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Tools of civics education: How democratic values are enacted in
a school curriculum and digital game

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Abstract

Civics education has been a topic that schools teach for a long time, and like many other school subjects there continue to be debates around how to teach it. Some see it as a way to instruct students in their patriotic duties to a specific nation while others view it as a time to teach the skills and values needed to uphold democracy. In a time where democratic governance is on thin ice in many countries, what the next generation of politically engaged society members learn about the role of government and their own role in affecting it, is a fascinating issue to explore. From the perspective that what we teach is intrinsically connected to how we teach, it is important have a good understanding of the tools that are used in teaching and learning. Tools such as curriculums, give teachers a particular way to approach a topic. In this thesis I unpack the democratic values that are created in a curriculum and game to be used in civics education courses. *Majority* is a digital computer game accompanied by a school curriculum with the aim to teach the democratic skills and values that will help students contribute to building a society that emphasizes peace and tolerance of differences. Based on the understanding that a flourishing democracy and democratic education go hand in hand, as education philosopher John Dewey argues, it is of great value to a democratic society to engage with precisely how democracy is taught (Dewey, 2024[1916]). Through interviews and document analysis I explored the context in which *Majority* was developed, its implementation, and what the components of it demand from its users. The concept of materiality from science and technology studies (STS) generally says that an object, such as *Majority*, is enacted (or created) through its relations with other objects and societal contexts (Mol, 2002; Law & Mol, 1995). And the STS approach to design sees this process as actively shaping how society interacts with objects (DiSalvo, 2012; Cherkasky, 2004; Winner, 1980). We live with inanimate objects, and they shape how we understand and conceive of the world, just as we are able to shape and manipulate how they work and function. Taking these conceptual approaches this thesis is an analysis of how democratic values are enacted in the entanglements of *Majority*'s two primary components, the digital game and its accompanying curriculum.

Abstract (German)

Politische Bildung ist seit langem ein Thema in den Schulen, und wie bei vielen anderen Schulfächern gibt es immer wieder Debatten darüber, wie sie unterrichtet werden sollte. Einige sehen darin eine Möglichkeit, den Schülern ihre patriotischen Pflichten gegenüber einer bestimmten Nation beizubringen, während andere darin eine Gelegenheit sehen, die für die Aufrechterhaltung der Demokratie erforderlichen Fähigkeiten und Werte zu vermitteln. In einer Zeit, in der die demokratische Regierungsführung in vielen Ländern auf wackeligen Beinen steht, ist die Frage, was die nächste Generation politisch engagierter Mitglieder der Gesellschaft über die Rolle der Regierung und ihre eigene Rolle darin lernt, ein faszinierendes Thema, das es zu untersuchen gilt. In dem Bewusstsein, dass das, was wir lehren, untrennbar mit der Art und Weise verbunden ist, wie wir lehren, ist es wichtig, ein gutes Verständnis der Werkzeuge zu haben, die beim Lehren und Lernen verwendet werden. Instrumente wie Lehrpläne geben den Lehrern eine bestimmte Art und Weise vor, ein Thema zu behandeln. In dieser Arbeit möchte ich die demokratischen Werte untersuchen, die mit einem digitalen Spiel für den Politikunterricht vermittelt werden: "Majority". Majority ist ein Computerspiel, das von einem Lehrplan begleitet wird. Ziel ist es, demokratische Fähigkeiten und Werte zu vermitteln, die den Schülern helfen, eine Gesellschaft aufzubauen, in der Frieden und Toleranz gegenüber unterschiedlichen Menschen im Vordergrund stehen. Ausgehend von dem Verständnis, dass eine florierende Demokratie und demokratische Bildung Hand in Hand gehen, wie der Bildungsphilosoph John Dewey argumentiert, ist es für eine demokratische Gesellschaft von großem Wert, die Art und Weise, wie Demokratie gelehrt wird, zu untersuchen (Dewey, 2024[1916]). Mit Hilfe von Interviews und Dokumentenanalysen habe ich den Kontext, in dem Majority entwickelt wurde, seine Implementierung sowie die Anforderungen, die seine Komponenten an seine Nutzer stellen, untersucht. Das Konzept der Materialität aus den Science and Technology Studies (STS) besagt im Allgemeinen, dass ein Objekt wie Majority durch seine Beziehungen zu anderen Objekten und durch soziale Kontexte erst entsteht (Mol, 2002; Law & Mol, 1995). Der STS-Ansatz für Design betrachtet diesen Prozess als aktive Gestaltung der Art und Weise, wie die Gesellschaft mit Objekten interagiert (DiSalvo, 2012; Cherkasky, 2004; Winner, 1980). Wir leben mit unbelebten Objekten, und diese prägen die Art und Weise, wie wir die Welt verstehen und begreifen, während wir gleichzeitig in der Lage sind, ihre Funktionsweise zu gestalten und zu manipulieren. Ausgehend von diesen konzeptionellen Ansätzen wird in dieser Arbeit analysiert, wie demokratische Werte in den Interdependenzen der beiden Hauptkomponenten von Majority, nämlich dem digitalen Spiel und dem dazugehörigen Lehrplan, umgesetzt werden.

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1. Introduction

It is no secret that in today's politics there is a trend toward authoritarian attitudes and policies. Democratic ways of governing are currently being strongly contested in multiple countries in Europe and in the United States. In a political moment that is intensely heated by differing views of how society should be governed, it is an important time to think about how we come to understand what democracy is – what democratic values are and how we act on them. In some ways *democracy* is a very abstract term that is often thrown around in discourse with little attention to its practical meaning. We assume we know what it means, or we think we know, but it is difficult to explain the meaning. With this thesis I wanted to explore what democratic values are from a very practical standpoint. Rather than rely on abstract definitions I wanted to explore how they manifest in practice. I turned to the topic of civics education in schools because this is a space where students learn about types of government, how decisions are made in government, and often it is the educational subject that is concerned with democracy and political engagement.

Although civics education is a widely known subject, its uses and meanings are not always clear. It is even often debated what it should be concerned with. In Austria, the site of this thesis project, civics education as the teaching of democratic values first became a topic in school curriculums in the late 1970's (Diendorfer, 2022). Until the late 1960's the subject had been primarily concerned with creating loyal Austrian citizens through a citizenship focused curriculum. This new approach focused on what it means to live in a democracy and how you can participate and act to support democratic processes of engagement and governance. The goal was to strengthen people's democratic consciousness, in part as a way to push against authoritarian sentiments. Today, there is often controversy around civics education focused on building democratic values and ways of participating in politics versus civics education focused on patriotism and ideology (Levine, 2023; Packer, 2021). This thesis is about how particular imaginations of civics education can be created by the way that we teach students. I think this is an important avenue of research because what and how we teach the next generation of engaged society members impacts us all. I see civics education courses as one space of many in a student's life, in which they, as future voters, are impacted by the experience. I am approaching this research topic from the field of science and technology studies (STS), which has given me a particular lens on the issue.

The academic STS field has done quite a lot of practically oriented research at the intersection of democracy and science/technology development and engagement. The way technologies are developed, how they are regulated, who has a say in these processes and how people are able to engage in them, and the way that knowledge about science and technology is communicated, are all

questions about who has power, over what, and how they exercise that power. I was inspired by this practical orientation in the field and the numerous studies that approach topics with an empirical focus, analyzing specific technologies, communication activities, and specific objects used in spaces of science and technology development. The practice of studying objects in STS is what ultimately led me to the case study of this thesis. Research by STS scholars John Law and Annemarie Mol formed my perspective on how objects can be studied (Law & Mol, 1995; Mol, 2002). And the STS scholar Langdon Winner shaped my thinking on the value of turning toward objects, with the argument that we should not underestimate the power of objects to impact our social lives through his case study showing how bridges can be built to discriminate against certain populations (Winner, 1980). This all led me to think about the objects that are used to teach civics education.

As a case study to explore how objects in civics education creates the values that students learn, I chose a digital game and the curriculum that goes with it. It is called *Majority*, and it piqued my interest as a research object initially because of the game. I found it very interesting to think about how teachers in schools or other educational settings incorporated digital tools into their lessons. Although the aspect of the game being digital ended up not having as much meaning as I initially thought, the idea of using a game, whether it is digital or not, remained interesting. It is different than a traditional classroom lecture and as I discuss in the concluding chapter of this thesis, the medium provides something unique to students' learning experience. Majority was created by the World of Tomorrow Institute (WOTI) in Vienna to be used by schools and as supporting material for civics education instruction (WOTI, 2024). The website advertises it as a chance to, "Immerse yourself in a fun and educational game that teaches you how to lead a community and make democratic decisions" (WOTI, 2024). It is also advertised on the website as a way to fight the rise in autocracies worldwide and strengthen democracies through education on democratic values. According to the website, it is the only educational video game that follows the Council of Europe's model for democracy education, called the *Reference Framework of Competences for Democratic Culture* (RFCDC, 2016).

Majority is both a game and a curriculum, and throughout this thesis I refer to "the game" and "the curriculum" or sometimes the "lesson plans". The lesson plans and the curriculum text are one and the same, and this is what I call the text that accompanies the game (Boelmann, et al. n.d.). It provides an outline for teachers to follow to incorporate the game and the topic into their teaching. I will often refer to just Majority, and with this I am referring to both the game and the curriculum. Sometimes I also call Majority a tool, because based on the purpose of it as described on the website, it is a tool for educators to use in their teaching. I use this case study to show that the democratic values Majority teaches are not just those that it states based on the RFCDC, such as tolerance,

fairness, or ability to solve conflicts peacefully. Using an STS perspective on designed objects and the role of objects in society, I make the case that Majority *enacts* democratic values. Said differently, it *creates* the values it teaches. I found that the two components that make up the tool Majority, are entangled in different ways and that through these entanglements Majority's values of democracy are enacted in both idealistic and realistic ways. This answers my primary research question: **How are democratic values enacted in the entanglement of the curriculum and game?**

I will show how I came to this conclusion in the empirical chapter, chapter 6, where I lay out my analysis of what I found in the material (the game and curriculum). In chapter 7 I will discuss this analysis more thoroughly and tie my conclusions into the relevant theoretical perspectives and literature. But to start at the beginning, in chapter 2, I demonstrate how this research speaks to and is embedded in a broad range of literature. This literature spans from what civics education is and the landscape of it in Europe and Vienna, Austria, to the use of digital games as educational material, to discussions around citizenship and technology. Chapter 2 also addresses the STS literature that intersects with education, as this intersection is where this thesis would be most at home. Following that, in chapter 3 I will explain my primary research question and the three sub-questions that I used to answer this main question. In Chapter 4 I go over the theoretical perspectives that shaped research and understanding of Majority. These include the design of objects from an STS perspective, materiality, and John Dewey's theory of education. As a teaching tool for civics education, it was important to explain how I see the connection between democracy and education. Then, in chapter 5 on materials and methods, I will explain precisely how I conducted the analysis in chapter 6 to show my methods of coming to these conclusions. This chapter also contains a detailed description of my case, to provide a background understanding of what the game and curriculum look like and what they do.

Especially in today's political climate, it is strikingly clear that we cannot take democracy for granted. Democratic ways of governing and participating in society need to be continually practiced and one place to do this is civics education courses. This is not a thesis about what democracy means in general or what democratic participation means in society. It is an empirically focused thesis rooted in a particular case study. What I can say about democratic governance and democratic values is contextual to this case study. However, I hope that the way in which I conducted this study is useful to others interested in how we come to understand democracy in specific contexts.

2. Literature Review

This research project is embedded in a broad swath of literature, from what democratic values are to what democratic participation can look like, to how communities can be governed. Most of the literature discussed in this chapter comes from the education field, and through this research project I seek to add an STS point of view to this literature. And to the STS field I hope this project provides an example of how STS concepts and methods can engage with issues in education. Where some literature reviews might provide a comprehensive overview of the discussions in that field, I took a more direct approach in addressing discussions and arguments within the respective fields of literature that my research specifically speaks to.

First, I will go into literature on civics education (2.1). This is a broad field and has been studied from different angles, such as the social sciences, education, and psychology. To keep this review as relevant as possible, I did not pick a particular angle or specific type of civics education to explore. Instead, I focused on aspects and questions within the literature that this research project addresses. Following the foray into where civics education occurs, and how and why, I go into literature that speaks to the connection between technology and citizenship (2.2). This is a vast field of literature though, so I focused on the part that Majority speaks to. This is the connection between technology, citizenship, and education, and how they are intertwined. Since Majority is a civics education tool with a digital component, I wanted to better understand the discussions around the role of the digital in civics education. Then I dive into the literature that is specifically about games and education (2.3). Where the previous section deals with digitization's impact on democratic citizenship, this section deals with discussions around games as tools of learning and how the digital aspect plays into that. And finally, I provide a look at the state of research on education in the STS field (2.4). Although there is relatively little research in STS that explicitly addresses issues or topics in education, there are discussions around training scientists and engineers that have been woven into some STS studies.

2.1 Civics education

My study of how Majority enacts democratic values is relevant to discussions on civics education because it was developed as a tool for classes on democratic skills and values. How a tool enacts democratic values speaks to the research on the role of civics education in society, such as its effects and purpose. In this first section I discuss the landscape of civics education. Majority was created and developed in Vienna, Austria, so the civics education landscape that my research is most relevant for is this context. Austria is part of the European Union and so that is also a level of governance that is relevant in this case. Following that I dive into how civics education can be defined,

because there is different terminology and understanding of what civics education is. Finally, I will move into the literature on why we even need civics education. As a research project concerned with an educational tool for this field, it is important to understand the arguments for why democratic participation and engagement are important topics for schools to take up.

2.1.1 The landscape

Civics, citizenship, and democracy education are a primary focus of the EU's education initiatives. The European Commission's Working Group on Equality and Values in Education and Training wrote an issue paper on citizenship education (European Commission, 2023). The issue paper covers a wide range of topics on the matter. There have also been several studies conducted at the EU level that the issue paper discusses, concerning civics education or general topics related to European Union institutions and governance. The Council of Europe published the *Reference Framework of Competences for Democratic Culture* (2016), which seeks to outline skills and values that encourage democratic community building. This is also a document that became part of my research materials. In addition, there have been several initiatives at the EU level focused on effects of digitalization in education, and proposed ways of addressing the issues that have emerged with the deeper entanglement of digital technologies in society. I will address this topic further in the next section. What is clear though, is that this topic has taken on a certain degree of importance at the EU level, and based on the different EU groups engaging with it, the topic of citizenship seems to be one of the commission's priorities in its education initiatives.

The issue paper discusses the results of the working group's meetings, including challenges for policy, teaching, and communities. It also reviews types of citizenship education and the main ways that it is taught – they found that in Europe this is primarily at a cross-curricular level integrated into other subjects, and not as a separate class (European Commission, 2023, p. 12). The main types of citizenship education the document discusses include traditional civics education and critical civics education, where the critical approach is more focused on developing people's critical thinking and analysis abilities versus imparting knowledge about government structures and processes (p. 14). There is also a transformative civics education, which places its emphasis on social change and how society can be transformed to be more just. Despite these concrete types, civics education is often not viewed as a topic that should have a dedicated course in school, but more recently there is a demand for this.

This research project is situated in Austria, because the research materials were developed there. Looking at the Austrian national level, shows that in the 2024 Austrian National Education

Report, civics education is one of the chosen areas of development (Nationaler Bildungsbericht Österreich, 2024). The report points to the need for civics education (called *Politische Bildung* in the report) to be its own class in school, for a dedicated course on the topic in teacher training programs, and for greater promotion of a democratic culture in schools. And in Vienna, coming to the local level, there is a dedicated center for the study of democracy. They conduct studies on issues of democracy, didactics of democracy education, and provide pedagogical resources for teaching and learning (Demokratie Zentrum Wien, n.d.). The *Zentrum Polis*, an organization funded by the Austrian ministry of education and based in Vienna, also provides didactical materials and many resources and information for the teaching and learning of political education (Zentrum Polis, n.d.). Civics or political education has importance in the Austrian school curriculum, it is even explicitly mentioned as an important topic to incorporate in the Austrian constitution, but only since 2016 is it a mandatory topic to cover in schools after the 6th year. The Ministry of Education lists it as one of several teaching principles that should be incorporated into teaching but do not have their own dedicated course. It is often incorporated into geography or history. There is a plethora of projects and initiatives in Austria and specifically in Vienna that deal with this topic, and my research into Majority is embedded in this landscape of resources for furthering children's and grown-up's political and civic awareness.

2.1.2 Definitions

The issue paper from the European Commission's working group defines traditional citizenship education as "aspects of education at school level intended to prepare students to become active citizens, by ensuring that they have the necessary knowledge, skills and attitudes to contribute to the development and well-being of the society in which they live" (European Commission, 2023). For the term "civic education", they use the OECD definition which differs slightly in its broadening of the places and situations that can affect a person's capabilities and understanding of civil society. Instead of focusing on learning at the school level, their definition includes all learning that could take place in one's life. They primarily use the term "citizenship education," but also define how they understand similar terms such as "civics education," "digital citizenship education," "democratic citizenship," "education for democratic citizenship," and others. The RFCDC (2016) describes the purpose of the education system as "endowing [people] with the capacities which they need to become active participants in democratic processes, in intercultural dialogue and in society more generally". The capacities which they speak of are many but all fall into the categories of values, attitudes, skills, and knowledge and critical understanding. The motive is to impart people with an awareness and commitment to creating a culture of democracy, which goes beyond democratic laws and institutions, to include the competencies for intercultural dialogue, peaceful discussion and

debate, respecting other points of view and experiences, etc. (pp. 15-16). Himmelmann (2013) also discusses various competencies that should be learned, arguing along the same lines as the RFCDC, that the focus should not just be on knowledge acquisition but on bolstering democratic values and attitudes, awareness, critical learning, conflict resolution, and other skills that lead to active and knowledgeable engagement.

I use the terms civics education, democracy education, and political education interchangeably because in the literature these are all terms used to generally refer to the teaching and learning of engagement in civic life and democratic governance, and knowledge of democratic values, attitudes, and skills. Although there are some differences to note. In the German literature, what is referred to usually as civics education in English-language literature especially from the United States, is most often called political education (*politische Bildung*). For example, the citizenship publication series of the *Demokratie Zentrum Wien* uses the term political education when referring to anything having to do with teaching and learning (Lange, n.d.). The Austrian National Education Report 2024 also uses the same terminology. Although I use the different terms interchangeably, I will most often use civics education or democracy education, because the former is used in a lot of the English-language literature and the latter is the term used in my case study. There are no vast substantive differences among the various terms, however, civics education or political education are broader more traditional terms, and democracy education is as the name already suggests clearly focused on teaching values and engagement methods that build democracy. In the following section I go into reasons why civics education is important in the first place, why there is both increased interest and controversy around the topic today, and why the methods used to teach civics education are important if the desired outcome is increased awareness and participation in politics and civil society.

2.1.3 Why civics education?

There is both increased interest and controversy around civics education today. The rise of new media and technology in politics and civic engagement, combined with the trend toward more extreme right-wing politics, has led to renewed discussions around the value of civic engagement and the role of education in that. Civics education is often seen as an answer to the increased public skepticism toward democratic institutions and democratic participation (Campbell, 2019). The current distrust of institutions, at times breakdowns of democratic processes (for example, the insurrection at the Capitol building in the U.S.), and increasingly complex and contentious issues like climate change or immigration, require a closer look at why this field in education is seen as a solution to these

problems. In this section I discuss some of the controversy and arguments for civics education to develop an understanding of its purpose in society.

To start I draw on John Dewey, a prominent thinker on the topic of democracy and education, because he speaks to the reasoning behind connecting democracy and education in the first place. He argues that education plays an outsize role in safeguarding democracy. He writes, "since a democratic society repudiates the principle of external authority, it must find a substitute in voluntary disposition and interest; these can be created only by education" (Dewey, 2024 [1916], p. 82). Education is the primary, and only way according to Dewey, that the skills, knowledge, and modes of participating in governance can be successful in creating and sustaining a democratic government. So, to have a society in which the people can voice interests, and do not rely on an "external authority", you need a body of people that is educated. In a similar way, education theorist Amy Gutman argues for a *democratic theory of education* that focuses on what she calls "conscious social reproduction" (Gutman, 1987). This is the idea that members of society should be able to impact how students are educated because that "shapes the political values, attitudes, and modes of behavior of future citizens" (p. 14). Gutman's argument, like Dewey's, is that we need theories of education that are democratic because how we educate impacts how we govern and participate. I will deal with Dewey's theory of democratic education more fully in the chapter on sensitizing concepts, but I have brought his argument into the literature review because it was a founding and influential contribution to the literature on the need for civics education. John Dewey's is a basic argument for the necessity of education in general to be democratic, and for it to be the place where students learn the skills and values that allow them to be effective contributors to a democratic society.

Then there is the idea of having specific courses or class sessions on civics education, which can be understood as learning a set of competencies and values. Most often, in Europe and other Western democracies, civics education is understood as education for democracy. This would also be in line with how Dewey viewed the purpose of education. From this point of view, civics education is the teaching and learning of *democratic* competencies and values. Through research on civics education and civic engagement among young people, Himmelmann (2013) identifies various competencies essential to developing active participants in society. Himmelmann explains that there has been a shift in the last decade from simply speaking of civics to democratic civics education and the idea of democratic citizenship. This change in terminology is reflected in the shift from just teaching students about government and its institutions to teaching them about the culture of democracy. Civics education today often includes all aspects of social life, not just the workings of government, and with that has come a focus on instilling democratic values and behaviors in young

people. The purpose of civic competency in this case is meant to strengthen a democracy through political engagement, critical thinking, intercultural dialogue, awareness and understanding of environmental and human rights issues, to name just a few. There is also an orientation within civics education called “inclusive citizenship education” that seeks to teach majority populations to live in increasingly diverse societies (Kenner et al. 2025). The idea of inclusive citizenship is to focus on how practices of exclusion can be reduced or eliminated, rather than placing the burden on the excluded to integrate (p. 89). It is an orientation within this education field that prioritizes asking questions and creating space for new points of view.

