

Climate Change Literature in the English Subject Classroom

Discussing how English teachers can use Young Adult Climate Fiction to teach about sustainability and the consequences of climate change.

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Abstract

This thesis explores the Young Adult Dystopia *The Sandcastle Empire* by Kayla Olson and the Young Adult Climate Fictions *The Final Six* and *The Life Below* by Alexandra Monir and their different depictions of a future world affected by climate change. Intending to figure out how an English teacher in a Norwegian classroom may use these novels, the thesis discusses the criticism of capitalism, scientific innovation, and parental responsibilities given to the teenage protagonists. The thesis does this through an ecocritical lens and focuses on the characteristics of Anthropocene and Climate Fiction. Simultaneously, the thesis examines how the novels may affect the young adult readers and how the teacher may use this theory and the criticisms mentioned above to develop critical thinking. By doing so, the thesis finds it reasonable to believe that teachers may fulfill the Core Curriculum's goal of creating environmentally aware and sustainable students by using these novels in climate change teaching.

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1 Introduction

Climate change is one of the most critical issues of our time, being one of the most discussed topics in current politics and the media. Although debates often surround whether climate change is a real threat or not, the facts can sometimes be overwhelmingly clear. Different research papers have shown that the temperature is likely to rise between 2 and 5 degrees centigrade (Trexler 2), which has led the UNFCCC to create the Paris Agreement, signed by 125 parties, in 2016-2017. Their goal is to ensure that all parties signing must contribute to keeping the temperature under 2 degrees below the pre-industrial level by the end of the century (“What is the Paris Agreement?”).

According to the Intergovernmental Panel on Climate Change, the consequences of not reaching the Paris Agreement goals are fatal. To mention some of the consequences, drought-affected areas will become dryer; the Greenland and West Antarctic ice sheets will melt and result in sea level rising and floods, which will, in turn, erode the coastal areas (IPCC 11-13). The cold areas will be colder, the weather will be more extreme, and the crops will fail (IPCC 11-13). Research has also found that the climate may be even more sensitive than initially thought, and so we have even less time on our hands to reverse the climate crisis. In fact, they are thought to be irreversible (McElwee 34-35). The Paris Agreement was established to create a proper defense against climate change; however, the US officially began leaving the Paris Agreement in November 2019 (Kann, “US Begins Formal Withdrawal from Paris Climate Accord.”). The US withdrawal from the Paris Agreement is something that will lead more countries to follow (McElwee 34). As Adam Trexler puts it, “[g]lobal climate change is likely to be our time’s lasting legacy on Earth” (1). It is no wonder, then, that Robert Upton has established that we are in the period that he calls “The Decade of Environmental Panic” (3).

Today's teenagers must maneuver through ethical and political discussions in their voyage towards adulthood. They have a lot to worry about: the political climate surrounding the Black Lives Matter movement in the US, as well as the inspired protests in Norway, is present in media and a topic for discussion. Polarized discussions regarding the US election have taken more and more space in news media. Lately, the COVID-19 pandemic has started several debates regarding healthcare issues, the economy, and the individual's rights to refuse wearing face masks in public. All these issues surround teenagers daily, in social media, in the news, at the kitchen table, and most importantly, in school. Simultaneously, the constant fear of environmental change is hovering over their heads. For teachers, this issue may be pressing, and climate change may be something they may urge teenagers to learn about and discuss. However, this is a difficult topic to cover. The students have already become engaged with the topics after seeing them on the news and on social media. The teacher's question is, then, how to approach this topic and constructively meet misinformation and resistance?

Climate change is, as established above, very real. Nevertheless, the phenomenon is still quite controversial and subject to political debate. These debates usually surround whether the threats of climate change and global warming is a hoax, what the economic consequences will be, and even how to produce natural gases without leaving a large climate footprint. In other words, people and nations want to carry on, as usual, many not believing in climate change, as if it is a religion they can choose not to follow.

One may ask if there is so much information out there, and this information is established as facts, how could there be misunderstanding and resistance among students? A study by Ezra M. Markowitz shows that many young adults do not believe in climate change as a political issue, even though most young adults know much about the topic. They see it as not exclusively anthropogenic, meaning that the environmental issues are caused by humans. What they believe is that all the changes and problems surrounding the climate is part of a

natural process (488). Maria Ojala found similar results in Sweden; there is a significant amount of climate skepticism among young adults. She deduced that this correlates with too little knowledge and distrust in institutions (1143). This may imply that climate skepticism not only comes from misinformation but from the fact that young adults do not trust their school as a source of information.

Although there is a significant amount of climate skepticism in young adults today, there is also hope. In September 2020, *The Guardian* published an article about students in the UK demanding more education on climate change and sustainability. The article mainly portrays the wishes of the founder of Teach the Future, Joe Brindle, and what his foundation has discovered in their research. They found that 68% of students asked want to learn more about the topic. However, only 4% said that they felt sufficiently informed. In Brindle's own experience, he realized that nothing he learned about a more sustainable lifestyle came from his education. Brindle expressed concern about students being prepared for the future, claiming that teaching sustainability is "the most important mission for any educational establishment to tackle" (Tatum, "We Deserve to Be Taught about It': Why Students Want Climate Crisis Classes."). Furthermore, Brindle insists that climate change is "going to be the key defining issue of our adulthood. And we deserve to be taught about that" (Tatum, "We Deserve to Be Taught about It': Why Students Want Climate Crisis Classes."). It is clear, then, that although there are some skeptics out there, many students themselves realize the need for an educational system that can prepare them for the future.

This climate change awareness in young adults can be seen further through the movements we have seen in the media. Lately, many students from lower and upper secondary schools have participated in the different protests around the world, demanding a bigger focus on solving the climate crisis. It started in 2018 with Greta Thunberg and her "Skolstrejk för klimatet" (Thunberg), and in Norway, this resulted in "Klimabrølet" in 2019

(Strønen et al.). While researching the topic of climate activism in young adults, I came over an article by Spyros Spyrou, where he reflects on a day where he accompanied his daughter to one of the climate protests in Cyprus. He says that

To draw attention to children as future-makers is not to set children apart from (or in opposition) to adults. That would take us back to identity politics. Rather, it suggests that children (and not just adults) have a legitimate right to the future. (Spyrou 6)

This commentary highlights the need for a change in how we view climate change and environmental responsibility. Adults, including teachers, have the responsibility for how they leave the world for the younger generations. When reading articles such as these, we are also made aware of the courage and enthusiasm that young adults and children have for the climate crisis and how we may underestimate their abilities because of their age.

Thunberg, who won Person of the Year in Time Magazine at the age of 17 (Alter et al.), suggests that children are not the “future-makers” at UN’s Climate Action Summit in 2019. She goes further than that, implying that governments, businesses, and other places of economic and governmental power, have stolen her generation and generations to come’s future. She says that she “shouldn’t be up here. I should be back in school on the other side of the ocean. Yet you all come to us young people for hope. How dare you!” (NPR). These hard-hitting words are probably the reality for many teenagers and young adults, knowing that Thunberg started a movement all over the world. It is not difficult to agree with this suggestion that children should have the privilege of taking over the world, like all generations before them. However, today’s children will inherit the world and face enormous challenges and uncertainties due to the irresponsibility of the previous generations.

1.1 Background

Climate change can, for many reasons, be a difficult topic to work with. Not only due to the climate skepticism discussed above, but also because climate change as a concept has

been hard to grasp for many. As Adam Trexler argues, people feel that it is a concept that is floating above their heads: “[e]merging from computer models, specialist journals, and university press releases, global warming appears first and foremost as a scientific position requiring elite, privileged knowledge to evaluate” (75). When adding this information to the previous discussion concerning people’s difficulties in trusting authorities, one may imagine a social science or science teacher’s difficulties. How can an English teacher even begin to approach this topic? The answer, one may argue, lies in Young Adult Literature. Unlike many other subjects, English does not have to rely merely on facts. To use fiction and give the students an imaginary world to explore climate change as a geological, biological, and social issue puts the English subject in a unique position for teaching about this subject. To discuss the research question, which asks how English teachers can use literature to develop environmental awareness through literature, there will be a discussion on why teachers should use these texts to educate their students on climate awareness. But first, there must be an examination of how the Norwegian educational system can facilitate this.

The Norwegian teacher of the English subject must learn how to work with and use the curriculum, which is divided into two sections. The first part is the core curriculum, where the teachers find the general values and principles for teaching. When explaining the core curriculum, the section aims to realize “the broad purpose of primary and secondary education and training”. The other “gives direction for the teaching and training in the subjects” such as English in lower or upper secondary. Putting these two parts together, “the curriculum in its entirety is the foundation for the teaching and training, where the different sections are closely linked and are to be used together” (“About the Core Curriculum.”). In other words, the English teacher must keep the broader purpose of education and the more precise direction in the form of learning objectives to give their students the best education possible.

The core values of education and training are divided into six subcategories. To go through all of them would be too extensive for this thesis, but there is a need to look at the fifth subcategory, “Respect for Nature and Environmental Awareness.” The first sentence gives us the premise that the “[s]chool shall help the pupils to develop an appreciation of nature so they can enjoy and respect nature and develop climate and environmental awareness.” By this, the educational system declares themselves responsible for the development of environmental awareness in their students. Students should be taught to respect nature and understand what role they have in the ecosystem and “how our lifestyles impact nature and the climate, and thus also our societies”. By this, teachers are bound by law to educate their students in eco-friendly living, as the “school shall help the pupils to develop the willingness to protect the environment” (“Respect for Nature and Environmental Awareness Core Curriculum.”).

The core curriculum also provides interdisciplinary topics that should be covered throughout school, one of which is Sustainable Development. The curriculum defines this as “protecting life on earth and providing for the needs of people who live here now without destroying the possibilities for future generations to fill their needs” (“Sustainable Development Core Curriculum”). By including this in the core curriculum, the Directorate of Education further underlines the need for environmental awareness, not just for nature and general life on Earth, but also for the present and future society. Further, the core curriculum includes that “[t]he pupils must learn to understand that all individual activities and choices are significant” (“Sustainable Development Core Curriculum”). This ensures the teacher’s responsibility to teach their students to be aware of their actions as autonomous beings and how this may affect the environment.

The core curriculum further demands that the teachers give their students the political and ethical tools to understand environmental challenges and solutions. Thus, an English

teacher should, when discussing global politics, discuss environmental politics. For example, the English teacher can inspire a discussion on what promises the candidates, and political parties, make about climate change when covering the election in an English-speaking country and what political issues they are debating. Furthermore, the core curriculum says that the environmental challenges should be solved collectively and that we, as a society, “need knowledge, ethical awareness, and technological innovation to find solutions and make the necessary changes to our lifestyle to protect life on earth” (“Respect for Nature and Environmental Awareness Core Curriculum.”).

