

Play of the Oppressed

Designing for critical consciousness through play

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June 1, 2023

Abstract

In this thesis, I investigate liberatory pedagogy and liberatory play. The dual goals of the project are to propose a theoretical framework through which liberatory play can be understood as the praxes of liberatory pedagogy; and to explore, by designing teaching tools, how liberatory play can be brought to the classroom. I explore the theory of Freire's pedagogy while highlighting the importance of radicalism and praxis, before expanding on the latter through my own concept of liberatory play, based on Lugones' playful, loving world-traveling. I propose an understanding of liberatory pedagogy through radicalism, and explore how it defines educational praxis. I characterize this praxis as liberatory play, and highlight implications for its practical application. Then, I expand upon the theory by considering liberatory play and its praxes practically, through the design of a tool that facilitates its adoption by teachers. I present a prototype that leverages radicalization as the medium through which a praxis must be developed, and argue that it is these kinds of tools that will facilitate wider adoption of liberatory pedagogy.

Key theoretical takeaways are: a construction of liberatory pedagogy that highlights the importance of radicalization and re-radicalization as the central aspect of an education and that shows the central role that educational praxis plays in the project; an expansion of the concept of liberatory play that can serve as a model to evaluate and compare the praxes of liberatory educations; and the recognition of practical implications of liberatory play for the design of further tools and practices to bring a liberatory education to ever more students. Meanwhile, key takeaways for future research on praxis are: the importance of focusing on design processes, rather theory or examples, in further liberatory pedagogy tool development; the positive effect of conceptualizing comprehensive play activities when designing resources to make liberatory play approachable to non-specialists; and most importantly the need for tools that focus on teacher radicalization and re-radicalization as catalysts for praxis.

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Introduction

Just as Paulo Freire starts his work by naming his audience, the radicals, so I will start my own with mine: these are ideas for the would-be teachers, would-be revolutionaries, would-be radicals. My hope, that through these words there are ever more of us, that we learn to radicalize each other, to remain radicals as we play with the world.

This work is the direct result of two core experiences. The first one is observing, while working as a Math teacher, that play sometimes arose accidentally in my classes, a result of a new activity or a twist on an old one. When it did, the mood of the class shifted. My student and I became more engaged, more trusting of each other, and topics that had felt impossible to them before suddenly seemed doable. Yet, try as I might, I could never figure out how to trigger this play mode consistently, how to effectively integrate it to my practice. The second one is encountering for the first time Paulo Freire's *Pedagogy of the Oppressed* (2000a), and recognizing in his pedagogical work many of the effects I had already observed in my own classes, but no mention of play or of how it could create this engagement with the students. So, I took it upon myself to bring play to Freire.

I must point out that this project is a critique and a construction from within liberatory pedagogy. While I will interrogate the ideas that Freire and his contemporaries have worked with and propose how play could make this pedagogical mission more accessible, I will not be comparing their approach with other schools of thought, or criticizing its goals and methods from without. This is both a practical and an ideological decision: practical, because other writers (such as Howlett, 2013) have already contributed more extensive, more informed comparisons between Freire's work and that of other pedagogues of his time. More importantly, ideologically, because I see liberatory pedagogy as a value-driven approach to education, where the most important goal is to help people teach themselves to recognize their own world, to become thoughtful agents in their lives. This I believe in, and this is a mission that I am invested in contributing to.

In this thesis, I investigate liberatory pedagogy and liberatory play. The dual goals of the

project are **to propose a theoretical framework through which liberatory play can be understood as the praxes of liberatory pedagogy; and to explore, by designing teaching tools, how liberatory play can be brought to the classroom.** In Part I, I will explore the theory of Freire's pedagogy while highlighting the importance of radicalism and praxis, before expanding on the latter through my own concept of liberatory play. I will propose an understanding of liberatory pedagogy through radicalism, and explore how it defines educational praxis. Then, I will characterize this praxis as liberatory play, and highlight implications for its practical application. In Part II, I will expand upon the theory by considering liberatory play and its praxes practically, through the design of a tool that facilitates its adoption by teachers. I will present a prototype that leverages radicalization as the medium through which a praxis must be developed, and argue that it is these kinds of tools that will facilitate wider adoption of liberatory pedagogy.

Three concepts I have already mentioned, the *radical*, *praxis*, and *liberatory play*, will remain central to the entire project, so I will describe them, briefly, as follows: *radical* I always mean in the sense that Freire (2000a, p. 39) uses it, and it refers to the individual that evaluates and questions their knowledge, that compares it to the evidence they see in the world, as a way of constructing and maintaining their convictions. The radical is a thinker who is not afraid of being wrong, and so would rather question than blindly accept knowledge. I will explore radicalism much more thoroughly in Part I. *Praxis* I also mean in the sense that Freire (p. 79) uses it, and it refers to the thought and action of the radical, combined as one, to effect change upon the world. It has deep political implications that I will not dive into here, as the tool of the revolutionary to bring about social change. Instead, I will focus on educational praxis, the tool of the teacher to radicalize their students. Part II is deeply concerned with this kind of praxis, and I will reflect on its meaning and effects much more in depth then. Finally, by *liberatory play* I mean the act of playful, loving world-traveling, situated through a specific activity. This is the central concept I will explore throughout the entire thesis, and I will expand on its theory in Part I and its practice in Part II.

Though it will be presented in two separate parts, this project is in fact a unified work. Through the design process described in Part II I explored and refined many of the concepts in Part I, and through the theoretical reflection in Part I I refined the structures and prototypes

exposed in Part II. They were developed, and should be interpreted, as one whole, with the theory informing the practice and vice versa, thus conforming a project that evaluates both aspects at once, an exploration of how these two aspects of liberatory pedagogy are interrelated. In separating the theory from the practice in this text, I have attempted only to make my analysis of each clearer for the reader, partly because both parts are conceptually complex. In this vein, I have also separated the introductory and conclusive elements of the work, such that each Part includes their own chapters that contextualize the work and present key takeaways and analysis. The final conclusion aims to serve as a unifying element, and as such contextualizes and analyzes the work as a whole.

Part I: Liberatory Play

Education, Play, and Fun

In Part I, I will concern myself with the theoretical underpinnings of liberatory play as the praxes of an education for critical consciousness. In Chapter 1, I will situate my contributions within the study of praxis of liberatory and critical pedagogies. In Chapter 2, I will reconstruct liberatory pedagogy from the concept of the radical, to explore the centrality of praxis to the mission of a liberatory education. Then, I will expand on my previous concept of *liberatory play* (Martínez Sánchez, 2022) (See Appendix 3 for full text) as the praxes of liberatory pedagogies in Chapter 3. Finally, I will bridge theory to practice by suggesting three major implications of reframing liberatory pedagogy through liberatory play.

Before starting, I must point out that by proposing a new vision of liberatory pedagogy I am not refuting or discarding any previous conceptualizations that have been made of its goals or its practices. Rather, I am creating a frame through which educational praxes can be more meaningfully studied, understood, designed and exercised as related phenomena, since research into liberatory praxis has so far focused on individual approaches and the specific subjects they are exercised on. Moreover, as the realms of different praxes for liberatory pedagogy have expanded, a comprehensive understanding of what are their defining factors, and therefore a way to evaluate new practices and compare existing ones has become ever more necessary. Through liberatory play, I will construct a frame that is capable of doing all of these things, as well as uncover novel forms of educational praxis.

Finally, in framing liberatory pedagogy as a form of play, I not only intend to show how play can be a powerful educational experience, but perhaps more importantly how a meaningful educational experience can be pleasurable and *fun*. As Freire (2000b) points out, “Democratic educators can only see the acts of teaching, of learning, of studying as serious, demanding tasks that not only generate satisfaction but are pleasurable in and of themselves” (p. 90). Though

education is a serious matter and in this Part I will talk about play seriously and rigorously, we must not forget that the experience of education can and should leverage people's enjoyment of discovering new things, of finding and questioning and observing and playing with knowledge. In exploring liberatory pedagogy through liberatory play, let us remember that a better theoretical framework, a more clear angle for implementation, a robust conceptualization of educational praxis is not my only goal. I also aim to remind us that education can and should be enjoyable, that the pleasure of growing through exploring knowledge should be central to our pedagogical praxes, that *fun* is not the enemy, it is our best friend.

Liberatory and Critical Pedagogies

In this chapter, I will situate my project by analyzing the work that has been done across the fields of liberatory and critical pedagogy. The objective, to explore the avenues along which the theories of critical education have been advanced, and in doing so to expose the need for a broader conceptualization of praxis in liberatory education beyond the specific use of certain praxes in specific subjects. This will serve as a springboard for me to reconstruct a conception of liberatory pedagogy as the radicalization of both radical-teacher and students, through the praxes of liberatory play. A note on terminology —while today the broad field is commonly called Critical Pedagogy, I have chosen to use the terms that Shor & Freire (1987) advanced, using the word liberatory instead of critical for naming purposes. This is for a number of reasons: First, it signals how my work is primarily inspired by Freire's, rather than that of the critical pedagogists. Second, I maintain that the term liberatory places the correct emphasis on the ultimate objective of intellectual and social liberation of the Subject, rather than criticality which is only a component of this liberation. Third, while Freire does have influence from the Critical Theorists of the Frankfurt School (whose work is most often associated with the moniker critical) through his experiences in the New School (Dale and Hyslop-Margison, p. 59), he does not directly talk about the concept of criticality in the same way, but rather about *conscientização*, commonly translated as *critical consciousness*, if at all. Fourth, Mary Flanagan (2009) has already proposed the concept of *critical play* inspired by Critical Theory, so I will not be using that term in order to

avoid confusion between my conception of liberatory play and her work. However, this rejection of the term *critical* does not mean to imply a hard border between liberatory and critical pedagogy. Instead, I see the work of all these scholars as existing on a broad continuum, all of them influenced by similar ideas and writing in close dialogue with each other. Because of this, for the remainder of this chapter, I will attempt to use the word *critical* and *critical pedagogy* when the authors I am referencing use that term, and *liberatory pedagogy* otherwise.

Three Avenues of Liberatory and Critical Pedagogy

Beyond his liberatory pedagogy theory in *Pedagogy of the Oppressed* (2000a), Freire's work also encompassed political and cultural criticism, the exploration of dialogue and the generative question as a specific praxis of liberatory education, and insight and experience teaching literacy and Portuguese that not only informed his theory, but also advanced his work along all other avenues. While these distinctions are not clearly defined in his writing or in that of any of the other writers I will mention here, I propose them to evaluate their work and to situate my contribution specifically within the realm of praxis.

The most important scholars of the first avenue, that of political and cultural criticism, are certainly Henry Giroux and Peter McLaren. Giroux's "passion revolves around the struggle for a critical democracy both in the United States and the world at large" (Kincheloe, 2004, p. 78). In his latter work (2011, 2021, 2022), he has focused on the emerging threats to critical democratic societies, particularly in the United States, and the anti-critical effects that neoliberal policy has on schools and communities. McLaren's more recent work (2016, 2020) has also focused on the societal effects of critical pedagogies, with a broader emphasis both in international scope (with much attention paid to Latin America) and topic, being directed "toward political, cultural, and racial identity, antiracist multicultural education, the politics of whiteness, white supremacy, modes of resistance and popular culture" (Kincheloe, 2004, p. 86).

The second avenue, focused on the exploration of praxis in the classroom, is best represented by Ira Shor. By himself (1992) and in conjunction with Freire (1987), Shor has produced work on adapting liberatory pedagogy to rhetorics and writing courses in the context of the United States, as well as extensive contributions in outlining and analyzing the dialogical praxis with an emphasis on generative themes. Of all the authors here cited, Shor is the most closely concerned

with praxis as the activity of teachers in the classroom, and through his work as a writer in *Empowering Education* (1992) and an editor in *Freire for the Classroom* (1987), he has amassed a wealth of insight and case studies of the dialogical praxis in action. Meanwhile, authors such as Boal (1979) and Frasca (2001) have opened the door to new avenues for praxes: theater and digital simulations, respectively.

The third avenue, focused on leveraging the approaches of critical and liberatory pedagogy to achieve significant insight in specific areas of knowledge and their teaching, is best represented by bell hooks. In her work, she has focused on the relationships between feminism, socialism, and racial relations (Kincheloe, 2004, p. 83). Kahn (2010), Grosfoguel (2008) and Evans (2012) have leveraged critical pedagogy towards advancing sustainability and decolonial education.

In short, we can categorize the work of the critical and liberatory pedagogists according to the scope and primary concerns of their research. Authors that form part of the first avenue have focused on cultural criticism and analyzing the impacts a critical education, or a lack of it, has on society. As a result, they focus less on the specific work of the individual teacher. Those in the second avenue are concerned with educational praxis, exploring how a liberatory pedagogy can be exercised in schools, classrooms, and many other formal situations. In contrast to the first avenue, their work prioritizes the individual experiences of teachers as the enactors of liberatory pedagogy. The writers in the third avenue have, in turn, utilized the outlooks and approaches of liberatory and critical pedagogy to explore specific subjects, and in doing so gained critical insight into their bodies of knowledge as well as society's interactions with and reactions to them. As a consequence, their work is crucial in understanding how specific topics can be explored critically, but not how liberatory educations can be beyond those specific topics. Yet, no matter how separate their fields of interest may be, all of these writers are closely related, and their work exists in dialogue with each other.

Praxis

Given these distinctions in research emphasis, most of my work within liberatory pedagogy will be firmly situated along the second avenue, that of praxis. Besides the early work of McLaren (2014), and the aforementioned discussions of praxis by Shor, Boal and Frasca, relatively little work has been done in conceptualizing what the praxes of liberatory pedagogy encompass.

Instead of arriving at conceptual understandings of what such praxes would entail, all of the former authors have singled out a particular form of praxis, be it the dialogical education (McLaren, Shor, Freire), theater (Boal), or digital simulation (Frasca), and explored its application across a variety of situations. In contrast, I aim to explore praxis first by proposing a conception of liberatory pedagogy that focuses specifically on the radicalizing effect of these educational praxes, and second by establishing liberatory play (Martínez Sánchez 2022) as a useful approach to understand their characteristics and hopefully design for them.

Kincheloe (2004) notes the risks of essentializing Freire: “Ever since his initial work appeared, there has existed a tendency for teachers to tame Freirean pedagogy in ways that move to two ends of a critical pedagogy curriculum. On one end some teachers attempt to depoliticize his work in ways that make it simply a amalgam of student-directed classroom projects. On the other end of the continuum some teachers have emphasized the political dimensions but ignored the rigorous scholarly work that he proposed” (p. 74-75). In my conceptualization, I avoid both of these extremes by foregrounding the importance of the radical thinker and of the coming-to-consciousness of the student as a radical, and then highlighting the political importance of the radical beyond any specific political position. While any instance of liberatory pedagogy must be situated within the context of a body of knowledge, a perspective, and a particular social setting, I maintain that radical thinking, the capacity to observe the world clearly and to recognize discourse in any piece of knowledge, will remain the first objective of any such project. Thus, both types of misconception are avoided: any pedagogy that depoliticizes liberatory pedagogy would fail to recognize the role of the radical thinker in reconstructing themselves and their society, in pairing clear thought to action, as the first stepping stone to revolution. On the other hand, radical thought must rely on rigorous examination of knowledge and careful, insightful observation of the world in order to discover the underlying structures of our societies. Thus, any pedagogy that highlighted political messaging at the expense of this rigorous examination would fail at being radicalizing, and would instead become sectarian indoctrination.