These democratically focused kinds of citizenship education stand in opposition to a type of civics education focused on nationalist values or mere instruction of functions of government. Civics education has been historically vulnerable to changing politics. As a topic that teaches students about participation in public life, it is uniquely vulnerable to governments using it to exert their own political ideologies (Levine, 2023). Ideally civics should not be used to advance personal or religious causes, or specific political agendas, but it has been used in schools to promote specific ideologies. This is not just in explicitly authoritarian regimes but in self-described democracies such as the United States. For example, in a 2021 essay in the magazine *The Atlantic* civics education in the United States is described as “the heart of the struggle to define the meaning of the American idea”, and as “a political battlefield that schools mostly avoid through neglect” (Packer, 2021). Partisanship in American politics has resulted in civics classes being places of ideology and party politics. Its purpose is not agreed upon. It is not necessarily about teaching democratic skills and values to ensure a robust democratic society and government, it may, as that quote demonstrates, also be seen as a tool for promoting particular political ideals. There is a tension between those who want civics education in schools to be used for instilling democratic and inclusive values and those who want to use it for nationalistic and/or partisan purposes.

This is also visible in the EU’s focus on integration of refugees and migrants as civic or citizenship education rather than educating the general population on intercultural dialogue (Osler, 2020). At the same time, the EU puts ideals of democracy on display in the educational guidelines and standards that it sets, marking itself as a bastion of democratic cultures and institutions. However, a growing number of people in many EU countries reject the European ideals on which its institutions are built, and so there is a discrepancy to speak of between the rhetoric at the EU level and what happens in practice (p. 74). Individual member states have turned toward teaching national values over European ideals of democracy laid out in the EU’s education guidelines. The 2015 “migrant crisis” was a prime example of the rift between what the EU says it stands for and what individual member

states do in practice. If civics education is to be inclusive it cannot create links between democracy and national citizenship, teaching people that democracy is reserved for those who have the specific documents that allow them to be citizens of that particular nation. In this sense the purpose of civics education is to teach and discuss how a society can include people and cultures that are different, rather than how the “different” or “foreign” people and cultures can assimilate. To achieve this, as Osler (2020) argues, civics education needs to engage with the societal context of the institutions and practices that are taught as being democratic. This means dealing with histories of racism in the EU’s institutions and its practices of democratic participation and governance. Civics education has taken on many different purposes, and as these arguments from the literature on civics education show, it is contentious because it is often closely related to the politics of the day and sometimes even used to peddle specific political ideologies and agendas.

2.2 Technology and citizenship

The literature on technological citizenship, or sometimes also called digital citizenship, points to the relationship between technology and citizenship and how they are intertwined, to the point where we often cannot talk about one without the other. In Majority the digital is explicitly part of the curriculum but also plays a more implicit background role in its effects on teaching and learning. My research speaks to the discussions on technology and citizenship by being an example of the role that the digital can play in civics education.

The digital is often said to be ubiquitous – meaning that to be a member of society is to engage with the digital. We move through society with it, and it moves with us. One of the early uses of the term technological citizenship comes from Frankenfeld (1992). He argued that technology does not live outside the bounds of democratic processes and decision-making because as members of a society we are all in its realm of impact, and so it should be governed by citizens (p. 462). Langdon Winner also brought the two terms into conversation with each other in a 2005 essay. In this essay he warned of being too optimistic about the benefit of technological innovations to democracy. He argued that an attitude of “technological euphoria” would not necessarily be conducive to upholding democratic activities and would not always promote greater citizen involvement or power (Winner, 2005). He pointed out that although certain things like fundraising might be made more accessible through online platforms, there are also aspects of digital technology that impede citizen engagement in politics and community activities.

The *International Handbook of Media Literacy Education* provides a more recent comment on the term digital citizenship – that it should be based on responsibility, participation, and justice (de

Abreu et al., 2017). There are many different digital cultures and spaces, each with their own set of norms and standards, and so a framework of citizenship that emphasizes personal responsibility is well suited to creating just, inclusive, and respectful digital communities. De Abreu et al. also make an argument for what they call participatory digital citizenship, which is when society members are called to take active roles in the creation of their digital spaces. And lastly, they argue for justice-oriented citizenship, which calls on members to understand the “systems, powers, and influences at work in their world” (2017, p. 152). These are all ways of thinking about how we, as democratic participants in society, can shape our relationships with technology. Technology and citizenship have shaped one another and continue to do so in profound ways, which can be seen by the European Union’s emphasis on digital citizenship. The Council of Europe defines a digital citizen as someone “who is able to competently and positively engage with evolving digital technologies; participates actively, continuously and responsibly in social and civic activities; is involved in a process of lifelong learning (in formal, informal and non-formal settings) and is committed to defending continuously human rights and dignity” (COE, 04.02.2025). The Council of Europe has also deemed 2025 the year of digital citizenship education. Digital citizenship education is a major priority for the EU’s education sector and holds a prominent position in the EU’s education framework. The EC has five primary focus areas in its education framework and one of these is the Digital Education Action Plan 2021-2027 (European Commission, n.d.). This policy initiative outlines the commission’s main priorities, tasks, and provides guidance for policy makers.

Part of the push for digital citizenship education is that aspects of the digital have proven to be real threats to pillars of democratic governance and participation. We have already seen election tampering through the spread of misinformation in very rapid and extensive ways, made possible via online platforms and computer algorithms. The European Group on Ethics in New Technologies' *Opinion on Democracy in the Digital Age* discusses these threats and proposes ways of addressing them, to counter the rise of authoritarian and populist governments in recent decades (European Commission: Directorate-General for Research and Innovation et al., 2023). One of several ways that the EGE’s opinion paper suggests addressing threats like biased algorithms and unchecked spread of misinformation, is public education. Knowing how to seek out different sources of news and how to recognize a valid and respectable source online, is now crucial to upholding democratic governance and participation. In today’s world, where social and political life often happens online, people need to know how to navigate digital tools and systems. Lessons on what reliable and authentic online sources are, how to detect misinformation, understanding algorithms as value laden systems, and generally being a critical user of digital devices and the web, are very important to ensuring that all members of society have an equal chance to participate.

2.3 Digital games as learning tools

In this section I dive into the literature on the use of digital games in educational settings because my research explores Majority as an educational tool. Majority's game component was developed specifically for the school classroom and in combination with an educational curriculum. The use of video games, or digital games, in teaching and learning is a relatively common practice. They are often used because they can be highly engaging. People generally play a video game precisely *because* of how engaging it is. Video games can be both fun and challenging and take the player through a range of emotions, with constant feedback that keeps the player wanting to stay in the game (Raessens, 2005). The digital aspect of video games also makes them especially entertaining. The screen shows you constant visuals, moving characters, and background scenes. The uniqueness of a video game, compared to other media, is that the player has a character in the game, and they are interacting with the content in this highly visual and stimulating way. Designing games specifically as learning tools can be difficult though, and there are many different types of games that can be more or less helpful depending on the content. Contemporary research into learning methods has come to some of the same conclusions about learning that digital game designers have already been implementing. Video games generally have something in common and that is the process of problem solving to be successful in the game (J.P. Gee, 2010). Problem solving as a learning method is both present in the learning sciences and in the games industry and often overlap in the form of educational or so-called serious games. Not only do video games provide problem-based learning, but they also have instant feedback mechanisms built in and sometimes also allow for customization. In an educational setting the idea being that the student has more agency in their own learning process than they might otherwise. Learning through creating and doing is a central part of many video games. And as Squire (2008) argues, they are spaces of possibility because they allow the player to enter into a virtual world in which it is possible to try things, fail, and discover alternative ways of doing something. Squire also points out that it is important to remember that they are powerful tools of simulation with ideologies and values designed into them. Their ability to simulate environments is also what made them attractive training tools in the military before they became popular educational tools.

In a world in which we engage with digital technologies daily, in which algorithms have the power to influence the news we read, it is valuable to know how computer systems and programs are designed, and to understand the problems and questions that arise in the design of these systems. Burke and Kafai (2016) warn that understanding how the medium itself works is equally as important, if not more essential to learning than just playing the game. Treating games as a method of learning in which we can wear all three hats – designer, maker, and player – can provide people with the skills

to be full-fledged participants in the digital world, to be so-called digital citizens. Rather than just being a consumer of the game, Burke and Kafai see the most potential in games as learning tools when players can also change things about the game themselves – when they have the computing knowledge to make modifications to the game. Majority is not that type of game, but it is embedded within a curriculum that makes space for each individual learner's participation in the material.

There is an abundance of literature on digital games and game design in education, but a small section of that literature has also dealt specifically with the use of digital games created for civics education and more broadly politics. Political video games first had to be seen as a medium that can persuade and affect people's understanding of politics, before they were studied as research objects (Bogost, 2006). Video games possess power in their ability to be persuasive, and as Bogost argues, in their *procedural rhetoric*. It is not the content, necessarily, which holds the power but the medium and the expression of the content. It is the game itself and the way that it is constructed that is designed to be persuasive. Bogost (2006) also discusses the construction of many different types of games, from more historical political games like *Civilization*, which takes the player through different eras in time, to games based on specific political events like the game *9/11 Survivor*. These games create a representation of the past and ask the player to go to that historical moment and experience it to the degree that they must face the same situations. The procedural rhetoric of expressly political games can make them more persuasive than other games and especially more than other media. Political games can also have real political goals and be used in the context of communicating or teaching specific political aims – action and engagement on a specific issue being the end goal. In addition to political games that ask the player to engage in a historical event there are games that ask you to directly engage in political processes.

For example, Fisher (2020) examines two political games with educational goals, one in Nigeria and the other in Kenya. The two games are developed by local organizations with the purpose of addressing local people about their rights and roles in a democracy. Through playing this game users should learn about the political process in their country and their own place in it. Fisher argues that one of the most important aspects of the two games is that they were both made by local game designers with local communities in mind. For a civics education game this is essential, because the socio-cultural, political, and historical topics dealt with in civics are unique to places and communities. The production and dissemination processes were also essential to the success of the game's goal to foster civic participation outside of the game. Who creates the game and the way that it is produced and distributed are defining factors of success in this case. In a similar vein, Dishon and Kafai (2022) argued that for games of civics education it is most useful if the player can connect what is happening

in the game to what happens outside the game. These connections bring the player out of the simulation. Neys and Jansz (2010) studied several political games to understand their effectiveness at generating real action from what the players experience in the game. They found that games may prompt civic engagement in players, but whether this is due to the content of the game or the engaging and at times social nature of the game, the researchers could not say. However, they could conclude that the games studied may contribute to some type of civic engagement. Games about politics or political situations often make the player confront and address a particular issue, and what these games provide at the very least, is this interactive confrontation with an issue, which could prompt discussion outside of the game.

I began this section with a discussion on why video games are popular learning tools, showing that there are many good reasons to use a digital game in an educational context. This includes a digital game's ability to be engaging and entertaining through its visual stimulation, and to be a space for problem solving, creating, and trying and failing with direct feedback. In the literature on political games, much of it addresses questions concerning the effects of these games – how effective they are in getting people to participate, learn, or engage with politics. My research does not address this question, in part because it is outside of my scope but also because, as some game-based learning researchers have specifically pointed out (see Dishon & Kafai, 2022; Burke & Kafai, 2016), the effectiveness of the game lies in what the game allows the player to do and the extent to which the player has agency in the game. The way that the game is implemented and how it is played are important factors in the game's ability to convey a particular message. The experience that the players walk away with is certainly one measure of effectiveness, but I have chosen to focus on the method instead. A game will always have some sort of effect, so I wanted to understand the object before asking what it has achieved or not achieved in the world. And as Squire (2008) also pointed out, digital games are powerful tools of simulation that carry their own ideologies. I see it as essential to study the mediums we use for learning. This is why I focused my empirical work on the object in question, and on how that object creates a particular imagination rather than what the learners/users of the digital game learned about politics and democracy.

2.4 STS and education

Since I am approaching my research into this educational tool from an STS perspective, it's important to understand how education research and STS interact. This section discusses the influence of STS in educational research. To start, I note that STS has not dealt extensively with the field of education. However, with the field's interest in knowledge claims and exploring how knowledge is made, education and training practices have still occupied a piece of the literature.

Science education and training have been of particular interest, with less focus on social sciences or humanities. Likewise, the education research field has also not yet made widespread use of STS concepts and approaches. My research on curriculum as an object in education is relevant to both the STS literature on science pedagogy, and the education research dealing with concepts of STS, from ANT to sociotechnical imaginaries, to standards and quantification. My inquiry into the Majority curriculum and digital game speaks to the literature on educational practices, objects, and policies that put STS concepts and approaches to use in their research and analysis. A special issue of the journal *Discourse: Studies in the Cultural Politics of Education* is one example that begins to show how theoretical and methodological concepts developed in the STS discipline can provide interesting insights on education practices and objects.

This special issue presents several research papers that deal with issues in education from an STS perspective – in particular the notion that objects have politics because they are part of the ordering and configuration of power in society (Gorur et. al., 2019). The ways that objects are used by teachers in educational settings and how they relate to each other are value-laden and can express power, sometimes even in unexpected ways. Speaking about contemporary issues in education, such as rising inequities, standardization (of curriculum and testing, for example), and neoliberal practices in education governance, Gorur et al. argue that “STS provides the means for engaging with the ontological politics of these phenomena”. The concepts and methods used in much of STS research provide new and interesting frameworks for addressing these issues in education. One study in the special issue is particularly relevant to my work as it deals with educational technologies’ contesting visions of education (Chang, 2019). Using Jasanoff and Kim’s 2015 concept of sociotechnical imaginaries, widely used in the STS field, the study shows how technologies used in education can have values and interests that enact certain futures. It argues that characteristics of these technologies and the imaginaries they perpetuate are produced through and by each other. The sociotechnical imaginaries of twenty-first century education are actively constructed through the mutual shaping of a social organization with its own values and assumptions, and the particular technologies it employs. Other papers in the special issue, such as Helene Ratner’s research, make use of STS notions to shed light on the lack of social context and understanding of knowledge as socially constructed, when addressing high-risk children in schools. STS concepts are being explored in education research and are providing interesting and valuable insights into the relations between the social and the seemingly mundane or technical parts of pedagogy.

I now turn to the STS literature on training and education to provide some understanding of how STS has dealt with the topic. Traditionally this has been focused on engineering and science

education, not on disciplines within the social sciences. The following are examples from foundational STS theorists and thinkers that show an early interest in how engineers and scientists are trained. One such example is, the prominent author and founding contributor to the STS field, Thomas Kuhn, who addressed pedagogy in his work through attention to how students of science learn. Kuhn is well-known for arguing that science is made within communities of like-minded people within a discipline, and only when enough anomalies to the existing scientific framework emerge does the overarching mode of theory and practice change (Sismondo, 2010). Kuhn called these communities paradigms and emphasized that within these paradigms the meaning of the terminologies and ideas stem from the culture of each paradigm. The point being that the way we describe a scientific term or how we use a particular scientific theory is learned, and that there is no universal way. Kuhn argued that there is a strong link between training and practice – how a scientist is trained is indicative of the way that they practice professionally (Warwick & Kaiser, 2005). Much like a skill or craft, scientists learn the meaning of overarching concepts through the process of solving problems, which impacts not only how they solve one problem but how they approach other problems in the future. Traditionally philosophers have viewed scientific theories as static. What Kuhn proposed, which was very new at the time, was that these theories are created and molded by the training of the scientists who work with them. How scientists and engineers solve problems and understand scientific frameworks is directly related to their training.

Interestingly, many foundational studies in the STS discipline took place in settings where training takes place, such as universities, laboratories, or other research facilities, but neither the training nor the trainers are the subjects of the studies themselves (Mody & Kaiser, 2008). Knowledge making in these spaces was sometimes acknowledged as something that is tied to training, but Mody and Kaiser point out that the question of how educational institutions and pedagogical methods shape knowledge itself, was often not pursued. For example, Harry Collins conducted a study of several laboratories attempting to construct a high-pressure gas laser called the TEA Laser (1974). He concluded that knowledge transfer between these laboratories was highly dependent on scientists showing others how to do the work rather than reading about it. Collins argued that much of the information on how to build this laser was knowledge that the scientists embodied. He called this tacit knowledge because it had to be learned through practice. Collins shows a strong connection between how teaching/learning is done and the research conducted. Collins (1974) does not however explore the education that the scientists received, as a way of understanding why they work in the laboratory in certain ways or where the tacit knowledge they have gained through practice comes from. The STS discipline has a history of exploring how knowledge is made and transferred, and this sometimes also dips into questions of training and education.

Historically education has always been part of sociopolitical contexts (today as well). The education of scientists and engineers is often for a sociopolitical interest – for national security, a stronger economy, technological competitiveness, etc. For example, in Germany in the late 19th century technical vocational schools were introduced as a counter to the traditional *Gymnasium* to address the need for more technical workers during a period of increased industrialization (Mody & Kaiser, 2008, p. 380). The types of education scientists and engineers receive is shaped in part by the day's political context. Although this was not always explicitly addressed in studies of science, it's still important to point out that the reasons for promoting certain science education/training over others is embedded in social contexts.

2.5 Conclusion

In summary, this literature review has situated my research in a few different but still related fields. In section 2.1 I explored the literature on civics education, starting with an overview of the landscape of where and how this field is practiced. I focused on the landscape that is relevant to my project, which is the EU's initiatives on civics education, and the Austrian and Vienna based policies and organizations that engage in the field through policy and practice. I also went over common definitions of civics education to provide a base understanding of how it is conceptualized and some of the arguments for why the topic is a valuable and important one in the Western political world today. Section 2.2 dove into technology and education literature because we live in a society mediated by digital tools and platforms, to the point where we cannot discuss civics education without the role of the digital in that. Of course, Majority is not only being used in a digitally mediated world, it also has a digital component itself. The game aspect of the tool allows me to also situate this project in the literature on games and education. Of course, this is a very vast field, and my work only speaks to some of it. This is why in section 2.3 I focused on the role of games in education – the arguments for why games can play a role in an educational setting and ways that can be done most effectively. My work speaks to this in that what my research seeks to answer is a question concerning the direct use of a digital game and what it achieves. Finally, in section 2.4 I looked at what the STS literature says about civics education. This is an important part of the literature review because I have taken an STS perspective and approach to this research project. As I found in my review of the literature, there is relatively little in the STS field that directly deals with education, let alone civics education. This thesis can provide perhaps interesting insights into how STS notions, concepts, and methods might go about researching an issue in the education field.

3. Research Questions

My starting point for this research was a general interest in educational tools and how those impact what is taught and learned. Civics education on democracy has been described as a way to combat general declines in civic engagement, changes in understanding of what democratic governance should be, and a growing move in politics toward right-wing nationalist policies. From an interest in educational tools and how democracy is conceived of, I wanted to understand Majority better. I wanted to study the way that an educational tool functions and how it perpetuates conceptions of democracy, from what democratic engagement means to democratic governance to the values that are woven into such an educational tool. I decided to pose the following question for my research: **How are democratic values enacted in the entanglement of the curriculum and game (RQ)?** This question went through multiple reiterations in the research process, but what always stayed the same was wanting to know how this tool designed for civics education classes worked. I wanted to know how it taught civics education. There are two aspects to this question, the first being the imaginary of democracy, or what the democratic skills and values are that the tool perpetuates. And the second being the way the curriculum achieves this – how it creates this imaginary of democratic skills and values. I used the word enact because, as I will discuss in the theory chapter, this encapsulates both the what and the how, for they are one and the same in my perspective. The reason I explore this question is that, from the point of view that the objects we use in daily life contribute to how we see the world, I decided it was important to understand how an object did this and figure out what vision the object created. To get at this question in a methodical way I also came up with three sub-questions that would help me address this overarching question. The next paragraph outlines these three questions, including some guiding questions I used within each of those to orient myself during the analysis.

The first of these sub-questions that I address in the empirical chapter is: **How does context shape the tool (SQ1)?** I want to know what the tool is composed of, and more abstractly what makes the tool what it is. Understanding some of the things that shape it makes the lens it uses to teach about democracy visible. I wanted to understand what that lens is, and how it manifests. The second part about how it manifests brings me to the next question: **What shapes the implementation of the tool (SQ2)?** I pose this question because I am interested in what happens when the tool is used. It was not in my research scope to find out how users experience the tool, but I was able to explore the tool itself and find out what aspects of it affect its implementation. Then I investigate the actual text and game of the curriculum, asking: **What do the curriculum and game ask students to do (SQ3)?** As a much broader question than the first two, this ended up being the bulk of my analysis. For clarity I

divided this question into two parts which I used during the analysis to focus my work. In the first part I ask: ***What does the text ask students to do?*** Paying attention to what the curriculum text asks of the students made what they actually do in the lesson visible. It showed what the curriculum does to teach democratic skills and values, not just what it says it will do at the beginning of each lesson plan, but the real actions that students must engage in. To get at the game, I asked the question: ***What does the game ask the players to do?*** Again, I wanted to understand what, as the player, the game wants from me. This allowed me to access what is created or performed in the game, as opposed to what the game presents. Exploring these sub-questions showed me how the game and curriculum text are entangled. Using my three empirical sources, the game, the text, and the interviews, I show how in moments of interaction, at times more obvious than others, democratic values are enacted. In the end these can contribute to creating a particular image of civics education.

4. Theoretical Perspectives

The following concepts informed how I understood and evaluated my research findings. First, I will address the concept of imaginaries because, although this notion did not inform my analysis in specific ways, it provided a general perspective. It allowed me to consider that a tool like Majority might have a particular vision or imagination of democracy. Ezrahi (2012) provides a theoretical framework he calls the *performative political imagination* to understand how political worlds are made. This research project is an exploration into the vision and imagination of democracy that is enacted through the curriculum and game's entanglements, so I use the idea of the performative political imagination to guide my overarching project goal of understanding the world in which, this tool, Majority, was made. Ezrahi writes that, "generated by the creative collective imagination, political imaginaries (like myths of origin that have evolved in diverse human societies) become powerful tools that, when performed, can produce social and political facts" (p. 38). Performances of a collective political imagination make things happen. How we imagine the political world matters because these imaginations can produce realities down the road. Rather than a representation or a description of a particular imagination, a performance of it is action oriented. The description or representation becomes real in the world through actions taken that are based on that imagination.