The curriculum substantiates this need for ethical awareness and innovation in the subcategory about critical thinking. Here the students are required to use different sources, which could be everything from encyclopedias, blogs, and news articles, to their subject material and fiction, where they should learn how to find the truth and face their ignorance. The subcategory underlines this by saying that “[t]he teaching and training must therefore seek a balance between respect for established knowledge and the explorative and creative thinking required to develop new knowledge” (“Critical Thinking and Ethical Awareness Core Curriculum.”). With the help of a teacher, the students will be educated in facts and ethical discussion, which will give the students insight into different values and opinions so that they will have developed what the core curriculum calls “good judgment”. These values are more precisely formulated into competence aims, which are, as of writing this thesis, not translated to English yet. This is due to the renewing of the curriculum in 2020, a process where the new curriculum is slowly and gradually being incorporated in schools nationwide. The thesis will therefore include direct translations from the competence aims written in Norwegian. All the competence aims that are relevant to this thesis will be quoted and discussed throughout the text.

1.2 Thesis Statement

The young adult duology consisting of the novels *The Final Six* and *The Life Below* by Alexandra Monir and *The Sandcastle Empire* by Kayla Olson may affect young adults. Especially in a time when the young adults are dealing with climate change at a time of uncertainty about their future, due to the way the main characters adapt to new situations. Through analysis, these Young Adult Climate Fiction novels can be a tool for teachers to inspire young adults to become climate aware citizens. The analysis will show this through the critical lenses of ecocriticism and reader-response theory. The analysis will thus provide insight for teachers looking for ways of including this discussion in their English subject teaching.

Therefore, this thesis will approach *The Final Six*, *The Life Below*, and *The Sandcastle Empire* from an ecocritical perspective and develop new insight into the following research questions:

- 1) What is an ecocritical reading, and how can an ecocritical reading of Climate Fiction for young adults help the English teacher inspire critical thinking and environmental awareness?
- 2) How can the different traumatic experiences of the different characters in the novels affect the young adult reader's view on the consequences of global warming?

2 Definitions

To answer the first research question, there must be a definition of the different terms used in the analysis. First, I will discuss the concept of Young Adult Literature. This is mainly because of the books I will analyze and their genres. It is also because it is essential to know the literary devices standard for Young Adult Literature before using a reader-response approach, especially regarding the pedagogical ability of Young Adult Literature. Secondly, I will examine ecocriticism as a theory and concept and figure out why it is necessary for the critical landscape and how it applies to this thesis. Thirdly, I will give a brief explanation of Anthropocene Fiction and Climate Fiction because these genres can further underline the importance of ecocriticism and offer some help during a reader-response approach.

2.1 Young Adult Literature

Young Adult Literature is a genre written for and about adolescents or teens. When trying to figure out who these young adults are, there are different suggestions and claims as of when you are a young adult: Robyn McCallum defines them to be from the age thirteen and over (“Young adult literature”), Daniel Hahn suggests the ages twelve to sixteen (“Young Adult (YA)”), Marci Glaus says ten to nineteen (408), and the list could go on and on. Building on the previous definitions, this thesis defines the readers of Young Adult Literature as teenagers, thus between thirteen and nineteen, because the focus of this thesis will be on teaching students up to the age of nineteen. In other words, students in upper secondary school. However, this does not exclude the ages under thirteen or over nineteen from reading Young Adult Literature, nor that teenagers cannot read literature meant for a more mature readership. As Molly Wetta argues, Young Adult Literature’s readership is teens, but these tend to read Young Adult Literature well into adulthood (45). Although readers past adolescence read Young Adult Literature, this genre should not be confused with Amy

Pattee's "new adult," which a genre more aimed at the recently independent adults around ages eighteen to twenty-five (218-219).

The young adult concept is relatively new, as it is a concept created in the twentieth century. Some are suggesting that it became a phenomenon between the two world wars (Hahn). The topics and themes covered in Young Adult Literature are diverse and spans from what concerns the personal to the societal, and everything in between. McCallum divides these topics quite helpfully into three categories in *The Oxford Encyclopedia for Children's Literature*, calling them personal, intrafamily, and interpersonal issues. The personal issues span from issues surrounding the body and appearance to sex and sexuality to the heavier issues like drug abuse and suicide. Further, intrafamily issues can be more traditional, dealing with family break-ups or conflicts with one or more family members. The intrapersonal issues are quite diverse, spanning from interacting (or not interacting) with friends and other teenagers to a conflict regarding the personal and the cultural situation in the teenager's life (McCallum, "Young adult literature"). Hahn's topics covered in the second edition overlap with these categories, in what he refers to as "the teen experience," where you experiment, test boundaries, and establish your own identity.

The Young Adult novel's structure usually builds on the first-person teenage narrative (Koss and Teale 568). However, there are many variations as to how authors choose to do this. Traditionally, McCallum argues, there has been a tendency among authors to make the narration "multivoiced" or give the novel a dual narration ("Young adult literature"). Gay Ivey and Peter H. Johnston (257), and Melanie D. Koss and William H. Teale (568), agree to this. However, as Pattee writes in "Between Youth and Adulthood: Young Adult and New Adult Literature," Mike Cadden claims that an adult creates this adolescent voice. Thus, it can never really be authentic (225). However, all adults have once been teenagers themselves and can write from what they remember of their young adulthood. Nevertheless, adolescents tend

to recognize themselves in Young Adult Literature, feeling a personal connection to the characters (Chambers and Gray 79).

Another thing Young Adult Literature writers do to engage their young readers is to change between genres within a single work of fiction. An example of this is when an author writes a realist novel with diary entries or poems in some chapters to give the reader another perspective or let the reader dive deeper into the narrator's minds (McCallum, "Young adult literature"). The genres could be the typical bildungsroman, fantasy, science fiction, non-fiction, short stories, or romantic novels. The most popular genres, however, are the graphic novel and the dystopian novel (Hahn). McCallum claims that the Young Adult Novel typically deals with two different "schematas", as he calls it, which can be understood as storylines. The main character is either trying to mature and become an adult or rebel against their family and reject adulthood (McCallum "Young adult literature"). This relationship between childhood and adulthood, which is the essence of adolescence, usually happens with a story arch as a backdrop where the novel's central conflicts occur.

It is a commonly known fact that Young Adult Literature is didactic in nature, meaning that they are written to teach the readers something about themselves or the society they live in, and the authors usually do this by engaging the readers in the issues mentioned above. However, why this fascination with the genre? What is it that keeps young adults reading? As Shirley Brice Heath and Jennifer Lynn Wolf argue, a vital point of the novel's engaging element is that the readers identify themselves with the characters (146). As Kelly Byrne Bull states, this is because the readers' voices and interests are reflected in the text, such as actions, statements, and thoughts from the teenage characters (224). When the characters, who remind the readers about themselves, do something that changes the world within the novel, the readers feel like they have a voice, like what they say or their actions may affect the world (Bull 229). They believe that they have a "social responsibility," as

Stephen Wolk puts it (667). Furthermore, we see that Bull claims that adolescents read Young Adult Literature because it is available. In most cases, it is on the bestseller lists and stands and is advertised in media and in libraries (229). C. Crowe claims that Young Adult Literature may create a bridge or work as training for the classical works they will read later in life (121). However, we must not forget what may be perceived as the main reason for adolescents choosing to read Young Adult novels, which is for their enjoyment, something Bull points out (224).

Heath and Wolf argue that young readers are more prone to identify themselves emotionally with characters in literature (146). Robin G. Veldman agrees with this, claiming that “[n]arratives are also critical to our ability to reason morally” and that “we use stories to imagine ourselves in different scenarios” (11). Thus, the reader tries to figure out the consequences of our actions and find the right way to act. This is not something we do consciously but rather something that is in our human instincts. Furthermore, Veldman states that we need the narrative as a frame for our moral and ethical choices and use the narratives we read to justify our own actions (11).

Now, why should a teacher use Young Adult Literature in teaching, opposed to literature for adults? On the one hand, Young Adult Literature has a pedagogical value when adolescents read for pleasure. As Valentina Adami writes, the teenage protagonist goes through a personal development towards adulthood, often against a political or social issue as the novel’s backdrop (129). This means that the young adult main characters’ journey is reflected in social issues in the novel. These social issues are rooted in reality. In making the protagonist face the same issues as the teenage reader while connecting that to what is happening in the fictional society, the reader may learn that they too are part of a society where they can make a change. This is especially relevant for Young Adult Dystopias, where

the dystopian context gives the protagonist a more demanding challenge, giving extra weight to the teenage reader's impression of their agency in their own lives (Adami 129).

On the other hand, by using Young Adult Literature, the teacher follows the competence aims. For lower secondary, the competence aims say that the students should be able to “read, interpret, and reflect on English fictional literature, including young adult literature” (“Kompetansemål Og Vurdering Engelsk (ENG01-04).”). For upper secondary, the competence aims vary for what year the students are in. Additionally, they vary depending on whether English is obligatory or not. In VG1 (first year), English is obligatory, and the students must “read, discuss, and reflect on the content and literary devices in different texts, included self-selected texts” and “read, analyze, and interpret English fictional literature” (“Kompetansemål Og Vurdering Engelsk (ENG01-04).”). In VG2 and VG3 (second and third year), English is an elective, and this is where students must “show independent reflection and critical thinking when reading and discussing different types of texts” and “interpret and discuss some forms of fictional texts in English in light of their historical and cultural contexts” (“Kompetansemål Og Vurdering Engelsk Programfag (ENG04-02).”).

2.2 Young Adult Dystopia

Before moving on to the theories used in the analysis, it is useful to look briefly at the genre dystopia, and especially that written for the young adult audience. Due to its popularity and pedagogical value, Young Adult Dystopias are in a unique position to teach the young adult reader how to be a critical thinker with their own agency. Many scholars and professors have found “dystopian literature as an inspiration for critical thinking” (Chambers and Gray 78). As the novels analyzed in this thesis depict some form of governing organ, either the Kingpins and their Wolves in *The Sandcastle Empire* or the corrupt leadership at the space center and their leader Dr. Takumi in *The Final Six* duology, the analysis is going to examine and discuss the dystopian characteristics of the novels and how they may teach students

critical thinking. Following, there will be a brief explanation of the characteristics of the Young Adult Dystopia, as they will be relevant for the analysis.

When looking to dictionaries, *The Oxford English Dictionary* defines dystopia as “[a]n imaginary place or condition in which everything is as bad as possible” (“Dystopia”). In “Vulnerable Lives: The Affective Dimensions of Risk in Young Adult Cli-Fi,” Alexa Weik von Mossner writes that dystopia “engages with pressing global concerns” (554). In the same way, Carry Hintz writes that Young Adult Dystopias are recognized by a political message (255-256), and that the main protagonist has to go through pain, a sexual awakening and take on a public role as the hero of the story (256). Some other characteristics are that the protagonist, who is a teenager, is more sensible and has more knowledge about the consequences of different actions than the adults: “Somehow it is the adolescent protagonist who can manage to be clear-sighted, even objective, in this nightmarish situation.” (255).

