that nothing said within this focus group or the names of participants is shared with anyone outside of this focus group.*

I would like to confirm that you all signed the formal consent form. If there are any questions or concerns about that, please let me know now.

Data Information*: Please remember your data will be made anonymous and stored on the McGill cloud. I will use this data to answer my research question regarding educational methods in ESE and the effects on students' sense of empowerment.*

Interview format: *This focus group will be organized by questions that are grouped into different themes. On the consent form, I have listed McGill counselor resources should you feel this interview brings up any difficult emotions. I understand that speaking about climate change and sustainability issues can be difficult, so please do not hesitate to take a break or withhold from answering a question. Please know that nothing in this group can affect your grade and no information will be shared with instructors. You can withdraw from the study at any time.*

Warm up: Here we will introduce ourselves and I'll ask some general questions about your experience in FSCI 198.

- *Introductions: Please draw a portrait of yourself for an introduction, you can include words and/ or drawings.*
- *Think about one word or phrase that describes what you are taking away from this course.*
- *How have you liked FSCI 198?*

General empowerment & hope: This section will ask about your experience in the course in terms of learning, action beliefs and hope.

- *What is a strong learning moment from FSCI 198? Could you please write this down.*
    - *[Probe]: Why was this a strong learning moment?*
- *Think about how you felt about your ability act on the climate crisis at the beginning of class versus how you are feeling now. Please write down a couple words that describe how you felt at the beginning versus how you feel now.*
    - *[Probe]: What created this shift in descriptions?*
    - *Do you find anything in the course to be hopeful? What things?*

Bulk: Psychological empowerment theory

- *What actions do you take or would like to take to contribute to the fight against climate change? (Write on sticky notes and put onto the whiteboard) Then, please write the aspects of the course that inspired these actions?* [Behavioral]
- *Did this class illuminate barriers to taking these actions? If so, how?* [Interactional]
- *Now, think about your belief in your abilities to reach these goals or do these things. Could you please rate on a scale of 1-5, 1 being not at all, 5 being absolutely, your belief in your abilities to reach your goals or actions.* [Intrapersonal] (Use sticky notes)

- *Why did you rate what you did?*

Closing

- *Let's close with one thing we hope for the future.*

8.4 Appendix D: Student Reflective Journal Prompt

Are you feeling empowered to act on the climate crisis? Have your experiences in this course affected your feelings about taking action? If so, how?

8.5 Appendix E: McGill REB approval Certificate

McGill

Research Ethics Board Office
James Administration Bldg.
845 Sherbrooke Street West. Rm 325
Montreal, QC H3A 0G4

Tel: (514) 398-6831

Website: https://mcgill.ca/research/research/compliance/human/reb-i-ii-iii

Research Ethics Board 2
Certificate of Ethical Acceptability of Research Involving Humans

REB File #: 22-08-024

Project Title: Hope in the Anthropocene: Empowering students in Environmental and Sustainability Education

Principal Investigator: Daphne Chalmers **Department:** Integrated Studies in Education

Status: Master's Student **Supervisor:** Professor Blane Harvey

Approval Period: September 21, 2022 – September 20, 2023

The REB 2 reviewed and approved this project by delegated review in accordance with the requirements of the McGill University Policy on the Ethical Conduct of Research Involving Human Participants and the Tri-Council Policy Statement: Ethical Conduct for Research Involving Humans.

Georgia Kalavritinos
Ethics Review Administrator

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* Approval is granted only for the research and purposes described.
* Modifications to the approved research must be reviewed and approved by the REB before they can be implemented.
* A Request for Renewal form must be submitted before the above expiry date. Research cannot be conducted without a current ethics approval. Submit 2-3 weeks ahead of the expiry date.
* When a project has been completed or terminated, a Study Closure form must be submitted.
* Unanticipated issues that may increase the risk level to participants or that may have other ethical implications must be promptly reported to the REB. Serious adverse events experienced by a participant in conjunction with the research must be reported to the REB without delay.
* The REB must be promptly notified of any new information that may affect the welfare or consent of participants.
* The REB must be notified of any suspension or cancellation imposed by a funding agency or regulatory body that is related to this study.
* The REB must be notified of any findings that may have ethical implications or may affect the decision of the REB.