Imaginaries are enacted by metaphors, images, fictions, etc. that uphold a particular political order. This is an important aspect of this theoretical perspective because it shows us how an imaginary might be performed. In his introduction Ezrahi (2012) gives the example of monarchies and how the political imagination of the divine right of kings was upheld by rituals, institutions, and in combination with a religious imagination (p. 2). In a democracy, we also have institutions and rituals that uphold the democratic imaginary. However, Ezrahi is quick to point out that there are often discrepancies

between our imaginings and the realities of power distribution and representation (p. 4). Political worlds are created through our imaginaries and the performances of those imaginaries.

Majority enacts a particular imaginary of democracy because what is written in the curriculum and what is represented by the game, are experienced by those who use the tool. The words, images, and activities that students and teachers take part in when engaging with the tool impact and shape their social and political imaginations. In Majority I see the power to enact a particular political world, and to impart a certain vision of democratic skills and values for those who engage with it. The perspective that imaginaries can create our political worlds shaped my overall thinking in the research process. To understand my findings, I now turn to three different concepts, each of which allowed me to see different aspects of the research and thereby address the sub-questions that allow me to answer the primary research question.

4.1 Dewey's Theory of Education

My perspective on the relation between democracy and civics education comes from John Dewey's theory that democracy has a vital and fundamental place in education practices, and public education is essential to a democracy. The two are intertwined, because a democracy requires continuous education of the practices and values that uphold it, and this education must be conducted in democratic ways. The way that Dewey conceptualizes what democracy means in education has led me to see how the curriculum's learning methods are democratic. Speaking to what a democracy is, Dewey writes that "a democracy is more than a form of government; it is primarily a mode of associated living, of conjoint communicated experience" (Dewey, 2024 [1916], p. 83). The theoretical assumption, or hope, is that an educated body will understand their role better in the democratic "mode of associated living". They will learn how to advance their interests through democratic actions while also being aware of their associations with others in society. The role of education then, according to Dewey, is to create spaces and pathways for people to learn to advance their interests. Democracy is not only government but skills, values, behavior, and a mode of communication and association with others. So, civics education and a democratic culture of education also help to create a democratic culture of governance and participation.

The way in which people are educated, and in the case of this research project how civics education is taught, can have a direct relation to how people learn and put that into practice. Dewey argues that for shared interests to develop and for people to associate with others, in particular those who have different interests, education should be public. How could educational institutions advance a society of shared interests and associations if the different interests did not associate with each

other? If democracy is the association between individuals and the advancement of shared interests, then public education spaces like schools can be places for democracy to thrive, because there is a wide variety of interests and experiences that come together (Dewey, 2024 [1916], p. 80). Dewey's perspective is that public institutions are better at ensuring a diversity of backgrounds and opinions. He also describes school as having the very important function of being a space that is unlike the environment in which the child was born. He describes it as an escape from what a child is very familiar with, so familiar that they are probably not consciously aware of it anymore (Dewey, 2024 [1916], p. 21). The school environment creates opportunities to associate with people who have different interests than yourself and who are from different cultures and backgrounds. For education to be democratic it should be held at public institutions.

This perspective, that education needs to be democratic in order for students to learn democratic skills and values and to foster a democratic culture, led me to see aspects of the curriculum that engage students in democratic ways. It is also visible in how the curriculum text asks students to engage with the game. Although the game itself is a finished ready-made product that cannot be tinkered with, which according to Dewey's perspective would not be a democratic design, the space for social connection and discussion that is provided in its implementation allows students to use it in a democratic way. According to Dewey one way that educational practices should be democratic is by allowing students to be "self-directed". Dewey writes that "to subject mind to an outside and ready-made material is a denial of the ideal of democracy, which roots itself ultimately in the principle of moral, self-directing individuality" (Simpson & Stack, 2010, p. 148). Education practices that involve "ready-made material", material that is produced without teachers and learners and that does not engage the student's intellectual and individual capacities is undemocratic, from this point of view. Another way to think about this is to say that these are capacities that go beyond learning how a government is structured, to include what are non-cognitive skills. For example, skills such as resilience, patience, and the ability to discuss a contentious issue, which require a degree of independence and confidence in one's own ideas and abilities. Hillygus and Holbein (2023) advocate for this type of civics education in today's education spaces as well, arguing that it is these non-cognitive skills that help young people become actively engaged in their communities. They write, "the notion that noncognitive skills are an important component of civic education dates at least back to Dewey (1916), who believed that democratic society would benefit if schools taught social competence and socially responsible behavior" (p. 76). Based on Dewey's writings and their own research, they argued that non-cognitive skills are what get people to go vote rather than more information on how government works. A democratic culture in society cannot thrive if the educational tools used do not foster the skills, in particular the social skills, that are needed to have

an engaged citizenry. The methods of learning and teaching in a democracy must also be democratic in order to uphold the actions that create democratic processes and ways of governing. We now turn to a closer look at two methods of teaching and learning that encompass this democratic approach to education.

Dewey emphasized learning through experience. He writes that students need the opportunity to see and take care of a real animal or the chance to garden and cook in school (Simpson & Stack, 2010, p. 151). Experiencing what chemistry is through cooking or what it means to take care of an animal by having a pet, are learning methods which give the child the chance to use all their senses in exploring and learning about the new topic or object. It is also a form of play through which skills can be learned. The importance of the method of play cannot be understated. Dewey was adamant that only through direct experience and play, which would allow a child to be curious, to explore, and to fail, would it be truly possible for a child to learn about chemistry through cooking or botany through gardening, at least to begin with (2024[1916], p. 184). Dewey also uses the example of gardening to say that through the experience of putting seeds in the soil children can learn to connect abstract and intellectual topics like botany and food science to real life (2024[1916], p. 187). Making this connection includes learning about the farmers who grow food and the role of plants in the ecosystem, which can help students connect abstract concepts or ideas to the public interests of communities. As Dewey argues, the complexity of life requires flexibility and innate curiosity when knowledge is not readily available or presented to you, as is so often the case. Mayors provide several moments of experience for students – both the general experience of discussing and reflecting on what they are doing in the game or in a city council simulation and the experience of governance that is provided in the digital game. Experiencing a topic, rather than listening to a teacher talk about it, is part of bringing democracy into educational practices.

Similarly, Dewey is a proponent of inquiry-based learning. Children who learn to be curious and to inquire, rather than decide on a position before beginning a task or a conversation might be more open to new ideas, to question existing ones, and to learn from people and things that are different than what they had previously known. As Caspry (2019) writes in the *Handbook on Dewey's Educational Theory and Practice*, the “answer to citizenship education, then, is to overcome the human tendency to cling to existing belief, by cultivating in students the disposition to inquiry” (p. 115). The value of inquiry is relevant to democracy education, because the practice of taking other people’s interests and experiences into account and to be curious of other’s opinions before defending one’s own, are a central skill in participating democratically in a community. From this point of view, I see how the methods used in a civics education curriculum are instrumental to how a child

understands what democratic practices look like and feel like. Dewey's argument for democracy *in* education and for educative practices that are democratic signify that the means and products used to teach and learn should be participatory, self-directed, experiential, and empowering of both the individual's intellect and skill. The way that knowledge is made impacts how children associate what they learn with the environment and people around them. Learning through play and experience gives the student more than words on a page and an abstract technical idea of a subject matter. How we educate is an important facet of creating and maintaining the knowledge and actions that support a democratically governed society. Dewey's emphasis on how and what is used to teach, is what leads me to pay attention to the materials that are used in this curricular tool.

4.2 Materiality

Mayority is a curriculum and a game for instructional use. It has different material components – a text that can be printed out and a digital game that can be played on most devices – that are used in the social setting of a school classroom or another educational context. The material qualities of Mayority are inextricably linked to its social effects. Law and Mol (1995) argue that, “perhaps materiality and sociality produce themselves together. Perhaps association is not just a matter for social beings, but also one to do with materials” (p. 274). Just as people associate with each other, so do material things. Since the social and the material are inextricably linked, one cannot be understood without the other. Law and Mol's notion of relational materialism is useful in providing a framework for understanding how the digital component of the tool plays into the other material parts of the tool, such as the curriculum, or into social aspects, like the experience of teachers using it in their classroom. As Law and Mol write “materials are interactively constituted; outside their interactions they have no existence”, meaning that materials do not exist just as they are (1995, p. 277). Materials are made in the relations they have with other materials and social situations. Said otherwise, the components of Mayority are *enacted* through their relations and interactions.

I used the word enact in my primary research question because I am interested in what the components of Mayority *do*, what activities they engage in and the effects they have. The notion that things are enacted has led me to see what the components of Mayority do and how that creates the democratic skills and values it teaches. Through studying a particular disease at a hospital, Mol (2002) found that the way this disease is practiced enacts objects in different ways. There is not just one way in which an object is enacted, because a body has various ways of dealing with a disease. Patients have experiences that shape how they relate to and understand their condition. She argues that the ways the disease is practiced by the patients *enacts* objects that are part of the making of the disease in certain and multiple ways. Said otherwise objects are *made* in the practices that they are a part of.

The enactments are multiple, which is why she calls it the “body-multiple”. The body has multiple ways of experiencing the disease and therefore objects that are part of the experiences are enacted in ways specific to each experience. When something is enacted, what it becomes is through how it is practiced or made. In asking how Majority enacts democratic skills and values, I am taking the perspective that Majority is made through the ways in which it practices democratic skills and values.

Majority *enacts* democracy as it does, only because the different material and social aspects relate to each other as they do. Relational materialism shows that materials exist in their relations, and concept of enactment explains that it is then in these relations that materials, or objects, do not just exist but are made. It is here that they become something. Mol (2002) writes that “since enactments come in the plural, the crucial question to ask is how they are coordinated”, which is also why I traced how the two primary parts of Majority connect and interact with each other. One of these parts is the digital game. The digital is material because it is made through its relations with other things and beings. Digital technologies and digital spaces can be said to be what they are through the interactions they have with the social and the material. The ways in which people put the digital to work in their lives or how the digital lives in a space, is often tangible because it is constituted through its interactions with the social and other material objects. Majority is made up of different material and social components that have agency, that *do* things. I call it a “tool” throughout this thesis, but it is not a passive or neutral tool, because I see it as an object with capacities and purpose. I see the object as embedded in a socio-material context, and as an object that has certain material qualities that stand out – such as the digital component of the tool. I started my project by asking what this tool *does*, because I was interested in its effects and its meaning. Studying its effects proved to be much more difficult and mostly out of the scope of this project, so I focused on its meaning in the analysis. More specifically, these concepts frame my inquiries into what the curriculum asks students to do (SQ3) and the role of the digital aspect in the tool (SQ2). I try to make sense of what the curriculum asks of its users and what the digital aspect means for them using the idea of material relations and enactment.

Since this tool is made up of a curriculum text and a digital game, it is important to explain how these are both materials. The curriculum text is something you can touch, feel, pick up, and physically move around, if you print it out. The game, or if you use the text online, is digital. I still see this as part of the material that makes up Majority because even digital technologies are created through their interactions. For example, Mora-Gamez and Davies (2023) describe communities using technologies, whether digital or hand-made crafting, as “more-than-tech communities”. They found that these communities do not just orient around technology but rather around a desire to share

something, to show appreciation, attentiveness, and care toward something. Technology is not just abstract or existing in another atmosphere, it is subject to the same relations and emotions that objects we physically touch, and feel are. The digital is material because it is not a separate entity, it lives in our world and becomes intertwined with the experiences we have and the goals we strive for.

The following examples provide some insight into how STS has dealt with the notion of materiality and the enactment of objects in other cases. For example, STS scholarship has explored this in studying how objects might mobilize publics, and their role in public engagement efforts (Marres & Lezaun, 2011). Objects, like people, have political capacity. Through their use and implementation, objects can enact political situations in particular ways. Studying the way a public interacts with science and technology, for example, can be done from a material perspective, where the focus lies on how the material objects at play contribute to, and play a part in creating that public and shaping their participation. Taking the perspective that material devices are inherent to understanding public engagement efforts, I view my inquiry into this educational tool as an inquiry into an object with the capacity to create action. As a material device, a tool, Majority plays a role in shaping those who engage with it – its public.

To conclude, I make sense of the material aspects of Majority by paying attention to the ways in which the material components relate to each other, and how those components come to matter in the social situation of the classroom. And seeing the digital as material provides a deeper understanding of the meaning of the digital component of Majority in its various relations and social situations. This brings me to the next section on design. Looking at this tool's materiality leads me to see the socio-material relations, but not yet how those relations are constructed. The notion of design, and some specific concepts within design, informed my analysis and understanding of how the political capacity of Majority is formed and enacted. It has provided a foundation for analyzing how socio-material relations actually enact certain ideals of democracy and democratic governance. It is the more practical concept that allowed me to find and explain the material relations and enactments.

4.3 Design from an STS perspective

Investigating this educational tool to understand its overall imaginary of democracy meant making the link between what the tool does to shape the educative process and how that creates democratic values. I chose the concept of design because when investigating this tool, it became apparent that there are decisions, contexts, technical features, and limitations that contribute to the vision of democracy that this tool puts forth. These aspects are all part of the design, they are part of what form the capacities of the tool. In this next part I go into how I have come to understand design

from an STS perspective and following that, I turn to some specific notions of design that have made different socio-material aspects of the tool visible to me.

Technologies, also understood as objects, are important research subjects in and of themselves, because studying their social lives can reveal interesting aspects of their design. Langdon Winner (1980) argues that objects have politics because they are part of society, not separate from it, and because they affect the distribution of power in society. From this understanding that objects are part of society comes the point that objects are therefore shaped by society. Unlike the concept of technological determinism, which views technology as having its own inherent world and development path, the idea that technologies have politics sees technological objects as co-constructed by society. Winner writes that we need to pay attention to the “meaning of the designs and arrangements of our artifacts” (1980, p. 125). Paying attention to this should help us understand the social life that the object enacts. The design of any object carries meaning since it is formed and shaped by the designer and the context in which it is developed. Winner is not the only STS scholar to make this point, and to show how designed objects might perpetuate certain ways of interacting and being in the world.

For example, Wiebe E. Bijker studied the design of the bicycle, and found that its history shows how the gender hierarchy of the early twentieth century is reflected in the bicycles designed for women during that time period (Bijker, 1997). In short, objects are not neutral they – things, tools, objects, even systems and processes – express hierarchies of power and authority (Bijker & Law 1992; Winner 1980). The people who do the designing, shape objects through their own politics, cultural background, socio-economic status, ideas, notions, ideologies, etc. I use this perspective in my own empirical work to demonstrate how Majority reflects the motivations of the designers, and to discuss events and other documents mentioned by the designers, which contributed to the context in which the tool was designed. Tools used in civics education courses are designed by people, and these people have their own goals, ideas, values, assumptions, histories, and norms that they are working with. Whether consciously or not, these are written into those tools. Coming back to Winner’s terminology, artifacts are made up of components arranged by designers, and these arrangements are not by accident or predetermined, they are conscious choices made by the designer (Winner, 1980). These choices carry meaning. Design from this STS perspective provides a lens through which to see how the tool is formed and shaped, and to explore the role of the social context as I did in the first sub-question. It is important and useful to analyze the design of Majority because, as both Bijker and Winner argue, objects carry power in their ability to perpetuate the interests and values of the context and people who are part of its design.

Design is an action-oriented practice because it is the business of constructing how we experience something. All the things that contribute to the construction or configuration of a tool, can be seen as “designed” because a tool does not miraculously appear as a finished product, it is actively created and formed. The perspective that technologies and objects are political – that they are developed in a context, that they can enable action elsewhere, and that they create a certain experience and understanding for us, this frames my empirical work. It grounds my research in the understanding that this educational tool puts a *certain* vision of democracy into the world, not *the* vision. In the following section, I explain how one concept particularly informed my analysis of the context of the tool. Combined with the other STS perspectives on the role of context in forming and shaping objects, the notion of “design style” led me to explore the different objects and social situations that informed the development and implementation of Majority.

4.3.1 Design Style

Next, I want to discuss Cherkasky’s (2004) notion of “design style”, because it specifies that design is involved in creating our social worlds and emphasizes the role that context plays. This concept of design helped me address my first sub-question on the story behind the tool. Compared to Woodhouse and Patton’s *design by society* this also moves us a bit away from the situatedness of the designer to the situatedness of the object. This informed my empirical question on the context of the tool (SQ1). If we see the practice of designing a tool as not only the work of combining different elements to make an object do what we want, but also as the process of forming and shaping power structures and social hierarchies, then we must understand how these tools, technologies, and artifacts are configured (Cherkasky, 2004). We must understand what kind of social worlds they call into existence. Cherkasky describes design style as “...a legitimated institutionalized pattern for how an artifact or technological system is created and sustained” (2004, p. 30). The pattern is constructed of the overarching and prevailing style, of design methods and practices, assumptions, and goals. This is more than the context of one tool, it is a design style that prevails over complex technical systems made up of many tools. What I take from this concept though is the underlying theory that objects live within a style, they represent a particular style, and this is constructed through a “design by society”. It is a conception of design that foregrounds the life worlds in which technologies, artifacts, tools, machines, etc., are created and developed.

Cherkasky draws on Ludwik Fleck’s (1979 [1935]) notion of “thought style” for his concept of “design by society”. Fleck uses “thought style” to show that there are dominant modes of being in the world, of thinking and doing, that do not just emerge from a vacuum but are created in value-laden and politically distinct contexts. Actors and objects live and operate within these dominant modes of

thought. For Fleck it is about how we construct knowledge, and that knowledge of a particular topic is never formed by one individual, but rather in groups. It is formed in conversation and interaction with the people of that group. And these conversations and interactions create a thought style specific to that group (Wojciech, 2023). These thought styles shape the knowledge of the larger thought collective, in which there are also dominant modes of thinking, but which change and adapt based on the comings and goings of different thought styles. This is Fleck's conception of the construction of knowledge and how we come to accept certain proposals and assumptions as facts.

Following this, Cherkasky argues that technologies and objects have particular design styles. Like thought styles they are overarching methods and understandings of design. Majority is not a thought style in and of itself, but I use this notion from Cherkasky because it makes the role of the context of a designed object very visible. Objects should be studied for the contexts in which they live so that they are not unconsciously propelling forward unjust and inequitable ways of living. The "style" of Majority, as it is argued by Cherkasky, is an empirical question to follow. Understanding the context that this tool was developed in, contributes to my understanding of the kind of democratic skills and values that the tool enacts. Although I have not studied the design style of Majority per se, I have studied where, by what, and by whom that style was created. The second design notion that I draw on speaks to a fundamental value in a democratic society, that of having the ability and the space to contest and disagree with actions, processes or ideas that you have a different opinion of. This design concept specifically seeks that out, which made the role of contestation in Majority visible.

4.3.2 Adversarial Design

Design can be understood as an endeavor which attempts to create tools for understanding current conditions or situations (DiSalvo, 2012, p. 16). DiSalvo describes the concept of *adversarial design*, as objects that are designed to represent and enact the political conditions of contemporary society and challenge/offer alternatives to dominant practices and agendas. But it is also a way of analyzing objects regarding the aspects of their design that are adversarial. But what does it mean for an object to be adversarial or for it to have adversarial qualities? Examples of adversarial design are objects that invite contestation and disagreement and create a space to experience this, such as robots designed to embody the issues, we have with them (p. 68). DiSalvo's example is a body of work called *Machine Therapy*, in which, among other machines, a kitchen mixer is used to evoke in its users feeling of unease and uncertainty. By interacting with it the user experiences tensions with the technology and possibly faces a confrontational interaction with the machine. This design is agonistic because it brings to light issues that designers would try to design away or smooth over and opens the device to critique. DiSalvo contrasts this to an example of another social robot that is designed to

make the user feel comforted and less lonely. The notion of adversarial design that DiSalvo develops comes from political theory literature on the idea of democracy being adversarial, and as DiSalvo writes, “from an agonistic perspective, democracy is a situation in which the facts, beliefs, and practices of a society are forever examined and challenged” (p. 5). An agonistic perspective of democracy goes beyond the act of voting to see challenging and contesting issues, in any form, as a democratic act and an essential part of democracy. An object that is political in its design would, according to this notion, be one that challenges and contests a situation. Designed to be adversarial it would evoke a political issue.

The concept of adversarial design has led me to see the points in the curriculum and game in which space for disagreement is created, and where you experience contestation. The curriculum provides many opportunities for students to engage in discussion and emphasizes the activity of students voicing their opinions and through these discussions engaging with difference. The game is also a place where contestation can be found – when as the mayor you don’t fulfill the requests of your residents, they go to the town square and protest. Although the curriculum creates these spaces for contestation in the curriculum and game, I have still come to see Majority as designed with the ultimate goal of finding consensus and catering to what the majority want. I do not therefore see Majority as a perfect example of adversarial design, because I do not think it is designed as a whole to invite disagreement. This is not its purpose. An environment is at times designed to allow for the possibility of disagreement and debate, but it is not something that is central to the design and its goals. It is not the primary commitment of the tool. There is a strong emphasis on the idea of people coming together in agreement, as opposed to a focus on dissensus and the idea that through disagreement and contestation inequities and power dynamics might be revealed.

I use DiSalvo’s concept of adversarial design though, to frame Majority as a project which seeks to take the, at times complicated and messy idea of democratic governance and participation and make sense of it through the tool that they developed. In DiSalvo’s own words, “as a kind of inquiry into the political condition, these projects transform the messy elements of a situation into an object and an experience that allow one to sense it and make sense of it” (2012, p. 118). DiSalvo actually draws on John Dewey’s conception of inquiry here, to argue that adversarial design can be thought of as an inquiry into the political condition. He describes inquiry as the skilled task of taking a situation and rendering its elements understandable. In Majority you have the chance to engage in a model of democratic governance, and experience some of the issues that can arise when governing a diverse community of interests democratically. Through this framework of adversarial design, Majority becomes something physical that you can touch and feel regarding the difficulties of

governing. It is an object designed to provide its users with the opportunity to experience a particular aspect of democratic governance: the task of providing for as many different interests in a community as possible. Through the lens of adversarial design as inquiry, Majority's design takes a difficult and messy aspect of democratic governance and renders it visible to its users.