2.3 Ecocriticism

Trying to make a clear definition of ecocriticism, one quickly finds out that this has yet to be determined by ecocritics themselves. Although there are many “introductions to” and “explanations of,” most works on the topic refer to *The Ecocriticism Reader* by Cheryl Glotfelty and Harold Fromm. In the introduction, Glotfelty writes that “ecocriticism is the study of the relationship between literature and the physical environment” and that ecocriticism “takes an earth-centered approach to literary studies” (Glotfelty & Fromm xviii). Greg Garrard follows this by referring to Richard Kerridge and his definition of the ecocritic as someone who “wants to track environmental ideas and representations wherever they appear” to detect a debate that is “taking place, often part-concealed, in a great many cultural spaces” (Garrard 4). Said cultural spaces could be genres, such as those discussed in this thesis, in public debates, or art and other cultural forms of expression.

In his book *The Future of Environmental Criticism*, Lawrence Buell defines ecocriticism as the term referring to the “environmentally oriented study of literature and (less often) the arts more generally” (138). There is a tendency to think of the ecological in both a metaphorical and a literal, scientific way in the ecocritical works. Buell splits the movement in two directions, first-wave and second-wave ecocriticism. However, these waves are not necessarily chronological like first, second, and third-wave feminism; they are more parallel than that. The first-wave ecocriticism characterizes the environment as the natural. This is where the pastoral literature fits best in: First-wave ecocritics generally look at the effect, or in other words damages, the cultural has on the natural (21). Second-wave ecocriticism, alternatively, sees the environment as a symbiosis of the natural landscape and what is built by humans. This movement is more concerned with the social aspects of environmental thinking and is sometimes referred to as “the environmentalism of the poor” (22).

There has been a tendency to put environmentalism and ecocriticism in the same context. The difference between environmentalists and ecocritics, however, is, according to Garrard, that environmentalists are concerned with pollution and global warming but do not make up a solution to the problem themselves. Instead of changing something in their own life, like choosing public transportation instead of driving a car or using less water, they rather look to the government or other organizations and trust them to provide them solutions. The activism they might be involved with, according to Garrard, is recycling bottles or buying organic food. “Shallow environmentalism” like this, Garrard says, is spread across the world, as it is the “easiest” form of activism (21). As Garrard states, this movement could be powerful, and one could argue that this environmentalism, with some help, could evolve into a much more radical wave if given the right tools (22). However, Buell uses the term “environmental criticism” when speaking of ecocriticism and makes no significant difference between the two. For the sake of consistency, this thesis will use the term ecocriticism.

Race, class, and gender were the most popular topics in literary theory in the late twentieth century. Simultaneously, newspaper articles were filled with stories on oil spills, extreme weather, and global warming (Glotfelty & Fromm xvi). As Buell expresses, “[t]he environment became front-page news” instead of a backdrop for other topics (4). Rather than joining together in one field of environmental criticism, each literary critic implemented the environment into their own, isolated criticism. (Glotfelty & Fromm xvii). Since its beginning, the environmental critics have worked to define their place on “the critical map” and figure out how to analyze texts in an environmentally critical way (Buell 9).

2.4 The Anthropocene and Climate Fiction

As established above, ecocriticism is a theoretical movement that is useful to know about when analyzing the novels. However, it does not provide us with any tools for constructing an analysis. Thus, this thesis will use the Anthropocene and Climate Fiction genres as a theoretical basis for an analysis. However, this thesis sees the Anthropocene and Climate Fiction as two different ways of achieving the same goal as ecocriticism, which is to examine characteristics and themes referring to the environment and climate change in literature. Following, there will be an examination of the two theories, mainly focusing on Adam Trexler and Adeline Johns-Putra’s contributions to literature about the environment. This is due to their theories of Anthropocene and Climate Fiction’s usefulness as recipes for fiction analysis.

The Anthropocene is a new expression for the present period of the Earth’s history, which has become a necessity due to the human interference in our climate (Trexler 1). It is argued that the Anthropocene shifts focus from the individual to a process that is taking place no matter where we live and what we have do. In other words, that climate change is inevitable due to previous generations’ actions or lack of action in the present generations across the globe (Trexler 4). The Anthropocene expression covers the terms climate change

and global warming but emphasizes the fact that it is too late to do anything about what has happened due to past mistakes. These phenomena will not just happen in the future; we are encompassed by them happening now (Trexler 4).

When looking at novels about climate change, Trexler found that there were either too many novels by the “great” writers whom everybody wrote about or too many self-published writers. The more critically acclaimed writers did not really write about the climate but used the climate as an anecdote in the story of how the main character got to where they were. When he eventually found novels to analyze, Trexler found that Anthropocene Fiction has, until the present time, shown how our conditions have changed due to climate change and how humanity has “failed to act”. This form of fiction has “offered a medium to explain, predict, implore, and lament” (9).

“Fictionalizing climate change”, Trexler argues, “is not about falsifying it (...) but rather about using narrative to heighten its reality.” (75) The role of fiction about climate change is to put the reader in a fictional situation where people are suffering from various natural disasters, such as floods, storms, and droughts. Fiction about climate change should also show their consequences, like famine, war, and exile (76). Trexler argues that the most popular strategy for portraying the consequences of climate change has been the flood narrative, which is a common trope in religious and ancient texts and has deep cultural roots all over the world (82-83). However, while laying out the many climate change-related problems, climate change novels may also explore solutions and human responses to the climate problem (14).

Climate Fiction is a genre but does not have the precise characteristics more easily found in other genres. It rather is, as Goodbody and Johns-Putra write in their introduction, “defined by its thematic focus on climate change and the political, social, psychological and ethical issues associated with it” (2). They see it instead as a “cultural work” that reflects

humanity's role in and reactions to climate change. In other words, this relates to the theory of Trexler in the sense that it focuses on how authors write about climate change in literature and everything surrounding that. The difference is that the Anthropocene seems "stricter" with what is allowed to call itself Anthropocene Fiction, while Climate Fiction is a term that can be used for all fiction dealing with the notions above.

3 Theory

3.1 Reader-Response theory

The Oxford Dictionary defines reader-response criticism as the “premise that the text does not have full existence until it is read” (Baldick, “Reader-Response Criticism.”). This definition correlates with what Matthew Schneider-Mayerson writes in his study on Climate Fiction readers, that reader-response theory “is a reader-focused orientation” (475). By this, reader-response theory argues that it must be read and reflected upon by one or multiple readers for a text to have any meaning.

Wolfgang Iser writes that a literary text requires a reader to create a response (ix), which is more fitting considering that the name of this theory or framework for literary criticism is called reader-response. By this, he means that the text can create a response, but that it takes a reader and the psychological process of reading for it to create a response. The reader has to gather meaning from what he calls “subject matter” in the text (ix). However, Iser does not call this phenomenon reader-response theory, but an aesthetic response, saying that it has “to be analyzed in terms of a dialectic relationship between text, reader and their interaction” (x). In this thesis, there will be a focus on the latter. Keeping in mind that his theory on Aesthetic response is meant for empirical studies of reader response, this thesis will argue that the theory may be used as a theoretical framework.

For a text to produce any meaning to the reader, it must “establish itself as a correlative in the reader’s consciousness,” Iser argues (107). By this he means that the individual reader must experience that the text wakes some preexisting knowledge or interest within the reader and gives him or her some new perspective on a topic. For instance, the text presents the social norms or values of the potential reader and uses these to ensure the readers’ uptake of these norms and values (107). In other words, literature must, in a sense, move the reader or give them new perspectives on a topic they have preexisting knowledge on or of which they

have experience. For instance, if a young adult reads about teenagers experiencing cyberbullying, the young adult has read or learned about this in school and may even have heard about instances of this phenomenon from friends or rumors at school. They know it is wrong, but now, after reading about it, they have learned about the emotional and psychological consequences caused by this phenomenon. The reader may also experience the opposite; they have seen the positive consequences this has for the cyberbully in their social environment. Either way, the reader has taken these norms and values and internalized them.

In their research on applying reader-response theory in the EFL (English as a Foreign Language) classroom, Garzon and Castañeda-Peña describe reader-response theory as a construction of meaning due to the reader having a personal experience while reading a literary text (186). They view literature as “an aesthetic work that allows the reader to feel, see and think” and that the associations the reader makes while reading are a large part of the reading process (191). Further, Garzon and Castañeda-Peña found that reader-response theory made reading literature “more meaningful and real for students” (195-196) and that the students realized that “their own personal thinking [was] important” (196).

“In reading a literary text,” Garzon and Castañeda-Peña writes, “the student is likely to be more engaged in the topic” (189). Putting the reader-response theory together with ecocritical reading will allow the readers to engage in the topic of climate change. While reading Climate Fiction, the students may be emotionally affected, see new perspectives, and reflect on their own position in a society characterized by an environmental crisis. By doing so, the students may also develop themselves as critical thinkers and become more critically aware. A reader-response theory may also help teachers identify different opinions in the classroom due to the increased ability to participate in a classroom discussion and vocalize own reflections and observations that Garzon and Castañeda-Peña found in their students (196).

Building on the same thoughts about the teacher as discussed above, Jie Y. Park found in her study that “reader-response theories de-centered the teacher as the authority of literary knowledge.” This opened for the thoughts and reactions that the students had (“Re-imagining Reader-Response in Middle and Secondary Schools” 192). She supplements this by saying that although reader-response opens the classroom up for personal experiences, a teacher’s job is still to “challenge and support students to question where their responses come from” (193). Consequently, the teacher must help students figure out the social constructions to which they belong. They should explain what society is like to their students and what mechanisms are responsible for their way of thinking.

3.2 Ecocritical Reading

Glotfelty and Fromm write about William Ruckert, who defines ecocriticism as “the application of ecology and ecological concepts to the study of literature” (Glotfelty & Fromm xx). However, Garrard defines ecocriticism as an analysis focusing on the “green moral,” in other words, an environmental, political agenda, presented in novels (3). Garrard takes this idea further by explaining that “ecocriticism seeks to evaluate texts and ideas in terms of their coherence and usefulness as responses to environmental crisis” (4).

The problem for environmental and ecocritical literature is that “no human can speak as the environment, as nature, as a non-human animal,” as Buell puts it (7). By saying this, he separates the environmental writers and critics from those of other social or political groups, or as calls them, the critics writing for “disempowered social groups” (7). Feminist writers can write from a feminist perspective, LGBT+ writers can write from their community’s perspective, and Civil Rights writers can write from their perspective. However, what an ecocritic can do is write about human reactions to nature and how humanity responds to the environmental crisis.