Radicalism and Pedagogy

Having situated my work as an investigation into praxis, I will now propose a vision of liberatory pedagogy that emerges from the concept of the radical and evolves through the roles of radical-revolutionary and radical-teacher. Throughout, I will highlight the importance of praxis, the linking of thought and action into a unified whole, as a key element in the activity of the radical and therefore in the pedagogical work of the radical-teacher. Ultimately, I will arrive at a conceptualization of liberatory pedagogy focused on its goal of radicalization of both student and radical-teacher through praxis.

What, or Who, is a Radical?

Already on the Preface of his *Pedagogy of the Oppressed* (2000a), Freire defines his intended audience: The radical, the true radical, “is not afraid to confront, to listen, to see the world unveiled. This person is not afraid to meet the people or to enter into dialogue with them. This person does not consider himself or herself the proprietor of history or of all people, or the liberator of the oppressed; but he or she does commit himself or herself, within history, to fight at their side.” (p. 39) The true radical is defined not by their specific opinions or politics, but by their approach to the world, to knowledge.

Contrast this radical to the sectarian: “Whereas the rightist sectarian, closing himself in ‘his’ truth, does no more than fulfill a natural role, the leftist who becomes sectarian and rigid negates his or her very nature. Each, however, as he revolves about ‘his’ truth, feels threatened if that truth is questioned. Thus, each considers anything that is not ‘his’ truth a lie.” (p. 39). The key aspect of the radical, then, is the ability to see the world as it is, to observe before judging and to keep an open mind as new arguments, new information, new ideas come up.

Unlike the sectarian, who believes they have already encountered Truth, the radical regards their truth as convincing, but transitory and as yet imperfect. This distinction in the radical’s construction of knowledge has enormous effect on their outlook: “Sectarianism, fed by fanaticism, is always castrating. Radicalization, nourished by a critical spirit, is always creative. Sectarianism mythicizes and thereby alienates; radicalization criticizes and thereby liberates. Radicalization involves increased commitment to the position one has chosen, and thus ever greater engagement in the effort to transform concrete, objective reality. Conversely,

sectarianism, because it is mythicizing and irrational, turns reality into a false (and therefore unchangeable) ‘reality’” (p. 37).

By observing the world as it is, by attempting to understand and form their own opinion based on what is observed, the radical recognizes that every situation is only itself. Premade solutions and prethought concepts work only for abstract situations, which do not exist in the real world. By recognizing that every phenomenon in the world is a result of its own particular causes, the radical comes to understand that any thought process that would prioritize a structure, a set of premises, over the observable evidence that the phenomenon presents is no more than a mythicization, a form of wishful thinking. Instead, the radical sees their received knowledge as a starting point for continuous evaluation of the world, and when this knowledge proves inadequate or insufficient they creatively reform it, thus always adapting their thought processes and preconceptions to new evidence and environments.

By constantly reinventing their thinking, the radical liberates themselves from the imposed thought structures they have received. The radical comes to conscience of their and others’ existence in and influence on the world around them, transforming their criticality from mere capacity (critical thinking as *tool*) to outlook (critical thinking as *keying* (Goffman, 1985 p. 45)). In so doing, the radical attains, or rather exercises, critical consciousness. Thus, they transcend their characterization as only *victim* of a system, and instead become a Subject that recognizes their own influence on the world.

By evaluating their own thought against their perception of the world, the radical confirms and reconfirms their ideas, thus gaining ever greater commitment to their position. However, this does not mean that the radical becomes rigid or more attached to the position that they have chosen. To the contrary, when their position does not respond to their evaluation of the world, the radical is quick to react and change their mind, not with insecurity but rather with the confidence that this new position is better than the one they just abandoned. Thus, even as the position changes, the commitment only increases: every new position is an evolution of the last one, a result of hundreds and thousands of careful considerations.

But, in recognizing the world, the radical also recognizes that they are not alone. All around them, there are other Subjects with their own criticality, their own outlooks and experiences. The radical understands the limits of their own vision, and supplements their perspective with that of

others. Thus, they understand themselves as both an individual and as part of a society: while they experience their criticality individually, they do not place it above everyone else's, nor do they refuse to learn from others' conclusions. Instead, they recognize others' experiences as opportunities to enhance their own thought processes, as more information to further complete their perception of the world. In this way, "the radical is never a subjectivist. For this individual the subjective aspect exists only in relation to the objective aspect (the concrete reality, which is the object of analysis), Subjectivity and objectivity thus join in a dialectical unity producing knowledge in solidarity with action, and vice versa" (Freire, 2000a, p. 38). While recognizing that reality can only be perceived subjectively, the radical constructs some kind of objectivity in the collection of subjective experiences of all Subjects, and attempts to apprehend that as an object of study. Thus, they construct their criticality socially *and* individually, existing as both individuals and members of their community.

The Radical as Revolutionary

Just as radicalization involves ever greater commitment to the perspective one has chosen, so it must involve ever greater engagement in the effort to transform said reality. As they recognize themselves as a Subject, the radical cannot deny their agency in the world around them. So, they start with themselves, deconstructing their received prejudices and ideas and changing the way they engage with the world. They come to see their experience as *praxis*: "human activity consists of action and reflection: it is praxis; it is transformation of the world. And, as praxis, it requires theory to illuminate it. Human activity is theory and practice; it is reflection and action. It cannot, (...) be reduced to either verbalism or activism" (Freire, 2000a, p. 125). The radical molds their action to their reflection, and viceversa.

Thus, the radical becomes a revolutionary: an agent of change who through collective reflection and action attempts to bring about a better world. However, this does not necessarily mean that they must engage in armed conflict as soon as possible or at all. Only through true *praxis*, rather than activism, will a collective of radical-revolutionaries determine when, where and how the revolution must come about: "Let me emphasize that my defense of the praxis implies no dichotomy by which this praxis could be divided into a prior stage of reflection and a subsequent stage of action. Action and reflection occur simultaneously. A critical analysis of

reality may, however, reveal that a particular form of action is impossible or inappropriate *at the present time*” (Freire, 2000a, p. 128). The radical-revolutionary sees revolution in every action-thought, and endeavors to bring about change not only through grand, massive movement, but also through everyday individual action. For the radical-revolutionary, *praxis* is universal, and change can come at every point in time.

In recognizing the agency of others as Subjects, the radical-revolutionary cannot deny collaborative thinking and decision-making as the social manifestation of *praxis*: “It is absolutely essential that the oppressed participate in the revolutionary process with an increasingly critical awareness of their role as Subjects of the transformation.” (Freire, 2000a, p. 125). Moreover, collective revolutionary action cannot be separated from collective radical thought, for without it it would be little more than sectarian manipulation: “If (the oppressed) are drawn into the process as ambiguous beings, (...) it is my contention that they will merely *imagine* they have reached power. Their existential duality may even facilitate the rise of a sectarian climate leading to the installation of bureaucracies which undermine the revolution. If the oppressed do not become aware of this ambiguity during the course of the revolutionary process, they may participate in that process with a spirit more revanchist than revolutionary.” (p. 125). The radical-revolutionary cannot deny others the criticality that they aspire to themselves, nor can they pretend that any vision of the world is complete without the participation of all other Subjects involved as such. For the radical-revolutionary, the first step of any revolution must be the radicalization of others. Thus, the need for a radicalizing pedagogy, a *liberatory pedagogy*, is born.

The Radical as Teacher

If the road to revolution is through radicalism, then the primary purpose of a liberatory pedagogy, and therefore of a radical-teacher, must be the radicalization of their students. Yet, the means through which this radicalization is to be achieved is not clear cut: “As opposed to the mythicizing practices of the dominant elites, dialogical theory requires that the world be unveiled. No one can, however, unveil the world *for* another. Although one Subject may initiate the unveiling on behalf of others, the others must also become Subjects of this act.” (Freire, 2000a, p. 168-169). As a solution, Freire proposes the dialogical education, with communication between teacher and students as its central tenet: “Those truly committed to liberation must reject

the banking concept in its entirety, adopting instead a concept of women and men as conscious beings, and consciousness as consciousness intent upon the world. (...) ‘Problem-posing’ education, responding to the essence of consciousness –*intentionality*– rejects communiqués and embodies communication” (p. 79).

The dialogical pedagogy characterizes itself by seeking critical understanding of how knowledge is constructed over the rote acquisition of knowledge-as-facts, which Freire calls “the banking model” (p. 74). However, this must not be confused with a total prioritization of criticality over content. Indeed, this dichotomy is a creation of the banking model itself: “Implicit in the banking concept is the assumption of a dichotomy between human beings and the world: a person is merely *in* the world, not *with* the world or with others; the individual is spectator, not re-creator” (p. 75). In contrast, the radical-teacher must understand knowledge and criticality as one and the same. By reframing knowledge as discourse, the radical teacher reconciles the individual’s perception with the world, and recasts them as re-creator instead of simple spectator of knowledge. This reconciliation is the key aspect of any radical pedagogy, as it is through it that the student is radicalized: by learning to question received fact, the student comes to the understanding that all knowledge of the world is mediated by someone’s perception. Thus, the illusion of total objectiveness, of neutrality in knowledge is exposed and abandoned.

But the role of the radical-teacher is treacherous, for it is not guaranteed that a radical thinker will easily or immediately become a radical-teacher. In fact, the radical thinker, having gone through the process of radicalization themselves, might confuse their own journey with a path to be followed, and their own conclusions with those to be reached. In doing so, they forget that the purpose of the radical-teacher is not to create thinkers like them, but instead to facilitate others to become radical thinkers on their own terms, and reach their own conclusions, themselves. Of course, this is not to say that the radical-teacher must efface their experience or their expertise, but rather that, like with any other knowledge source, everything that the radical-teacher brings to the table must be questioned, examined anew, re-created and re-polemicized. Guiding a group of students towards radicalization becomes, then, an act of reevaluation and relearning for the teacher: “Through dialogue, the teacher-of-the-students and the students-of-the-teacher cease to exist and a new term emerges: teacher-student with students-teacher” (Freire, 2000a, p. 80). Liberatory teaching becomes itself praxis, bringing together educational action and thought in

both the teacher-student and the student-teachers. It reveals, to all involved, the individual-collective nature of praxis, and recasts all the individuals in the classroom as Subjects.

Thus, we arrive at a new understanding of the purpose and ultimate goal of a liberatory pedagogy: the radicalization and re-radicalization of both radical-teacher and students, through praxis.

Liberatory Play

Having established the ultimate goal of a liberatory pedagogy as the radicalization and re-radicalization of both radical-teacher and students, I will now turn my attention towards praxis, the union of action and thought through which the radical-teacher and students radicalize themselves. In this chapter, I will propose liberatory play (Martínez Sánchez, 2022), based on playful, loving world-traveling, as a framing of the praxes of a liberatory education. First, I will revisit an existing definition of liberatory play, and from that base I will spend the rest of this chapter exploring how worlds and world-traveling, lovingness, and playfulness come together as the praxes of a liberatory pedagogy. Then, I will connect liberatory play to radicalization, and establish it as an important radicalizing praxis.

Let us consider liberatory play as such:

“In short, it is the act of playful, loving world-traveling. Liberatory play means to identify a world, to travel to it to explore its systems and experiences from the inside out. It means to travel lovingly, to be willing to observe this world on its own terms. Most importantly, it means to travel playfully, to enter this world voluntarily with a desire for discovery and exploration; with a disposition to engage in boundary play with the world, with a willingness and openness to being wrong, to be made a fool. Liberatory play means to travel to a world creatively, constructing one’s engagement with the world through playful activity.” (Martínez Sánchez, 2022).

Inspired by Lugones’ (1987) playful, loving world-traveling, liberatory play focuses on the free exploration of new ideas, experiences, and realms of knowledge. Each of these elements is key, as is the concept of boundary play (Nippert-Eng, 2005). Thus, I will expand first on the

concepts of worlds and world-traveling as the central subject and exploratory mode of liberatory play, and then integrate lovingness and playfulness as the crucial modifiers of world-traveling to conform this new concept.

Worlds and World-traveling

Worlds are “constructed sets of discourse, systems of thought and knowledge, frameworks of engagement with reality’s phenomena, that present themselves as unified, even when they might not be in practice” (Martínez Sánchez, 2022). The definitions of worlds, both mine and Lugones’, are intentionally expansive and non-definitive to reflect the varying nature of human knowledge. While some small worlds’ base axioms, boundaries, and outlooks might be relatively easily identifiable, even these are most often related to larger, more blurry worlds, from which the knowledge of the smaller world is derived or impacted by. World structure is diverse and mutable as well. For example, bodies of knowledge related to mathematics rely on rules, proofs, axioms and equations to build their boundaries and impact, and these reverberate across the worlds they are related to. In contrast, a world such as a novel might be based on a body of text, a narrative structure, a set of preconceptions and analyses of what its effect is on the broader realm of experience. Worlds change and mutate, overlap and influence one another. There are worlds with countless subworlds, and worlds without any.

Because of this, previously I said that “one should identify worlds holistically, in the realm of human experience. When it seems that there is a system of thought, or a particular collection of knowledge, or a consistent set of frameworks that are being applied, it is probable that one has encountered a world” (Martínez Sánchez, 2022). Now, I want to rephrase this to say that, instead of encountering worlds, we perceive them both socially and individually.

Some worlds are socially constructed: we establish boundaries between fields of study, that group different areas of knowledge together. Thus, we come up with subjects, world-definitions that are established by an educational community for the purpose of teaching that knowledge set as an interrelated group of concepts with a perceived continuity, relatedness, and similar outlook.

Political ideologies, constantly at war with each other, also illustrate how this social construction is mutable, determined in the moment, and oftentimes not associated to the ideas themselves but rather the context within which they exist: “The singularity of the right has to do

with the ease with which its different currents unify before danger (...). While the right is only sectarian against progressive thought and practice, the 'lefts' are sectarian among themselves. If there are three or four factions within a leftist party, each believes itself to be the only one truly progressive, and they all fight amongst themselves" (Freire, 2000b, p. 76-77). The right, itself already a loose confederation of worlds with different political outlooks (In many countries, authoritarians and anarcho-capitalists have somehow fallen within the same political parties), unites as a single ideological world when facing the lefts in the public discourse. The myriad worlds of the right meld into unity when perceived from without, even as from within they might remain separate and in disagreement. In contrast, the lefts reject the conception of themselves as a loose confederation of worlds in the first place, and as an extension refuse to meld with each other into a perceived unity.