4.4 Conclusion

The close relationship between education and democracy theorized by Dewey, socio-material relations and enactments, and design may seem at first glance to not have much in common, and alone they certainly are a random assortment of concepts and ideas. However, I see these concepts as threads running through my research, sometimes they overlap and sometimes they don't. The characteristics of each thread have brought varying aspects of the research to light, from the methods used in the curriculum to the relations between the different components of the tool to how the tool is implemented. And the red thread through the whole project is that objects – and in the case of this project Majority – have politics and perform politics. Objects are not neutral passive things that we live with and use. They have a role in shaping and constructing our social and political lives. They enact the democratic values we hold. This has been my starting point and my guiding light in the research, reminding me again and again why it is worthwhile to study this educational tool. In the next section I will move on to the methods of this research project, to explain how exactly I went about studying Majority.

5. Materials and Methods

This chapter focuses on the case study I chose for this research project – what it is, why I chose it, how I approached it, and how I researched and analyzed it. The case study is an example I use to answer my research question. I say it is an example, because I could have chosen a different case study that would have also allowed me to answer my research question. However, that would have resulted in a different project, with a different approach and different conclusions. I can address the research question only at the example of this case study. This chapter on methods and materials is the story behind what I did and why. It will clarify how I came to this case study and then how I used it to address my research interests. I start with a description of the case study, then how I accessed it, and following that I go into the methods I used to learn about the case (the data collection), and how I analyzed the information I walked away with (coding and analysis approach).

5.1 Case study

My interest in this research project was always in the method of teaching civics, so I chose a specific curriculum that was being developed as a tool for educators to use in their civics education courses. The group that developed it is called the World of Tomorrow Institute (WOTI), it is a start-up based in Vienna, Austria that creates educational products to promote democratic values that are geared toward children and youth. They specialize in digital education and have created Majority both for educators to use in a classroom setting, and to download online for anyone who is interested. Majority is a digital game and accompanying it is a curriculum with lesson plans for educators to use. The game, the curriculum, and the interviews I conducted (discussed in the section on data collection) make up my research material and are described in detail in the following two sections.

5.1.1 The game

In this section I describe the game in detail to provide an understanding of what goes on in it. The game is fairly simple. You play one character, the mayor, and your job is to respond to the residents of your town. You can win the game by successfully providing for your residents as they increase in number and in need. The community has diverse interests, and you must provide for these, from building places of work to places of worship or infrastructure such as a grocery store. There is an easy, medium, and difficult level, which determines how quickly your town grows in population and need. The higher the population and need the faster and more strategic you must act. Before I dive into a description of playing the game, I will give an overview of the main features. The other characters in the game are residents, organized into interest groups, Rhinos, Ducks, Rabbits, and Mice. The size of each group changes, and the interests of the groups change too. Sometimes there are a lot of Rhinos and few Mice, or the opposite. They represent the interest groups and make requests to you on behalf of their group. These requests might include a house of worship, a grocery store, a social gathering spot, a management office, or a house. A request occurs in the form of a pop-up on the screen. Another feature of the game is that you can always see how happy your residents are on a happiness barometer. At the top of the screen there are icons which tell you how many resources you have each of wood, hay, and steel. The icons also tell you how much money is in your bank, how many residents you have and how many are leaving, and how many of the different characters are in each interest group. This can later help you gauge which requests to fulfill first and which to wait on.

The rest of this section goes into more detail on what happens in the game. The first thing you do in the game is choose your character and the level of difficulty. The difference in the levels is in how many demands you must fulfill, and how many residents leave the town before you lose. Exactly

what you must do changes every time though. When you start a new game, you are told the win/lose condition. For example, the losing condition might be that ten characters leave town, and you win when 35 characters have a house and a job. In the easiest version you just need to fulfill certain demands to win but there is no lose condition. In each version you start with the same amount of money, 1200 (no currency stated). The jobs you provide create revenue for the town, bringing in money and replenishing your account. Fulfilling the residents' demands to build markets, homes, or places of work like a farm or a mine, all cost money. A request might be, "the traditional citizens in our town have requested that you build a house of worship and a mine", or "Rhino citizens in our town have requested that you build a lumber mill", or "sociable citizens in our town have requested that you build a festival tent". So, as the mayor, your primary goal in the game is to fulfill these demands that periodically come in from the different groups of citizens. And not forgetting to provide them with homes to live in.

Of course, there are caveats and details that make it not as simple as clicking your mouse a couple times to build a house and a farm. You begin the game with 1200 (no currency stated) but this goes quickly because most things cost 100-300 to build. Each request must be completed within a certain time, and there is a bar on the side of the screen that shows how much time you have left. Particularly in the difficult version, the requests come in very quickly, and you could have three or four at a time. This requires paying attention to how much each request costs, how much money you have, how much time is left, and how happy each group of characters is. The unhappier the characters – measured in total on the left side of the screen and per character if you click on an individual – the more likely they are to leave the town. You can also tell the satisfaction of the characters by whether they are protesting, and what they are protesting. If you do not build enough homes, the characters might start gathering in the town square holding signs up that display a house.

In addition to responding to requests you should be aware of the instructions of the game. Each place of work that you build also provides income, but sometimes it matters where you build. The game instructions, which pop up when you click an item, will for example tell you that your income from a lumbermill increases if at least one spot next to it on the map remains open. When building houses, you are also told that the happiness of the residents increases when houses are built next to each other. Throughout the game you make these and other such considerations when placing a new house or work site onto the town map. These considerations affect how quickly your money account grows, which affects how many demands you can fulfill and how fast.

There are a few strategic points also worth mentioning, because they affect how the game goes for a player. A notable aspect about the money in the game is that after a certain point it grows

very quickly. So much so that you don't need to pay attention to it anymore and can freely build, because the amount coming in and the speed at which it comes in, is so much more and faster than the number of requests that you get. It is important to build slowly and maximize the money that you earn from each work site at the beginning, before the revenue starts flowing on its own and you don't have to pay attention to it anymore. Another important caveat is that you don't just build by clicking the grocery store or the wagon builder. Aside from needing money in your account to build these things, you need raw materials. Producing raw materials also costs money, which you have to factor in. To build a site for pottery for example, you need stone. You first build a mine and that will then produce a certain amount of stone for you. The other raw materials are wood and wheat. Being aware of your resources, how much you have of each and what you need to fulfill different requests, is crucial to successfully playing the game and in the end winning.

5.1.2 The curriculum

The curriculum text, also called lesson plan, was developed for educators to use with the game. Although the game can be downloaded and played anywhere, the lesson plans provide a more focused approach to the topic and a clear plan for educators to follow. It consists of teaching units and worksheets, some of which are tailored to specific grade levels. The units (*Einheiten*) outline learning goals, takeaways (such as specific skills, values, attitudes, knowledge, and critical thinking topics), pedagogical comments for the teachers, and step by step teaching instructions, including questions to ask the students.

The first unit is a basic one geared towards all grade levels, the second and third units are also geared toward all students and build off of the first unit, and after that there are separate units for grades five and six, grade seven, and grade eight. Each unit is outlined in the same way, beginning with the general topic and followed by the focus of that teaching hour. This is then followed by a statement on the learning goals and their connection to the curriculum, the competencies that should be learned, and the minimum and maximum learning goal for the unit. The next section of the unit is a very detailed description of what to do with the students and how to do it (both technically and pedagogically). This section is broken up into minute-by-minute blocks with written instructions for what the teacher can say and ask the students. For example, the introduction of the base unit says it will take eight minutes and tells the teacher to show the students the opening picture of the game and explain to them that in the coming units they will step into the role of a mayor to think about and discuss the responsibilities that job has (Boelmann et al., n.d., p. 4). There are also two specific questions written out that the teacher can pose to the students, and a related pedagogical comment on how those questions allow students to connect to their own ideas and impulses. The material also

contains worksheets. Some of these worksheets are directly related to the game and others go beyond the game, asking questions and addressing topics brought up in the game but that are no longer about the game itself.

5.2 Access and ethical considerations

My path to studying the game began with email exchanges with the start-up that created the game. I explained what my research interest was and that this research would be conducted solely for the purpose of writing this master's thesis. They kindly gave me access to the game and curriculum, which at the time had not been officially released yet. I agreed not to publicly disseminate any of the material, and therefore kept the game and curriculum materials to myself and did not share them. A short version of the game can be downloaded for free, but to play the full version you need to buy it. The published curriculum can also be purchased online by anyone. Through email exchanges I got in touch with a person familiar with the design of the game and a teacher who was familiar with the lesson plan material and had thought about the implementation of it. These two people were my interview partners and provided substantial insight that I would not have had just in analyzing the game and curriculum through document analysis.

Following Jensen and Laurie (2016) on the importance of informed consent when interviewing, I got informed consent to use the data I gathered from the interviews for the purpose of writing this thesis. For data protection and anonymization, I call the first person I interviewed, interviewee 1 or the designer, and the second, interviewee 2 or the teacher. These terms describe the professional point of view that each of the interviewers provided. Interviewee one signed an informed consent sheet that I also verbally explained at the start of our in-person conversation. Interviewee two gave me explicit verbal consent at the start of our online interview on Zoom. Both persons gave their consent after I explained what I was writing this thesis about and that the data I gleaned from our conversations would be used solely for the purpose of writing this thesis. In both cases, in person and on zoom, I explicitly stated that they could withdraw their consent at any time.

5.3 Data Collection

My data included the game, the lesson plans, and the two interviews. For the interviews I prepared a semi-structured interview guideline in which I wrote out the main topics I wanted to address and specific questions within each of those topics. This method of interviewing uses prepared questions and topics but leaves it open ended enough to allow the participant to answer freely (Jensen, 2016). Although I had many prepared questions, even written out in a particular order, I followed what the interview participant was saying, sometimes addressing my questions out of order

and asking follow-ups to issues that they brought up. In conducting qualitative interviews, I was able to learn the how and why behind Majority. I especially wanted to understand how the materials were created and developed. Semi-structured interviewing allowed me to have the kind of conversation where my goal was to better understand these aspects of the game and lesson plans, and to hear the interviewees' thoughts, opinions, and experiences.

When I received access to the game I played it many times. At first, without specific intentions just to get a feel for the game. Then I played it many more times, at least 5, and jotted down notes in the form of memos. I took note of what happened in the game and my experience with it. When something stuck out to me, if I was confused, or if I felt confronted in some way by what happened in the game, I noted this too. These notes provided data for the analysis of the game. I stopped playing and taking notes once my observations and experience were repeating, this was after playing around 5 times. The experiences are documented in the empirical chapter in outlined text boxes to make it clear which data is my personal experience with the game, and which is from the curriculum and the interviews. I also took screenshots of points in the game that depicted the moments I experienced as important or interesting. I included some of these in the empirical chapter.

To get data relevant to my research question from the curriculum text I used the thematic content analysis approach as described by Clive Seale (2018). I first spent time just reading the document over, Seale calls this "immersion in data" (p. 432). I made notes in the margins on thoughts I had while reading, and later, this helped direct me to sections that had stood out at the beginning. To address my research interests more specifically and understand what the interview transcripts, curriculum text, and game memos were saying, I used a certain kind of coding. This is described in the next section.

5.4 Coding

Coding is a tool used to organize material and data, and so the following paragraphs explain exactly how I chose to organize the data I collected. My approach was a combination of inductive and deductive coding – deductive because I chose categories of interest before beginning the coding process, and inductive because the codes that I wrote within each category are directly based on the text, and some are words taken from the text (Seale, 2018, p. 435). This can also be called thematic coding because I had themes that I was interested in pursuing (Rivas, 2018). Although I coded nearly all of the text of both interviews, not everything we discussed was applicable to my research interest. Tangents that went way off of my research goals I left completely out, but the rest I coded. However, in the organizing and re-organizing process I determined that some codes were not relevant. This is

why thematic coding was useful in sticking to my research goals. I tried to be as methodical as possible in my coding, organizing, and defining process, however, I cannot exclude the possibility that I missed some aspects or connections in the material. Beyond the general method of writing codes next to data as a way of defining and organizing, I drew on constructionist grounded theory coding to be more precise in how I wrote codes and developed categories and themes from those codes.

Charmaz (2014) describes constructionist grounded theory coding as a process whereby you develop initial codes and then more focused codes, all while keeping in mind that you as the researcher are part of the research field and through the questions and methods you choose, you create the analysis and findings. What I have coded is my own reading and interpretation of the material, not an objective account. The purpose of these paragraphs, and in general this chapter, is to provide as accurate an account as possible of the way that I went from the raw data I collected to certain topics and themes that are discussed in my empirical chapter. Charmaz's method of coding gerunds allows the researcher to stay close to the action. I asked myself, what do the lessons plans have students do? This helped me to see the ways in which they enact democratic values. This approach to coding was also useful for me because I was interested in the processes that created the teaching tool, and grounded theory coding, as described by Charmaz, encourages you to see what is happening in the data (p. 113). By defining lines of data with action verbs, I could make what the text or video snapshot said visible as something active, something that has an actual impact, versus something that is passive and sedentary.

For the curriculum I wrote gerund codes directly in the margins of the text. For the game I wrote memos and took screenshots. These were far fewer than the codes I had from the text, so I directly inserted them into a table, which is described in more detail in the next paragraph. I used the f4 transcription software to automatically transcribe my interview recordings. The software time stamped every few lines which is how I cited the quotes in the empirical chapter. I took this transcription and read through it twice while listening to the recording. I had to edit the text a bit because the transcription was not always accurate. I then read through this text again, writing gerund codes in the margins. The number of codes I had from the curriculum text and interviews required a way to sort and organize them if I wanted to make sense of it. I used the online tool Sketchboard. This tool doesn't do anything automatically with the codes, but it provides an easy way of moving text around on a board and creating different category groups, and then easily changing those groups. I wrote out the codes in boxes and then moved them around the board, grouping them together. I named the groups based on the topics that the codes reflected. I also used this online tool to make

sense of how different topics I had coded related to each other by moving arrows between the boxes and creating a small map of different topics and their connections.

Finally, I created a table to organize the codes from the curriculum text. On the left-hand side, I wrote the categories I am interested in (deductive codes). These are the topics that I want to know about. In the middle section of the table I wrote out the codes, the terms or phrases that I pulled out of the material that fit into those categories (inductive codes). I did not include all of the codes from the Sketchboard, only the ones that were applicable to my research interest. Then, on the right-hand side of the table I formulated topics/themes that could describe those codes. My interest was in understanding how Majority is used and how that enacts democratic values. To address that question I wanted to pay attention to how the game is discussed in the material and to its role in the lesson plan. To focus on this data, I came up with the category “role of the digital game”. I was also interested in what the material can tell me about what democratic skills and values it tries to teach. I created one category for “skills” and one for “values”. These two categories are taken directly from the material. The text is written in a very explicit way, and the lesson plans outrightly state which democratic values and skills the students should learn from each lesson. I took a very similar approach to coding the data from the game. I created a table and inserted the screenshots in one column. In the next column I wrote out the memos, and in the last column I formulated a fitting topic.

5.5 Analysis approach

In my approach to the analysis, I drew on Asdal and Reinertsens (2022) practice-oriented approach to document analysis. They approach documents as active and lively, as moving objects rather than passive pieces of paper. I drew especially on their concepts “document text” and “document tools”. I use these concepts because they are well suited to exploring the physical dimensions of the material, how it moves and is used, as well as the written text. As “tools” documents do work for us, they shape and are shaped by issues, and although we think we can control their movement and how they are used, we are also subject to their influence. Analyzing a document as a tool sensitizes one to the function of the document, what it can do, how it can be used, moved around, and acted upon (p. 40). I used this perspective to focus on what the document does in practice when it is implemented. Knowing that the curriculum text and game have functions and that they are put to use as tools allowed me to see the activity between the text and the game and how these materials interacted with each other. Their notion “tools of knowledge” also helps to further explain the purpose of my analysis and what I can achieve with it. Asdal and Reinertsen explain that there are different kinds of “document tools”, and because the curriculum’s stated purpose is the teaching and learning of democratic principles, I explored it as a tool that makes this topic or issue visible. Tools of

knowledge help us to see and understand issues (p. 46). Analyzing the material as an optical tool, a tool that makes themes and topics of democracy visible and understandable to students, shows us what lens Majority is using. All tools used to teach and learn are made by someone in a particular context and therefore have their own lens through which the student or teacher is then teaching and learning.

A practice-oriented analysis means paying attention to actions, so for the curriculum text this means “that words do things and that texts are active elements that contribute to shape the objects and issues in question” (Asdal & Reinertsen, p. 213). The curriculum text has the ability to enact things. It asks certain things of the person reading and using it. It has goals, and it is trying to achieve something. From this practice-oriented point of view I am interested in what the textual language, the objects, and the actors *do*. Using Asdal and Reinertsen’s definition of text as “signs we can interpret” means that not just words are part of the text, but also graphics, numbers, and images. I approached my analysis of the game much in the same way as I did the text. The game is made up of signs in the form of images and text. I have included screenshots of the game in the empirical chapter to provide a look at these images and text. I coded the different elements of Majority each a bit differently (different mediums requiring different methods), but for the analysis I moved between the different codes a lot, looking at where they overlap where they contradict each other and how they speak to each other. I traced the interactions between the different materials, seeing where they interact, describing what that looks like, and what happens in that moment.

5.6 Surprises and challenges

During the research process I experienced some limitations that shaped the direction of my research. The first interview with the designer was a very eye-opening interview in that the goals of the game were different than I had previously thought. My understanding had been that it was an educational game that when played was supposed to teach you about democratic values. Although this was not wrong, it turned out that the game had been developed to be played in conjunction with the educational teaching materials. There were a lot of aspects to the game that I did not pick up on while playing, and this I learned was actually expected and planned to be that way. The game had not been developed to be played solo but to be played with a facilitator who could follow the lesson plans and thereby, ideally, achieve the educational goals of the game. Initially my research interest was focused on digital games and how they are integrated into educational spaces and teaching. This is why I would have also liked to observe the curriculum and game being implemented to better understand the dynamics of the implementation. Being able to observe how students and educators interact with and experience the tool, would have been very insightful in addressing the question of

how digital tools are implemented. However, at the time of my data collection the curriculum had not been officially published yet, so it was not possible to observe it in use. To limit the scope of my research and not let it become too broad I also decided it was best to stick to the materials of Majority and just include the two interviews I conducted. In the end, I think the observation would have provided very interesting insight and would have fit well within my scope had it been feasible to do. Despite small setbacks such as this, I was still able to analyze the Majority materials and receive interesting insights from two people involved with the game and curriculum. Another challenge arose during the coding and analysis process. It was difficult to have three different forms of data – documents, interview transcripts, and a digital game. Coding these three different types of data in a way that seemed fair to each of the materials and making connections between them proved to be difficult at times, requiring a constant back and forth between the materials and teasing out what was unique about a material and what was common among them.

5.7 Positionality

To finish this chapter on materials and methods I want to comment now on my own positionality, or situatedness, within these materials and the research project. As Haraway (1988) shows us, there is no objectivity, everything and everyone is situated in a context. What we know is linked to how we know it, and knowledge is therefore not magically found somewhere. I am not a video game player, and so I am not familiar with the terminology or culture of video games. I say this because I want to make the background I come from clear. I learned a lot about video games and their role in education during the interviews, but this was all new knowledge to me as I am not part of the video game community, nor am I or ever have been a schoolteacher implementing digital technologies. Also, part of my background is my societal context. This shapes my thinking and understanding of research and the world in general. I have learned to read, write, and engage in academic thinking in Western society, specifically the United States and Europe. I am writing this thesis in Vienna, Austria, within the Science and Technology Studies program at the University of Vienna. I am sure that there are countless ways that this research project could have been approached and vastly different literatures that it could have been situated in. This paragraph on my situatedness provides a bit of context as to why and how I have done this research in the way you are experiencing here.

6. Empirical Findings

This empirical chapter is about a tool used for civics education. As discussed in the chapter on the research questions, my primary research question asks how democratic values are enacted in the

entanglement of the curriculum and game. I have chosen an action-oriented approach to my analysis, which means that I approached the following sections all with the goal of understanding what the curriculum and the game are doing, achieving, or making possible. Analyzing the curriculum and game as a “knowledge tool” makes the tool’s components and the relations between the components visible (Asdal & Reinertsen, 2022). I investigate the different components of the tool, how they are implemented, and how they relate to each other. As a “knowledge tool” Majority communicates information about democratic skills and values, and like other communication devices, it is shaped by the social world it lives in. Tools of knowledge enable users of the tool to “observe, acknowledge, analyze and discuss a given phenomenon” (p. 45). To better understand how this curriculum and game envision civics education – not just based on what it says, but on what it *does* (enacts), requires analyzing the curriculum as a tool of sight, as something that enables us to *see*. Understanding it as a tool of sight and vision means being aware that this is a particular vision and not the only one. A different tool would enact a different vision. I carry this perspective with me as I analyze the research materials, always paying attention to how things are done, to activity, knowing that this can provide a picture of the vision or lens that Majority has. This chapter contains four sections with several sub-sections, within which I lay out the analysis of my empirical research.

6.1 Creating context

How we understand an issue like civics education is invariably shaped by the tools we use to learn about it. This led me to the question (SQ1): How does context shape the tool? The context of Majority is wide, broad, and far reaching, it also includes so many more people, events, and documents than was possible for me to analyze. Within the scope of this thesis, I cannot provide a comprehensive analysis of the tool’s context. What I do provide though, is a bit of insight into the world in which Majority was developed. This enables, although not a complete picture, a look into what feeds the issues that Majority engages with. I found that a policy and socio-political context shape Majority.