Lawrence Buell expresses another problem for the ecocritical movement. He points out that “[u]nless ecocriticism can squarely address the question of how nature matters to those readers, critics, teachers, and students for whom environmental concerns does not mean nature presentation first and foremost (...) then the movement may fission and die” (Buell 113). In this, Buell also discusses the problem of environmental texts being more traditional and not reaching out to the ‘masses’, as genres such as wilderness narratives and nature poetry are outdated. There is a need for a discussion on how to preserve nature in the genres that are compelling to the public. One of these genres being the Young Adult genre and the Dystopian Literature they are already drawn to.

In this thesis, I will perform an analysis using Garrard’s definition of ecocriticism. The thesis will look for environmental or climate change-related moral and political agendas to put it in his words. To look at the relationship between the physical environment and the human, as Glotfelty puts it, is too vague. However, the thesis will attempt to examine how the natural or unnatural environment affects novels’ main characters. As the thesis uses Trexler’s theory, I will examine some of the aspects in *Anthropocene Fictions*, especially the scientist’s role. This is also important in Johns-Putra’s theory of Climate Fiction. Additionally, there will be a discussion on the importance of place, as is discussed in Trexler, and the politics surrounding Climate Fiction. These will also be essential tools to connect the English subject curriculum to the novels.

As Johns-Putra argues, “[t]he role of the ecocritic includes teaching students about the dangers and complexities of climate change” (274). This also includes the social, technological, ethical, interpersonal relationships that we see are affected in the novels. Throughout the analysis, I will use the theory of how Young Adult Literature, and especially Young Adult Dystopia, as a genre may help the teacher develop critical thinking in the students. Additionally, I will look at how the different characters in the novels create

emotional reactions in the reader, making them reflect on their role in their own lives. Simultaneously, the analysis will suggest how a teacher may use the reader-response theory to help students become self-aware readers and develop their critical thinking. The thesis will underline this with references to the English subject curriculum.

When Johns-Putra discusses the role of ecocritical readings, she divides the issue into two main questions that the reader should ask themselves: Are the critics supposed to do a normative analysis, where they play the role of an activist that educates the reader on how to help the environment, or should they be more objective and “reveal the complexities in the relationship between literature and environment” (274)? Johns-Putra argues that the latter has an educational effect because of its political nature. To answer this in a Norwegian context for the subject of English, we should look at the core curriculum discussed earlier in this thesis. The teacher must educate their students on how to protect the environment, and thus the following analysis will seek out ways to do this through analysis and reader-response theory.

4 The Novels

Why does this thesis explore the possibility of analyzing Young Adult Literature in the classroom when looking at climate change and not use an adult Climate Fiction novel? There are several reasons why that is a good idea. Firstly, there is the problem of time. Teachers do not have time for about 30 students with different reading skills and achievements to read approximately 300 adult language pages. Young Adult novels, on the other hand, do not require a higher-level reader. Thus, it is wise for a teacher to use Young Adult Literature for all their students to be able to follow the class. The second reason is that Young Adult Literature, on many occasions, provides an easier way of teaching students to analyze literature. It is easier to locate the theme, plot, and main characters in a novel with a less advanced language and form. Thirdly, as is already established, Young Adult Literature is more relatable to the teenage reader as it is written for them, with their emotions, interests, and personal life in mind. Lastly, the weaker students on a lower level may read the novel in its entirety and experience a sense of accomplishment when finishing the novels.

Before analyzing and comparing the novels, it is necessary to present the three novels' plots briefly. Then, there will be a discussion of the main characters and the overlapping Young Adult themes presented in *The Final Six* duology and *The Sandcastle Empire*. Following that, there will be a discussion on climate change presentations, how these aspects of the novels fit in an ecocritical or Anthropocene reading, and how they may relate to the potential students reading these novels in a classroom setting.

4.1 Summary of *The Final Six*

The Final Six, published in 2018, is a Young Adult Novel written by Alexandra Monir. The plot revolves around the two adolescent main characters, Italian swimmer Leo and Iranian American aspiring scientist and tech specialist Naomi, who are drafted to a space project. The space project, led by the international space organization, intends to train 24

teenagers in a competition where the six winners will be shot into space to colonize one of Jupiter's moons, Europa. Each teenager has a particular set of skills that qualifies them for the competition and will be important in their voyage through space. By the beginning of the novel, we learn that Leo has lost his family in a great flood that put most of Rome underwater. He is close to drowning himself when the military comes through the bay to reveal that he is one of the final six. The readers learn that Leo is happy to be drafted and sees it as an honor to represent his family and country in this project.

Contrastingly, Naomi would rather stay with her family and is hesitant to join the program. After spending time at the space center, Naomi, and eventually Leo, become suspicious of the project, especially its leader Dr. Takumi. While the two teenagers develop a relationship, the two are coming closer to the project's truth. This results in Naomi getting a spot on the program while Leo is cut out. However, a solution reveals itself to Leo while Naomi is preparing for take-off when Dr. Greta Wagner recruits Leo to her secret space project. The novel is constructed so that approximately every other chapter is from Leo or Naomi's perspective. By doing so, Olson gives the reader the perspectives of both participants, one happy to be there and the other one trying to fight the system. This also gives a good overview of how the relationship between Naomi and Leo develops during training. The first-person perspective gives us, as readers, an excellent insight into what the two narrators are thinking and feeling in the moment. We are given the opportunity to view some of the events at the space center from two different points of view.

4.2 Summary of *The Life Below*

The 2020 novel *The Life Below*, the sequel to *The Final Six* and final book in the duology about Naomi and Leo, starts with Naomi facing a future without Leo. Unlike the first novel, this one starts with a prologue where the reader faces one of the main plots. Someone has cut all communications with Earth, and the teenagers have to manage traveling through space,

landing on Europa, and surviving on a new planet without adult supervision. When the novel goes back to the present time, Leo prepares for his space travel with Naomi's scientist hero, dr. Greta Wagner. From that moment on, the teenagers in space face many new challenges: they find proof of life on Europa, meet extraterrestrial life in Mars' orbit, find out that they do not have enough food for the colonization of Europa, lose Dev, a member of their team, to the aliens on Mars, and meet Leo on his unlawful mission to space. All of this while Naomi tries to unravel the real reason why they are on this mission.

Like its prequel, *The Life Below* is written in first-person narrative, and the chapters are divided between Leo and Naomi's perspectives. This especially becomes an important tool when the final six meet Leo's spaceship outside of Mars. Concluding this novel, and the duology as such, is an epilogue where Naomi's little brother, Sam, receives the truth about the mission from Dr. Takumi. The reason behind this mission was to see if he could manipulate the human body to survive in any climate, thus ensuring life on Earth no matter what the outcome of climate change is.

4.3 Summary of *The Sandcastle Empire*

The Sandcastle Empire by Kayla Olson is quite different from the two novels by Monir. The Wolves, a group of people from the lower socio-economical classes, have taken control over large parts of the US. While being at war with the rest of the world, they are slowly expanding their territory using technology created in labor camps where people from the higher socio-economical classes are forced to work as slaves. The main character, Eden, has just lost her father when we meet her and is considering her options for escaping the camp. After an unexpected explosion, Eden and three other girls see the opportunity to flee by taking a sailboat, and together the four strangers head for the rumored Sanctuary Island. Seemingly safe ashore, the girls realize that everything is not what it seems, and the closer to the middle of the island they get, the closer they are to the truth. Her father is not dead after all and is

working for the Wolves. However, to Eden's relief, he is an undercover agent for the secret resistance group, and Eden is recruited to help their cause.

The novel is written in first-person narrative, and unlike the other novels there is just one narrator – Eden. However, Olson has included some chapters here and there, that describes the inner life of Eden in a quite dramatic tone. Here, she reflects upon what happens throughout the story and what has happened in the past. These chapters help the reader understand what she feels about the loss of her best friend and boyfriend, explain the circumstances around her mother's passing, and portray what motivates her to take the role of the protagonist of the story of these teenagers. Although not dealing with climate change as the main topic, *The Sandcastle Empire* shows consequences of climate change when portraying water pollution and the rising sea levels as a catalyst for social problems. The social problems caused by climate change are underlined by scientific inventions meant to save humanity, resulting in even more differences in the distribution of humanitarian aids.

5 Analysis and Discussion

The Anthropocene, Johns-Putra claims, tends to draw a focus on parental responsibility. In her book *Climate Change and the Contemporary Novel*, Johns-Putra criticizes what she calls posterity-as-parenthood, stating that most climate change novels offer criticism to this rhetoric (7). As this analysis will show, Young Adult Climate Fiction also joins this trend of criticism, showing that the older generation's responsibility is inherited by the teenage generation. This responsibility is manifested in the physical items the teenage protagonists carry with them, as well as their physical appearances. This is most evident in Eden, who not only carries around her father's personal items; the field guide, representing his knowledge and scientific role in the larger scheme, but also what he has taught her and how little she knows, and the ring symbolizing the once happy family. Additionally, she carries around the physical remains of her father's presumed dead body.

We see similar responsibilities pushed onto the teenagers in *The Final Six*. For Leo, the same responsibility is symbolized in his family's family ring, which he gives to Naomi when she is allowed to go to Europa without him, as a last, desperate attempt to give his family a symbolic future. For Naomi, the parents are alive to place the burden on her, which they do multiple times in person and over video calls, making her want to go to space to ensure them a spot in the future colony on Europa. Her responsibility for bringing her family's traditions forward is also symbolized with her Iranian American heritage. This is emphasized when she in *The Life Below* receives, via satellite image, a picture of an Iranian goddess who is "ruler of the stars" (Monir, *The Life Below* 141), which is fitting for the situation in which she finds herself.

However, previous generations' responsibility is not only given to the teenagers in *The Final Six*-duology through their families but the entire world. Naomi and Leo are not only carrying the expectations of their ancestors, dead or alive, on their backs, but are watched by

the entire world through news reports and live screenings of them winning the spot. In this novel, the space program is making a reality show of the final six and their space voyage. The pressure is more significant for Naomi when she sees a little girl that “looks just like me at that age” (Monir, *The Life Below* 136), holding a sign in Farsi saying “godspeed, Naomi” (Monir, *The Life Below* 135). This contrasts with *The Sandcastle Empire*, where the responsibility of saving the lives of future generation is directly pushed onto Eden from her father, something the rest of the world is blissfully unaware of.

Because of this responsibility, or burden, if you will, the protagonists experience something Johns-Putra refers to as a “loss of innocence”. They are made aware of their role in the world, giving them “notions of selfhood” (7). Naomi, Leo, and Eden are forced to act in place of the adults, which confuses them, wondering what place they have in the world, later resulting in the self-realization of being the protagonists in the story of humanity. By using reader-response as a method of reading these novels in a classroom situation, the students may internalize this feeling of self-realization in the characters and take responsibility for the planet. Such moments could be an organic situation where they would internalize this responsibility. However, it would be up to a clinical study to see how and to what degree this happens.