But worlds can also be constructed and perceived individually: I might encounter a world in the ideas that I discovered together from a single source, say "the world of Roberto Bolaño's fiction", without that necessarily implying that Bolaño himself, or any other thinker, would perceive a single body of knowledge in all his works. Bolaño can also serve as an example of how not only the world, but also its defining characteristics, can be individually determined. Given the fact that he wrote many novels in a more or less interrelated universe, where the same characters, or versions of them, appear in different books, I could construct this world from a myriad perspectives, taking as the defining works the earliest, or the longest, or the ones considered the best. Ultimately, it is me, as the reader, that is ascribing this perception of worldness to many works published separately.

So far, I have focused on describing worlds that we can traditionally call bodies of knowledge: subjects, political ideologies, fictions. However, a loose conception of worlds also allows us to include as perceivable worlds the lived experience of individuals. This is, after all, what Lugones (1987) originally means by world, and it resonates powerfully with Freire's (2000a) insistence that all people can and should draw from their personal experience as a valid form of knowledge: "Almost never do they realize that they, too, 'know things' they have learned in their relations with the world and with other women and men. Given the circumstances that have produced their duality, it is only natural that they distrust themselves" (p. 63). By understanding worlds loosely we can appreciate how all of human knowledge and experience

can fall within multiple worlds at any time, and move, evolve, and shift world-alignment as it is constructed and perceived. Worlds thus reveal the relationship between knowledge (concepts, ideas, experiences) and discourse (world construction and knowledge situation). Moreover, in defining worlds we also situate specific areas of knowledge, and identify perceived relationships that help us understand and contextualize it in the world. Worlds, then, reveal themselves not only as unified bodies of knowledge but also as constructs, vague concepts that only exist when they are being thought of and analyzed, that in fact facilitate that analysis by bounding our collective knowledge and presenting it in a form that makes apparent sense.

World-traveling, then, becomes the act of exploring the worlds we construct: “the act of coming to inhabit a particular world, of reconstructing oneself, temporarily, according to its rules and norms, frameworks and outlooks. To travel to a different world is to look at it from the inside.” (Martínez Sánchez, 2022). But, as worlds are not identified but perceived, world-traveling becomes also world making. When world-traveling, we draw the boundaries on knowledge ourselves, we identify a world-construct to travel to by limiting it and choosing to explore it according to the limits that we have set for that exploration, and we respect –or challenge– those limits as we explore. Even as we explore socially constructed worlds, we inhabit them voluntarily, as we agree not to talk about Roberto Bolaño and critical reading techniques in Biology class, as we accept or reject historical materialism depending on which broad ideology camp we place ourselves in to explore.

But recognizing that in world-traveling we are also world-making should not be assumed to mean that, by world-making, we gain the right to the knowledge and the experiences of others. Indeed, just as some worlds are socially constructed and exist beyond our individual control, some others, those involving the experience of others, require that we recognize their world-construction in order to be understood. Thus, we arrive at the second key component of liberatory play, lovingness.

Lovingness

Lovingness, or rather, to *travel Lovingly*, is “to be willing to perceive individuals, and their worlds, in their own terms. We must be willing to see worlds as valid and viable when we travel to them, and reserve judgement until we are able to understand what those worlds entail, and

how the people that inhabit them perceive themselves.” (Martínez Sánchez, 2022). When world-traveling, we the travelers must be willing to perceive the world we travel to meaningfully, completely, according to its own set of criteria, axioms, rules and norms. Be it the experience of an individual, the fiction of a novelist, or the political ideology of a radical, a loving traveler will choose to reserve judgement of the knowledge that a world contains while exploring it, and instead to focus on discovering and understanding what there is there. Divorcing themselves from *arrogant perception* (Lugones, 1987), a loving traveler recognizes that all knowledge and all experience ultimately comes from people more similar to themselves than they are different, people who can be understood. To travel lovingly to another person’s world is to recognize their reasonableness, to attempt to understand their ideas, knowledge, and experience from the perspective of their lives and the factors that mold them. Similarly, to travel lovingly to a socially constructed world is to see it from the eyes of those who construct it as well.

The loving traveler, recognizing the primacy of the experience of the people who construct a world, informs themselves to the best of their ability of the bases of any given world, and approaches it from that perspective, without making value judgements of the validity of those bases when first perceiving this new world. As such, the loving traveler makes it their business to understand rather than to judge or to correct, and opens themselves to the experiences of others. In this, the loving traveler exhibits a form of radicalism: they see a world as it is, independently from their preconceptions, rather than project their own momentary experience onto it. In fact, while Lugones associates lovingness to traveling to another’s experience, it is also fundamental to travel lovingly to one’s own. When the oppressed are trained to see themselves as ignorant, “So often do they hear that they are good for nothing, know nothing and are incapable of learning anything—that they are sick, lazy, and unproductive—that in the end they become convinced of their own unfitness” (Freire, 2000a, p. 63), they are made to see their own experience unlovingly, to refuse their own reasonableness and their own capacity to observe and learn from experience. Because of this, lovingness is key to understanding not only liberatory play but radicalism itself. The loving traveler recognizes the humanity of everyone, including themselves, and in so doing observes that all of these experiences, regardless of class or race or nationality, are intrinsically linked to real life, to the world as it is and as far as it can be perceived. To regard the experience of anyone as redundant or irrelevant is to regard them

unlovingly, to “perceive them incompletely, as caricatures, focusing on individuals as only service or as only workers or as only a single or a single set of things.” (Martínez Sánchez, 2022).

To travel lovingly is also to refuse essentialism in our perception of humanity. The loving traveler identifies that no human is only reason, or only emotion, or only body. They recognize that, regardless of the kind of world that they are traveling to, the knowledge, structures and ideas therein have been created by people such as them: with reason, yes, but also with feeling and thought and intuition and belief. Thus, to travel lovingly is to recognize humanity as a complex phenomenon: “I am a totality and not a dichotomy. I do not have a side of me that is schematic, meticulous, nationalist, and another side that is disarticulated or imprecise, which simply likes the world. I know with my entire body, with feelings, with passion, and also with reason” (Freire, 2000b, 30).

So far, by associating liberatory play as loving world-traveling, I have identified it as a fruitful, exploration and discovery oriented, observational approach. Now, I will turn my attention towards playfulness, which will allow us to see how liberatory play is more than just observation.

Playfulness

In liberatory play, *playfulness* is “first and foremost, an attitude of discovery and a disposition towards “self-construction”, the recognition of rules where they exist but also the willingness to test and bend those rules, to hold them in one’s eye and to decide whether they are desirable to this particular experience” (Martínez Sánchez, 2022). Playfulness is a disposition towards the identified world that prioritizes creative interaction with it rather than passive observation. In behaving playfully, the world traveler situates themselves within the world that they are exploring and questions it actively, identifying its rules and boundaries and challenging them (Nippert-Eng, 2005) meaningfully (not aggressively), to understand them better. Playfulness allows the traveler to better understand the world by casting them as an investigator, an active participant within it with the agency to influence, to change as they perceive.

Playfulness facilitates the traveler involving themselves in the world by actively blurring the boundary between spectator and participant. When behaving playfully, the world traveler not

only understands the boundaries that define a world, but also explores them as one more member of that world-society. The playful world-traveler acts and reenacts the thoughts, behaviors, and actions of the members of a world, and in so doing recreates it, blurs its limits, and challenges its preconceptions.

However, the playful world-traveler does not impose their own agenda on the world they explore. In fact, they recognize that playfulness, as a disposition, is voluntary and self-created, so no one can be coerced to play. Thus, the playful world-traveler recognizes the difference between boundary play and boundary work (Nippert-Eng, 2005), and respects the latter to allow other players, both travelers and residents of any given world, agency over their own experience. This also implies that the playful traveler actively recognizes the blurred relationship between the individual player and the collective while playing. Indeed, traveling playfully is either both at the same time, or nothing at all: in engaging voluntarily, in perceiving lovingly and in acting creatively the playful traveler exercises their individuality, and comes to terms with any world, any knowledge, as being only observable through their own perspective. Meanwhile, in recognizing worlds as socially constructed, in behaving lovingly to others, in negotiating boundary play with other players, the playful traveler also identifies their individuality as part of a broader collective, without which their individuality cannot be understood. It is because of this that liberatory play is, even when engaged in individually, not an individualistic action. Playful understanding can only be achieved when the individual sees their play not as divorced from others, existing by itself, but rather as complementary to those same others. As Freire says, “To be alone has represented throughout my lifetime a form of being *with*” (Freire, 2000b, p. 29).

A perspective of playfulness also encourages the playful traveler to take risks and to explore worlds and approaches that they are not yet comfortable with. This attitude facilitates the playful exploration of new ways of being, of doing, of thinking without the fear of being incorrect: “We are not worried about competence. We are not wedded to a particular way of doing things. While playful we have not abandoned ourselves to, nor are we stuck in, any particular ‘world’” (Lugones, 1987). Thus, the playful traveler is more ready to leap not only within any particular world, but also between worlds, to examine their features and limitations more meaningfully. When the leap is erroneous, the playful world traveler simply tries again, without being discouraged by regarding any given leap as a mistake. Instead, it is all one continuous experience

of play.

Playful activity cannot be pre-described: “playfulness is creative. This does not mean that it is oriented towards the production of an object, but rather that it is not pre-scripted and pre-defined. Playful activity is defined as it is performed” (Martínez Sánchez, 2022). As an exploratory, creative interactive mode, playfulness takes many active and passive forms, and is defined more by its outlook than by its action. Playfulness can be anything, from lively conversation to physical exploration to active listening. It can encompass any action or behavior born out of the playful traveler’s desire to explore and understand, challenge and observe. Playfulness opens the door to an endless number of praxes of liberatory play.

Liberatory Play as Radicalizing Praxis

Thus, we can come to understand liberatory play as playful, loving world-traveling. We identify and construct a world of knowledge and experience and we visit it to understand it better. But we visit it lovingly, in that we observe it in best faith and we recognize it as reasonable and with a right to exist as it is, without bringing judgement and preconception from our own experience. Also, we visit it playfully, in that we explore it actively and passionately, and we challenge its boundaries to discover their reasons for being. In doing so, we acquire better understanding not only of the knowledge contained within that world, but also of its underpinings and foundations, of its reasons for being in the way it is, and of how it could be different.

By engaging in liberatory play, we exercise praxis. We combine thought and action to meaningfully question and challenge the way the world is constructed and presented around us, and in the process reinvent ourselves, our knowledge, our surroundings, and our experience. While liberatory play defines itself by its active nature in that it must be situated and performed in order to be playful, it also requires the thought and reflection of loving world-traveling. Liberatory play cannot exist in the abstract; instead, it requires a subject (a world), an activity and a player to exist.

Liberatory play itself can serve as a radicalizing experience. In the first place, it encourages us to seek knowledge and ideas, in the form of worlds, to travel to them. It asks of us to consider these worlds lovingly, as they are, with their own strengths and flaws, and to construct our

perception of them based on their own terms. It asks us to observe reality, to question it and to understand it better, not only from our perspective but also from that of others. Then, liberatory play asks that we playfully engage with these worlds that we observe, in order to challenge and come to understand them better. By allowing us to meaningfully expose both our and others' thoughts, preconceptions, prejudices and ideals, liberatory play facilitates our coming to consciousness of the world around us, and our perception of knowledge as human constructed discourse.

In the classroom, liberatory play facilitates the radicalization of students by allowing them to come to terms, individually and collectively, with the knowledge that they are presented and its influence on the world around them. It renders apparently irrelevant knowledge relevant by situating it within the student's life through playful activity, and it exposes how this presented knowledge affects the student's life beyond the classroom. Liberatory play as praxes is expansive, since any particular activity, on any given subject, can serve as a radicalizing opportunity. Thus, it facilitates the radicalization of the student regardless of the teacher's mandated curriculum (if there is one). Any subject is composed of knowledge constructed by people, and therefore any subject is an appropriate ground for radicalization.

Moreover, liberatory play facilitates the transition of the teacher from radical-revolutionary to radical-teacher. In participating in play with the students, the teacher is encouraged to re-confront their own ideas and preconceptions, their own knowledge, and to reconstruct conclusions not only for the students, but also for themselves. Furthermore, the playing teacher equalizes themselves with the student, and is able to become a co-student alongside them. While Freire highlights that dialogue is the means through which the teacher and student roles are blurred (2000a, p. 80), here I must point out that it is through playful, loving dialogue, through the open exchange of ideas that the teacher-student and students-teacher emerge. Even as the boundary is blurred, however, the teacherly role remains by virtue of their guidance and larger experience, and as such they exercise the authority granted by having more knowledge rather than that given arbitrarily by a school structure. Yet, neither of these authorities is inviolable, and all authority relationships are open to liberatory play themselves.

Thus, Freirean dialogue becomes a praxis of liberatory play, and the latter can come to occupy the role of the praxes of a liberatory pedagogy. It radicalizes the students, but it also

facilitates the radicalization and re-radicalization of the radical-teacher through its emphasis on equal participation, recognition and exploration of knowledge and perspective, and encouragement to challenge and question the way knowledge is received. Most importantly, we can now understand liberatory pedagogy as the radicalization and re-radicalization of both radical-teacher and students, through the praxes of liberatory play.

Practical Implications of Liberatory Play

In the previous chapters I have proposed how we could consider liberatory play as the praxes of a liberatory pedagogy focused on the radicalization and re-radicalization of both teacher and students. Now, I will focus on why we should do so. I will explore three implications of framing the praxes of liberatory pedagogics as liberatory play, with a special focus on their effects on liberatory pedagogical practice: that liberatory play is relatively common already, and thus its conceptualization can help us better understand these experiences; that it can facilitate bringing liberatory educations to the classroom in non-methodological ways; and that liberatory play approaches can be implemented in a diverse set of classrooms today, without requiring the institutional reforms that others have pointed as prerequisites for critical schools. These implications will present a cohesive picture of why it is desirable to include liberatory play into our conceptions of liberatory pedagogics from both a theoretical and a practical perspective.

1. Liberatory play is relatively common already

While I am proposing a novel understanding of liberatory pedagogical praxis as play, I do not mean to imply that liberatory play itself is a new experience. In fact, quite the opposite: “liberatory play aims to describe many experiences that I and others have had, as both teachers and students, where the classroom becomes playful, explorative, and engaging, and in so doing facilitates a critical understanding of the subject at hand. Many of these experiences are not even regarded as innovative in practice: an excellent lecture, a good exercise, or an exciting prompt for a written homework are all examples of day-to-day educational activities where I have experienced moments of liberatory play.” (Martínez Sánchez, 2022).