6.1.1 A policy context

Issues are shaped by their contexts. Asdal and Reinertsen write that, “the situations of which documents are part can sometimes be traced inside documents” (2022, p. 117). At the beginning of each lesson the curriculum references an external situation. This stood out because it is the only external thing referenced in each lesson plan. Paying attention to the “inside” of the document through close reading and looking for references or mentions of other external situations within the text, brought the *Reference Framework of Competencies for Democratic Culture* (RFCDC) to my

attention. This is a Council of Europe document outlining skills and values that learners should be taught to be effective participants in a democracy. It is meant to be useful to educators in different contexts, both formal and informal, and to policy makers who advise or work with education departments and ministries. It is a tool to guide lessons on democracy, human rights, and civic participation and action. The website of this framework describes the purpose of it as follows:

“The RFCDC as a set of materials can be used by education systems to equip young people with all of the competences that are needed to take action to defend and promote human rights, democracy and the rule of law, to act as active citizens, to participate effectively in a culture of democracy, and to live peacefully together with others in culturally diverse societies”
(Council of Europe RFCDC, n.d.).

In 2013 the Council of Europe Committee of Ministers, then chaired by the country Andorra, held a conference on governance and education, and the initiative for this framework developed from there (Council of Europe RFCDC, n.d.) The report written on that conference describes education initiatives as one of the solutions to ensuring Europe’s culture of democracy remains strong in the face of various global crises, an at the time ongoing economic crisis, a shift in higher education from focusing on general education to focusing more on employment preparation, and various other societal concerns (van’t Land, 2013). The framework consists of many volumes geared toward different subject matters and sometimes with varying emphases, but the Majority curriculum simply says it orients itself around the 20 competencies that are outlined in the framework. A document describing and explaining these in detail was published in 2016, the RFCDC, which is what I have based my analysis on. The framework also seems to be continually worked upon, as they have just recently published an RFCDC specifically for vocational education and training (Council of Europe VET, n.d.). This is also part of the Council of Europe’s *Education Strategy 2024-2030*, whose primary goal is to revitalize the role of education in supporting the growth of democratic culture and governance. Democracy and education intertwine in this policy context that the curriculum draws on.

Now that I have discussed where the RFCDC itself originates, I want to move on to how Majority’s curriculum text engages this framework. And how it brings it into its own sphere, making it part of the context of the tool. The very first unit of the curriculum begins by referencing the framework:

“The series of lessons is based on the 20 competencies of the Council of Europe’s RFCDC Model for living together in a democratic culture. In this unit the following competencies stand at the center: ...” (Boelmann et al., p. 3).

This clearly demonstrates that the curriculum bases the content of its lessons on this framework. By referencing this document, the curriculum brings it into its context. The text didn't necessarily need to quote the RFCDC model at the beginning of each lesson, it could have also just referenced it at the end of the full curriculum in an appendix. But, by stating that it is based on this model on each first lesson plan page, the curriculum text makes an active and very visible move to make the RFCDC model part of its context. I also take inspiration here from Asdal and Reinertsen's notion of "contexting" - the act of a text or object *creating* its context. Creating is a verb so there must be an action behind it. If we think about the text as doing something, we see that the curriculum makes an *active* effort to point the reader to the RFCDC.

The curriculum text is not the only way the RFCDC is brought into the curriculum's context. Interviewee 2 discussed the RFCDC model when asked about the background of the curriculum.

"But I think this model is a good thing, especially in this area, because it is something you can agree on. And of course it also makes the game easier to market, or it probably makes certain things easier. And just practically speaking, if you take a model that is only valid nationwide, because it is only adapted to the Austrian curriculum, then you would always have to...yes, then it would be difficult to rework afterwards. But if I now use this Council of Europe model, then I might find it a little easier" (Int. 2, 12:37).

The RFCDC provided the lesson plan writers with a reference, that as they saw it gave the content respectability. It also helped them to write the lesson plan in such a way that it is applicable elsewhere, such as in Germany and Switzerland, and is not only based on the Austrian school system and curriculum. It allowed them to just write one lesson plan and not have to potentially rework the lessons later for a different market. However, as of now (February 2025) the learning materials are only available in German. Interviewee 2 also suggested that the RFCDC is a basis for agreement because people would trust and respect the educational guidelines from the Council of Europe. This would be another aspect making the tool more marketable and applicable outside of Austria. The RFCDC is employed in the curriculum text as a trustworthy basis for each lesson plan, and to make the lessons applicable and appealing beyond Austria. Linking to the Council of Europe document, allows the curriculum to be "European", which in this instance is enacted as a credible and trustworthy link. We see this in the response from interviewee 2, and as shown in the previous section, in making this link very visible by writing it at the start of each lesson plan.

Part of inquiring into the context is also to ask what democracy and democratic governance mean in the RFCDC. Exploring the text of a document is important to the question of context, because

textual meaning shapes the curriculum. By exploring what the RFCDC says we can gain an understanding of where the curriculum's text received its inspiration. So far, we know that at least one reason Majority draws on the RFCDC is to create reputability, and we know how the curriculum goes about doing that. I am interested in how the RFCDC model deals with the notion of democracy, in order to understand how that contributes to shaping the curriculum.

To start, the RFCDC views democracy as an idea that lives through people's actions, which are taught and learned: "Democracy is, of course, built on institutions and laws, but it lives through the actions and behavior of its citizens. Democratic culture must therefore be taught and fostered too." (RFCDC, 2016, p. 7). Democracy is a particular form of governance that is acted out through laws and institutions. This document, however, is more concerned with people's actions and behavior. In other words, their engagement in public life. In this text the focus is on democracy as a form of culture, one that requires skills and values that must be learned and fostered for that culture to thrive. And I want to emphasize the difference here between democracy as a system of government and a culture of democracy, because the difference is important. As I wrote above, democracy encompasses certain rules and privileges – such as being able to vote on who represents you in government or the fact that there is not one governing authority but a separation between different governing authorities. Democracy needs its institutions to enact laws that are democratic, in order to have democratic governance. A culture of democracy though, as outlined in the RFCDC, encompasses how individuals *act* in society. It is about the behavior of society members.

The focus on culture frames the meaning of democracy. This becomes clear when looking at the competencies outlined in the RFCDC. They are divided into four categories: values, attitudes, skills, knowledge and critical understanding. Each of these four has several examples – such as valuing cultural diversity, empathy, conflict resolution, respect, civic mindedness, and knowledge and critical understanding of the self and of language and communication.

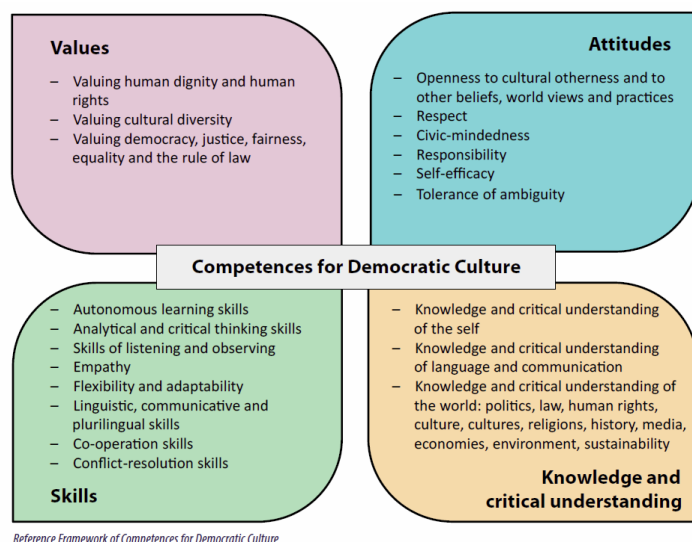


Figure 1: RFCDC Image (RFCDC, 2016).

These four categories and their respective examples show us that the competencies valued by the RFCDC are primarily individual attributes that should allow people to participate and engage democratically. The document calls these individual values and ways of acting competencies. The following quote explains what exactly is meant by competence in the framework:

“it is important to bear in mind that the term “competence” is not being used here in its casual everyday sense as a synonym of “ability”, but in a more technical sense to refer to the psychological resources (such as attitudes, skills and knowledge) which need to be mobilised and deployed to meet the demands and challenges of democratic and intercultural situations” (RFCDC, 2016, p. 35)

The competencies are framed as individual attributes that allow learners to be effective democratic participants. Chapters two and three of the RFCDC, explain the underlying assumptions that the model is based on – that it is both competencies and institutions that are needed to foster a culture of democracy, and that without addressing social inequalities a healthy culture of democracy cannot exist. It acknowledges the importance of having democratic institutions, but it focuses the teaching on the values and achievable skills that a healthy democratic culture needs.

Knowing how the text presents democracy education is not the same as understanding how the text *enacts* democracy education. This is an important distinction to make because although we learn a lot about how the text envisions democracy education by simply reading the text, we do not learn what the text implicitly conveys and what it might be leaving out. The term enactment in this case helps to see beyond the actual text of the RFCDC, and to investigate another layer of what

democracy means in this framework. When thinking about context, I am not only interested in other texts that the curriculum references but also in the situations and political contexts that the tool is embedded in. The following section goes into how a particular political situation became relevant in the creation of this educational tool.

6.1.2 A socio-political context

The Latin meaning of the word context is to weave words or language together. I wanted to know how the text is woven together with its surroundings. In the previous paragraphs I showed how the curriculum text makes a visible move to connect to another external text, weaving its own textual meaning together with that of the RFCDC model. But texts are not only woven together with other texts they are also related to their surroundings and created within situations. Part of Asdal and Reinertsen's contexting work, and their broader move of asking how issues are formed, is to flip the question and ask, "how does a particular context come to be enacted and made relevant for a given text?" (2022, p. 117). I answered this question above for the RFCDC model, but in my interview with one of the game designers, another context was brought to my attention. To understand what we see when using the curriculum and game as a "tool of knowledge", we must understand this part of the tool's context as well.

This tool was developed for teachers and educational facilitators to engage with students on the topic of democracy, democratic participation and governance, and broadly speaking democratic community building. For Majority's producers and designers, the idea for the educational game came from a desire to act during the refugee movements of 2015/2016 in Europe (Int. 1). The organization that created this tool saw the difficulties faced by mayors in towns along the routes that migrants and refugees were taking, and wanted to do something. They brought mayors from different towns and villages along these routes together to discuss and share experiences. One of the widely shared experiences of small-town mayors was feeling overwhelmed by the rapid increase in the number of people in their towns. The following quote describes how some of the towns' populations expanded a lot during this time, and how there was a desire to discuss ways in which small towns and villages could better deal with the new realities they faced.

"The idea was that we would all sit down together and see if we could share knowledge. Because there were situations like that...it was the island of Samos, and I don't think it has more than 10,000 or 100,000 inhabitants and that somehow multiplied and they suddenly had many times that number of inhabitants and had to provide for them somehow ... And within the framework of the whole thing there were different ideas about what could be done and

things and working groups ...then the idea came up that we could make a game that somehow represents the situation of these mayors” (Int. 1, 00:32).

In meetings with the mayors, it was clear that they were overwhelmed and dealing with an unprecedented situation. One idea that the members of the organization had coming out of the mayoral conferences, was to make a game that could represent what the mayors were experiencing. This is what eventually became the game Majority. But what exactly of the mayors’ situation did they want to represent? Interviewee one described hearing about the difficult situations that these mayors found themselves in, often not able to provide for the increasing number of desperate inhabitants and stuck between wanting and needing to help, but not having the resources to do so adequately, especially as small towns with limited funds.

“We didn't start with what should the game be, but with what emotions do we want to create? Okay, what we wanted to create was helplessness. So, we wanted to say that you can't make the citizens happy, you have no money and when you ask for help, nothing comes. Because that was what we heard so strongly from the mayors” (Int. 1, 10:41)

The designers and creators of Majority wanted to represent the helplessness that mayors faced. The context for the game became the experiences of some small-town mayors during these refugee movements in 2015. It became this because, as the designer who I interviewed said, this inspired the organization’s leaders to want to do something. From this, the idea to create an educational game eventually materialized. As an impactful experience for the producers and designers, the political situation became relevant and an inspiration in the creation of the game and the curriculum that followed. From these comments we also see that it shaped the content of the curriculum and game, making them about the issue of democratic participation and governance. Issues of governance were the foremost concerns of these mayors, as interviewee one described, and this is reflected in the digital game component of the curriculum and in the curriculum’s textual emphasis on discussion and deliberation in groups.

To conclude this section, in asking how context shaped Majority I found that it draws on two particular contexts. Of course, it draws on many more contexts that I am not aware of or did not have the capacity to research, but these two are enacted in the game and curriculum’s language and development stories. The RFCDC is used in the curriculum as an authority figure, as a respectable reference that tries to make the curriculum marketable and appealing to a European audience. Democracy education means connecting to a European organization seen as reputable and trustworthy. The refugee movements of 2015/2016 and the difficulties that small town mayors faced

in governing the situation, as described by one designer of the tool, inspired the game and shaped its emphasis on governance. The contexts shape and form the design of Majority. They create its “design style” (Cherkasky, 2014). And through this “design style” they enact what civics education looks like in the case of Majority. Context plays into everything, and it does in the implementation as well. The next section explores the implementation of the tool.

6.2 Implementing the tool

In this section I explore the question on how the tool is implemented (SQ2): What shapes the implementation of the tool? All of the topics that arose during my research that were associated with the implementation and use of the tool, had to do with the digital aspect in some way. The digital aspect of the game means it is used in particular ways and not in others, but it also means that it provides an experience that is crucial to its implementation. How the curriculum is implemented in the classroom was connected to the digital component of it, and how the game is brought into the curriculum is also affected by the fact that the game is digital. The implementation of Majority in educational setting is shaped by the digital aspect of it.

6.2.1 What digital games can do

In the game players can experience and possibly “feel” the issue in a way that is unique to games. The player has the chance to virtually experience being a mayor and what it might feel like to deal with some of the challenges of governance. Some of the interactions that the designer created are unique to this game, but others are characteristics that games in general allow because of the type of media that it is. This first example points to the primary goal of the game and what a digital game offers its users.

“With [this tool], I thought the game should be a basis for discussion. Games have one advantage over all other media, namely that they are interactive. And content that is experienced interactively is processed differently than content that you hear” (Int. 1, 47:40).

Interviewee one, the designer, describes here the possibilities that games offer – the ability to engage with content in an interactive way. This characteristic of games is a material example of what this tool can provide. The game can provide an experience that is very different from traditional classroom instruction. Shortly after this statement, interviewee one goes on to describe another characteristic of games, which is the ability to put yourself, as the player, in the shoes of the characters in the game.

“There are moments when you ask yourself if what you're doing is right, so when you look at your homeless people, for example, and you have nine homeless people, because all the time

you're just making your industry bigger, there comes a moment, even if it's a small moment, when you think ok yes, maybe I should do something here" (Int. 1, 47:40).

As described here by interviewee one, a game gives you the possibility to dive in, to put on the shoes of your character, and for a moment to think like them and experience a bit of their world. The digital game has specific purposes, but it is not to teach students definitions of what democracy is, or even necessarily what democratic skills and values look like. The purpose of the game is rather to inspire an emotion and an experience that, as the designer envisions in this case, will prompt the players to think about how you support a community, whether through social projects to provide housing or through economic projects to provide jobs. The quote below further demonstrates this point. Describing the connection with the issue that you get from interacting with the game, interviewee one says,

"...that you really experience it, how it feels in that moment and that you press pause and walk up and down the room because you don't want to make a decision, yes, only games can do that" (Int. 1, 47:40).

A game can draw you in, it can put you in the shoes of someone else and push you to experience what that person or character might experience, or at least maybe give you an idea of what that experience could potentially feel like. A game, as interviewee one said, can ask you to enter a different world and make decisions as one might in that world. In this game the player sometimes must make difficult decisions about which interests of the different character groups to prioritize. The designers want the players to experience the feelings of helplessness and desperation that they heard so often from mayors during the conference meetings they had with them, at the beginning of the 2015 refugee movements in Europe. By way of the decisions the designers made and game's mechanics, these experiences are embedded into the game. The fact that the game is digital is, in part, what makes this possible. Other games might be able to do the same, but in this case the digital component is an important part of why the game is designed to create this experience for the player. The digital enables it.

6.2.2 Connection – the game and the lesson plan

The following section provides an analysis of how the construction of the game and the curriculum are connected. I concluded that the game being digital shaped the purpose of it in the educational context and it impacted how the game could be implemented in a classroom. This became clear in close reading of the curriculum text, in the answers of the two interviewees, and even in my own experience playing the game. The purpose of the game in the curriculum was to be a discussion

starter, a lead into its main educational goals. It was not meant to stand on its own. The designers left the main instruction to the lesson plan, which makes the digital game an accompaniment to the lesson plans in an educational setting. It is possible to acquire and play the game without the lesson plans, but this misses a huge part of the educational work that is achieved primarily through the curriculum. Speaking about the game and the learning materials, interviewee 1 said,

“We were told that the game will have accompanying teaching materials. That means it would be good if we integrated some things into the game, in terms of teaching material. But a lot of this is taken care of by the teaching material that the teachers then receive. In other words, we don't have to feed the game with stuff suitable for school” (Int. 1, 23:37).

The game was not designed to be a one stop shop for learning about democratic governance and participation. The idea was that the lesson plans would take care of the direct learning, and that the game could then be more of a discussion starter, and a tool to engage students on a more emotionally involved level. The lesson plan's directions, and specifically what it asks students to do, are integral to the educational goals of the game. I share here a note that I wrote to myself while playing the game, which further demonstrates the point that the game, taken by itself, is not the primary learning site, and that group work (a task that students are asked to do many times) is a necessary mechanism in bringing the game and the learning material together.

I thought that I should be learning about democratic community building while playing the game, and I got frustrated when I played but didn't feel like I was learning anything about what it takes to build democratic communities. It's a very simple game, and there are a very limited number of things to do in the game. The game itself did not directly prompt me to think about the role of a mayor, or what it takes to build a democratic community. I still don't know what democratic skills are or what values exactly the game is trying to promote.

Excerpt from Personal Notes – Thoughts on the role of the game in the learning process

My failure to learn anything from playing alone is another suggestion, beyond the statement of interviewee 1, that the pedagogical move of having students work together in groups shapes the learning outcome of the game and the accompanying teaching material is crucial to that. Playing by myself without prompted questions for discussion, left me unsure of what, if anything, I was learning. When looking at how the game and the lesson plan interact and come together, the materiality of the game becomes clear. It is not only the text of the lesson plan that shapes how the two objects interact, but also the material and technical decisions that were made by the designers. As interviewee 1 said,

they (the designers) did not “feed” the game with educational content, since they knew that the idea was for the lessons to take care of this for the most part. They made the decision to keep the game relatively simple with the goal of creating an experience, rather than specific curricular outcomes. The designers of the game delegated the educational content, from one object to another, because the first object, the game was designed with limitations and other purposes.

So, on the game designer’s part it was a conscious decision to leave something out, to leave out big parts of the learning process so that students might fill it in themselves through activities that are intended to be carried out through the lesson plans. This observation was confirmed by interviewee two. Interviewee two expressed that there are certainly topics that are important to discuss on the topic of democracy that the game does not cover:

“I don't have any opportunities for participation...they can formulate needs and we can bring them to the mayor...But they don't actually have the opportunity to decide anything, it's either the mayor says yes, we'll do it or we won't do it” (Int. 2, 50:54).

Interviewee 2 commented that the game on its own does not cover important topics to learning about democracy, like the chance to participate in a town decision making process. The game allows the players to raise their voices by making requests to the mayor based on what their interest group wants, but there is no chance in the game alone to participate in a city council meeting, a vote, or any other type of democratic decision-making process. This limitation is also evident in the kind of game it is, and what is possible in it. This next quote is a statement by the game designer, explaining how they kept the design of the game extremely simple:

“We have completely reduced the game mechanics to placing houses and interacting with the needs of citizens. That was the only thing you do in the game. And we supported this puzzle aspect. The game is a simulation game but it's also a puzzle game to a certain extent because it's really more about when do I make which decision or how do I make which decision” (Int. 1, 32:31).

The game is a simple game of reacting to what the town residents ask of you as the mayor, and responding based on how much revenue you have, number of resources, how happy your towns people are, how many people have a home, and how many other requests you have from the town. Sometimes you have to think hard about which decision to make, whether to place more houses or fulfill more requests, and other times you don’t because you have so much revenue and so many resources that you don’t have to actually make any tough decisions.

This section has showed how the game was designed knowing that the learning materials would cover most of the educational content, and because of this the game could have relatively simple game mechanics and focus on what games can do best, provide an immersive experience. Thinking about the tool as a material object is what showed me these connections between the two main components of the tool (the game and the lesson plan). As a material object Majority is made up of relations and these relations carry meaning (Law & Mol, 1995). Each component has its own purpose, which is visible through the objectives of each and how they play to one another – the lesson plan carrying specific learning goals and methods for achieving those, and the game providing its own strengths through what it can do digitally. From the understanding that the tool, Majority, is made up of different components, the digital is also a component embedded in the workings of the other components. This embeddedness has an impact on how the tool is designed and implemented. This section showed that the game was designed to be simple and without the expectation that the player would have an all-encompassing learning experience solely from the game, and as such would be an accompaniment to the curriculum when used in an educational situation.

6.2.3 Bringing the digital into the classroom

The people who created the lesson plans made design decisions in the lesson plan development that shape how the game and the lesson plan interact. This perspective from interviewee 2 shows a possible challenge of incorporating something digital into the civics education lesson plan – a potential limitation of this tool. When discussing how one might practically implement the game, interviewee two said the following:

“I’m always very careful when it comes to the use of technology in lessons...I wouldn’t say play it through, play the game now...as a reward. If I now say that the computer game is the reward, then normal lessons are also the punishment or are considered boring, and I don’t know whether that wouldn’t have unwanted side effects, so to speak, playing the game on your own [without any learning material] is something I wouldn’t do” (Int. 2, 53:23).