Another point made by Johns-Putra concerns the role of science. To figure out what is needed to save the environment, we must look to science. However, science cannot provide a simple answer to how humans should move forward ethically. Nevertheless, this does not mean that scientists have not tried. Here, we see what Johns-Putra labels scientific utopianism or the utopian project (141), which is present in all three novels. This scientific utopianism can be exemplified with Leo’s reflection on science in *The Final Six*:

From almost nothing we have created something - something that can support human beings for twenty years. It’s like magic. In fact, sometimes I think that’s exactly what

science is: the magic we look for in stories, without realizing that it exists in all the inventions and creations around us. (Monir, *The Final Six* 279)

As Leo voiced in *The Final Six*, science in the novels gives us incredible solutions that will, seemingly, save the human species. However, Leo also highlights a theme in the duology of not just human inventions but also creations. “Creation” is an interesting word choice here, knowing that the protagonists will later encounter alien life in Mars’ orbit as well as on Europa.

In *The Final Six*, one of the NASA employees tells Naomi that the UN Climate Conference was the catalyst for huge names within space science to raise their voices and gather more funding for space travel research. The inventions are many, and especially the tent-resembling design by Mr. Nolan is interesting to note. Not only is his invention vital for the Europa project, but his message to the teenagers participating is one of the more sensible things that Naomi has heard during her time at the camp:

But remember: the recent destruction of most of our Earth was a man-made tragedy. Right now, Europa is pure, untamed wilderness of ice that you will need to terraform, make habitable - and then protect. We learned the hard way on Earth that no amount of technology or wealth is worth polluting and destroying our planet over. You can’t afford to make the same mistake on Europa. (Monir, *The Final Six* 280)

Monir is trying to push an important message on the young adults reading this. The climate crisis is a consequence of human invention, and nothing is standing in our way to do that again to another planet. If we want to flee the planet, it is up to us to do it better there. However, after reading the entire duology, the readers become aware that this ideology of protecting Europa to avoid making the same mistake as humanity made on Earth is entirely made up. To inhabit Europa is not in Dr. Takumi’s interest, after all. He is motivated by finding a solution for humanity on Earth, even though the novel has established that there is

no saving of our planet. The hypocrisy of scientists and world leaders is evident here, giving the teenage reader an understanding that adults do not always mean what they say in the real world either.

In *The Sandcastle Empire*, Eden's father worked on the problem of water pollution when he was employed at Envirotech. Their solution to the lack of clean water was the Havenwater bottles, which are refillable bottles that clean the water so that it is safe to drink. This invention has roots in the real world. The Havenwater bottles remind us of the straw or tube that filters contaminated water, and later the bottles sold for the same purpose, from the company LifeStraw. Their mission is to make clean drinking water accessible for people of the third world ("Our History.", *LifeStraw Water Filters / Europe*). In the novel's case, however, the people are provided with one bottle per family, and the rich can buy more (Olson 27-28). The bottle, then, serves a purpose in this novel to show how unfair humanitarian aid can be in a capitalistic society.

Another invention in *The Sandcastle Empire* that makes sure humanity can survive climate change is the technology of growing produce underwater. This method, which we find underneath the Kingpin Island, is a real invention called "aquaponics". According to *The Aquaponics Source*, this technique is one of the most environmentally friendly ways of breeding fish and growing produce. It is "the combination of aquaculture (raising fish) and hydroponics (the soil-less growing of plants) that grows fish and plants together in one integrated system" (White, "What Is Aquaponics?"). With this invention, the novel shows how Eden's father designed this for the intention that it would benefit both humanity and the environment. However, the Wolves are using this for their own interest, something to be kept away from the masses.

The third and last invention that is the basis of much of the technology Eden meets on Sanctuary Island is "silk technology." We learn from Eden and her work at the silk factory

that they extract silk from larvae by boiling them and using the residue for clothes. Silk technology is then presented as a sustainable solution for the textile industry. It is also an alternative solution when there is no access to cotton fields and wool due to landscapes being destroyed by climate change. However, this is not how the Wolves use this technology. Before Zero Day, they used silk technology to put devices into people's arms as a means of payment instead of the methods we have now, like credit cards and payment apps. Again, technology is a device for maintaining capitalism. Eden also finds out that silk technology is used to create weapons and is also used to create Holo Wolves. In this process, Wolf technology is inserted into humans to turn humans into living surveillance cameras and weapons.

The scientists in this novel are both the source of solutions and problems. On Sanctuary Island, Pellegrine is the scientist behind the poisonous moss, deadly beetles, traumatic bridges, optical illusions, and psychologically altering vines. Every obstacle on that island, every source of conflict in the group, are due to this scientist and his willingness to alter nature. On the other hand, Pellegrine, along with Eden's father, is aiding the resistance from within the Wolves, functioning as double agents, and the pair ends up sending Eden on the mission to Kingpin Island. However, we must not forget that the invention of the scientists of Envirotech, the Havenwater bottle, is the catalyst for a social uprising in this novel. Here, the novel's plot and central theme are much more closely linked to the scientists and the consequences of their actions. This is also made clear in the narration of how the turn of events put Eden in the situation she is in now:

And then, when Envirotech discovered they could mold silk proteins into as many uses as engineers could dream, came the edible, unrefrigerated medication in form of plastic cards. New families, new *cities*, began to thrive. Landlocked Africa and Asia

look nothing like they did even thirty years ago. Silkworms have stirred the landscape of world powers into something no one predicted. (Olson 72)

Evidently, the same social problems we have today could be solved if everyone were given access to the same technology.

Although we learn through science fiction that science could make way for the most amazing and unique adventures, these Young Adult novels teach another vital lesson. There is a certainty that both Olson and Monir argue that science could cross the boundaries for what is natural and what is deemed as good. In *The Sandcastle Empire*, the Wolves create surveillance technology that they insert into the human body, creating a surveillance piece with a live feed of visual and audible signals. As if that were not enough, the Wolves take control of the teenagers' bodies when needed, creating an invisible weapon that could attack at any moment. These HoloWolves, which are discussed above, are marked with a holographic wolf when they have undergone the procedure. The Wolves apply this to a few people among the resistance group to get intel and attack the members when necessary. The scientists in *The Final Six* do something similar to the contestants in the Europa program. However, instead of human technology, they insert alien DNA from Europa to enhance the teenagers' abilities, like Leo's sudden improvement in swimming and holding his breath underwater. They disguise their intentions by calling it a vaccine to prepare their bodies for the radiation on Europa's surface.

Evidently, both *The Final Six*-duology and *The Sandcastle Empire* portray scientists who want to use their skills to benefit the planet. Sadly, their well-meant attempts have either been used for evil, as Eden's father's research was, and as Dr. Wagner's findings, which were stolen and used against her advice on the 24. All the novels discussed here, are, in a way criticizing this scientific utopianism, pointing out that people will use what they can for their own agenda. Both authors thus argue that science can be used for selfish and unethical ends.

One of the most pressing topics in climate change activism, and maybe the most exciting and helpful topic to cover in the classroom, is how climate change influences politics and how the different political organizations and parties say they will deal with climate change. This is also founded in the Core Curriculum, where it says that teachers shall “help them to be cognisant of ethical issues” (“Critical Thinking and Ethical Awareness Core Curriculum.”). As Trexler writes, “[p]lans for dealing with climate change have always been political as well, betraying preferences for international cooperation or unilateralism, preventing the influence of wealthy countries or permitting development of poorer ones” (119). This is not only relevant because students are interested in the topic and often also invested in politics, but also because the English subject is supposed to cover politics in English speaking countries as well as politics on a global scale. This is also established in the English subject curriculum, where it says to “explore and reflect upon diversity and societal relations in the English spoken world” (“Kompetansemål Og Vurdering Engelsk (ENG01-04).”). It would be useful, then, to look at the politics presented in the three novels.

As shown in Trexler’s argumentation, it is common in Anthropocene Fiction to put two “greater” powers up against each other, like the US and China, or the US and Russia. This way of putting two powers against each other is a historical trend sometimes portrayed in climate change politics. In *The Final Six*, however, we see that the European countries, represented by dr. Wagner and the European Space Program, Russia (General Sokolov), China (dr. Takumi), and the US, as the setting mostly takes place at the NASA facilities and resources in Houston, are working together against climate change. However, we as readers know that at the end of *The Final Six* and throughout *The Life Below*, some nations are more misinformed than others about what is happening at the space center. As the duology progresses, Naomi is made aware of dr. Takumi’s lies and how he misled Wagner, and it is not unlikely that the European Space Program is unaware of his true motives.

The Sandcastle Empire somewhat contradicts Trexler's premise of putting great nations against each other. The political plot of the novel is, indeed, international. However, the focus is on America. The conflict is surrounding Eden and her personal life, both geographically as well as politically. This makes the novel somehow more challenging to relate to a classroom of Norwegian students because they are not as familiar with American society and politics. Thus, the teacher needs to provide the students with prior knowledge of American society before reading the novel. If the teacher were to use this novel in upper secondary school, this should already have been provided. However, the focus on capitalism in this novel is an excellent point of discussion for Norwegians as well as American students, as capitalism is a world-wide phenomenon. This may also be a great opportunity to discuss American society and politics from the perspective of an American. Literature is in a unique position to do this, as this is justified in the competence aims that says that the student shall "read, discuss and reflect upon content and literary devices in different texts" and "discuss and reflect upon form, content and literary devices in English cultural expressions" ("Kompetansemål Og Vurdering Engelsk (ENG01-04)."). However, it must be stressed that this plot is not a reflection of what America is like today, but an attempt to predict what America might be in the future due to the social problems surrounding climate change.

In *The Sandcastle Empire*, there is an international resistance towards the authorities, while in *The Final Six*, there are no critical organizations that are taken seriously. With a less credible name like "the Space Conspirator," Wagner's attempt at educating the masses fails horribly. The only people who are listening to what the website claims are Naomi and her little brother Sam. The state of the world in *The Final Six* is too grave, too serious, for anyone to afford to be critical as they are driven from their homes, knowing that the Earth soon will be inhabitable. While this small resistance group consisting of Sam on the outside, and Naomi and newly recruited Leo on the inside, fail in their mission of leaking information from within

the space program, people are willing to die for the cause of resistance in *The Sandcastle Empire*.

Further, we will see that both authors seem to deal with what has been a trend in Climate Fiction since the 1990s, namely capitalism and its role in stopping or slowing down politics regarding climate change. However, critics have found that writers of Climate Fictions cannot see how a future economy could or should be. What they have discovered is that capitalism is inevitable. As Trexler expresses it, “[a]cross genres, capitalism is presented as a timeless certainty, even as it drives the world to inexorable ruin” (191). This has led to a trend where societies in climate change novels have been represented as something similar to a Nazi regime, or a Soviet-like state (Trexler 197). The characteristics of such regimes are something that clearly is present in *The Sandcastle Empire*. With work camps, class divisions with different colors for different forms of labor and armed forces controlling the workers, keeping order, *The Sandcastle Empire* looks like the perfect mix of Soviet and Nazi-like structures.