An example: While I was having the first conversations about this project with my friend (and teacher, and collaborator) Emma Heath, who I will introduce more meaningfully in Part II, she excitedly described the following episode as something that had worked magnificently, that her and her students had enjoyed and learned collectively from: as part of her English Literature course, she wanted to explore with her students the relationship between form and content in literary texts. She designed an activity where she asked each student to write a story in a format not usually used for that —recipes, letters, memos, etc. Then, they shared the stories they had written amongst themselves and with the rest of the class. The students loved it, and dived into the activity with gusto. By exploring this relationship actively, they recognized their own previous knowledge, and constructed new insights. By sharing with each other, they were able to compare their insights with others and gain an appreciation for how their peers were, themselves, wrestling critically with the topic. Talking with me, Emma highlighted how even students who were not normally the most invested or active in her class thrived and embraced the activity. By presenting them with an approach that highlighted their agency, allowed them to actively reconcile their experience with the topic, and explored new knowledge meaningfully and actively, Emma instigated an environment of creativeness, criticality, and pleasurable learning. This is liberatory play.

Another example: when I was working as a Mathematics tutor, I was introduced to Sofia,¹ a 13-year old girl who, at the end of middle-school, was really struggling with Math class in general, and algebra in particular. Not only that, after having had trouble with Mathematics for most of her life, she was convinced she was dumb, incapable of learning the content, and at best able to pretend for the sake of a passing grade. However, from my perspective, she was not lacking any particular skill required to excel at middle-school Math: she was proficient in all basic operations already, if a little slow when performing them, and while she could not at the time do algebra, it was clear it was not because she was incapable of it. To get her out of her head, we played a little game. I cut up a white piece of paper into little pieces, gave her a few, kept a few more, and hid some number of red scraps of paper I cut separately under my hand. I told her that we had the same amount of things, and her task was to figure out how many red

¹ I have changed Sofia's name to protect her privacy.

pieces one white one was worth. We started by exploring what operations one could do –if she added white pieces to her side, I would add to mine; if she subtracted, I would subtract as well– and eventually she got to the point where all I had left was what was hidden under my hand. So, I revealed it, and she figured out in a second the answer to our little puzzle. This was liberatory play too! Together, we recontextualized the abstract algebra rules she had learned at school as a common sense activity, which she herself thought was close to obvious, and which allowed us both to explore how the basics of the technique were not God-given, but actively observable in her everyday life. In a matter of months, Sofia was acing her Mathematics class, to the point where I was asked if I had taught her how to cheat². Together, Sofia and I stumbled onto an experience that helped her realize how she could understand Mathematics too, how it was connected to her life, and through her hard work and questioning, she slowly came to a better critical consciousness about what she was being taught at school.

So, if liberatory play already exists, why suggest it as a new approach at all? In both of these cases, neither Emma nor I had a conceptual framework to evaluate why the activities that we were trying out in class were working. Thus, when they were as successful as they were, we were surprised and unable to draw clear meaningful insight as to why they were working so well, what we could take from them to try out next time. By approaching these kind of educational activities as liberatory play their effect as praxis can be better understood; they can be analyzed, questioned actively, and insights drawn from them can be communicated with other teachers who would like to bring new critical understanding to their classroom without having to accidentally stumble upon it themselves.

2. Liberatory play can facilitate bringing about a liberatory pedagogy despite its rejection of methodologization

By its very nature, a liberatory approach must reject received method, instead focusing on the

² a sad aside: more than once, when “bad” students started doing better, teachers and parents assumed that they had figured out how to cheat, rather than that they had gained some new conscience that had eluded them before. This I think is a problem with our educational culture, that we assume some students are “good” and some aren’t, and once one has revealed in which camp they fall, they can never escape it.

experience of the teacher and the students in any given situation: “Rather than relying on particular or reproducible methodological practices, Freire’s educational advice encouraged educators to create and recreate each new learning experience” (Dale & Hyslop-Margison, 2011, p. 74). In place of methodologies, this pedagogy demands a change in approach to knowledge. This is why bringing about liberatory education is not just a matter of suggesting a new technique: “If liberating education was just a question of methods, then the problem would be only to change some traditional methodologies by some modernized ones. But that is not the problem. (...) For me, one characteristic of a serious position in liberating education is to stimulate criticism that goes beyond the walls of the school” (Shor & Freire, 1987, p. 35). In fact, this is one of the great advantages of the approach. By focusing on the situated, individualized process of coming to understanding of knowledge, rather than on a pre-made approach to transfer content, a liberatory pedagogy can serve as a radicalizing tool that equates acquiring new knowledge with examining it, questioning it, contextualizing it.

But, on the other hand, how to get started? If, like Freire, one is a language teacher, one might start out adopting a similar dialogical approach based on the generative word. But even doing just this is insufficient, as one would fall into copying rather than developing one’s own liberatory praxis for one’s environment. Moreover, what happens when what one teaches is not language, but rather science, mathematics, physical education?

Previously, I highlighted how a liberatory play approach broadens the scope of a liberatory education beyond any particular activity or approach: “Indeed, any activity that encourages students to engage with the subject they are studying as playful, loving world-travelling has the potential to be a praxis of liberatory education. Thus, the question ceases to be ‘Can X be used for liberatory education?’ and instead becomes ‘How can X serve as liberatory education?’” (Martínez Sánchez, 2022). We can and should draw inspiration from the experience of other teachers, focusing on how an activity can facilitate playful, loving world-travelling rather than expecting the activity to do so from the start. By framing Freire’s dialogical approach as a praxis of liberatory play, we can abstract the most important aspect of it: that it is a situated, participatory activity that aims to connect the experiential knowledge of students and teacher to the received knowledge that is supposed to be taught. A liberatory play approach allows for easier piecing out of what new practitioners should focus on when starting out with liberatory

pedagogics, and facilitates the clear distinction between the play activity, which can be adapted and applied from other contexts, and the play experience, which is by its very nature situated and unique. Here, it is also advantageous that a liberatory play approach can “also serve to bridge this gap of practical knowledge by facilitating the application of the numerous analytical tools and frameworks that have been proposed for designing and evaluating play and games” (Martínez Sánchez, 2022). Play design has a wealth of tools that have been created specifically to analyze the situated experience of playing in the context of a designed activity or artifact. As such, it can serve as a fruitful starting point to develop novel activities that can encourage the students and the teacher to engage in liberatory play. However, it should be noted that no activity by itself is liberatory, but rather it is in its application, in its coming to life through the interaction of the students, the teacher, the material, the world, that a liberatory experience can be achieved.

This approach has implications beyond Freire’s specialty of language studies: “Liberatory play proposes a clear way forward for approaching technical subjects by presenting them as worlds to be explored. Under this paradigm, the question shifts away from an issue of competence towards one of understanding” (Martínez Sánchez, 2022). By focusing on the playful exploration of knowledge rather than on how any particular body of knowledge can be played with, liberatory play provides options for bringing it about with any subject. Thus, the mathematics, science, economics teachers, those whose areas of study are traditionally presented as apolitical fact and whose educational traditions don’t have a clear history of critical engagement, have a clearer entry point into bringing about critical understanding of their subjects.

In short, by focusing on liberatory play, liberatory education can turn its rejection of methodology from a weakness into a strength. While it is not productive to simply adapt any activity and expect it to work, many activities can be used as starting points for play in the classroom. The key then is not to focus on the primacy of the activity, but in the play. As such, any activity that succeeds in bringing about exploratory play with the knowledge the students and teacher are discussing will be successful, regardless of the base body of knowledge. By highlighting the experiential nature of the play activity, liberatory play can encourage teachers to not only design new activities and be inspired by others, but also to look at what matters: whether the activity is bringing about a successful play experience with the students.

3. Liberatory play can serve as a way to bring liberatory pedagogies into schools today, rather than waiting for an abstract future where it is viable.

We need a radicalizing pedagogy today, and not just in an abstract future where everything is already better. Giroux (2020, 2022) and McLaren and Jandric (2020) have both pointed out how a shift towards a critical education is necessary for people to liberate themselves from the growing influence of neoliberal institutions. As the rate of technological innovation has accelerated, we have become more vulnerable to uncriticality, to being presented with information that we do not know how to contextualize. Already in 1997, Freire recognized the radical change that computers and the internet have brought about (Freire, 2000b, p. 93), a change that has only accelerated in the 21st Century. Facts are cheap now, seemingly accessible from almost anywhere, simply by typing a question on a search engine or, increasingly, an AI. But as facts proliferate, critical understanding of what we see, what we read, what we listen to will only grow more important as we learn to differentiate what is worth paying attention to and what is not.

As such, we cannot wait for broad societal change, no matter how positive, to bring about a new generation of radicals. To the contrary, only through the radicalization of people will society change: “While only a revolutionary society can carry out this education in systematic terms, the revolutionary leaders need not take full power before they can employ the method. (...) They must be revolutionary—that is to say, dialogical—from the outset.” (Freire, 2000a, p. 86). Liberatory play can serve as a fruitful approach for a grassroots, classroom by classroom radicalizing movement.

By recognizing the inescapable relationship between fact-based knowledge and critical understanding of a subject, we can implement a liberatory play approach throughout a variety of school structures and curricula. In a standards-based system, for example, bringing about liberatory play can ensure that students will learn the prescribed content well enough to pass their exams, but more importantly also gain a critical understanding of what they are learning. In a system that systematically censors specific content, liberatory play can serve as a radicalizing approach with even the most “apolitical” subjects. Thus, in the best cases, the radical-teacher can bring about play to enhance their and their students’ experiences in a school environment

supportive of this mission. This, of course, is not to say that only in those contexts will liberatory play arise. In many other situations, through many other pedagogical practices, liberatory play can and will be encountered occasionally along the way, in moments of playful coming to critical consciousness for both students and teachers. But, most importantly, in the worst cases, where schools seek to completely decriticalize and decontextualize education, a liberatory play approach can serve as a guerrilla radicalization tactic. As other play approaches such as gamification (Majuri, Koivisto and Hamari, 2018) and flow (Soderman, 2021) have permeated the neoliberal educational context, liberatory play can be disguised by the radical-teacher as simply a novel approach in a fact-based education.

Moreover, by providing a clear starting point for teachers to bring liberatory pedagogics into their classroom, liberatory play can serve as a radicalizing tool for teachers themselves. Those who have not received the critical education of the critical pedagogues; those who might not agree with their specific politics (Howlett, 2013, pp. 266-67) but do agree with the broad goal of student radicalization; and those who might have been educated critically and agree with the political conclusions of the movement, but don't know how to get started; all can utilize liberatory play activities as clear entries into a radicalizing education, develop their own praxes and the skills of the radical-teacher who observes their subject and their students to constantly improve their method.

A liberatory play approach does not absolutely require that entire systems, or even the entire methodology of any given teacher is modified before it can be used. Instead, it can be implemented day-by-day, activity-by-activity, with any subject, in any classroom.

So far, I have identified three practical implications of reframing the praxes of liberatory pedagogies as liberatory play: that this experience is common already and that a liberatory play approach would simply make bringing about such experiences more straightforward; that by thinking about the praxes of liberatory pedagogy as liberatory play a teacher can navigate the pedagogy's rejection of methodology successfully; and that it serves as an approach that can be implemented today, in a broad range of schools across a broad range of subjects. Through these implications, liberatory play can universalize bringing liberatory educations to the classroom by making them adaptable to a myriad situated contexts, as well as providing clearer entry points for

a liberatory praxis. It can provide insight on how to bring critical consciousness to technical subjects, as well as a vocabulary for evaluating radicalizing experiences that are stumbled upon as a matter of course in technical educations. By opening the door to non-methodological, practical innovation by a multitude of teachers in a broad set of contexts, a liberatory play approach can reveal an endless number of new and existing praxes. And, by revealing the educational effect of existing playful experiences, it further opens the door to the adoption of play design resources to pedagogy.

From Theory to Practice

In Part I, I have proposed and explored a conceptualization of liberatory pedagogies as those primarily concerned with the radicalization and re-radicalization of both students and teachers through the praxes of liberatory play. In Chapter 1, I situated my work within the context of existing research on critical and liberatory pedagogies. I highlighted how my contribution aims to advance knowledge on pedagogical praxis; in the realm of theory by proposing liberatory play as a frame for evaluating existing and future praxes more effectively; and in the realm of practice by exploring actual possible praxes from the perspective of liberatory play. In Chapter 2, I reconstructed the mission of a liberatory education as the radicalization and re-radicalization of students and teachers, starting from the concept of the radical as the central actor of a revolution. The objective of this reconstruction was to understand the specific role of praxis in the work of the radical-teacher as the main avenue of radicalization for both the teacher themselves and the student. In Chapter 3, I explored liberatory play as the praxes that can make a liberatory pedagogy, and through the former's central concepts of playfulness, lovingness, and world-traveling I exposed the emotional, intellectual, and critical benefits of approaching a world, be it a set of canonical knowledge or someone's experience, through play. Finally, in Chapter 4 I looked towards the practical implications of conceptualizing liberatory pedagogies through liberatory play, and I elaborated on three specific ones that can facilitate the broader adoption of educations for critical consciousness in a variety of contexts and subjects.

So far, I have made three key contributions to further theoretical developments of praxis in

liberatory and critical pedagogies. In the first place, by reconstructing the goal of a liberatory pedagogy from the perspective of radicalization I have highlighted the centrality of praxis to any liberatory approach to education. Thus, further research in practical liberatory pedagogy should take advantage of this conceptualization to distinguish between the content and discourse being studied in any given case and the praxis itself, through which knowledge is being explored. In the second place, I have expanded on the concept of liberatory play as the praxes of liberatory pedagogy, and in doing so I have proposed a comprehensive model of how knowledge can be explored critically through a broad set of practices unified by their shared playfulness, lovingness, and focus on world-traveling. From liberatory play, existing and new praxes can be more effectively analyzed, constructed and reconstructed to encourage students and teachers to become more playful, more loving, more critical towards the worlds they explore together.

In the third place, I have suggested how theory might be more effectively translated to practice by exploring three major implications of a liberatory play approach to liberatory pedagogy: that this kind of play is already relatively common, and could therefore be easily recognized as educational by many teachers, and more effectively understood through the vocabulary of liberatory play; that through liberatory play one can both reject methodologization and provide an easier entry point for new radical-teachers to bring liberatory educations to their classes; and that through liberatory play praxes liberatory educations can be brought to schools today, without the need of broad educational reform to establish new pedagogical approaches. By recognizing these implications, liberatory pedagogists should be able to more effectively bring the theoretical advantages of a liberatory education to the classroom, and recognize and encourage the instances where critical consciousness is already arising in students without the direct influence of a radical-teacher's work. In Part II, I will explore the practicality of the three implications I exposed in the theory here, through the experimental design of a tool to facilitate teachers bringing liberatory play to the classroom. Thus, I will expand beyond the theory articulated so far and elaborate on how theory can better inform practice.