The teacher is skeptical of using the digital game alone without a curriculum, and the challenge is in bringing in the game in a way that students will benefit from it in an educational way. How to incorporate the game into the curriculum is thus an important consideration for the teacher. The digital aspect is a material characteristic of the tool that the teacher takes seriously, and as an author of the teaching material, the teacher thought about this when creating the lesson plan. Paying attention to the material interventions – points at which material aspects influence how the tool is used – shows that in this instance, the digital aspect of the game shapes how the teacher uses the

game, which is in combination with the lesson plans. The material characteristics of the educational tool shape how it can be implemented. The following paragraph is an example of how the sociality of the tool also shapes its implementation – the concept of time, how much of it is needed and when.

6.2.4 Why timing matters

For the teacher timing was an important aspect to keep in mind when implementing the game. For example, it was important to the teacher that the game be introduced at the “right time”. It should fit into the current topics being discussed in class.

“Then another important point is that it fits topic wise. So if we have well, Greece and Attic democracy etc. that is of course connectable. Although it has to be said that especially for eleven 12-year-olds, it's not as obvious as for us as adults, it's a big transfer” (Int. 2, 19:48).

The above quote shows that the teacher is thinking about how to create a connection for the students to the topic of democracy and democratic community building. As the teacher says, it is not so easy for children to make the connections, and so the way that the game and curriculum are brought in thematically should be fitting to the current curricular context that the students are in. As I showed in the section on the lesson plan text, creating connections is an important theme visible in the text’s language, but the aspect of timing shows us another facet of connecting, namely creating a *timely* connection. The curricular connection should be timed so that it makes sense for the students, so that they can situate this new tool within a thematic context that is connected to the themes and topics of the tool. Speaking to this same issue at a later point in our conversation the teacher made this comment:

“It always depends on how much I have already done in the classroom, how well do the children already know the subject?” (Int. 2, 49:41).

This comment about how to use Majority shows that the actual implementation will very much depend on the teacher, the students, and what topics around the theme of democracy they have already discussed in the classroom. Majority was not designed in a vacuum and cannot be implemented in one either. There is always a context, and to successfully use it in the classroom it is important to pay attention to the students and the curricular context.

Another aspect of time that was important to the teacher was length, having enough time to comfortably use the tool and being realistic about how long it takes in a classroom of 20 kids to get them started, and one that has a digital component. Although the digital component wasn’t the only

aspect that created a need for enough time, it was at least one aspect. When asked about the ideal setting to implement Majority, the teacher made the following comment:

“We have designed our units as double lessons because these 50-minute units, so there are always pros and cons, 50 minutes is a good amount of time on the one hand, but it is also impractical on the other. It makes no sense, for example, if I want to play a round of Majority that takes up to 25, maybe 25 minutes. Maybe not everything will run so smooth with the children. This means that until everyone has started the lesson, even if I have 50 minutes...if there was a test before or after, then the children are over-excited...it takes five minutes until the tablets are started, until everyone has started playing and so on. In other words, it just takes a bit of time. In other words, double lessons are desirable.” (Int. 2, 18:28).

Having enough time, more than 50 minutes, would be an important part of successfully implementing the tool according to the teacher, who describes kids needing time to take out and start up their tablets, and the possibility that the kids are over excited and therefore might need more time to concentrate. The teacher also specifically described a challenge that the game presents in the context of time, namely that, although the children all have tablets on which to open up the game, it might take a little while for the children to get set up:

“But when I say to eleven twelve year old children, please take out your tablets, because they've all been given a tablet by the school, and open them up, if one of them doesn't find it or if some of them have it in their locker or whatever, or one has no power, it just needs that [time]” (Int. 2, 15:49).

One aspect the teacher points out here relating to the game is the possibility that students have not charged their tablets. There are also other aspects here that the teacher pointed out require enough time, such as students forgetting their tablets in their locker, or any number of things that could delay starting to use them. Having enough time and being realistic and practical about what is possible and what is not with a school class, was a consideration for the teacher when thinking about implementing the tool and in creating the lesson plans.

The aspect of time becomes visible through the teacher's thoughts on how and when Majority would be best used in the classroom. The teacher shows how certain material social relations highlight the importance of time. The relation between the students and their tablets, where the tablets are, how quickly they can get it out of their bags, whether it is charged or not, are material aspects that shape how the tool is used. The relation between the teacher, the tool, and the students

shapes when the tool is used. As shown in the paragraphs above, the teacher believes that introducing the tool at the right time is important, because the tool deals with a relatively abstract and complicated issue for students, and the students, according to the teacher, would benefit from using the tool within a related curricular context. Timing shapes when and how the tool is implemented.

6.3 Teaching democratic skills and values

This section addresses the sub-question (SQ3): what do the curriculum and game ask students to do? To get at this question I used a guiding question during my analysis: what does the curriculum ask students to do? And what does the game ask students to do? How this enacts democratic skills and values requires a closer look at the text and its language and the game itself. I want to know how the text enacts democracy education – not just what it states but what actions the text brings into being. In this curriculum, democracy education is embedded in the method, content, and medium. I found that *what* this tool educates is intrinsically connected to the *way* it educates. What the text asks of those using is how it conceptualizes the meaning of democracy. This chapter will demonstrate how it does that by analyzing the situations in the tool that show how democratic skills and behavioral orientations are taught. The curriculum has many lesson plans, but I chose to focus my analysis on the first three which are part of the basic units. This analysis therefore encompasses only these three lesson plans. The following sections detail the themes that emerged through close reading and coding of the curriculum text, always asking myself what the text is asking of its users.

6.3.1 With the curriculum text

6.3.1.1 *Fostering individual empowerment*

Empowerment becomes visible when paying attention to the wording throughout the lesson plan, particularly the didactical comments. On every page of the lesson plan there are didactical comments, which explain in short phrases what students should be learning in each section. These are some of the didactical comments of the basic unit:

“The students express their own assumptions and experience themselves as individually perceived, self-effective learners” (Boelmann et al., p. 4).

“Understanding of own ideas as important” (p. 8).

“Working independently” (p. 5).

Sharing ideas out loud among peers fosters feelings of empowerment in students, because as the didactical comments say, it allows them to voice their thoughts and opinions and thereby see

themselves as capable and active participants in the learning process. These phrases are examples of empowerment because they all point to the idea that students are becoming independent, confident, self-actualized learners. Empowerment in this case looks like providing students with learning opportunities that allow them to experience their own capabilities and view their own participation in the learning process as important and valuable. These example phrases I pulled out of the text don't explicitly say this, but from the perspective that text can enable actions, I see the wording of these phrases as enacting empowerment.

6.3.1.2 *Engaging with difference*

Paying attention to what the lesson plan asks of students also showed that the discourse is focused on the idea of engaging with difference. Throughout the basic unit the words *perspective*, *expectation*, *needs*, and *wishes*, come up many times together with the words *different*, *similarities*, and *multiple*.

"Dealing with differences in needs" (Boelmann et al., p. 10).

"Collecting different perspectives" (p. 4).

"Identifying different perspectives" (p. 4).

"Seeing multiple perspectives" (p. 11).

"Dealing with different expectations, needs, and wishes of citizens" (p. 3).

"Reflecting the different expectations, needs and wishes of the different citizen/interest groups in light of the available roles" (p. 9).

"Differentiating between own and other's opinions about societal and political questions and analyzing them" (p. 13).

In this example we see that the words *perspective*, *needs*, *wishes*, and *expectation* are most often used in conjunction with words that signal the ability to contend with an idea or opinion that is different from your own needs, expectation, wish, or perspective. This conveys a focus on the idea of engaging with difference. The sentences above say that students can identify the different perspectives of the interest groups, reflect on them, tell them apart, and deal with the differences between characters and interest groups, showing that engaging with difference is an important theme in the text. It is also used as a method of teaching, which we see in the example "collecting different perspectives" (Boelmann et al., p. 4), and it is a point of learning content that is reflected in the RFCDC

model. This idea of engaging with different perspectives is incorporated as both method and content – taken together I see this as the text enacting a practice of engaging with difference. From the point of view that learning to engage with difference can be designed into an object, as described in DiSalvo's (2012) concept *adversarial design*, I see the method of having students voice their opinions and collecting/discussing different perspectives that arise, as creating a space for contestation. This emphasis on recognizing and acknowledging differences is an aspect of the tool that I see as designed to allow dissensus and to encourage discussion of it. A place for contestation emerges from the practice of engaging with difference that is written into the curriculum.

6.3.1.3 Role play

Coding for what the text asks students to do also revealed that the idea of putting oneself in the shoes of others, or role play, is a recurring theme in the text. The following sentences taken from the lesson plan are examples of instances in which the students are asked to take on the character and persona of someone or something. I called this theme putting oneself in the shoes of others because the examples are all statements about slipping into the role of a mayor or pretending to sit on a municipal council to take part in the democratic process of voicing and addressing concerns of the community. They are concerned with understanding another point of view through role play. At the beginning of the basic unit (lesson plans 1-3), the game is introduced, and the students are told that in the game they will take on the role of a mayor. These phrases signify this action:

“Slipping into the role of mayor” (Boelmann et al., p. 5).

“Taking on the role of a mayor” (p. 4).

The entire game is framed as role play, because in the opening scene of the game the player is told that they will now be in the position of a mayor. The game is introduced by the teacher and students “take on the role of a mayor” by playing the game. Later on, in the lesson plans they are asked to engage in a group discussion simulating a municipal council. In this instance of putting themselves in the shoes of others, the text says students should be doing the following:

“Discussing in the role of a municipal council” (Boelmann et al., p. 11).

“Simulating democratic discourse and decision making” (p. 11).

“Experiencing a dilemma situation” (p. 9).

Accompanying this role play are actual worksheets that outline the different roles students can take on. These are the same roles that appear in the game, where they are called interest groups. These groups are the traditional ones, the social ones, those most interested in work, and the mayor (Boelmann et al., p. 37). The students are given two other worksheets to help them prepare for the municipal council simulation and group discussion. These worksheets ask them to think about what needs and wishes they have as the interest group they represent, why those wishes are good for their community, and how they will propose these wishes in the municipal council meeting (p. 34-35).

Students are asked to put themselves in the shoes of a mayor and in the shoes of an interest group in these two situations. They are prompted to experience and play out potential ideas, desires, and decisions, and try out voicing concerns and making decisions. This theme of putting oneself in the shoes of others is created through the text's wording and how that wording enacts the taking on of different roles. Through role play the actions of the students translate to putting themselves in the shoes of another position. I cannot say how effective this is because it was not in my research scope to interview the students. However, regardless of whether it is effective or not, this teaching method translates to teaching the skill of being aware and respectful of other points of view. This becomes part of the imaginary of what democracy means for this tool.

6.3.1.4 Group work

The lesson plan's emphasis on group work is evident in a few different ways. The first is the way that the topic and game are introduced. The first two quotes below, which are directions for the teacher using the lesson plan, show how the lesson plan incorporates the game. The third quote from the lesson plan shows how the overarching idea of taking on the role of a mayor is introduced to the students.

"Students are asked to play the game in pairs" (Boelmann et al., p. 5).

"Discovering together how the game works" (p. 5).

"The teacher explains that now together the students will engage with the expectations and focal points of a mayor ... Together the students gather their ideas in plenary" (p. 4).

As demonstrated by the third quote, students are asked to discuss the job of a mayor in the group. The teacher is also given some prompted answers in the didactical comments of the lesson plan to direct the group discussion. This kind of group discussion allows students to connect to the topic within a large group. Students think about the job of a mayor and what a mayor wants for the town, they voice their opinions and thereby begin to develop ideas about what it is that a mayor does, and

potentially what they would want a mayor to do for them and their community. The group discussion also gives students the chance to hear the ideas of their fellow classmates and discuss these as a group. Then, students are asked to play the game with each other, not alone.

The first two quotes demonstrate that the game should not be played independently, it is included in group work and expected to be a topic of discussion for the students as they play it together. The game is an object to be tested and discovered together with others. Paying close attention to when and how the lesson plan deals with the digital game, shows that the writers of the lesson plan use the pedagogical method of group work to employ the game in the curriculum. Not just in the beginning phases of the lesson plan, but throughout the entire curriculum, students are asked to do work and discussion in pairs, in small groups, or in a larger plenary. These are further examples from the lesson plan text:

“In plenary the students exchange the different requests they got [in the game]” (Boelmann et al., p. 5).

“The students exchange their experiences [playing the game]” (p. 6).

“The students figure out their roles [for the city council simulation] and discuss in groups” (p. 10).

These examples show the numerous instances in which students are asked to work on tasks together with others and to discuss them with each other. The text language also shows that group work acts as a facilitator for interaction between the students and the tool as an object. The example statements above are closely connected to the topic connecting to other's experiences (as described in more detail in the creating connections paragraph). The exchange of ideas and experiences that is made possible by working in groups enables students to connect to each other. This didactical comment from the lesson plan demonstrates this as well:

“Identifying different perspectives and connecting these with one another” (Boelmann et al., p. 4).

Here space is being made for students to connect to each other's thoughts. In both the group discussion and partner-work to figure out the game, students must discuss with each other their thoughts and opinions on the job of a mayor, what they want to do in the game, what decisions they want to make and how to handle the different requests that arise. Each person's experience and decision-making process is closely linked to that of another person. By paying attention to what the

text says about the game — how students engage with each other and the topic, and how students engage with the tool — group work becomes visible as an important theme.

6.3.1.5 Making connections

I noticed that throughout the lesson plans a common theme emerges because of the ways in which the tool has students engage with the topic of democracy. I want to point out right away that this theme is related to the other themes. It emerges in part as a result of those other themes. Within the themes laid out in the above paragraphs, in particular group work and role play, students create connections. I have categorized the different kinds of connections that the lesson plans ask students to make as — connecting to other's experiences, connecting to past learning, and connecting to the outside world. The first form of connection that I outline in the following paragraph is also the one most closely intertwined with the themes already mentioned in this section.

I begin with how students are asked to **connect to other's experiences**. One example of this is that the lesson plan asks students to bring ideas and experiences to their group discussions. In the first basic unit students are expected to do the following:

"The students gather their ideas in plenary" (Boelmann et al., p. 4).

"The students briefly discuss the assignments in plenary (differences or similarities), and then continue to play" (p. 5).

"The students discuss their experiences playing the game with each other" (p. 6).

They are asked to talk about their experiences playing the game, any ideas they had so far, and the actual tasks that they had to do in the game. This creates awareness of other students' perspectives by letting them see the topic through the eyes of someone else. This exchange of ideas not only creates connection between the students, but also between the teacher and the students by giving the teacher insight into what the students are thinking and experiencing. Exchanging ideas and experiences fosters connection.

Students are also asked to **connect to past learning**. The lesson plans have teachers ask students to think about what they did in the last lesson and what ideas they recall. The following are examples of this from the third unit, which is also the last in the basic units:

"The teacher introduces the lesson and makes references to the learning progression of the first double lesson" (Boelmann et al., p. 10).

“The students reflect again on the results of the previous lesson and make references to their previous notions” (p. 10).

“Connecting to overarching ideas” (p. 6).

In the directions and didactical comments, we see that connecting to knowledge from the past lesson and comparing that to other discussions is part of the learning process that is encouraged here. Students are also repeatedly asked to make reflections. This is an example of that from the second unit, and is a direction after the students played the game for the first time:

“The teacher introduces a reflection phase on the previous game phase... What went well? Did you achieve your goal? What were the conditions for success, what were the stumbling blocks?” (Boelmann et al., p. 6).

Here students reflect on what they experienced playing the game. Asking the students about what happened in the game encourages them to examine the tool they just used. Activating past knowledge and experience by connecting to previous units through reflection also fosters critical thinking. It gives students the chance to remember what they learned and reflect on that knowledge. It shows them that critical thinking is a process, coming back to one’s own ideas or the lesson’s overarching ideas more than once allows you to make new connections to the topic and deepen existing knowledge. By asking students to recall knowledge learned in the past and discussing that in the present together with peers, puts that knowledge on stage. That knowledge can be argued for or against and is prevented from staying in a bubble.

Students are asked to **connect to the world** at the end of the second unit, after having discussed the role of a mayor, their own experiences playing the game, and connections between these experiences and the learning goals. With the help of a worksheet that students can fill out, the teacher is directed to move the discussion from observations about the game to real world-oriented issues. The following is an example from the text, the first quote is a direction the teacher gives and the second is a didactical comment on that section of the lesson plan:

“We have now looked at the possibilities in the game, but how do you as mayor address the needs of the residents in reality?” (Boelmann et al., p. 8).

“Transferring learning so far to one’s own context” (p. 8).

These two quotes demonstrate the intention of the curriculum for the final unit. In this third unit the teacher leads a group discussion in which students receive different roles and together simulate a city

council meeting (discussed in depth in the section on role-play). This simulation is the start of making a connection to the issues in the student's own lives and within their communities. Toward the end of this simulation and group discussion the teacher helps students make these connections, as shown in these quotes:

"The teacher guides the connection to student's own lives...To what extent can the simulated community council meeting be transferred to our own world?" (Boelmann et al., p. 11).

"The students work out possible connections together, and compare these with discussions, disputes, solutions to problems, they have already experienced" (p. 11).

"Inclusion of the previous experience of the students" (p. 11).

Students are asked to make connections to discussions that they have witnessed or been part of, issues that they are aware of in their communities, and how they see what happened in the city council meeting simulation reflected in their own world. Making these real-world connections creates awareness and understanding of political structures and processes in student's own lives.

Briefly taking a step away from the text I want to bring in a quote from interviewee two (the teacher) who also thought about how to create more personal connections to the topic of democracy. This is an issue that can seem very abstract and difficult for students to grasp, according to this teacher:

"this is already relatively abstract for children and not necessarily obvious. And you have to think about it a bit, how do we create the connection to the game, so to speak, which is not immediately obvious?" (Int. 2, 39:24). "It's called life-world references...What is the life of an 11, 12, 13, 14, year old child? What could he be interested in?" (Int. 2, 40:39).

The concepts and practices that constitute democratic community building, such as petitioning or civic initiatives can be difficult to imagine for children. Connecting the ideas that are brought up in the game and the lesson plans to the student's own lives makes these democratic practices more visible to the students. The teacher's perspective on what it is like to teach this topic provides additional insight. It shows that creating connections between the meaning of democracy or the issue of democratic community building, and student's own lives is an important part of what the lesson plan tries to convey.

The examples from above showed language from the text that is focused on the connection from the game and curricular topics to the student's own lives and experiences. There is also,

however, other language in the curriculum, primarily in units building upon the basic unit, that represent a shift almost completely from the game and the city council simulation to student's own lives. My main analysis focused on the first three basic units, but in continuing to code other units I found that there was one significant difference that needs to be mentioned.

After the first three units, the text's language is completely focused on how students can engage in democratic community building in their personal lives and has almost entirely moved away from the game and the city council simulation. These are statements from the fourth unit that show how students are now asked to think about their own lives and how they can participate in democratic processes:

"Knowing possibilities for direct democratic participation" (Boelmann et al., p. 13).

"Able to take advantage of what political organizations offer (eg. Partys, NGOs) and know how to contact them" (p. 13).

"Students think about their own participation opportunities" (p. 13).

"The students research current citizen initiatives" (p. 15).

"The students create petitions based on their own life-worlds" (p. 15).

In this fourth unit of the lesson plan students get online and research real citizen initiatives and work together with each other to come up with their own initiatives and then present them to the rest of the class. These statements show that students are expected to fully move from the pedagogical tools that the lesson plan employs, the game, in-class simulation, groups discussions, etc., to their own lives. They are now tasked with thinking about the real and actual ways in which they can use their democratic skills. What is practiced with the methods employed in the tool turns into encouraging engagement in real-world activities and issues. The actively engaged methods of learning are imagined as democratic.

This is after all a curriculum for learning about democracy, but I see what the curriculum asks students to do as fostering *particular* democratic practices. What democracy means, what being democratic looks like, and what the methods of teaching this are, could vary greatly from one curriculum to the next. The topics that I have pulled out of the curriculum signify a *certain* picture of democracy, that is enacted by the actual tasks and ways of engaging that the lesson plans outline. The imaginary of civics education that emerges is one of democratic actions imagined as modes of behavior and acquired skills that will *create* a way of moving through the world in which democracy

can function and thrive. The methods of civics education embody the skills and values, or said differently, the skills and values are enacted in the curriculum by its methods.

6.3.2 With the digital game

In this section I also address SQ3 but now I am interested in the game. Following the question, what does the game ask the player to do, I investigated the game itself. Beyond just understanding what happens in the game I wanted to know how it was making the things I experienced happen, what it was making possible for the player. As a game in which the player is the mayor of a town with the job of providing for its residents, the game is about governance. In my analysis I see governance as enacted in certain ways through the game's design. Designed objects have political capacity, as Winner (1980) argues, the way they are constructed carries meaning and matters in our understanding of their role in society. And from the point of view that objects are enacted, that they are made through and by their social situations and relations, I explored how the game makes governance (Mol, 2002). Since it was outside of my scope and resources to ask students who had played the game about their experience, I played the game myself keeping the question in mind, what is the game asking me to do. I also discussed the game in detail with interviewee number one, who provided substantial insight into the thoughts that went into designing the game. These insights and my notes from playing the game over and over again, provided the data for my analysis in this section.

6.3.2.1 *Acquiring resources*

In my analysis of the game and based on insights from interviewee number one I concluded that the game requires the player to put nearly their entire focus on acquiring resources. As discussed in the section of the methods chapter on the case study, your one role in the game is to be the mayor of a town and to please your residents. Ensuring you have lots of satisfied residents allows you to win. Through many rounds of playing, I felt the focus on resources, and this was confirmed in conversation with interviewee number one. This need for resources comes through in the design, how you must play the game to win and aspects of the game's mechanics. Before diving into my experience playing the game, I want to give some background information that came from the interview.