Capitalism is a topic that has been mentioned earlier in the thesis and will be explored further below. Capitalism was caused by many things, one of which being the industrial revolution, which is characterized by more jobs, larger cities, and more efficient productions in factories and other facilities. The market, as we know it today, started with the industrial revolution. Simultaneously, modern measuring of CO₂ in the ice has found that climate gas emissions started in the same period. This is because the smog and gas emissions from factories and other facilities, as well as an exploitation of the world’s resources (“The Discovery of Global Warming”). Thus, the industrial revolution also started the Anthropocene era. In that sense, climate change and capitalism have a shared history, and one may argue that capitalism is a cause of climate change. This is an essential historical context that should be a part of the teaching of English history and society, which is established in the competence aim “explore and reflect upon diversity and societal relations in the English

speaking world seen in a historical context” (“Kompetansemål Og Vurdering Engelsk (ENG01-04).”). Then, we see that this lays the foundation for teaching climate change in the English subject and for teachers to discuss how the novels portray capitalism.

In *The Sandcastle Empire*, we find the critique of capitalism in how the rich could buy Envirotech’s inventions, while others could not, as discussed above. When Envirotech launched the Atlas project, the ocean-habitats, it had a high price, and

the Supreme Court upheld Envirotech’s right to set their own prices, in the name of commerce and capitalism and centuries-old dreams. No doubt the honorable justices wanted to grow old with their grandchildren, like everyone else. Difference was, they could afford it. (Olson 29)

This was part of what started the uprising and the movement that would become the Wolves. From Eden’s tone, the reader becomes aware of the anti-capitalist morals conveyed in the novel. Here, capitalism is even mentioned by name. This is also a criticism of the American government system and how it benefits those already rich and powerful.

In *The Life Below*, the critique towards capitalism is highlighted in the discussion about sponsorship on the space ship. While delivering a message to their viewers on Earth, the teenagers are required to thank “ACS Sportswear” for their help on the mission. A few teenagers asks why, to which one of the robots answer “Earth’s declining population means declining tax dollars, so sponsorship provides a significant source of our mission funding” (Monir, *The Life Below* 131). Although surprising for the reader, this is happening today. For instance, this happened when astronauts on the International Space Center brought Estée Lauder cosmetic products to space for sponsorship money to fund NASA. The acting director said that “the plan is for them to take photos and video in space of the \$105 per bottle serum that the company will then be able to use for advertisements across its social media channels” (Silva, “Influencers In Space: Astronauts Prepare To Receive Cosmetics And A New

Toilet.”). Then, we see that this event might be a characteristic of science fiction while also being a commentary on what is happening today.

Further, we see that the teenagers in the novel become even more baffled when they have to mention how durable these clothes are and how they can “shield their bodies during extreme storms” (Monir, *The Life Below* 132). The critique here lies in that a major company selling sportswear profit from people who need to shield themselves from storms caused by climate change. This is especially questionable when clothing manufacturers are a large part of the pollution emissions that have caused and maintained climate change. When a teacher asks their students why the teenagers are horrified by this sponsorship, it could make them aware of how politics and climate change are entwined. It would also be a point of discussion for how they, as consumers, should reflect upon sponsorships and commercials in today’s society.

In her study of youth climate engagement, Julie Doyle argues that questioning capitalism in climate change communication can help us “envisioning more collective, caring, and helpful futures” (2752). Thus, by discussing the topics regarding capitalism in these novels, a teacher could inspire their students to become aware of their role in environmental change. Additionally, the novels may here function as an enhancer of these feelings, as a reader-response approach to the chapters dealing with these issues may affect the reader. Together, the novels and the teacher may inspire the young adult students and show them how a more considerate and mindful political approach to environmental innovation and leadership may change the outcome for the citizens of Earth.

Research has shown that teachers “select texts that engage students in critical thinking about social issues because they provide a specific context in which to explore a larger social critique” (Ames 23). We find this in dystopian literature as well, according to Hintz and Ostry. They explain in *Utopian and Dystopian Writing for Children and Young Adults* that the

Young Adult Dystopia usually portrays class inequality, social injustice, conformity, or totalitarianism in an extreme way (8-9). They argue that this may inspire young adults to question authority and fight for social justice in their own life. Thus, Young Adult Dystopia may inspire critical reflection in the teenage reader. It would, then, be a good idea for the English subject teacher to use Young Adult Dystopian Literature, or novels with dystopian characteristics, in their teaching. Hammer contributes to this thought when he writes that “[r]ecent studies in utopian and dystopian narratives indicate that postdisaster fiction maintains connection with contemporary historic events as a form of moral commentary” (Hammer 44). From what has been discussed in this thesis, it could be argued that by working with novels like these, who have dystopian characteristics, teachers will have chosen novels that inspire critical thinking.

As we have seen so far in this analysis, the novels all present issues concerning politics and the social aspects of climate change and some of the consequences this may have for our planet. However, the novels are lacking some things that also should be discussed in a classroom setting. For instance, the novels do not deal with temperature changes, ocean acidification, or the loss of biodiversity, which are all parts of global warming that should be a part of Climate Fiction. However, *The Life Below* does this in a way when it covers biodiversity on Europa and Mars, and how this is linked to Earth and should be protected in this new era for humanity. Nevertheless, this does not justify that animal life on Earth is not considered at all. Yet, if Monir was to think of this, she may have gone with a more Noah's arc-like story, which would probably be too difficult to make realistic, and would perhaps be too childish for a Young Adult novel.

Both novels reflect briefly on what people find to be meaningful in a time of great crisis, which may be worthy of discussion in a classroom. After *Zero Day*, Eden loses her house, her status, and her luxurious lifestyle. However, when thinking back to the time before *Zero Day*,

it is not the cheese, or the swimming pool, or the big franchise movies she watched, that she misses the most. Eden thinks of the relationships she has lost with her best friend, Emma, her boyfriend Birch, and her father. At the beginning of the novel, she is described as entirely alone, sitting on a beach in solitude, reflecting on what she has lost. Moreover, it is not until she meets the other girls, and then later Lonan, that she can grow and thrive, having someone to fight and survive for. One of the more important lessons of *The Sandcastle Empire* is the importance of networks, of having someone to rely on. This is enhanced when the plot revolves around not letting the Kingpins having their own “sandcastle empires”, the Atlas project, where they will rule in solitude when the floods and storms have taken everyone else.

In the *Final Six* duology, we see some of the same tendencies where there seems to be a moral in having faith in family and friends. It is evident in Leo, when after losing his family to the flood is close to committing suicide in Rome’s port, and we see it in Naomi, who is trying to make the final six to save her family. However, another subtle lesson in *The Final Six* is portrayed in how the novel describes Rome and Los Angeles. Things and buildings are currently given cultural and historical meaning, have no chance against climate change. The paintings Leo finds at the bottom of the sea, the basilica in Rome, and the Hollywood sign are all part of the history of humanity. However, when facing the benevolent weather changes due to climate change, these things lose importance. Terrifyingly, nature trumps culture, reminding the reader of human mortality in the face of climate change.

Both novels cover a big theme in Young Adult Literature: love. This love is firstly represented in the family bonds discussed above. Secondly, love is present in new friendships. Naomi makes friends with Sidney in *The Life Below*, and together they solve a significant piece in the puzzle that is their mission. However, it is the feeling of having someone to trust and share her free time with that is the most discussed in Naomi’s inner life. Likewise, Eden makes new friends with the other girls she escapes the camp with in *The Sandcastle Empire*.

Although her relationship with Lonan is the most engaging one, the trust she experiences with Alexa is perhaps the most touching for the reader, as Alexa originally is a Wolf and thus an enemy. Lastly, love is represented in the new romantic relationships established in the novels. Leo and Naomi find comfort and encouragement in each other, and we see the same development in Eden and Lonan. These expressions of love symbolize hope through the challenging times the protagonists' experience, which may affect the reader to become as hopeful as them for a better future. This is a significant aspect of utopianism in the novels.

In Trexler's theory, place is an essential element in Anthropocene Fiction and is a useful tool in giving the readers a way of taking climate change seriously. He defines place as a "space to which meaning has been ascribed" (75). Place could be both natural landscapes and urban spaces in this context. However, it makes more sense to use urban cities and neighborhoods as places affected by climate change in Young Adult Literature as these places may be where the students often feel more familiar and at home. In *The Sandcastle Empire*, this is not something that is focused on, but is mentioned:

It started with the Kiribati islands. Rising seawater swallowed seventeen of the original thirty-three islands gradually, over previous decades, but then – all at once, it seemed – every island went under. First, there was the typhoon. Next, the tsunami.

(Olson 27)

As one can see in this description of rising sea levels, place is usually a device when trying to convey facts. Here, however, it is also used to describe a near-future reality, a direct consequence of climate change

Like Trexler, Alexa Weik von Mossner also considers place as crucial if the reader is to understand the consequences of climate change. She writes that

there is reason to believe that the vivid embodied simulation of a future devastated world might impact how we consider developments in our own world that may lead to

such a future state. In fact, it is quite possible that emotionally salient virtual experiences of speculative story worlds are crucial for a fuller understanding of what is at stake. (559-560)

This is highlighted in *The Final Six* when Naomi describes a world of climate refugees. These vivid images of homeless and hungry people reflect the refugee crisis of today. Not only is this a reference which students may have seen on their screens, but some students in the Norwegian classroom might have been refugees themselves. Thus, we see that place can be used as a device to enhance emotional reactions to climate change. Further, we can see that place relating to family bonds, friendships, and grief may create emotional reactions in the reader, possibly affecting their environmental awareness.

As argued earlier in this thesis, the English subject can offer something the science-based subjects cannot: fiction. Trexler discusses this in his conclusion: “perhaps the best fiction can do is show us ‘in an artistic form, the feelings we do not have’” (224). Likewise, Schneider-Mayerson claims that “[f]eeling is an integral aspect of most reading experiences” (489). In this way, fictional literature can give the reader some experience of a scenario they have not experienced themselves. Thus, fiction may create a notion of concern for the future, knowing that these emotions and experiences that fiction gives them may be the reality for themselves or the next generations in the future. The descriptions of emotions and affection in the three novels are, then, part of what makes Young Adult Literature so suitable for teenagers in a classroom. All three novels portray teenagers who fall in love, develop inseparable friendships, and experience devastating losses.

One of the things that separates Monir’s duology from *The Sandcastle Empire* is the descriptions of catastrophes and how climate change has affected all the teenagers at the space center. This is initiated by the backstories of the two protagonists, Naomi and Leo, and is especially accentuated when they talk about their pasts. Starting with Leo saying, “I had a

sister ... Angelica. ... I wasn't supposed to ever see her like that – my baby sister underwater, her *face-*” (Monir, *The Final Six* 120). The imagery Leo describes here undoubtedly creates a sense of empathy in the reader, making them reflect upon losing someone close to climate change. When Naomi responds that she knows how he feels, she is helping the reader empathize with him. She also experienced a realization that she was going to outlive her younger sibling: “My little brother, Sam, is everything to me. When he was diagnosed with his heart condition, and the doctors said he was living on borrowed time – it nearly broke me” (*The Final Six* 120). Thus, the two protagonists establish one of the novel's main themes, namely grief caused by climate change.