Part II: Designing Tools

Questions Concerning Praxis

How can teachers implement a liberatory pedagogy in their classrooms? How can they develop a praxis of their own, without a methodology or a premade structure to follow? How can we make it easier for them? These questions remain central to a broader adoption of a liberatory pedagogy, since they pinpoint an element that has so far eluded most scholars: if the great advantage of this education is that it can develop a critical consciousness in students based on their specific situated experiences, then how could a group of teachers, no matter how well meaning, facilitate other teachers adopting these approaches? To further my research into the praxes of liberatory pedagogy, I used these questions as a starting point for a tool based on liberatory play to do just this, to facilitate teachers everywhere bringing critical consciousness to their students.

In Part II, I will describe the research and design process through which I developed a liberatory play tool intended as an approachable set of resources to get teachers started with developing their own praxes of liberatory play. Throughout five experiments, I interrogated the concept of tool, explored possible structures and approaches to toolmaking, and considered the roles that theory, design resources and examples play in making it easier for teachers to adopt a liberatory perspective to their practices. By adopting a liberatory play as critical making approach, I was able to focus on the design process, rather than the final outcomes of each experiment, as a source for further insight into the praxes of liberatory play, and the challenges facing a broader adoption of play as a radicalizing force in schools.

In Chapter 1, I will relate how I situated my design project by establishing the goal of creating a tool that would allow for the adoption of liberatory play approaches by a wide variety of teachers across a broad range of subjects and contexts. I will also describe specific design objectives, based on the implications for the practical adoption of liberatory play I explored in

Part I. I will explain how I developed a broad set of personae as target users for my tool design, and I will expand on how, by adapting Ratto's (2011) critical making, I developed a flexible approach to my research project based on liberatory play. With these considerations, I will define the design space that was explored throughout the creative process.

Then, in Chapters 2, 3, 4, 5, and 6, I will describe five subsequent experiments in developing a liberatory play tool, each time starting from a different source and envisioned structure: in experiment 1, I attempted to design from theory. In experiment 2, examples would serve as the guiding element of the tool. For experiment 3, I explored a diverse, design oriented toolbelt. Experiment 4 was about taking the successful elements from experiment three and attempting to create a unified set of best practices. Finally, in experiment 5 I returned to evaluate the concept of a tool from the perspective of the theory and constructed a tool for the radicalization and re-radicalization of the teacher as a way to develop their own praxes.

Throughout all the experiments, the design processes served as interrogatory tools into the theory of liberatory pedagogy and liberatory play, and particularly questions relating to praxis and the development of these approaches by teachers in the classroom. As such, while one of the requirements was to have a final prototype that could be further experimented with, the primary role of the resources I created was to interrogate the structures I was envisioning and the ways in which theory and practice relate to each other. Thus, the prototypes described herein should be considered primarily as *filters* (Lim, Stolterman & Tenenbergs, 2008), the last three of which evolved iteratively into a final, complete tool meant to be played with by teachers.

Ultimately, I will explore three key takeaways from this design process: the importance of shedding the explicit, direct influence of both theory and case studies in future tools for the design of tools for liberatory education; the centrality of the unified play activity, as opposed to the description of play elements, as a form of facilitating teacher adoption of liberatory play; and most importantly the need for tools that do not attempt to bring practice to existing radical thought, but that instead facilitate the teacher's radicalization and re-radicalization, and through that process their development of their own praxes.

Goals, Objectives, Methods and Collaborators

In this chapter, I will describe how I identified a specific research area for my tool design process by defining a goal and supporting objectives from theory, locating personae as ideal users for a proposed tool, and establishing a liberatory play approach through critical making as the research structure that would enable me to combine design and conceptual investigations in real time. First, I will describe how I defined a goal and objectives from the implications for practice I identified in Part I result from a liberatory play approach. Then, I will explore how my and my collaborator's experiences helped define a set of personae that would allow me to avoid designing only for a very specific kind of teacher, and I will describe how this impacted the structure of our collaboration. Finally, I will describe how I derived a flexible approach from Ratto's (2011) critical making, which I recognized as itself a praxis of liberatory play.

Project Goal and Objectives

Having identified liberatory play as a fruitful design space, and the (vague) format of a tool as the object of my design sessions, I determined the main goal of my practical research as **A set of resources that can help teachers across a variety of subjects and contexts adopt liberatory play as a pedagogical outlook, and integrate the praxes of play into their activities dynamically.** I also established the three implications that I identified in Part I as objectives for the tool:

Liberatory play is relatively common already

Objective: That the activities that can be designed with the tool are easily recognizable to teachers as educational, easily focused on their topics, and situated in their classrooms. Because liberatory play is already common, the focus of the tool should be on helping teachers develop new vocabularies and personal resources to identify and advance activities that are already working, question those that are not, and more generally make the process of designing playful activities clearer.

Liberatory play can facilitate bringing about a liberatory pedagogy despite its rejection of methodologization

Objective: That the tool provides a clear path towards pursuing liberatory play in the

classroom, and through it a liberatory education, without resorting to a methodologization of the process. In other words, the tool should be clear and direct enough that it can be a meaningful aid when designing new educational activities, but it should never provide authoritative step-by-step instructions to follow in all, many, or even any cases. This also means that any premade resources, examples, and processes should be presented as open to reinterpretation and remaking according to the experiences and context of the individual teacher.

Liberatory play can serve as a way to bring liberatory pedagogies into schools today, rather than waiting for an abstract future where it is viable.

Objective: That the tool is usable, out of the box, by a wide variety of teachers engaged in a broad range of subjects, and that it is adaptable to many different contexts as determined by teacher and student age, sociocultural environment, local established educational practice, and others. In short, the tool must be easily situated by the teacher when designing new activities for their students. Moreover, the tool should not require most teachers to completely reinvent their methods and practice from the ground up in order to be useful. Instead, it must be a lightweight, versatile artifact that can be used on an activity-by-activity, class-by-class level, such that the teacher will be able to easily implement and experiment with its resources without requiring them to reeducate themselves or completely overhaul the institutions within which they operate before being able to draw from the tool. This objective is absolutely key to the success of the project, since it implies that the result will be usable, in the short term, by many different kinds of educators. It also implies that its resources must be constructive and suggestive (“try this out”), rather than negative and prescriptive (“don’t do this”), such that any preexisting teaching practice the teacher might have been before will be a valid starting point for experimentation with this tool.

I would design a tool that could facilitate teachers bringing liberatory play to the classroom, with the objectives that it would be helpful in designing everyday playful activities, that it would not present itself or indeed be a methodology, but rather a series of resources to help teachers build their own praxis, and that it should be easily usable, out of the box, by teachers in a wide variety of contexts and subjects without requiring them to completely reinvent their practice or reconstruct their organizational structures.

(De)constructing Personae From Experience

From the beginning of the conceptualization phase of the project, it became clear that I needed to decouple my experiences, which inspired it, from a vision of the end user of a final prototype. By analyzing my and my friend Emma Heath's experiences as teachers, I had so far constructed a series of concepts and objectives, based in theory but confirmed by observed phenomena in the real world. However, if the goal was to communicate these insights to others, to help them and us innovate in our own classrooms, it became imperative that I avoid designing mainly for us two or for other teachers just like us. In this section, I will describe how our particular circumstances shaped my construction of target users who could be unlike us, our collaboration, and the role Emma had as a sounding board for most ideas in this work.

Emma is currently teaching high school English to 11th and 12th graders at a prestigious private school in New York City. Before that, she was an American History teacher at a different private high school in California. In both cases, she has had some freedom to determine her curriculum and practical approach. Thus, she has focused on close reading, critical interpretation and understanding of texts, and writing as key aspects of her classes, and she strives to cultivate her students to become better, more critical readers and writers. In practice, she does this through a combination of lecturing, reading, written assignments, and most importantly dedicating a lot of her class time to guided discussion of the lectures, assignments and readings she gives her students. But Emma is also a creative teacher, and she has designed many activities to keep her students interested and to more fruitfully explore her topics. Like the Form-Content exercise I described in Part I, many of these activities are already exemplary of liberatory play, and Emma has an intuitive facility for encouraging her students to play.

In contrast, I have worked as a group teacher and individual tutor specializing in high school Mathematics for a private tutoring company in Mexico City. While there, most of my students were 12th graders preparing for the SAT or ACT, the US college admissions exams. I also tutored younger students struggling with Mathematics at school. Because of my role as a support teacher, I had no control over any of my curriculum, instead teaching either what the exam covers exclusively or what my students were already working on at school. In both cases, my assigned task was to get the students up to speed, to successfully insert the content they were missing from school. Because of this, and the fact that Mathematics is not traditionally thought

of as a critical subject, on the surface it seemed like any activities that I designed would be entirely devoted to better transmitting a predetermined set of facts. However, I often found that students struggled to acquire content passively, and that the occasional playful activities that I stumbled upon, such as the one I described experiencing with Sofia in Part I, were much more effective at conveying new knowledge to students even as they seemed to question not the topic itself, but rather the underpinnings of the subject.

Despite our differing circumstances, Emma and I are similar as teachers. For starters, we share much of our education: we met while going through Structured Liberal Education (SLE), the great books program at Stanford University. There, we were both exposed to the ideas of Critical Theory, Marxism, and Existentialism among others, and to a critical, inquisitive and questioning approach towards knowledge and education that we both came to adopt as our own. Moreover, because of our longtime friendship and similar backgrounds, we share a common vocabulary and have previously collaborated informally with each other in activity design. Finally, we are both creative, social individuals who care about experimenting with new approaches in the classroom and encouraging teacher-student-student interaction as the basis of our educational practice.

Even as our experiences were a key inspiration for this project, it was important to separate Emma and I as teachers from the design of the tool. In fact, one of the central challenges of the design process was to design from my and Emma's experience without falling into designing for us specifically. If any design was going to be successful, it needed to work regardless of whether the final teacher shared some of our educational background, subject matter and context, or practical approach up to that point. On the other hand, despite the fact that both Emma and I have had some successes with students, it was also crucial that this tool did not devolve into a procedure to make other teachers, who were not us, more like us. Instead, I required a broader artifact that would help me evaluate our successes, yes, but also identify the flaws in our approaches so far and suggest new ways of doing things. Not only that, but this artifact needed to be able to do that for a multitude of teachers, most of them not at all like Emma or me.

So, I decided to formulate a broad persona for the kind of teacher that I would design for. Firstly, the tool would be primarily for teachers teaching near the end of secondary education or beyond, since my experience and Freire's (2000a) both corresponded to that age of student.

Secondly, I would design for teachers who may or may not have received critical educations themselves, which meant that I could not make any assumptions of them knowing any specialized vocabulary or critical approaches already. Thirdly, I would design for teachers involved in a broad variety of subjects, so the toolset could not be tailored to any specific set of them. Finally, I would design for teachers who may, or may not, have already had encounters with liberatory play situations, so I could not rely on them having experienced something similar to me in order to convey my point. The only unifying aspect of my teacher personae, beyond the age range of their students, was that they be willing to try something new.

As for my collaboration with Emma, she served most importantly as a discussion partner and a source of inspiration throughout most of the theorizing and design process, and many insights I present here I reached through conversation with her. During the theorizing stages, her practical experience and descriptions of different situations in her classrooms greatly helped me ground the idea of liberatory play as praxis, and identifying her activities as play or not encouraged me to find the limits of the concept. During the design process, she gave feedback on most prototypes after I made them, and this feedback was crucial in evaluating and tailoring them for practical use. Though the research and design work was all mine, her insight and feedback were fundamental in grounding the work to make it potentially more useful for actual teachers working in actual schools. However, because designing for a broad population of teachers was so important, it was my task to evaluate our conversations critically and decide which of the feedback was mostly applicable to her experience only, and which could be universalized effectively. This process encouraged me to do the same with my insight, which hopefully made the tool less tied to my own educational practice as well.

From Critical Making to Liberatory Play

Initially, I decided to approach my design sessions from a perspective of critical making (Ratto, 2011). Starting from the liberatory pedagogies of Freire and Shor in particular, and supplemented by my own concept of liberatory play, I would explore practical approaches to these theories and fabricate tool prototypes as a way of exploring how liberatory play could be more effectively encouraged in practice in the classroom, and by extension the role it could play, theoretically as well as practically, within a liberatory pedagogy. This approach seemed

especially appropriate thanks to its flexibility in exploring theoretical concepts and ideas that came primarily from theory in a practical manner, thus bridging the gap between my theoretical work and its intended role as informing praxis. Moreover, I was interested in focusing on the process of creation as a space to question and further my theoretical understanding of liberatory play, and a critical making approach could help me prioritize this aspect over eventual testing and refining of a completed product.

However, I made two important adjustments from Ratto's (2011) concept to my approach: firstly, I knew that I would be designing and inquiring primarily alone. Since liberatory play was a concept that I was still actively developing, it was impractical to find available co-designers that would have a similar kind of approach or expertise with the theory I was trying to build in the first place. Since I still needed a way of conversing through the developing ideas and reflecting on them with others, Emma would discuss with me the theoretical and practical development of my research and serve as a sounding board for new ideas.

Secondly, unlike in Ratto's (2011) approach I did intend to create a prototype that could be shared, shown, and that would "speak for itself". Based on my goal and objectives, I needed to design for an artifact that would thrive in the hands of others, which required me to think of the process of sharing it and communicating its purpose as a central aspect of the artifact itself. Additionally, since my work was focused on praxis, I needed to create with the outlook of informing further research beyond theory, into the practical realm of education. Thus, a purely conceptual exploration with a non-functional or too abstract prototype would have been ineffective in bridging my theoretical approach with the practice it was meant to influence. This consideration also meant that, unlike Ratto's (2011) method, which centered on individual design sessions conducted for later reflection, I envisioned an iterative structure from the beginning, hoping to create and recreate increasingly more effective tools that would reveal new angles to liberatory play.

As I wrestled with adapting Ratto's (2011) approach to my project's circumstances, I came to see critical making more and more as itself a praxis of liberatory play. Like the latter, critical making focuses on constructing a world ("One stage involves the review of relevant literature and compilation of useful concepts and theories." (2011)), and playfully travelling to it through situated activity (in this case, fabrication) to investigate its practical, technical, theoretical and

conceptual boundaries and limits (“This process involves wrestling with the technical prototypes, exploring the various configurations and alternative possibilities, and using them to express, critique, and extend relevant concepts, theories, and models” (2011)). Like liberatory play, it blurs the boundary between personal exploration through individual activity, and collective understanding through conversation and reflection. Also like liberatory play, it focuses on this playful exploratory process as the central point of the learning experience, rather than the end result. Finally, Ratto’s (2011) process of conceptual evolution through multiple tries is a perfect example of the constant re-radicalization of the teacher who, through repeated instances of liberatory play, reevaluates the success of their approach and their ideas every time to make their praxis better.