With regard to the conferences bringing together mayors from various small towns along the refugee routes, interviewee number one talked about a particular feeling and experience that he describes as a "leitmotif of the whole issue". Many mayors had the feeling of helplessness in their quest for resources. In the following quote, interviewee one describes one of the stories heard from the mayors, which demonstrates this feeling experienced by many of the mayors at the meeting:

“The one thing I will never forget was. It was, um, in Italy there was a mayor of a small village...it was on the coast and it was a place where a lot of people landed on boats. And he said it was with a right-wing government in Italy at the time. He said it was nice that they are saying I should close the borders. Yes, but they're sitting in Italy, in Rome, on their upholstered armchairs. And the man they're expecting to take in the woman who's climbing over the harbor with two children and not kick her back is me, and that's what I'm doing. That's the kind of thing that stuck [with me], that the EU is powerless. The states are playing their political game of representation, which has [nothing] to do with reality. And the people who actually have to solve the problems are mayors of municipalities with 50,000 inhabitants, who in reality have no money, no resources, no nothing. Yes, that's how it is. This enormous helplessness in the face of this situation was simply a leitmotif of the whole issue.” (Int. 1, 13:23).

What stood out to interviewee one from this story was the helplessness that the mayor felt toward this situation. And notably, a disconnection, maybe even resentment by the mayor, that neither the national government nor the European Union was helping in a meaningful way. The mayor describes being left to deal with very dire situations, without the necessary funds and resources to address the influxes of people in those small towns.

The game itself also demonstrates this need to acquire resources and the feeling of helplessness in that. Paying attention to aspects of the game's design makes this visible. I took the screenshots below while playing the game. The first screenshot shows a moment in the game where I didn't have enough resources to fulfill one of the requests.



Figure 2: Screenshot (WOTI, Majority-Game, 2024) - A request but not enough resources

The request was made by the social interest group to build a pub. To do this I first needed to open a people's office, but I didn't have enough resources. In the game there are management offices for the

different interest groups, such as the people's office for buildings intended for socializing. Before opening a pub, you must open the management office, and this also requires resources, such as wood or stone. Below is a memo I wrote about this aspect of the game after I had played a few times and ran into the issue of missing resources more than once. It describes what that situation was like in the game.

I have a request by residents wanting a pub, but I cannot fulfill the request for lack of resources. I need more money so I can purchase more resources and then fulfill this request. It feels strange to just have to wait, and not be able to do anything. The requests are displayed on the right side of the screen, and the resources at the top next to the money that is generated from building work sites. At this point I only have one request, so I can just wait a bit and the work sites I already built will generate some money. Once I have enough, I can buy wood or wheat, whatever I need to open up the people's office and then the pub. So, it's just about waiting right now. Essentially, when I don't have too many requests I just have to wait until the revenue builds up.

Excerpt from Personal Notes – Issue of missing resources

I had figured out that I needed to wait to purchase more resources for building until there was enough revenue saved up from the little industry I had managed to build at that point. It became clear to me that there was a strong relationship in the game between the resources you had, the revenue from what you had built up so far, and what you were able to do for the residents. Below is a screenshot showing what this looks like in the game. It is an image of a point in the game where I have a decent number of resources, and a good amount of revenue saved up to buy more.



Figure 3: Screenshot (WOTI, Majority-Game, 2024) - Having enough resources

The experience I had playing the game was that you are constantly trying to acquire resources, and that this is all you do. Sometimes you build up a good stash, but that can quickly dissipate when you have a lot of requests. Fulfilling the public interest is easy when money is plentiful, and resources are available. The experience of having plenty of resources and addressing citizen concerns versus having few resources and trying to address citizen concerns are both possible in the game. This reflects the huge emphasis on resources that interviewee one had described hearing from the mayors.

The following paragraphs show how this is also specifically expressed through the design of the game, as a result of decisions made by the game's designers and developers. Interviewee one had some insight into this and why collecting resources and money was the main goal of the game, not just from a player and content perspective, but from the designer and game mechanics perspective. In this quote taken from our interview, interviewee number one talks about how acquiring money and resources is the driving force of the game, and this is expressed both technically and topically.

"So the money is definitely the driving factor. There are two reasons for this. One is technical, one is thematic ... The technical reason is - money is easy to regulate. So, it's a number that goes up and down. You can sort of game design technically, just lift things off themes like money ... And the thematic component is that this topic is always about money. So, it has a lot to do with it, especially there were a lot of initial ideas in which the state was the opponent. The idea was that you ask the state for help that never comes" (Int. 1, 09:58).

Money is technically speaking a straightforward game mechanic that is easy for the designers to implement in the game. Having numbers go up or down was relatively easy to develop and could then be used to base a theme off of in the game. From the mayors at the mayoral conferences the game designers and developers knew that content wise the focus on money and resources plays a huge role in a town's ability to provide for its residents. And as I also showed in my own experience playing the game. I have already described the situation in the game where you don't have enough resources, but also not that many requests, so you can just wait and eventually the revenue will be enough for you to fulfill a request. The opposite situation is also possible though. The situation in which you don't have enough resources or money in the bank, and lots of requests. You also have another job in the game though, aside from building work sites and addressing citizen concerns. You must build housing. There is a point in the game where all of this comes together.

6.3.2.2 Building housing

This next section shows how there is a tension in the game between providing housing and fulfilling requests. This memo describes the stress I felt from that tension, which had actually been designed into the game.

One of the first things I experienced in the game was realizing that I had to be careful not to build too many houses at once, because then you would be out of money and not be able to provide jobs. It took me a few games to realize that although my instinct was to make sure all my citizens had a place to live, this was not how I could win the game. At the beginning of the game, I didn't have a lot of money to pay for resources and building projects, so I had to wait longer for the work sites I did have to generate money. It was stressful to see the number of people who don't have a house and/or a workplace, and to see them protesting. I was very confused at first, because I thought I should be able to provide my citizens with housing and I didn't realize that I couldn't do it because I didn't have the resources. I had to wait for more money, and I couldn't do anything, I was stuck, but the citizens were protesting and were unhappy. This made me feel stressed. I wanted to do something, but I couldn't.

Excerpt from Personal Notes: Feeling the tension between providing housing and fulfilling requests

It felt instinctively wrong to focus on building up the industry (work sites) while so many people were homeless, but the game didn't allow me a choice. I had to first create work sites and jobs that would generate income for the town before I could build housing. There might be five requests at once, but you don't necessarily have resources to address all five at the same time. And then you have the added issue of building housing, and if you don't build enough housing the residents begin to protest in the town square, which can lead to dissatisfaction in the town, and eventually residents leaving. If too many residents leave, you lose the game.

It was certainly stressful to balance the requests, the housing, and keeping everyone happy. But as I discussed in the section on what games can do, what I experienced was what the designers intended to happen. It is even what the designer described as being a benefit of games, something that a game can offer that another medium may not. Games have the ability to transport you and make you feel something that could be difficult to generate through other teaching mediums. It was the intention of the game designers to have the player feel this tension between resources and housing. The stress of that tension is what they had heard at the mayoral conferences and through game design they were able to create that feeling for the students playing.

In my case the game was successful in making it possible for the player to experience what it imagines to be a difficult aspect of democratic governance, namely, the issue of not having the resources to address basic needs and specific needs of different interest groups. By designing the game so that you have a limited number of resources, the designers created a situation in which the player can feel something that is maybe a little like what the real-world mayors felt and described at the mayor conferences. The tension between resources and providing for resident's needs is created through the game design. The game enacts the job of a mayor as the responsibility to acquire the resources necessary to provide for residents. This is a very material depiction of democratic governance. Civics education is not just about skills and values, but also about understanding the real situations of governance.

6.3.2.3 Pleasing the majority

There is another aspect of governance in this game that I want to highlight. Governance is enacted as the job of making the greatest number of people happy. There are multiple interest groups who constantly vie for the attention of the mayor. As I showed in the two sections above, the mayor's governance of the town is enacted as acquiring resources, building housing, and the tension between these two. The interest groups making these requests also require that the mayor actually fulfill the majority of requests. Governance is also enacted as pleasing interest groups. The game shows you when the townspeople are upset. When you don't build enough housing, the people begin to protest in the town square with signs that have little houses on them, as seen in this screenshot:



Figure 4: Screenshot (WOTI, Majority-Game, 2024) - Residents protesting lack of housing

At the top of the picture, you can see the number of people in the town and to the right of that you can see how many don't have work and how many don't have a house. In this instance there are nine people in my town and six of them don't have a house. Then, on the left side of the picture, you see a happiness barometer, and this changes throughout the game based on how many people are in your

town, whether you can house most of them, how many have jobs, and how quickly you can fulfill the requests that are made by the residents. This happiness barometer goes up and down. I noticed that it drastically goes down when you have too many people without a home. This demonstrates the game's goal of keeping as many people housed and with a job as possible. The fewer people who have these basics, the more upset the town gets, and eventually they will start to leave. This is a sign that you may lose the game. Happiness on the barometer is performed as housed and with a job. The more residents have a place to live and work, the higher the barometer goes.

Below is another screenshot where we see in more detail the number of people who feel happy, just content, or upset. This info box also shows how many people are in each character group and what their interests are. In this instance the same number of characters show interest in each of the categories, but it is also possible to be in the situation where more characters show interest in social activities than in the building industry.



Figure 5: Screenshot (WOTI, Majority-Game, 2024) - Interest groups and happiness barometer

The happiness barometer and the info box are mechanisms in the game that signify to the player how the decisions they make about when and whether to fulfill requests and build housing affect the people in the town. According to the game design, if there are a lot of characters interested in being social then you should prioritize requests that provide opportunities for socializing, such as building a pub or a marketplace. This will make more people happy, and the happiness barometer will go up. When you ignore this, and don't fulfill the requests of the majority soon enough, the happiness barometer suffers. Either it doesn't move at all, or it goes down. The most significant decrease happens when people begin to leave, and in my experience, this tends to happen when not enough people have housing. The happiness barometer and the indicators showing you how many people are interested in something are tied to how well you do in the game. In my experience playing the game,

you cannot win if you ignore this. These aspects of the game are designed so that you make decisions that please the majority. They enact the job of governance as pleasing as many people as you can.

Compared to the skills and values that are enacted in the curriculum text, what is enacted in the game is much more focused on material dimensions. Governing and what that means is at the heart of this game. Through its design – possibilities and limitations, and the way the player can win – the job of mayor, of governing, is enacted as both material and values based. The emphasis on acquiring resources and providing housing shows a commitment in civics education curriculum to the material dimensions of democratic governance. It shows that by providing jobs for residents, a town can build up a work force capable of generating tax revenue for the town. We see that this is important in the need to also provide housing for enough residents, which is only possible with enough tax revenue. Pleasing the majority of residents is a value-based commitment to governance, that shows the interest in this civics education curriculum in teaching that a primary concern of democratic governance is to make the highest number of people happy.

6.4 Conclusion

To conclude this chapter, I will sum up my empirical analysis. I have demonstrated that Majority, although a seemingly straightforward inconspicuous tool, is complex and made up of relations between its material and social components and contexts. The RFCDC as a policy initiative of the EU and the political situation of the refugee movements in Europe in 2015, create the context for which I have come to understand this civics education tool a bit better. They are enacted in the language of the curriculum text and through the stories about this tool told in the interviews. As I showed in this section as well the socio-political context is also enacted in more implicit ways through the design of the game. Then, I looked at how Majority is implemented and found that the game significantly impacts the implementation. It provides the learner and user of the tool the chance to experience the topics of the curriculum. I show how the game can do this by evoking feelings that are designed into the game. I demonstrated that the purpose of the game was to be a discussion starter, and that the game needs the curriculum text to be a full-fledged learning material. In addition, the fact that the game is digital also made the implementation something that should be thought about and considered carefully, and correct timing was important in this. Finally, I analyzed what the game and curriculum text ask the person using it to do. Here, I laid out several methods that embody democratic values in them that I found the curriculum text to engage its user in. And the game, although not necessarily embodying values in all of what it asks its player to do, enacts the value of experiential learning by being a game. The connections between the curriculum text and the game,

and that what they teach is created through how they do it, is what I discuss in the final chapter of this thesis.

7. Discussion and Conclusion

In this final chapter I will discuss the conclusions I have drawn from my empirical findings. The goal of this project was to understand how Majority enacts democratic values. I wanted to explore how this tool works so I could understand the values it imparts. Using both the theoretical perspectives that sensitized me to different aspects of the empirical findings and the literature that I embedded this project in, I discuss what I have come to realize regarding the question that guided me throughout this research project. **How are democratic values enacted in the entanglement of the curriculum and game?** Following this question led to three main conclusions: the value of conscientious technology use is enacted in the curriculum's handling of the game; the value of experiential learning is instilled through the tool's methods; and the contexts of the game and curriculum enact democratic values in both idealistic and realistic ways. As I go through each of them, I will explain how the theoretical lenses that I drew on helped me make sense of my analysis and come to each of the conclusions. I drew on educational theory, the concepts of relational materialism and enactment, and an STS perspective on design. They acted as frameworks that allowed me to see different aspects of the material and provided a perspective that shaped what I saw in the analysis. I also provide connections to the literature that I presented in chapter two. This body of literature is where my findings could find a home, and here in the discussion I make explicit how what I have learned speaks to that literature.

Before diving into what I learned from the analysis, I explain how the notion of enactment has shaped my research question and the following findings, because it plays a role in all of them. Mol (2002) argues that objects are multiple, that they are only a singular entity with one meaning if they are removed from their contexts. She uses this argument to say that objects are thus *enacted* in the practices in which they are used. In her case, disease is something that is *done* and, in my case, I use this perspective to say that educational tools are *done*. Majority is *done* because it is actively made in the relations with its material components and social contexts. The way that Majority is practiced, how it is implemented and used, is what enacts the values it teaches. In my analysis I learned that the aspects of Majority that I discuss in the following three sections are made to be democratic values because they are enacted in the particular entanglements of the curriculum and game.

7.1 Conscientious use of technology

The way that the game is introduced in the curriculum showed that conscious and careful use of technology is a value that is embodied in this educational tool. In the analysis I paid close attention to how the game and curriculum interacted, because from Law and Mol's (1995) notion of relational materialism I knew that Majority as a tool is formed through these interactions. Viewed as a material, the interactions between the components of Majority are what create it. This perspective made me attentive to the points at which the curriculum and game have some kind of interaction. In this case the interaction was simply that the curriculum uses the game, which I saw in the curriculum text when the game is introduced.

It is in this introductory phase of the curriculum that the conscientious use of technology is enacted. This curriculum uses the digital game in a very specific way that makes it solely an accompaniment to the learning material, as opposed to a stand-alone digital program that could claim to do the work of teaching. Paying attention to when the game is introduced and how, showed that the game is only put to use in the curriculum at the very beginning in the first two units. The first unit in the basic lesson plan introduces the game and has the students play it together. The second unit has the students play it again but with a different purpose. After playing and discussing it, the lesson plans have the teacher move on to other activities. All the other units, from the last unit of the basics (unit 3) to the units for more advanced students, do not mention or go back to playing the game. The curriculum is focused on teaching topics about democratic participation and governance, but this is not done in the game alone. As I discussed in the literature review, Winner (2005) points out that technology is not inherently useful to democratic engagement in society. We should not be too quick to accept digital technology as the best solution. As demonstrated in quotes from the interview with the designer, it was clear that the game should not be seen as equal to the curriculum. The designer emphasized that one can learn about democratic community building from the game but that the educational depth was with the curriculum. It accompanies the curriculum but is not where the main learning takes place. This was due, at least in part, to what the designers were able to achieve with a digital game. Technological citizenship as described by Frankenfeld (1992) should allow technology into the democratic process, to subject it to governance by the people simply because it impacts us. A conscientious use of technology emerged over the years as a democratic value because it gives the people the upper hand on what technology can do for society. Rather than seeing how digital tools can fit into our social worlds, a democratic use of technology is conscious of its purpose and pays attention to what it can do for society.

Coming back to the notion of relational materialism, technology and society must be part of the same thought. Materiality and sociality are produced together, meaning that we cannot understand Majority as a material without paying attention to the social world in which it is embedded as well (Law and Mol, 1995). It is embedded in many different social worlds that will always be changing. One of these social worlds that I had a glimpse into was its implementation in a formal classroom setting. This showed that not only is the game just one part of the curriculum at the beginning of the lesson plans, but that due to the nature of a classroom and the children in it there are things that impact the use of the tool. The timing of introducing the tool, when and for how long, are important factors in its successful implementation. Also, a seemingly small but crucial aspect was that the devices on which the game would be played needed to be charged. This also revealed that being aware of the game as a digital technology was an important factor in using it in the classroom. This careful and conscientious way of handling a digital tool is also reflected in the EU's initiatives to instill in people an aware and critical relationship with technology (EC, Digital Action Plan). And as argued by the European Group on Ethics in Science and New Technologies this is important in the current political climate in which both democratic values and institutions are under threat from the rise of extreme right-wing politics (European Commission: Directorate-General for Research and Innovation et al., 2023).

Mol's (2002) notion of enactments being multiple, that there are various ways in which materials become what they become, made me attentive to the digital as something material. The digital becomes material in its interactions with its social world and other materials. This perspective allowed me to see Majority as a tool that does something, just as other materials like wood for example, can be put to use in providing a chair to sit on or a bed to lie in. When I focused on the interactions that the components of Majority have with each other and their social worlds, I saw that the digital aspect is not a big part of the overall curriculum and speaks to the arguments and current educational initiatives on handling digital tools carefully in teaching and learning.

7.2 Learning through experience

The democratic value of experiential learning is enacted through Majority's methods. This became visible in tracing how the game and curriculum put different methods of communication to work and how they relate to each other. The methods that the curriculum uses to teach its content on civics education embody the values and skills it communicates. As discussed in the previous section and in the theoretical chapter, framing this tool as an object that is enacted in its practices showed that the way the components teach are what creates the values it imparts. Asking what the curriculum and game do led me to the methods that they use. Both game and text enact a version of the democratic through their methods.

In the empirical findings I showed how the curriculum text uses *role-play* and *group work* to teach students about democratic participation and engagement in a community. These are two prominent activities in the curriculum that embody democratic values. For example, through role-play students put themselves in the shoes of a city council meeting. Here they have the chance to experience what that type of democratic engagement might feel like, what questions could arise and what interests they have in their community that are worth fighting for. Through group-work the students engage with each other, this also makes other actions that I traced possible, such as *creating connections* and *engaging with difference*. These methods that the curriculum asks students to engage in embody the value of experiential learning by having students be active in the learning process. Dewey's democratic theory of education frames this type of learning as valuable to building democracy, because by experiencing the values the student is actively engaged in their own learning (2024[1916]). This is important in Dewey's theory of education because a democracy requires independent and self-directed people, as opposed to people who have only learned to follow a regimented routine. Education according to this perspective should be democratic in its methods if it is to help the next generation understand what democratic engagement and governance are. Rather than sitting and listening to someone or something explain what it means to engage with others when you disagree, or tell you that self-reflection can be a useful tool for understanding oneself and one's own point of view, students are asked to participate in these values. By working in groups and sharing in plenary, students are given the opportunity to hear the opinions of others and voice their own. Dewey's framing of education as a practice that needs to be democratic for it to teach democratic values led me to see the methods that Majority uses as embodying democratic values in its activity.

The game is also part of the curriculum, which is, as described in the previous section a material component of Majority, and it is also a method of learning in its own right. This is made clear based on the arguments by video game researchers, such as J.P. Gee (2010) who argues that what most digital games have in common is the chance to work through a problem on your own or together with others and receive instant feedback from the game. Some games also allow the player to tinker with the technical possibilities of the game and be the designer themselves, which gives the player even more agency (Burke & Kafai, 2016). This kind of problem solving, and especially those games that allow you to make your own changes, make for a relatively self-directed learning experience. The game relies on the player having a particular experience to learn about governance. The player puts themselves in the shoes of a mayor and experiences what democratic governance might be like in the situations that are depicted in the game. By asking myself what the game wants the player to do I traced the actions that a player has to make in the game, the tasks you have and what it looks like to carry out those tasks. This gave me a deeper understanding of what happens in the game. From this

emerged a picture of governance focused on the role of a mayor as operating under conditions of few resources and many needs, with the job of responding to these as quickly as possible. As I described in my empirical findings, this aspect of playing the game was stressful because of the tension I felt between the different things I had to do in the game to win and what I thought of as the right thing to do. For example, I wanted to build everyone in the town a house so no one would be without one, but this was not possible because I only had a limited amount of money and also had to keep building up the town's industry to create more revenue. I learned from the designer that this was an experience that had been explicitly designed into the game. The designer saw the value of Majority in being able to provide experiential learning. The game is a method that the curriculum explicitly uses to provide a learning experience, but this is not just any experience. It is a particular experience that is enacted in the design decisions and context of the game. Winner (1980) argues that objects have politics and are therefore not neutral but value laden and thus have been subject to decisions made by the designer of the object. Decisions and context flow into the design of an object, whether explicitly or implicitly experienced by the user of the object. This perspective showed that the decisions and context of the designer were important for understanding the experience that the player has in the game.

I also want to touch on the concept of adversarial design here, because it shows that this experiential learning that is enacted through methods in the curriculum and game make messy and difficult parts of democratic governance and engagement visible (DiSalvo, 2012). In my analysis I learned that Majority is not a clear example of adversarial design because, although it provides moments of time to engage with contesting views like in group discussions or through specific discourse on *engaging with difference* that allows students to experience disagreement and debate, it is not central to its goals or design. Speaking just to the game, I experienced a type of governance that was stressful, but I also found that in order to win the game I had to try and please a majority of people. The goal was to make as many people as possible happy, and not to engage in disagreement. There is a little more room for this in the curriculum text with its methods of groups work and engaging with difference. What projects of adversarial design do though, as DiSalvo (2012) argues, is to make a complicated situation or topic visible and understandable through the design of an object. In this case being the mayor of a town in the game and engaging in municipal council meetings in the curriculum text.

I found that both the game and curriculum embody experiential learning. The curriculum uses methods like group work, role-play, or making connections to give students an experience through which they are actively engaged in practicing a democratic value. And the game is in itself a method

that allows the player to feel through emotion what a certain kind of governance could be like. Enacted in different ways, the two components of *Mayority* create an experience that, as Dewey's theory of education tells us, is a democratic method of education.