Later in the novel, the reader is taken back to the characters' memories, and they are present while the teenagers are experiencing the consequences of climate change. One moment worth discussing is when Naomi is in her room, trying to rest after a hectic day at the center. She goes out into the hallway when she hears “[a] commotion” that is “coming from the boy's dorm – a guttural cry pierces at my chest” (*The Final Six* 117). One of the other teenagers then explains that some faculty members were delivered the message that

[t]here was a typhoon in Tianjin last night – where Jian Soo's family lives. The reports are saying it's one of the most violent storm lashings China has ever seen ... The majority of the city is under the Hai River now, and... they haven't found any survivors. (Monir, *The Final Six* 117)

Naomi's mental images of the Tianjin storm remind her of her own family and what she would have felt if she had lost them in the same manner. Here, a climate disaster is happening in the present time, stirring in memories of similar past events. This is enhanced when Leo then speaks from his own experience, saying that “[y]ou don't ever get over something like this. The best you can hope for is to survive it” (*The Final Six* 117). When hearing this, Katerina asks if anyone standing in the hallway has not lost someone to climate change.

Nobody answers, confirming that everyone has been affected by climate change. Naomi is in this moment suddenly reminded of her privilege among the 24.

Naomi experiences the same wake-up call when her roommate Suki had a bad dream about her real-life nightmare when she experienced a tsunami back home. She tells Naomi that

I watched my mom and siblings die. I saw the whole thing, and I couldn't stop it. ...

One minute I was in the kitchen cleaning my drunk of a stepfather's mess, watching my mom and brother and sister play bocce ball through the window, and the next ...

(Monir, *The Final Six* 140-141)

Not only is the image of Suki caring for her abusive stepfather a sad image, but hearing her experiencing the loss of her family to the tsunami is devastating and probably as hard to imagine for the reader as it is for Naomi. For the older reader, this story, especially when she describes being taken away by the wave, trying to find her family, the mental images of floating bodies may remind them of the 2004 tsunami in Thailand. As many Norwegian families were there for the Christmas holidays, these images have been in the Norwegian news time and time again.

Suki's story becomes even more powerful when she explains her mindset in that second, that she was so worried about the future of her siblings and herself that she did not hear the roaring warning of the wave and could not save them. This story not only gives us a personal experience of what climate change will be like for future generations; it is also a perfect analogy of teenagers today. There is a warning roar right now, coming from climate change activists like Greta Thunberg, but we may not have been quick-minded enough to hear it before it was too late. In the same ways that we are deaf to climate change, we are also blind, as we can see in a similar reflection in *The Sandcastle Empire*. Eden reflects upon how she did not see the Wolves until they were a militant group sieging her school. "The signs

were all around us, but we were too wrapped up in our own lives to really question them” (Olson 26). Although speaking about a revolution, and not climate change, this could definitely be discussed in a classroom situation: How a hectic life can distract someone from the signs and urges to take action.

Later in *The Final Six*, the readers are experiencing climate change second-hand through Leo, as he wakes up to an earthquake. Before he and his roommate Asher know it, “water lashes at the walls,” as they realize it is a tsunami (Monir, *The Final Six* 226). The feeling of panic fills the reader and is enhanced when Leo hears that “Asher begin to pray in Hebrew, his voice rising in panic,” and Leo is sure of his imminent death, seeing the face of his dead mother (226). Suddenly, the doors open, and their team leader evacuates them, the wind functioning as an alarming reminder that the worst is not over yet, and they head for an emergency tunnel.

The day after the earthquake and following tsunami, the teenagers in *The Final Six* are watching the news showing the tsunami through Naomi’s perspective. Here, we learn that the earthquake was quite severe, a 7.0 on the Richter’s scale. Naomi is not prepared for what she sees on the screen: “the sight of skyscrapers swaying and sinking into the waves while the Earth shakes, the echoing screams of the hundreds of victims trapped inside. I grip the armrest with white knuckles as the scene shifts to a wary-looking anchorman facing the camera” (Monir, *The Final Six* 241). For an adult reader, this may be a reminder of what happened on 9/11. At the time of those terrorist attacks, it seemed like the whole world experienced a collective trauma through the screen.

However, for this generation of students, 9/11 is perhaps not a reference they would draw from their own experience, as they are too young to have lived in 2001. Nevertheless, there is a possibility that the image of skyscrapers bowing to the flood gives an association to other cityscapes they know from pop culture, such as from the New York City skyline, and

that this should leave an impression in the young adult reader. However, this generation of teenagers has probably seen many apocalyptic movies depicting the same images. “The Day After Tomorrow” (2004), “2012” (2009), and the Norwegian movies “Bølgen” (2015) and “Skjelvet” (2018) are all apocalyptic movies, or movies depicting great catastrophes, where forces of nature destroy familiar landscapes and urban areas. Thus, they have seen this before, however, now it is a direct consequence of climate change. When exposed to imagery like this, the students may realize how climate change will affect not only the tourist destinations they have seen on vacation but also realize that climate change affects their homes.

Taking this notion further, it brings us to Leo’s trauma. The great flood, similar to the scenario above, changed Rome as we know it today. Leo says that “the Tyrrhenian Sea leaps at my doorstep” (Monir, *The Final Six* 3) and that

[i]n this new Rome, the only place to go is up. Each surviving structure has a ledge or makeshift dock like mine that connects to the *passerelle*: raised walkways far above the ground that lead us like a map to the places we need the most. The upper stories of the basilica, hospital, and city hall; the Wi-Fi café; and even the public school’s remaining classrooms. (Monir, *The Final Six* 3)

As exemplified here when Leo explains his everyday life in new Rome, climate change has taken lives as well as it has changed the infrastructure. Now, after the great flood, Rome would have a completely different roadmap. It also has a port, where ships can sail directly into the center of the city. Thus, *The Final Six* shows us as readers how climate change can alter the world we live in and force us to make creative solutions.

An excellent example of how the novels show how climate change affects people and emphasizes the social problems following environmental change, is privilege. In *The Final Six* duology, the same social order which the readers have grown up with is in place, while in *The Sandcastle Empire*, the tables have turned. However, both novels emphasize Eden and

Naomi's privilege. It is not until something drastic happens that they are made aware of this. For Naomi, this happens when she learns about the backgrounds of the other teenagers. Especially the trauma that they have been through relating to climate change. For Eden, it takes a social revolution putting her on the bottom of the social order to see how lucky she has been growing up, and regarding access to new technology:

Too many people were out of touch with reality, floating on the hard work of others who were killing themselves just to survive. That too many of us were too entitled, too grateful. Too used to all we touched turning gold. (Olson 26)

This topic contributes to creating critical thinking and awareness of their own privilege in the readers and would be a good point of discussion regarding two of the themes discussed in this thesis, grief and capitalism.

As Whitehead and Whitehead claim, "perspective taking is central to becoming an informed writer and critical thinker" (91-92). By reading all the stories of how the different teenage characters in the novels are affected by climate change, the reader takes upon themselves the characters' perspective. They experience loss and trauma through their stories. Experiencing the teenagers' losses in the book creates a "collective emotional maturity" (Trexler 224) because the reader is allowed to feel what we and future generations are going to feel. This may be a crucial point of analyzing Young Adult Climate Fiction in the English subject classroom. By experiencing the consequences of climate change, the students are made aware of what their fates may potentially be in the future.

This emotional effect in Climate Fiction may alternatively scare the reader from internalizing the issue; in other words, it may create a form of apathy. As Schneider-Mayerson found in his study, some readers of Climate Fiction experienced negative emotional responses. To explain this, he refers to this argument from the field of psychology: "when climate change is framed as an encroaching disaster that can only be addressed by loss, cost

and sacrifice, it creates a wish to avoid the topic” (Per Espen Stoknes qtd. in Schneider-Mayerson 489). However, Schneider-Mayerson found that those who already were concerned for the climate, were encouraged by these narratives (489). As we have already established, Norwegian students are concerned with the climate, it would therefore be safe to assume a similar effect on the Norwegian student readers. A notion related to this is found in von Mossner, where she argues that the dystopian genre also contributes to this:

in young adult dystopian writing, narrative elements that cue negative emotions such as fear and anger are deliberately combined with elements that evoke more positive emotions such as curiosity, fascination, and excitement in order to make the reading palpable for young readers and to not extinguish their hope for a better future. (von Mossner 554)

With these two perspectives in mind, it unarguably is a value in Climate Fiction concerning emotional responses to the climate.

Von Mossner writes that “some negative elements of the storyworld have already become catastrophic, others are still in the state of anticipation and therefore not yet realised.” (562). This is true for both *The Sandcastle Empire* and *The Final Six* duology. The novels depict worlds that are, to different extents, affected by the environment and climate change, and the different narrators describe the anticipation of what to come. For *The Final Six* the inhabitants of the Earth are expecting extreme weather and rising seas to be the end of the world, a total annihilation of all land. The only way to survive is for humankind to escape to outer space. However, in *The Sandcastle Empire*, it does not seem like they expect the Earth to be destroyed completely, but rather becoming uninhabitable if people continue to live in the ways they are doing now. Thanks to science and creative people who think differently, the solutions seem to be many. One solution is to change where we live and how we build homes.

Another is to learn how to utilize the elements for the benefit of humanity and the environment, like creating clean water and growing produce under the ocean surface.

The readers of Young Adult Fiction are shown how to take a stand and are urged to act. They are taught how actions have consequences. As Adami writes, “in YA fiction, teenagers are active players in the process of crisis resolution” (131-132). They often save the world while being conscious of the role they are given. The novels thus create a lens for the reader to see the consequences of their actions. They do this by having the protagonists looking back to the past, Zero Day in *The Sandcastle Empire*, or a time before they were born in *The Final Six* before the world became as it is. In a way, the past becomes a utopian hope for the future in these novels. This utopian hope could be a discussion point in a teaching situation. As Doyle argues, “more hopeful climate communication can encourage positive action” (2752), and “hope linked to problem solving and positive thinking can lead to more concrete actions” (2752). Here we find “where the pedagogical value of YA fiction lies: by showing young adults that they have the power to do something in the world, it educates them into being better and more active citizens” (Adami 131). By putting a positive spin on a hopeless topic such as climate change, emphasizing the teenagers’ ability to change the future, the teacher may help their students become more active in their role as protectors of the environment.