Thus, I ended up with an approach of liberatory play, through the praxis of critical making, to explore liberatory play itself. In each iteration, I constructed and reconstructed the world of liberatory pedagogies, focusing on the concepts of praxis, knowledge, radicalism and liberatory play. I situated my exploration through the playful activity of creation, using the development process of a tool as a viewpoint to investigate the concepts, the world, and their relationship. And, throughout each iteration, I reflected not only on the knowledge that I was uncovering but also on the process itself, tweaking my approach in every new attempt at tool creation to account for the new conceptual and practical knowledge I gained in the previous one.

By identifying a goal and supporting objectives, a deconstructed set of personae as target users of a final prototype, and a methodology (or rather approach) of liberatory play as critical making, I defined an area of action and a broad scope for my design sessions. This design structure would serve to guide many decisions, from measuring the success of a particular approach to evaluating the feedback I received from collaborators. Most importantly, my flexible approach would allow me to evaluate prototypes and particular project structures as I made them, to reflect actively on theory, envisioned form, and actualized design as a continuum, and to inform my decisions along one of these as I gained insight from another one. In the following chapters I will elaborate on these experiments and relate how the process of prototyping led me to gain insight not only on specific designs but most importantly on how tool structures, theoretical outlooks, and practical considerations must constantly inform one another.

But, before moving on to the design process, I want to draw our attention to what I will call prototypes throughout the remainder of this text. Most of them are not complete tools that can be evaluated on their own, but rather resources of varied complexity that I have created through the design process to actively evaluate the envisioned structures I was investigating, to compare the theory to the structure to that which is feasible to make. Thus, we should be thinking of most of these prototypes as *filters* (Lim, Stolterman & Tenenberg, 2008) through which I investigated the functionality, interactive potential, theoretical soundness, and applicability of an envisioned structure. If we are to see them also as *manifestations*, I must highlight how my liberatory play approach to the project facilitated a flexibility in scoping prototype constructions, such that the scope would grow or shrink as a research avenue proved to be fertile or not. Similarly, prototype fidelity increased as the prototype's resemblance to an actual usable tool became necessary to continue my research. In short, no prototype included here is *unfinished*, in that they all served as successful filters to research the structures I was attempting to create. Yet, most are *incomplete* tools, limited in scope to only as much design work as was necessary to evaluate an envisioned design structure, and not more.

Designing From Theory (Experiment 1)

For the first experiment, I decided to start my design process from the theory of liberatory play itself, and create something that would be a “translation” of the theoretical concept as explored in my previous essay (Martínez Sánchez, 2022). I hoped that starting from theory would allow me to bring many of the implications and advantages of liberatory play directly into a toolset, without having to compromise as much with formal aspects of the artifact. I also wanted to remove non-liberatory-pedagogy influences from my design process, and explore how a praxis could be born directly from thought.

Envisioned Prototype Structure

I envisioned that the prototype would be composed of three major sections. In the first one, I would provide a “translation” or a simplification of the key concepts of liberatory play, in a

small, accessible format that would not require the teacher to read a book or even an entire essay. The idea was also to present the concepts in such a way that they would be clear enough that they could be understood, but that they did not attempt to over-interpret the educational practice of the teacher —the tone needed to be creative, propositive, rather than prescriptive. Additionally, this short conceptual part needed to be able to propose play in a classroom as not only acceptable but actively productive, and to suggest how instances of playfulness were already broadly present in traditional schools.

In the second section, I would provide a number of worksheets, the actual tool set, that could be used to design any number of play activities. From the beginning, I imagined this tool set would have a modular structure, where I would provide many different approaches rather than streamline everything into a single approach. This, I expected, would allow for a balance between proposed workflow (in the form of the worksheet), and a non-methodological approach thanks to the possibilities of changing the worksheet used, of mixing and matching different approaches from different worksheets, and of trying out vastly different concepts from where the worksheets would be sourced.

In particular, I expected to create at least some worksheets for “common” activity types, working into them insight that I and others had gained through teaching, thus providing a model to make certain activities playful with minimal effort. During the planning stage, I had already explored ideas for a playful lecturing worksheet, a playful writing assignment, and playful discussion sessions. In addition to these activity oriented worksheets, I would attempt to design playful educational activity worksheets from existing design for play models, following the proposed advantage that I found in my previous work on liberatory play: “4, that it facilitates leveraging existing knowledge from play studies for education” (Martínez Sánchez, 2022). Thus, my worksheet section would comprise a number of varying approaches, from activity oriented tools to broader categorizations of activities that could serve as inspirational tools when designing new concepts.

The third section would be a compendium of examples, some drawn from my and other teachers’ experiences, some designed directly from the worksheets themselves. The objective for this part would be that it would show the versatility of the concept and the different approaches presented in the toolkit, and that through the examples and their analysis the theoretical concepts

would be expanded and clarified in a way that could not be done briefly in the first part of the toolkit. Thus, the examples would serve as the outcome of the design process, and include not only the insight gained from simplifying the theory but also that gained from turning active experience and design for play models into worksheets.

Design Process

Because I intended the theoretical aspect to have primacy over every other part and to inform the development of the others in turn, it was clear to me that I had to proceed linearly in my design process, from theory to worksheet to example. So, my first sessions were focused on simplifying concepts I had explored more broadly in theory, and determine which of these were fundamental to understand liberatory play and which were not. I decided to adopt a conversational tone throughout the whole theoretical section, since I envisioned it would make the concepts clearer and more accessible, and it would force me not to rely on more complex, inaccessible theoretical vocabulary to make my point. Thus, I started each design session by narrating the concept I was to explore during that time to myself, and recording it via a speech-to-text application. From there, I would construct the simplified definitions of the different concepts that I needed.

The narrative process also helped me elucidate which concepts were being used too much, or too little, and would need further explanation by simply rereading the transcriptions of my narrations and identifying, from my own discourse, what ideas I was having trouble explaining simply and directly. Thus, the design sessions evolved recursively, where I would reread what I had just narrated and attempt to expand or clarify what seemed difficult to understand from the previous narration alone.

Despite the advantages of the narrative approach I adopted for my design sessions, the process of creating the resources from theory first was fraught from the start. The concepts were complex, mutable ideas that seemed to get out of hand anytime I wanted to curtail them, and at every turn it was clear that I had to leave out information that I considered important to understanding the idea behind and the motivation for liberatory play. For example, I ran into issues with using the word *playfulness* to describe the concept *play*. In a longer format it is clear that what I mean by play is a multitude of things that necessarily includes the playful attitude

(see Part I, Chapter 3), but in a short document, for a non-specialist population, the two concepts sounded almost interchangeable and repetitive. So, I cut playfulness out and tried to shoehorn the important aspects of it to the other base concepts that I was exploring, in retrospect very unsuccessfully.

By attempting to simplify not only the concepts themselves, but also the bases from where they were drawn, I also ran into the issue of having to propose other concepts, not central to my exploration of liberatory play, to supplement what had been lost by cutting an apparently more complex concept out. For example, in cutting out *playfulness*, I had to provide an alternative method of explaining how liberatory play can be situated in any number of activities rather than only being a predefined specific set of “games”. Thus, I had to propose liberatory play as an engagement *mode* to make up for the lack of specificity resulting from cutting out *playful*. This became even more of a problem when I realized that, without exploring liberatory pedagogy beforehand, liberatory play was not self-justifying as an educational approach, and would need to be proposed as an educational model on its own. I briefly explored the idea of proposing *productive play* before realizing that without a robust theoretical background liberatory play would never make sense. Since the tool had to be easily accessible, without relying on the expectation that the teacher would have read all that I did in order to propose the concept in the first place, the idea of simplifying the theory as an initial approach to the tool became non-viable, and as an extension so did an artifact of the kind I had envisioned: primarily evolving from the proposed theory. Thus concluded experiment 1. Prototype 1 consists of a set of summaries of key theory concepts for understanding liberatory play, and can be found in Appendix 1.

Experiment Analysis

Prototype 1 fails because its structure makes achieving Objective 3, that the tool is usable out of the box by a wide variety of teachers, impossible. In a theory-forward approach, it is fundamental that the theory on which the entire tool is based is solid, understandable by its audience, and translatable to practice. This leaves only a few options for crafting such a theory: on the one hand, one can write the theory from its very bases, explaining every basic concept that is needed to understand why the theory should work, how it is justified, and only then proposing a practical application for it. Thus, the theory-forward approach becomes a book, and is

inaccessible by virtue of its length and conceptual complexity, even if its language is clear and all of the concepts it covers are well explained. On the other hand, one can write an abridged version of the theory, hoping that it will make sense to the reader because they are already familiar with its conceptual bases. Thus, liberatory play could have been explained from the basis of liberatory pedagogy, assuming that the reader would have read and understood Freire's work beforehand. This is inaccessible because it assumes a specific preparation of the reader, and as such it becomes a tool for a small set of teachers, those who already move within the world of progressive education. Regardless of the path one follows, the theory remains inaccessible for most teachers, and it still fails to provide a clear path from it to praxis, since its explanation is based on how it is built in thought rather than in action.

I attempted to circumvent these accessibility problems by seeking a middle path, where I would blend the clarity of the book-length approach with the brevity of the abridged one. However, it quickly became clear that the theory works *because* it is conceptually complex, rather than in spite of it. By cutting away pieces of it and replacing them with apparently simpler concepts, liberatory play became not more clear but more muddled instead, and in the cutting it lost many aspects and insights that I think make it an interesting approach to education in the first place. The loss of *playfulness* is the obvious example. By not having that conceptual space to explore how liberatory play can be situated through activity, how it is exploratory, not afraid of mistake or error, focused instead on discovery and experience, it became impossible to understand why it is a compelling series of educational praxes. But, while this is an extreme example, in attempting to simplify liberatory play I lost most of its appeal: my exploration of *mode* was not only not rigorous, it instrumentalized liberatory play more than was needed, and in doing so reduced it to educational tactic rather than praxis. *Loving* lost the importance of removing arrogant perception even from ourselves, and in doing so liberatory play lost the cruciality of exploring one's own experience. Meanwhile, my simplifications for *Worlds* and *World-travelling* reduced the concept of world to little more than subject or specific artifact, so liberatory play lost the insight of how worlds are constructed as they are perceived, how to world-travel is to make a world come to life. In exchange, this framing of liberatory play gained very little: it is shorter, but it is not necessarily clearer, nor more accessible, nor more compelling, nor, crucially, more easily converted into practice. However, failing at making the

concept of liberatory play shorter actually allowed me to expand my understanding of it beyond my original description of it. By trying to figure out what to cut, each piece evolved in significance and centrality to the experience, and allowed me to gain a more comprehensive view of how liberatory play manifests in the world, and how it relates to the other key concepts of my investigation.

In this experiment, I explored a theory-forward, academicist paradigm of tool-making for teachers. Examples of this paradigm are books and primers, such as Kincheloe's (2004) *Critical Pedagogy Primer*. No matter how good the book is, an approach of this kind retains the same issues of accessibility that I encountered in my experiment: it must decide whether to educate the teacher from the ground up or to assume they are already versed in the "correct" theory, in either case remaining inaccessible to a broad range of teachers due to either its length and complexity (Kincheloe's *Primer* is an example of this, clocking in at 182 pages, and including recommendations for further reading for a score of different authors and works), or its assumption that the teacher must come pre-educated. In short, approaches of this kind cannot be much more than study-documents, rather than practical tools. In the copy of the *Primer* I had access to, the publisher alludes to the two approaches mentioned before, and to the fact that these books are study, rather than practice-oriented: "**Peter Lang Primers** are designed to provide a brief and concise introduction or supplement to specific topics in education. Although sophisticated in content, these primers are written in an accessible style, making them perfect for undergraduate and graduate classroom use". Notice the tension between sophistication and accessibility, the high level of preparation required for studying these texts, and the lack of mention of its usability for teachers engaged in practice. Even when working on a much smaller scale, all of these issues were present in my experiment, and I was unable to find a middle way, to bridge these tensions and problems such that theory could be made directly accessible, and more importantly applicable, in a digestible format for a non-specialized audience. For my next experiments I decided to abandon the academicist, theory-forward approach, and explore different roads towards liberatory play.

Designing From Examples (Experiment 2)

Following my reflection on the issues of Experiment 1, I embarked on Experiment 2 from a different perspective. Instead of starting from theory and attempting to explain it all before ever getting to worksheets or examples, this time I would go in the reverse direction. For Prototype 2, I attempted to start from example –to construct a series of examples that I envisioned were representative of a liberatory play approach– and from there build the rest of the tool. I hoped that designing from these examples would give me a good number of insights into what liberatory play could look like, specifically as a lesson plan, in the classroom. From that corpus of lessons, I expected to be able to abstract key processes to inform my worksheets and the crucial concepts that absolutely needed to be explained in order to make sense of the tool as a whole.

Envisioned Prototype Structure

I envisioned that the final structure of prototype 2 would be very similar to that of prototype 1. Again, the tool would be composed of a theory/concept explanation section, a worksheet section that would be process oriented, and a section describing examples and lesson plans as inspiration for how to approach the worksheets and the theory. This time, however, the first two sections would be derived from the examples, so the design flow of the prototype, and indeed the insights I expected a user would be able to arrive to, would be markedly different. For starters, shifting the process to starting with examples meant that the tool would justify its approach through them. If it contained good examples, good cases and lesson plans, then teachers would be more likely to adopt a set of resources that could help them generate more lessons like these. It also meant that the worksheets would have to be tailored to the design process of the lesson plans, even as I was figuring out how the process worked by designing the lessons themselves.

Thus, I would first create a series of semi-situated lessons. Semi-situated because they would be about a specific example topic that I would choose from a regular high school curriculum to create a lesson, they would be specific in terms of proposed activity and lesson progress, and they would include specific questions to ask about the lesson. However, they would be created with an abstract class in mind, not tied down by the specifics of a particular school structure or

sociocultural context. By not focusing on these aspects, I hoped I would be able to focus on the design process of the lesson itself: how subject and topic evolved into activity and inquiry and from there into reflection and discussion. For the final tool, I would supplement these semi-situated examples with lesson plans and case studies sourced from other works, for each of which I would provide analysis on why they should or should not work, what could be done to adapt them to new contexts, and how one or more of the worksheets included could be helpful in creating a similar activity. Because I was worried that an example compendium might be taken literally and copied verbatim rather than serve as inspiration, I intended the analysis to be very clear not only on what worked, but also on what might not and what might need reworking. Thus, the final examples section would include a mix of abstract and concrete situations, from which teachers could draw inspiration.

The second part, then, would be an abstraction of the design process I planned to observe in myself through the creation of the semi-situated examples. By documenting not only the lessons but also the creative decisions I would make while designing, I expected to have a few road maps that I could then analyze using a variety of design for play theories to formalize a process of sorts that could be followed. These would be the worksheets. But, as it was crucial to not attempt to methodologize the creative process completely, each worksheet would be clearly marked as being derived from a particular process, they would provide a wealth of different approaches to follow, and they would remain very explicit in that these proposed design processes were only options and sources of inspiration, rather than an authoritative guide to bring about liberatory play regardless of context.