7.3 Drawing on context

The designer was explicit about the game allowing the player to have an experience that they may not with another method of learning, but with an STS lens on design that says social context matters in the creation of objects there are also more implicit ways that designers influence the use of an object. Designers have their own values and contexts from which they come and within which they do their work. The concept "design style" (Cherkasky, 2004) also makes clear the role that context plays in shaping an object. "Design style" draws on Fleck's (1979[1935]) notion of "thought style", which argues that there are overarching modes of thinking and acting in society that are situated in contexts. *Mayority* has a particular design style. Its design is shaped by the context in which it was created. Through context that I was made aware of in the interviews, I found that governance in the game is about the control of resources.

In the game's design, the context of the 2015 refugee crisis is used to make governance about providing public goods under conditions of pressure – few resources, many needs and requests. The designer had heard about the experiences of mayors along the refugee routes, during the swift increase of refugees moving from northern Africa and the Middle East through Europe in 2015 and 2016. This is the context behind the experience that the designers intend to communicate in the game. It speaks to what Osler (2020) points out, which is that the 2015 refugee "crisis" in Europe showed that there are sometimes discrepancies between the European Commission's various initiatives to build democratic culture and what member states do on a national level. In practice, following ideals of democratic governance was not always a priority. In my research on the game, I found that being the mayor was a bit of a stressful experience. There was not the ability to be an ideal "democratic" mayor. The conditions were not optimal, especially at the beginning of the game where you have the least amount of money and resources but the number of people entering your town looking for work and housing is increasing. Governance in the game is not depicted as a picture of governing based on abstract ideals, it is primarily about resources and controlling them in a way that serves many people, as the producers of *Mayority* heard in stories at the mayor conferences. In the game, you quickly realize that not all people will be provided for at once. It is these experiences you have as the player that make the game first and foremost about resource control.

The curriculum on the other hand draws on the context of a Council of Europe framework for building democratic societies, the *Reference Framework of Competencies for Democratic Culture* (RFCDC). Majority draws on the policy context of the European Union by basing its content on a European Commission policy initiative. This primarily plays a role in the curriculum text and acts as a reputable source to base the content of the curriculum on. The RFCDC is a general, and also idealistic, way to teach democratic values that because it is not rooted in a specific real world context. Osler's (2020) arguments showed that this idealistic focus can be an issue – the European Commission's focus on ideals of democracy and integrating migrants and refugees into these ideals, rather than focusing on the existing policies and structures that exclude people, can entrench exclusionary policies and attitudes. The curriculum does not deal directly with ways that people are excluded, as it is intensely focused on ideas around inclusion, tolerance, dialogue, etc. And this is not to say that these ideas are not important as well, but what Osler has pointed out is that *not* engaging with exclusionary practices directly can also be harmful. This shows the value of context in civics education. Institutions, policies, and objects of teaching, like Majority, have a social context. Understanding this context helps move away from solely teaching ideals that may or may not be achievable, to teaching democratic practices, like governance, that are anchored in real situations. I found that this is what the game provides the curriculum lesson plans. Although the curriculum draws heavily on the idealistic values of the RFCDC, the game gives students an experience that is rooted in a particular context.

The STS perspective on design foregrounds the political capacity and context of designed objects. But Winner's (1980) argument that, the way artifacts or objects are arranged is meaningful, showed me the value that the two components of Majority have for each other. The game and curriculum are incomplete without each other. The more idealistic values of democracy that are enacted in the curriculum text are accompanied by a real-world situation and real people's experiences in the game. I use Mol's (2002) idea that objects are enacted in their contexts, and that they are multiple, meaning that they can change based on the situation they are part of, to conclude that the particular contexts that Majority is situated in, enact it as an object of civics education that values both the idealistic and realistic approach. Majority does not assume to be a complete tool of civics education with just one or the other, the curriculum text or the game, but assumes that these two components are dependent on each other. This dependent entanglement of curriculum and game enact a type of civics education that values idealistic practices of democracy *and* more realistic practically grounded stories of democracy at work.

7.4 Concluding thoughts

Through my analysis I concluded that the game and curriculum are entangled in their timing, the contexts they draw on, and more indirectly, on the methods they each employ. Timing showed that a careful and conscientious use of technology is important in Majority. The different contexts showed that one tends toward a more idealistic teaching of democratic values and the other toward a more realistic teaching grounded in a real-world experience. This makes them dependent on each other. The methods of teaching showed that values are embedded within Majority. The value embedded in the various methods that the curriculum text and game use is overwhelmingly experienced based learning. As one tool, the game and the curriculum, communicate various democratic values through their design, based on both ideals of democracy and experiences had in the world. The design of the curriculum (the way the game is used and the methods that it relies on) and the design of the game (the decisions that were made to create a certain experience and the context out of which those decisions arose) embody a set of democratic values as enacted through all of the ways that the game and curriculum are entangled. To answer my primary research question, democratic values are enacted in the entanglements of Majority through timing, methods, and context. Together these entanglements show that visions of civics education are embedded in objects of teaching, because the democratic values that Majority teaches are inextricably linked to how it teaches. The timing, methods, and contexts of Majority show that civics education is envisioned as careful of technology, experience focused, and as a balance between ideals of democracy and real-world based situations of democratic governance and participation.

The STS literature on education and training is often focused on showing how context plays a role in the way that scientific practices create knowledge. For example, STS has shown that the way scientists and engineers are trained is indicative of how they understand concepts and theories, and generally how they conduct their work (Warwick & Kaiser, 2005). Based on this argument, the way that students learn civics education can have an impact on their understanding of democracy and democratic values. This project adds to the STS work that sees training, education, and learning as important spaces of research when aiming to understand how people acquire knowledge of something. My hope is that in a time where the ideas and practices of democracy are often tested, researchers and other interested people see the importance of knowing where our understanding of democratic engagement and governance comes from. Visions, images, or imaginaries of democracy are created, and it matters what this creating looks like and what it results in. The democratic values that young adults take into the world with them are shaped by the people and objects they encounter, and it is therefore crucial to pay close attention to how we teach them.

References

- Asdal, K., & Reinertsen, H. (2022). *Doing document analysis: A practice-oriented method*. SAGE Publications Ltd.
- Bijker, W. E. (1995). *Of bicycles, bakelites, and bulbs: Toward a theory of sociotechnical change*. MIT Press.
- Bogost, I. (2006). *Persuasive games: The expressive power of videogames*. MIT Press.
- Boelmann, J. M., König, L., Gimpl, F., & Jeller, M. (n.d). *Majority: Politische Bildung und Geschichte*. World of Tomorrow Institute GmbH. Retrieved from <https://shop.majority-game.com/produkt/politische-bildung-und-geschichte/>
- Buchanan, R. (2001). Design and the new rhetoric: Productive arts in the philosophy of culture. *Philosophy & Rhetoric*, 34(3), 183–206. <https://www.jstor.org/stable/40238091>
- Burke, Q., & Kafai, Y. B. (2016). *Connected gaming: What making video games can teach us about learning and literacy*. MIT Press.
- Campbell, D. E. (2019). What Social Scientists Have Learned About Civic Education: A Review of the Literature. *Peabody Journal of Education*, 94(1), 32–47.
- Caspray, W. R. (2019). Education for democratic citizenship from critical thinking to inquiry learning. In C. L. Lowery & P. M. Jenlink (Eds.), *The handbook of Dewey's educational theory and practice* (pp. 113–133). Brill.
- Chang, E. (2019). Beyond workforce preparation: Contested visions of 'twenty-first century' education reform. *Discourse: Studies in the Cultural Politics of Education*, 40(1), 29–45. <https://doi-org.uaccess.univie.ac.at/10.1080/01596306.2018.1549702>
- Charmaz, K. (2014). *Constructing Grounded Theory*. United Kingdom: SAGE Publications.
- Cherkasky, T. (2004). Design style: Changing dominant design practice. *Design Issues*, 20(3), 25–39. <https://www.jstor.org/stable/1511986>
- Council of Europe. (n.d.). *Vocational education and training (VET)*. Retrieved November 29, 2024, from <https://www.coe.int/en/web/reference-framework-of-competences-for-democratic-culture/vocational-education-and-training>
- Council of Europe. (n.d.). *Reference framework of competencies for a democratic culture (RFCDC)*. Retrieved November 29, 2024, from <https://www.coe.int/en/web/reference-framework-of-competences-for-democratic-culture/home>
- Council of Europe. (n.d.). *Digital citizenship education*. Retrieved February 4, 2025, from <https://www.coe.int/en/web/education/digital-citizenship-education>
- de Abreu, B., Mihailidis, P., Lee, A. Y. L., Melki, J., & McDougall, J. (2017). *International handbook of media literacy education* (1st ed.). Routledge.

- Demokratie Zentrum Wien. (n.d.). Retrieved from <https://www.demokratiezentrum.org/>
- Dewey, J. (1903). Democracy in education. *The Elementary School Teacher*, 4(4), 193–204. <http://www.jstor.org/stable/992653>
- Dewey, J. (2024 [1916]). *Democracy and education* (N. Tampio, Ed.). Columbia University Press.
- Diendorfer, G. (2022). “Der lange Anfang”. Der Schwierige Weg der Institutionalisierung von Politischer Bildung in Österreich. In *Politisch gebildet – aber wie?* Informationen zur Politischen Bildung Nr. 50. Forum Politische Bildung (Hrsg.).
- DiSalvo, C. (2012). *Adversarial design*. MIT Press.
- Dishon, D., & Kafai, Y. B. (2022). Connected civic gaming: Rethinking the role of video games in civic education. *Interactive Learning Environments*, 30(6), 999–1010. <https://doi-org.uaccess.univie.ac.at/10.1080/10494820.2019.1704791>
- European Commission: Directorate-General for Research and Innovation, European Group on Ethics in Science and New Technologies, Biller-Andorno, N., Céu Patrão Neves, M. d., Laukyte, M., Łuków, P., Mallia, P., Molnár-Gábor, F., Murphy, T., Nys, H., Palazzani, L., Prainsack, B., Sahlin, N.-E., Sharon, T., Hoven, J. v. d., Veselská, R., & Vidalis, T. (2023). *Opinion on democracy in the digital age*, Publications Office of the European Union. <https://data.europa.eu/doi/10.2777/078780>
- European Commission. (2023). *Working group on equality and values in education and training: Issue paper on citizenship education* (B. van Driel, V. Donlevy, & M. Mels, Eds.). Publications Office of the European Union.
- European Commission. (n.d.). *Digital education action plan*. Retrieved February 5, 2025, from <https://education.ec.europa.eu/focus-topics/digital-education/action-plan>
- Ezrahi, Y. (2012). *Imagined democracies: Necessary political fictions*. Cambridge University Press.
- Fisher, J. (2020). Digital games, developing democracies, and civic engagement: A study of games in Kenya and Nigeria. *Media, Culture & Society*, 42(7–8), 1309–1325. <https://doi.org/10.1177/0163443720914030>
- Fleck, L. (1979 [1935]). Introduction to thought collectives. In *Genesis and development of a scientific fact* (pp. 38–51). University of Chicago Press.
- Frankenfeld, P. J. (1992). Technological citizenship: A normative framework for risk studies. *Science, Technology, & Human Values*, 17(4), 459–484. <https://www.jstor.org/stable/689737>
- Gee, J. P. (2010). *New digital media and learning as an emerging area and “worked examples” as one way forward*. MIT Press.
- Gorur, R., Hamilton, M., Lundahl, C., & Sjödin, E. S. (2019). Politics by other means? STS and research

- in education. *Discourse: Studies in the Cultural Politics of Education*, 40(1), 1–15. <https://doi.org/10.1080/01596306.2018.1549700>
- Gutman, A. (1987). *Democratic education*. Princeton University Press.
- Hillygus, D. S., & Holbein, J. B. (2023). Refocusing civic education: Developing the skills young people need to engage in democracy. *The ANNALS of the American Academy of Political and Social Science*, 705(1), 73–94. <https://doi-org.uaccess.univie.ac.at/10.1177/00027162231177798>
- Himmelfmann, G. (2013). Competences for Teaching, Learning and Living Democratic Citizenship. In M. Print, D. Lange (eds) *Civic Education and Competences for Engaging Citizens in Democracies*. Civic and Political Education, vol 3. SensePublishers, Rotterdam. https://doi.org/10.1007/978-94-6209-172-6_1
- Jensen, E. (2016). *Doing real research: A practical guide to social research*. Sage.
- Jensen, E. A., & Laurie, C. (2016). How to be an ethical researcher. In *Doing real research: A practical guide to social research* (pp. 48–66). Sage.
- Kaiser, D., & Warwick, A. (2005). Conclusion: Kuhn, Foucault, and the power of pedagogy. In D. Kaiser (Ed.), *Pedagogy and the practice of science: Historical and contemporary perspectives* (pp. 393–410). MIT Press.
- Kenner, S., Kleinschmidt, M., & Lange, D. (2025). Inclusive citizenship education. In S. Kenner, M. Kleinschmidt, D. Lange, F. Reichert, & C. Schröder (Eds.), *Inclusive citizenship. Citizenship. Studien zur Politischen Bildung* (pp. 87–100). Springer VS.
- Lange, D. (Ed.). (n.d.). *Schriftenreihe Citizenship. Studien zur Politischen Bildung*. Universität Wien. Retrieved from <https://www.demokratiezentrum.org/forschung/publikationen/reihe-citizenship-studien-zur-politischen-bildung/>
- Levine, P. (2023). Politics by Other Means: Civic Education in a Time of Controversy. *The ANNALS of the American Academy of Political and Social Science*, 705(1), 24–38. <https://doi-org.uaccess.univie.ac.at/10.1177/00027162231189037>
- Law, J., & Mol, A. (1995). Notes on materiality and sociality. *Sociological Review*, 43(2), 274–294.
- Lerner, J. (2014). *Making democracy fun: How game design can empower citizens and transform politics*. MIT Press.
- Marres, N., & Lezaun, J. (2011). Materials and devices of the public: An introduction. *Economy and Society*, 40(4), 489–509. <https://doi.org/10.1080/03085147.2011.602293>
- Mody, C. C. M., & Kaiser, D. (2008). Scientific training and the creation of scientific knowledge. In E. J. Hackett, O. Amsterdamska, M. Lynch, & J. Wajcman (Eds.), *Handbook of science and technology studies* (pp. 377–402). MIT Press.

- Mora-Gamez, F., & Davies, S. R. (2023). More-than-tech communities: Alternative imaginaries within hacking and crafting. *International Journal of Communication*, 17, 4182–4195.
- Nationaler Bildungsbericht Österreich. (2024). *Executive summary*. Bundesministerium für Bildung, Wissenschaft und Forschung. Retrieved from <https://www.bmbwf.gv.at/Themen/schule/bef/nbb.html>
- Neys, J., & Jansz, J. (2010). Political internet games: Engaging an audience. *European Journal of Communication*, 25(3), 227–241. <https://doi.org/10.1177/0267323110373456>
- Osler, A. (2020). Education, migration and citizenship in Europe: Untangling policy initiatives for human rights and racial justice. *Intercultural Education*, 31(5), 562–577. <https://doi.org/10.1080/14675986.2020.1794231>
- Packer, G. (2021). Can civics save America? Teaching civics could restore health to American democracy, or inflame our mutual antagonisms. *The Atlantic*. Retrieved from <https://www.theatlantic.com/ideas/archive/2021/05/civics-education-1619-crt/618894/>
- Print, M., & Lange, D. (2013). *Civic education and competences for engaging citizens in democracies* (Vol. 3). Brill.
- Raessens, J. (2005). *Handbook of computer game studies*. MIT Press.
- RFCD. (2016). *Competences for democratic culture: Living together as equals in culturally diverse democratic societies*. Retrieved from <https://www.coe.int/en/web/reference-framework-of-competences-for-democratic-culture/model>
- Rivas, C. (2018). Finding themes in qualitative data. In C. Seale (Ed.), *Researching society and culture* (pp. 451–453). SAGE.
- Sady, W. (2023). Ludwik Fleck. In E. N. Zalta & U. Nodelman (Eds.), *The Stanford Encyclopedia of Philosophy* (Fall 2023 ed.). Stanford University. Retrieved from <https://plato.stanford.edu/archives/fall2023/entries/fleck/>
- Seale, C. (2018). *Researching society and culture* (4th ed.). SAGE.
- Simpson, D. J., & Stack, S. F. (2010). Democracy in education (1903). In *Teachers, leaders, and schools: Essays by John Dewey* (pp. 144–152). Southern Illinois University Press.
- Sismondo, S. (2010). The Kuhnian revolution. In *An introduction to science and technology studies* (2nd ed., pp. 12–22). Blackwell.
- Squire, K. D. (2008). Video games and education: Designing learning systems for an interactive age. *Educational Technology*, 48(2), 17–26. <https://www.jstor.org/stable/44429558>
- van't Land, H. (2013). *Council of Europe Standing Conference of Ministers of Education*. Retrieved from <https://rm.coe.int/conclusions-from-the-andorran-conference-andorra-la-vella-7-8-february/1680994a6c>

Winner, L. (2005). Technological euphoria and contemporary citizenship. *Techné: Research in Philosophy and Technology*, 9(1), 124–133. <https://doi.org/10.5840/techne2005918>

Winner, L. (1980). Do artifacts have politics? *Daedalus*, 109(1), 121–136.
<https://www.jstor.org/stable/20024652>

World of Tomorrow Institute GmbH (WOTI). (2024). Majority. <https://majority-game.com/en/>

World of Tomorrow Institute GmbH (WOTI). (2024). Majority-Game.
<https://majority-game.com/en/the-game/>

Zentrum Polis. (n.d.). Retrieved from <https://www.politik-lernen.at/allgemeines>

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Appendix 2: Image and Text Coding Tables

Coding table – Game

Images sourced from: (WOTI, Majority-Game, 2024)

Scene	Memo	Topic
	Demands/requests are made by residents, and they appear in the form of a pop up on the screen. It is your job to respond to the requests. Sometimes requests are made by groups of citizens with a common interest and other times it is character groups who make the request, such as the mouse citizens.	-Citizen petitioning -Interest groups exist (citizens have different wants/needs)
	When you don't respond to a request nothing happens at first. If you don't respond to many of the requests, then your happiness barometer goes down and your townspeople are unhappy, so they leave the town. Eventually this is how you lose the game, if too many people leave.	-Caring for citizens' needs -Punishment for not being able to provide for your townspeople's needs



When you fulfill a request, the happiness barometer goes up. Even though it says that the mouse citizens gained happiness, the happiness barometer does not calculate per group of citizens but only collectively.

-Fulfilling public interest is valued highly

The town functions at night and during the day, there does not seem to be a difference.



Waiting for revenue from existing industry and production to increase, so that I can fulfill further requests from citizens. At the beginning there is quite a bit of waiting and down time, where you cannot do anything.

-The role of resources
-Sometimes the Mayor is not able to help



Not enough money to fulfill requests and build houses. Requests for housing are never made, but people will start to protest in the town square and eventually leave if I never build houses.

-Housing is a right (townspeople don't ask for it but expect it)
-Demonstrating collective action

Protesting the lack of houses with signs.

Speaking up about problems in the community



Requests come one at a time and relatively slowly, especially at the beginning, so you do not have to make many choices because you are not confronted with an either-or situation. On the right-hand side, you see the demands that have been made and the time you still have to fulfill them. The only thing is that you sometimes have to wait for more money. Nothing bad happens.

The happiness meter starts low and increases as the player creates jobs.

-Fulfilling public interest is easy when resources are not tight and when demands are manageable

-Creating jobs and supporting the workforce is positively rewarded



Sometimes you don't have the resources to fulfill the townspeople's requests. You have to wait until the jobs you created make more money.

As the mayor you can't always provide what people want right away.



Once I figured out that I could neglect the housing for a long time without people leaving the town I knew I didn't have to make a choice between housing and demands for infrastructure. The choice is already made (*not realistic*).

I have so much money I don't have to wait

Allowing people to be homeless is not intuitive, but in the game it is possible to a certain extent. To win you have to focus more on building infrastructure/jobs than housing.

-There is a connection between the wealth of a town and its ability to provide for townspeople.

	anymore, I can build as quickly as I want. Also, more than half the people in my town don't have a home but people continue to move here and no one has left. I can only build houses when I have enough money left after fulfilling people's demands.	The more infrastructure there is the more townspeople work the more money there is, and the more a mayor can do for the citizens. -Jobs are more important than housing.
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Coding table – Curriculum text

Categories	Codes	Topics / Themes
The teaching method	• Asking students questions • Reflection • Worksheets • Plenary discussion • Partner discussion • Groupwork Start • Impulse question • Impulse statement • Think -pair- share • Putting oneself in a role • Leading roleplay discussion • Exchanges with others	Reflection Discussion Interaction
Role of the digital game <i>(image of technology)</i>	• Lesson begins with discussion • Time for set up • Figure out the game together	Technology as a tool The game is not central to learning There is not the expectation that the game can be intuitively learned Absence of the game
Civic Skills <i>(what should students learn how to do)</i> <i>Language that the document uses</i>	• Analytical and critical thinking • Teamwork • Speaking and community skills • Conflict resolution • Expressing own opinion • Individually valued and empowered learner • Taking charge of your own learning	Decision making Responsibility for own learning Voicing opinions Analytical and critical thinking

	• Ability to reflect on choices and decisions • Exchanging different experiences • Decision making not so easy • How to decide what is right • Decision making process • Weighing consequences • Reflecting different needs and wishes of citizens • Develop fitting problem oriented solutions • Group discussion as dilemma situation	
Civic Values <i>(What should students value)</i>	• Orientation toward the common good • Needs in a community • Interests in a community • Citizens have different needs and desires • Valuing democracy • Equity • Fairness • Equality • Rule of law • Responsibility • Mayor, community, individual citizen relation • Tolerance for difference • Interest groups	Community orientation Respecting differences in desires and needs Differences in interests