Young Adult Literature consists of “what if”-stories (Adami 131), they portray what the world could be like. With Young Adult Climate Fiction, the emphasis is placed on what the world could be like if the mechanisms in play today, which have been discussed previously in this thesis, are allowed to continue. The study by Schneider-Mayerson found that “for many readers, the ‘reality’ of these climate futures led them to see the present in a new light (488). The readers of Climate Fiction may thus realize what they could change in their present life to avoid the fates presented in the novels. One way to do this is to appreciate

the Earth. As von Mossner wrote in her article, “climate fiction ‘reconnects young readers with their environment, helping them to value it more, especially when today, a large amount of their time is spent in the virtual world’” (555). By using Young Adult Climate Fiction in their teaching, English teachers should be able to realize the principal goal of sustainable development in the core curriculum.

Von Mossner further discusses the tendency that “even the most dystopian young adult text must retain hope in order to be attractive to young readers and socially responsible” (562). The idea is to present the young adult reader with just enough darkness for them to realize the seriousness of climate change while at the same time leaving a beam of hope. This is what von Mossner means when she says that Young Adult Climate Fiction novels, especially Dystopian Climate Fiction novels, are “risk narratives.” In both *The Sandcastle Empire* and *The Life Below*, the endings are parts of what keeps the teenage reader hopeful. The goal, then, is to convince the reader that they can take on the same battle as the characters in the novel.

The study by Schneider-Matheson, however, found something contradictory to what von Mossner argues above. He writes that when the novels depicted a dystopian society where everything negative exists as a result of our actions, the readers were not inspired to vote differently or participate in protests or social movements working against climate change (498). Instead, he found that the participants contributed to shallow environmentalism, as discussed in the ecocriticism-chapter above. He writes that “[t]hough we should not expect literature to draw a roadmap for readers, it should be noted that a great number of these novels (...) do just this by depicting a potential political response in great detail” (498). As seen in the discussion above, this is something these novels do as well. Thus, reading this may be quite frustrating for a teacher trying to teach environmental awareness.

As the research of Schneider-Mayerson show, “literature can be quite effective at enabling or compelling readers to imagine different futures and consider the fragility of human societies and vulnerable ecosystems” (495). However, when discussing the ability to act upon these reactions, the study could not give an answer. Nevertheless, the study found that “[a]most half of the respondents discussed the book they had read with their friends and families, which often occasioned conversations about climate change” (Schneider-Mayerson 493). By doing so, the readers enable what may be perceived as a goal of teaching Climate Fiction, which is to spread this environmental awareness. The study seems to have created what the curriculum wants: reflecting, aware people. Thus, it is sufficient to say that enabling action-takers is the school system's responsibility, most definitely the teachers. By using Climate Fiction in classroom readings, reflections, and discussions, the teacher should be equipped to create reflecting, environmentally aware students who take these abilities home to the discussion around dinner tables and gatherings of friends outside school.

Iser argued that the “reader’s enjoyment begins when he himself becomes productive, i.e, when the text allows him to bring his own faculties into play” (108). This statement could make a teacher reflect upon young adult readers and what their faculties are. If we argue that these are knowledge about and experience with capitalism, science, social injustice, and climate change before reading the text, how could a teacher help enlighten this process with the student? Park found in her study of reader-response theory in middle and secondary schools, that the background for the reflections that students make consists of the mechanisms of our society. As she saw in her communal reader response groups, some of the teenage girls were not fully grasping the concept that women do not have the same level of empowerment as they thought. This resulted in the girls shaming a rape victim for being drunk and not dressing appropriately (202-203). As Park argues in her conclusion, there is obviously a need for a teacher to moderate these beliefs in a group discussion. Likewise, for the topic of social

injustice, capitalism, climate change, as well as who benefits from science, the teacher must make the students aware of these mechanisms through methods like questionnaires, discussions, or brainstorming activities, making sure that they have these faculties ready when working with the texts.

This thesis had an aim to look at some ways for a teacher to help realize the curriculum goals of critical thinking and environmental awareness. This thesis should, then, discuss some concrete teaching methods further for this to happen. In Doyle's research on youth climate engagement, the group tried multiple tasks. One example is the following:

students were asked to respond to the statement 'I can make a difference to the challenge of climate change' by placing themselves on an imaginary line on the floor with one end agreeing and the other disagreeing. This facilitated discussion and debate. A lot of input, however, was required from the teacher beyond the formal workshop time to encourage students' engagement with the project in their own time. (2762)

As we can see here, the teenagers participating in the project were encouraged to take a stand on their views of their participation in stopping climate change. This could be a useful task to do before and after reading the Climate Fiction novels. On the one hand, this shows the students, and the teacher, how their views might change after reading and discussing the novels. Thus, hopefully, make the students aware of how they have become more optimistic about the future. On the other hand, it can be a tool for the teacher to evaluate their own teaching, especially if the students do not change their opinion after working with the novels.

When initiating the learning process, Doyle's group worked with "climate campaigns, news articles, music, and artwork" (2762). By the end of the initiating phase, the teenagers expressed what they had learned through presentations and essays, as well as use some more creative methods, such as "poetry, drawing, posters, and a hand-drawn manga comic" (2763).

However, all the presentations of climate change as an issue were focusing on the science and technology, not the sociocultural aspects such as capitalism (2763). Some other methods conducted in this study included play, as in role-play and playing games. This, Doyle argues, “can encourage ‘interaction’ in nonthreatening ways” (2754). They also had workshops, including group discussions and research into the topic, which is “requiring positive collective action” (2754). Through similar teaching methods, especially those regarding group research and presentations, the teacher could ensure environmental awareness and critical thinking while working with the novels and climate change.

Other methods could be more directly linked to reader-response theory, as shown in “A Review on Reader Response Approach to Teaching Literature at EFL Contexts.” Here, Ishkak and Hartono value the “freedom, enjoyment, and engagement in reading texts and literary works” (118). They saw that methods such as keeping a reader-response journal (120) and hold literature circles (121) could be useful to keep the curricular goals of basic skills rooted in classroom activities and reflect upon the content of the chosen literature. The reading cycles contained for instance “peer-led discussions,” which “allows each member to interact and talk about their own responses and reactions toward the text” (121), where they could expand their vocabulary, discuss literary devices in the text, and reflect upon the themes of the novels, developing what Ishkak and Hartono described as “critical literacy” (120). Additionally, this allowed them to practice speaking in a nonthreatening environment, which led to an “empowerment of students” (120).

6 Conclusion

So, why read and analyze Climate Fiction, or Anthropocene Fiction, in the classroom? After all, “[f]or the scientific realist, art’s accuracy comes at the expense of being able to ‘do much’ at all” (Trexler 73). Literature, by itself, does not help the students form an environmentally conscious lifestyle. However, when the students have been taught the facts on the environmental situation and the most probable future, and the teacher has provided their students with literature of which they recognize some parts of themselves and the world they live in, and then create a classroom reflection on the literature given, the art indeed “does much”.

This thesis aimed to give answers to what an ecocritical reading is, how this could inspire environmental awareness and critical thinking in the students, and how the main characters' experiences could affect the reader’s view of global warming. Through the discussions before and during the analysis, it could be argued that an ecocritical reading, when focusing on the characteristics of Anthropocene Fiction and Climate Fiction, is to look for descriptions of the environment and how the natural and cultural landscapes are transformed by climate change. The thesis found that, with the help of reader-response theory, an ecocritical reading and discussion of the novels may inspire the students to become environmentally aware and critically thinking citizens. As discussed previously, the novels all portray how the protagonists must adapt to climate change, and how climate change has created a situation in which social groups or capitalist leaders have exploited for their benefit, and how the protagonists are trying to handle that. Through narrations of loss, struggle, and destruction of the natural and cultural landscape, the reader may have been affected to rethink their own role in the environmental debates going on in the present political landscape.

Although the novels are fictional, they function as a social commentary on the world we are living in. We see this in many instances. The previous generations’ responsibility of

stopping climate change is seemingly pushed onto the teenage protagonists, like how the responsibility they have for the Earth is pushed onto the generation of teenagers today. This makes the readers internalize this responsibility and understand their role in creating lasting solutions for climate change. How the novels portray science gives the readers hope for innovative solutions in the future. However, they also become aware of what happens if these solutions are misused or unfairly distributed. The novels portray such misuse of science when used to manipulate the teenagers' bodies, thus making the readers aware of the ethical issues surrounding innovation and underlining that the novels inspire critical thinking.

Further, the scientific innovation in these novels introduces the topic of capitalism, and how if maintained, it will contribute to social differences and keep the lower social classes away from the solutions that could potentially save their lives. Along with how the novels portray the countries and organizations and their political roles, as well as show the negative consequences of a social revolution, this gives the reader a form of social commentary of today's society and how historical movements may repeat themselves. Additionally, the novels show the urgency of thinking critically in the present because, in the future, it would be too late to question authorities when the sea is rising and storms are raging.

Throughout the analysis, there has been a recurring theme of discussing capitalism and the importance of talking about this concerning climate change. Through an ecocritical analysis and using Anthropocene Fiction as a model, it becomes clear that capitalism is criticized in the novels by portraying how unequal distribution of humanitarian aid inspired revolution and how sponsorships allow much needed equipment being held away from those who need it most. Reflecting upon and criticizing this may create more caring students, who want to see social change in the society they live in, possibly creating a global desire for change in the long run. Additionally, capitalism is criticized when the novels portray that

materialistic things, like personal items and buildings, do not matter if the protagonists have their family and friends.

Further, this brings us to another value given great emphasis in this thesis. With reader-response theory, the emotional responses to the different losses described in the novels may create affect and empathy in the reader. *The Final Six* may have a considerable influence on environmental awareness by portraying the stories about how the teenagers lost families, homes, and even whole countries to storms and floods. As they were living relatively peaceful and normal lives until this happened, these testimonies of the consequences of climate change may inspire awareness and even an urge to action. This could especially be the case when discussing these incidents considering the student's privilege and position in the world. The teenage protagonists' active role in conflict solving and world-saving may also be an inspiration for the teenage readers.

As now established, the novels present several issues that has pedagogical value and are worth discussing in the English subject classroom. These are ethical use of technology and who has access to the technology created in the name of innovation and providing for the future, how capitalism favors the few and exploits the weakest in our society, and how the climate crisis may affect the reader's individual life by destroying cities and taking family members due to flood, storms, and absence of clean water. Since Norwegian teenagers are usually interested in climate change and participate in the debates and protests surrounding it, these novels can further create curiosity in them. This could also inspire them to raise their voice and spread their new knowledge of the topic. If provided the tools to understand the facts about climate change and insight into the political climate in their own country and English speaking countries covered in the English subject, students may become affected by the literature analyzed in this thesis. If we, as teachers, can manage to create a sense of hope, focusing on creative solutions and how the students may participate in removing some of the

capitalist thinking in our present political landscape, we may fulfill the curricular goal of creating environmentally aware, critically thinking citizens working for a more sustainable world.

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