Finally, I could compile a “theory” part based on the concepts that would come up during the design process of the examples and the worksheets. Instead of focusing on liberatory play itself like the theory part of experiment 1, this section would serve more as a supporting glossary, explaining more abstract concepts as well as those from design for play theories themselves. It would be complementary to a self-justifying lesson and example-forward tool, where the main focus would be the lessons and the tools themselves, and this section would be extra support for teachers to acquire the basic conceptual vocabulary needed to interact meaningfully with the tool.

Design Process

I started the design process by picking a topic that I felt I could create an interesting lesson with: the scientific method. It seemed a good challenge for a multitude of reasons: firstly, it is usually taught in science classes in high school, which are not traditionally approached from a critical perspective, so it was compelling to evaluate how a scientific topic could be approached critically. Secondly, because it is a method itself, the subject lent itself to easy activity design, since it could so readily be put into action and played with. Finally, I have had ample experiences with it since I first learned it in high school myself, and through these I have acquired a critical perspective on it. From its authoritarian presentation at my school, to its strict application in courses I took in university ranging from mechanical engineering to linguistic analysis (with very mixed results in my opinion when used to attempt to gain insight into subjects), to me teaching it again as a tutor and wrestling with the inadequacies I perceived in both its strict usage and its traditional teaching. I decided to narrate this experiment as well to better observe my process as I designed. I aimed to end up with an informal lesson plan —not a minute by minute breakdown of what should happen in the classroom, but rather a flow of activities that could be analyzed and situated in a particular context later on.

At the end of my narration process I had a perfectly serviceable lecture concept, and little else. Even as I had observed my thought process carefully while I designed the activity, I had little insight on the actual path that I had followed to get from subject to activity to question. I knew that the three were important, and I could see how each activity responded to the aspect of the scientific method I was trying to investigate, but perhaps too closely. Even as I had tried to abstract the lesson to focus on the process, the activities that I had come up with were still too situated within the specific subject I was trying to create for, and while that made it impossible to abstract a process for any other lesson than a scientific method one, the plan itself was better for it. Moreover, while the questions for discussion I had come up with were appropriate to the activity itself, I found them insufficient in predicting any insight that the students would have from their specific experiences of the activity. Proposing pre-made questions would not work, and attempting to abstract a process from this design experiment would be a fictionalization of the design process instead of a clear picture of how the lesson had come about.

To further confirm the non-viability of this approach, I consulted with two collaborators.

First, I asked Emma Heath to reflect on her own design process for her original activities. She did not have much insight. For the best activities she had come up with, she did not know where the original ideas came from, and everything else from activity structure to the questions she asked in class before, during and after was iterated upon throughout her classes, rarely the same from lesson to lesson. Instead, she reflected that she had some basic questions that she would ask about the experience of doing the activity, and the rest were born out of the individual reflections of her students, improvised in the moment. There was no specific abstract-able process or method to be found. Then, I asked Julie Tremblay, herself experienced with playful learning design and acquainted with my liberatory play concept, to carry out her own version of my lesson design experiment to compare our insights and results. Instead of the scientific method, she chose an English as a Second Language topic, and created her own playful activity. Her results were similar to mine: she had a good activity, very situated to her topic, with little insight on how it had come about besides the fact that it was effective at exploring the topic she had chosen, and some questions that were able to evaluate the experience of the activity itself, but not more. Despite these similarities, her lesson had absolutely nothing to do with mine, neither in tone, approach, or student expectations. It was, again, completely situated to her topic, and abstracting a process description would have been useless for anything but that specific topic.

With these insights, I decided to conclude Experiment 2. As it exists, prototype 2 consists of a single, narrated lesson plan for a scientific method activity, which can be found on Appendix 1.

Experiment Analysis

Prototype 2 fails because the example it comprises, like any other example, cannot be abstracted into process or tool without losing the specificity that makes it a good example in the first place. In my scientific method lesson, I designed a series of activities focused on questioning the method from the inside. By attempting to recreate with the students the conditions that give rise to a standard scientific method –the need for a replicable process of deriving empirical knowledge from the world that allows us to communicate it meaningfully– my activities could be successful at encouraging the students to playfully inhabit a scientific mindset and devise their own methods of documenting and transmitting knowledge to each other, in the process questioning the scientific method and its structure themselves. Yet, these activities

would be useless for any other topic or subject, and while that is an advantage of the lesson itself –it is well situated to its topic– it exposes a major flaw of my second experimental approach: that the design process for any given lesson or activity cannot be abstracted from its subject and content without losing its value. Moreover, while activities themselves can be designed, the questions that must be asked in discussion to stimulate it and to trigger creative reflection from the students cannot be predefined, even if those that serve to interrogate the form of the activity can. This echoes Shor's (1992) Shor and Freire's (1987) insights on the differences between generative topics (similar to the formal questions) which can be brought to class to initiate discussion, and the actual questions that can only happen during the conversation itself.

The failure of prototype 2 also served to illustrate the flaws of the worksheet as a tool format. By focusing primarily on process, and dividing it into steps to be followed, the worksheet ignores the myriad different ways in which activities must be designed in order to fit the topic and the context in which they are taught. For a process-heavy topic such as the scientific method, the activity might consist in replicating it or reconstructing it, but this cannot be done for topics whose knowledge is of a different kind. Trying to shoehorn all of this diversity into a worksheet would only produce activities that resemble each other rather than the topic itself. Moreover, any worksheet would by necessity ignore the specific context the teacher is working with, which would divorce the activities designed with it from their environment of application. In order to facilitate the creation of meaningful, diverse play activities that are situated not only on subject matter but also on teaching context, I needed to find a tool structure that would facilitate and support a more holistic, unregulated creative process for the teacher. Thus, for the next experiments I would abandon the three part, theory-worksheets-examples structure in favor of a new one.

Experiment 2 is representative of the case-studies-and-examples paradigm of teacher tools. Examples of this paradigm are pre-made lesson plans, compendiums of case studies such as *Freire for the Classroom* (Shor, 1987), and even texts based primarily on analysis of the personal experiences of the teacher, such as *Empowering Education* (Shor, 1992). While the first two kinds can be very effective as reference documents to derive inspiration for designing new activities, the risk is that they are misinterpreted as more than generative resources, and that the approaches and lesson plans suggested as cases and examples are copied directly from the page

to the classroom. Even when the topic the teacher is exploring is the same as that described in a book, the context in which they explore it, their insights as individuals, and those of their students will differ from those in the case or in the book, and it is not guaranteed that any given lesson plan will work just because it worked before in a different context. The analytical insights derived from these examples, too, must be seen as a result of the situated nature of any given lesson, rather than an abstract learning that is necessarily transferable to any context. As teachers adapt lessons from examples and case studies, they need to be mindful of their own execution of them, and derive their own analytical insights given their particular context. Lessons, after all, evolve as they are taught.

As for the third type, the analytical text into the experiences of a teacher, the risk is that those experiences are too situated on particular teaching context and subject. Shor's text (1992) is deeply insightful about a particular praxis (the dialogic, generative theme method), for a particular subject (English language writing), in a particular context (New York City, end of the 20th Century, working class students, etc.). But, the further away that one gets from Shor and his praxis in one's own, the less directly applicable many of his specific insights become. This is not to say that they are not valuable –like other liberatory educators, his writing is complex, and in talking about praxis he also reveals a deeply compelling philosophy of education and a distinct social outlook– but it is important to highlight how different subjects, and different contexts, require different praxes of liberatory play. Crucially, these praxes must respond to the nature of the world that the teacher is exploring with their students in that particular situation, so praxis should be thought of activity-to-activity, topic-to-topic rather than subject-to-subject.

The case-study-and-examples paradigm fails at both providing a broadly applicable, non-methodologized resource to bring about a liberatory pedagogy (it would be an error to attempt to copy Shor's (1992) method and expect similar results to the ones he had), and creating a resource that is usable out of the box, since any and all example compendiums would need to be carefully and thoroughly analyzed for the specific insight that is applicable to the teacher's context. In the next experiments I moved away from an example-centric approach to the liberatory play tool, and focused on exploring the possible praxes of liberatory play directly.

Designing From Play Models (Experiment 3)

Unlike Experiments 1 and 2, Experiment 3 focused on the practical elements of the tool from the start. After having failed to recognize a clear path from theory to tool and from example to tool, I decided to attempt the design of the tool by itself, without first basing it on theory simplifications or key examples. Instead, following the insight that liberatory play “facilitates leveraging existing knowledge from play studies for education” (Martínez Sánchez, 2022), I would construct a tool using analytical and practical models from game studies.

Play and Games and Learning: A very short review

Before embarking on my own experiment, I evaluated a number of approaches that have in the past or are currently attempting to bring play into education as well. The objective in this review was to find if there were significant overlaps between these attempts and my own, and if so how the insights of these approaches could be leveraged for creating a better liberatory play tool. I analyzed educational games, edularps (Transformative Play Initiative and Westborg, 2022), gamification and gameful design approaches, and the related playful education models of The LEGO Foundation (Zosh et al., 2017) and The International School of Billund (Project Zero and ISB, 2019) For each of them, I explored how they linked play to education, whether they focused on knowledge depositing (the banking approach (Freire, 2000a, p. 74)) or critical consciousness, what kind of resources are available for teachers to implement these models, and how broadly applicable they are outside of the specific context they are created in. These questions were very much in line with my goal and objectives for a liberatory play tool: could each/any of these approaches be considered liberatory play? Do they focus on method or do they prioritize a broad, context dependent approach? Are they easily integrated by teachers to their existing practice and context? Of these questions, I want to draw particular attention to the first one, whether their approaches could be considered liberatory play. As I have mentioned before, liberatory play is a broad concept, capable of arising in many different contexts through many different praxes, sometimes even accidentally. Thus, there is no doubt that in any of these approaches liberatory play could arise. In fact, Frasca (2001) has already established the value of videogames and simulations as potential avenues for the praxes of a liberatory pedagogy. Thus,

the question here is not “can liberatory play arise here?”; the answer to that is, in all of these cases, yes. Rather, I wanted to focus on whether any of these playful approaches to education *prioritizes* a relationship between education and play that could be considered analogous to liberatory play.

Educational Games

Serious games, of which educational games are a subset, are “games used for training, advertising, simulation or education.” (Peña-Miguel & Sedano Hoyuelos, 2014). In particular, educational games are those designed “in order to balance the subject matter with the game play and the ability of the player to retain and apply said subject matter to the real world”.

Educational games work their subject matter into the game artifact itself, and in doing so blend the activity of playing the game with that of learning the content. There should be no doubt that some games will facilitate liberatory play, and that some more can be designed as praxis themselves (Frasca, 2001). However, educational games and their designers are focused on the object rather than the experience, and as such are limited by the content of the artifact itself when considered alone. This is to say, they are by necessity subject specific, predesigned with a set of knowledge or a world to be explored, and cannot be easily manipulated or used for exploration beyond this particular world. In this sense, educational games resemble specific liberatory play activities as explored in Experiment 2: they are situated in a particular subject and cannot be abstracted from there. Unlike the liberatory play activities, however, educational games, and in particular videogames, are very complex to design and require extensive support while in use in the classroom (Peña-Miguel & Sedano Hoyuelos, 2014). A tool based on educational games would require either an essentially infinite number of game artifacts for any given subject (and in that form would still be prescriptive, inflexible as to the perspective any one of these games provides on a particular subject), or a user population that were themselves game design experts, possessing the design and technical skills required to make artifacts as complex as these. Thus, it would either be a methodological approach, with a set number of premade avenues and subjects available, or technically complex to use, such that it would prove inaccessible to most teachers.

Edularps

Edularps are Educational Live Action Role Playing Games (LARPs) (Transformative Play Initiative and Westborg, 2022). The perspective of their creators into play and education is markedly similar to that of liberatory play, so much so that they could be considered one of its praxes: they are situated activities designed to facilitate the students' and teachers' discovery of the material through playful world-travelling, in this case in the form of roleplay. Like other praxes of liberatory play, they blend the individual experience of play with the collective, and facilitate the coming to consciousness of this boundary through discussion before, during, and after the activity (which Westborg (2022) calls debrief). Iuama (2022) already recognizes the potential of LARP as a praxis of a liberatory pedagogy, which an analysis of edularp from the perspective of liberatory play confirms.

While Westborg's (2022) approach could be considered a praxis of liberatory play already, she herself recognizes that edularp design is a specialized skill, which expert creators such as herself facilitate for schools. Thus, while its pedagogical outlook and ultimate educational goal might be markedly similar to my liberatory play tool's, a resource based exclusively or primarily on edularp would be limited to a single praxis and inaccessible to non-specialist teachers.

Gamification and Gameful Design

Gamification is "the use of game design elements in non-game contexts" (Deterding et al., 2011). As an approach, it integrates elements of game design to non-game artifacts and experiences to increase user engagement with the activity or artifact, as well as content retention and investment in the activity itself. It has been extensively used in educational contexts to great perceived success, especially through the integration of elements of achievement and progression (points, scores, challenges, badges, rankings, etc.) into educational activities (Majuri, Koivisto and Hamari, 2018). Importantly, gamification also appears to be based on the perspective of the designer or the audience (Deterding et al., 2011), which makes possible instances of "shallow" gamification (Lieberoth, 2015) where only the veneer of the game, the framing of it, exists.

Despite its success in education, the gamification approach has little insight into the relationship between play and education beyond the observation that people are more immersed when playing gamelike artifacts. Thus, it represents not a pedagogical outlook but rather a set of tactics to make activities that are not perceived as fun, or engaging, or desirable more attractive

to the user. This means that it can be leveraged to facilitate a banking model (Freire, 2000a) effectively, by adding gamelike characteristics to rote knowledge acquisition and repetition. In fact, most of the studies analyzed by Majuri, Koivisto and Hamari (2018) focus specifically on quantifiable results of gamified activities, such as skill and knowledge retention, both hallmarks of banking educations. By focusing on the tactical deployment of game design elements, a gamification approach risks falling into non-liberatory models of education, simply disguising them as play to make them less unappealing.

In contrast, a liberatory play approach must regard play not as a coating to better enjoy non-play activities, but rather as the central educational experience itself. An activity of liberatory play does not need this coating, since it itself prioritizes its playfulness, its approachability as play, as a central aspect. While elements commonly used in gamification could be used to design playful activities, a gamification approach to a liberatory play tool would fail given that it would prioritize the tactics of delivery of content over the experiential nature of the playful activity itself, thus potentially undermining the ultimate radicalizing goal of the experience.

The LEGO Foundation and The International School of Billund

I group these two institutions together because, even though each has produced their own research and resources, their approach and outlook on education is similar: they focus on play as a strategy for children's education, they argue that it helps children better acquire knowledge and skills, they have or are actively being developed within the Danish educational context and structure, and they focus on joy as the central experience of playful learning. In fact, it is these four characteristics that separate them from the aims of a liberatory play tool:

Firstly, both of these institutions' approaches are specifically and primarily geared towards education for young children. This forces several differences between their approach and liberatory play as described in Part I. The teacher is interpreted as a constant manager, both of the classroom and the activities themselves (Project Zero and ISB, 2019). This creates an unmovable division between them and the students, which is exacerbated by the fact that, as manager, the teacher is never fully participating in the activities that the students carry out. Furthermore, by focusing exclusively on young children, most of the resources and research that these institutions have generated are not clearly generalizable to education for most people,

unlike those envisioned as part of a liberatory play tool. Secondly, both institutions focus on skills and knowledge as the goals of a playful education, rather than critical consciousness. While The LEGO Foundation (Zosh et al., 2017) does highlight critical thinking as an important skill to develop through play, it remains only one amongst many, rather than a distinct outlook on knowledge and the world. Moreover, especially in the case of the International Billund School, the Danish context is inescapable. Many of the Billund School's resources rely on classroom arrangements and other strategies related to the material conditions of a Danish context (Project Zero and ISB, 2019), which renders them less easily applicable in settings with different or more rigid material conditions. The LEGO Foundation recognizes this by acknowledging that further research is needed in an international context (Zosh et al., 2017), but as of yet these approaches remain situated to Denmark's characteristics. Finally, their focus on joy as the central element of a playful education ignores the fact that discovery and exploration can be uncomfortable, and that critical understanding of the world can be painful. By focusing on joy, they simplify the potential effects of play in the players, and prioritize the emotionally pleasurable forms of play over those that might not be as enjoyable, but are valuable and worthwhile.

A liberatory play tool, in contrast, necessitates a flexibility in the boundary of teacher and student to facilitate collaborative knowledge construction and the sharing of experiences and impressions of play through reflection. It requires that play be thought of as an approach viable to any population of students, at any age, as a means of radicalization. It necessitates the recognition that critical understanding of knowledge and knowledge construction is a central objective of education, rather than just a skill to be developed as part of a toolkit. It also requires a broad perspective in terms of context where it can be applied, beyond the trappings of any particular educational system. Finally, a liberatory play approach must recognize the enormous complexity of playful, loving world-travelling, and in doing so allow for the existence of discomfort, of pain, of disagreement and other unpleasant emotions when they facilitate the loving exploration of a world.

Envisioned Prototype Structure

Since my previous experiments starting from theory and examples had failed, I decided to stop designing extraneous aspects to the tool as justifications for its existence. Instead, from this

experiment on, I would focus on the practical toolset first and construct the surrounding elements –theory explanations, examples and cases– later, based on what the toolset required for clarity and applicability. After discarding the possibility of using one of the playful education approaches listed above as a starting point for my prototype, I decided to instead focus on developing it from a diverse number of analytical and practical theories of game studies. As my initial sources of inspiration, I chose Caillois’ play model (2001) and Calleja’s (2011) model of player engagement because I was well acquainted with them, found them compelling frames of analysis for a diverse set of play experiences, and thought I could easily use them as a generative basis for designing the praxes of liberatory play. I complemented these two with Fonseca, Lukosch and Brazier’s (2022) Design Framework for Social Interaction, since it provided a much needed practical balance to the other two frameworks’ analytical approach and I found their focus on holistic play activity type, rather than decontextualized play elements, compelling.

Since I had abandoned the idea of creating worksheets after the previous experiment, finding them too rigid and prescriptive to facilitate teacher innovation, I explored other tool format options. I deemed a comprehensive framework too abstract and theoretically complex to make it easily adoptable, so I explored formats that would be more approachable, visually striking, and familiar to teachers. I considered posters and pamphlets outlining each of the play activities I would construct from the play models, but in the end chose to create a deck of cards with diverse play concepts based from one of the theories I was working with, such that there would be three different kinds: Play Forms (Caillois), Play Types (Fonseca, Lukosch and Brazier), and Engagement Types (Calleja). The cards format had a number of advantages that I found compelling, namely that they allow for the presentation of diverse bodies of information in one deck, so long as they are marked appropriately; that they are a very common format for teaching resources, and therefore teachers might be more inclined to adopt a card based tool; that by virtue of being space limited cards tend to be shorter and more to the point in content, so in this format not adding too much methodologizing would not be perceived by teachers as a flaw but rather as conciseness; and that because of their shape they tend to be explored and used less rigidly than other resources, sometimes even lending themselves to play. Thus, I would create a set of cards outlining different playful approaches towards activity design based on the individual elements of at least the three frameworks mentioned before, and potentially others depending on

the success of the first three. As for theory and examples, I decided to include whatever theory was needed in the eventual instructions that would accompany the cards, and to create a few, one or two sentence long examples for each card, such that they could serve as initial inspiration and to show how the card's content could be interpreted, but not more.

Design Process

I started by taking Fonseca, Lukosch and Brazier's (2022) model and using their seven play activity category descriptions as generative starting points for similar activities for an educational context. I adopted a single structure for all play activity descriptions, based on what I thought was crucial that teachers consider when designing an activity. First, I provided a broad description of the activity type; the *Artist*, for example, reads "Embark on a creative project: create artwork (visual, video, music, writing, etc.) based on or informed by your topic.". Then, I added a number of questions to Consider, which were intended to help design the activity to be properly situated. For the *Artist*, they are "Should the artwork be created individually or in teams? What materials are accessible to your class and will allow your students to create freely?". Next, I created a Discuss section, where I suggest an initial approach to the class conversation about the activity. The *Artist's* is "Show the artwork generated in class to each other. Use it as a starting point for conversation about your topic". This section was particularly important because it allowed me to suggest initial points for discussion and ways in which to kickstart the conversation without having teachers expect that a resource such as mine would be able to guess at what the productive avenues of discussion would be. Instead, the onus of the discussion lies with the teacher facilitating the activity. Finally, I proposed a set of Leading Questions, based purely on the form of the activity, to help the conversation get started if the teacher is having trouble coming up with good jumping off points. The *Artist's* were originally "Are different perspectives addressed by different pieces? What are they? How are they different?" and "How does the need to produce artwork influence the students' understanding of the topic? Did it inform a new perspective?". While originally all cards had a Participate section, the text was almost the same in all cases: it encouraged the teacher to get involved in the activity as the students would. Thus, I removed the element from each individual card and decided to put it in the instructions.

After creating play activities for each element in Fonseca, Lukosch and Brazier's (2022) model, I did the same for Caillois' (2001). I adopted the same structure as for the first model, since it proved fruitful in translating the different activities and concepts to teacher-oriented resources. For this model, however, I modified the titles of each concept, removing Caillois' latinate names and replacing them with more accessible words —*agon* to competition, *alea* to chance, *mimicry* to make-believe, *illinx* to sensation, *ludus* to ruled play and *paidia* to free play. This would simplify the conceptual explanations needed and make the activities clearer. Thus, I had the text for seven Play Types, and five Play Forms (one for each of Caillois' play forms plus one for the *paidia-ludus* spectrum). Before continuing to create the activities based on Calleja's (2011) concepts, I decided to prototype the differing looks and visuals of the cards, so I could show them to Emma Heath as they were supposed to look for feedback.

I modeled two Play Types (the *Artist* and the *Athlete*), and one Play Form (*Competition*) before showing them off. I color coded the two types differently, and added the kind of card they were prominently on the side of each card. As of yet, none of the cards had examples. From Emma's feedback, a few things became clear: firstly, the distinction between what was a Play Type and what was a Play Form was not clear. Secondly, there was an apparent overlap in content between *Competition* and *Athlete*, which was confusing since Emma could not decide how to think about an activity she had done previously. Thirdly, the examples were very necessary, but it was unclear what kind of example would work best: for the *Athlete* and the *Artist*, Emma suggested a large compendium of lessons that could be considered as representative of each play type, sourced from our experiences and online resources. I was reluctant to create such a compendium given my insight from experiment 2, so I remained undecided. As for the *Competition* card, she suggested a list of different forms of competition, that could be integrated into activities.

This last suggestion made me realize that the Play Form cards were too close to gamification strategies. As they were, there was a risk that they would not be interpreted as full-fledged activities to situate within the teacher's subject and context, but rather as game elements to tack on to existing activities, such as hosting a competition for whoever finishes an exam first and then discussing that. This realization, coupled with the fact that the different categories of cards were not clearly distinguishable and that the inevitable overlaps in content between cards of

different categories were confusing, helped me decide that it was time to stop this experiment and try again. Thus, prototype 3 consists of seven Play Type activities, generated from Fonseca, Lukosch and Brazier's (2022) model, five Play Forms activities, generated from Caillois' (2001), and visual prototypes for how three of these cards would look in practice: the *Artist*, the *Athlete*, and *Competition*. These can all be found in Appendix 1.

Experiment Analysis

Unlike Experiments 1 and 2, Experiment 3 was only a partial failure. While the Play Forms cards and the envisioned ones based on Calleja's (2011) model were unpromising in that they were easily confused for simple gamification, the Play Types cards provided a clear path to follow for the next experiment. Similarly for the structure, while making different types of cards based on different theories had revealed itself to be complicated and confusing, the card format was itself very promising, and I would continue to explore it for the remainder of this project.

Through the failure of the cards inspired by Caillois' (2001) model, I realized the ineffectiveness in attempting to turn a model that was designed to cut apart play into a series of cohesive playful activities. By attempting to isolate, for example, competition as a source of activity, I was in fact replicating the same risks and vulnerabilities that I identified in the gamification approach: that competition, like any other aspect of play, is not by itself a means to liberatory play. While a liberatory play activity might include competition, only when it is cohesive, holistic play can it become liberatory. Thus, cards that prioritized non-holistic views of play, that focused overtly in designing for one single aspect of the play experience, would run the risk of only including that element at the expense of the complete experience. This applied to Calleja's (2011) model as well. As models designed to provide ways to analyze the distinct parts of play by themselves, they would never serve as good generative sources to create comprehensive liberatory play activities. Thus, in the following experiments I would no longer focus on analytical models as generative sources.

The confusion in the overlap of the different types of cards also served to illustrate that the idea of providing a broad diversity of tools as a way of refusing methodology would only be a hindrance rather than serving as an inspiration to approach any given lesson from multiple perspectives. In the future, I would have to focus on a single basic structure and source for my

design experiments, to avoid any confusing overlaps and obscure qualifications, such as Play Types versus Play Forms versus Engagement Types. In the following experiments all activities would be of the same basic type, and the standardization that I had started with a single format for all activity texts should be extended broadly to generative sources and types of cards created.

In contrast, the card format had all the success that I had expected. The texts were brief, clear, and to the point, and because they were placed on a limited space they felt sufficient. The card format allowed easy exploration of different activity types, as well arrangement and rearrangement if one wanted to combine ideas from different cards. Their use as sources of inspiration for new activities felt intuitive, and the tone they struck was confident and suggestive without being prescriptive or authoritative. While the visual design of the mockups was inadequate –too formal, monotonous colors, unclear distinctions between the different parts of the card– the structure of the play activities suited the size and presentation of the cards very well.

The play activities inspired from Fonseca, Lukosch and Brazier's (2022) model were also very successful. The focus on cohesive activity, rather than individual play content, facilitated thinking about how to adapt any given activity type for a specific subject and context, rather than just taking individual elements to place in an unrelated format. They also facilitated the suggestion of practical considerations to design such an activity, which I hoped teachers would find helpful in situating any given design to their context. Moreover, they provided easy framings for discussion starting from an analysis of what the activity itself was, so the Discussion sections were also concise but suggestive. While the leading questions were too complex, each activity contained promising questions to start a conversation with. Finally, the titles of each card, based on a "profession", were very attractive and facilitated a generative mode of thinking, where a teacher could imagine their students taking on a role (*Artist, Inventor, etc.*) and think creatively about how to relate it to their subject matter. In the following experiments I would use these cards as a starting point.

This experiment is representative of a "toolbelt" paradigm of teacher tools, which would make up for the limitedness of any one tool with a variety of others. While this is not necessarily a problem, and it would always be preferable to have more resources than less, the risk is that a teacher without intimate knowledge of all their tool belt will often find it confusing. When

bringing together multiple overlapping approaches, one runs the risk of losing what makes each approach good on its own in the combination, just as there was a risk of interpreting the *Athlete* card from the perspective of the *Competition* one, thus only allowing the former to suggest physical competition, rather than a broad range of movement and sensory based activities. To avoid these risks, in the future experiments I would pursue a unified vision of the entire tool, rather than continuing to rely on a variety of possible approaches to avoid methodologization.

A Tool to be Abandoned (Experiment 4)

Experiment 3 led me into Experiment 4 with a solid basis to construct from, in the form of the card format, the successful play activity conceptualization for liberatory play inspired by Fonseca, Lukosch and Brazier's (2022), and the structure in which I had created cards so far (a description, followed by Consider, Discuss, and Leading Questions sections). Along with these, I had a series of specific design questions to address, which came from the failures of prototype 3: How to avoid methodologizing the cards given that the many-different-tools approach was not viable? How to create a unified set of play activities without having them be repetitive? How to approach examples such that they would be illustrative and suggestive without lending themselves to carbon-copying? These three questions, in that order, would guide the development of Experiment 4 and the ultimate result of prototype 4.

Envisioned Prototype Structure

The most pressing question at the beginning of experiment 4 was the one relating to methodologization. It was imperative that the prototype reject a step-by-step model and instead serve as a source of inspiration for teachers to develop their own praxes. At the same time, creating something that was too abstract would be useless, as there would be no clear connection to its application in the classroom. While at the individual level each play activity I was carrying over from experiment 3 struck a good balance between abstraction and concreteness I still needed to find a way in which to present the entire toolkit in this perspective, such that the individual cards would be engaged with from this point of view from the beginning. Thus came

the idea of the tool to be abandoned.

Instead of creating a comprehensive, beginning-to-end tool for every teacher to design play activities, I would present it as a set of best practices which the teachers could learn through experimentation and then eventually move on from to design their own. By presenting the tool as a solid set of base principles but not an entire path to follow every time an activity must be planned, I would successfully get around any methodologization issues. Indeed, the cards would serve as a base of inspiration that could be trusted to start one's own praxis, but there was no risk of misunderstanding that they represented the one, correct way of approaching a liberatory pedagogy. Moreover, by combining a best practices approach with the diverse set of play activities I would include the teacher would become aware of the enormous breadth of options when designing liberatory play for their classroom.

This structure for prototype 4 also allowed me to abandon the comprehensiveness that I had aimed for before and instead focus on developing the most solid version of each of the play activities that I would include, without expecting them to be able to account for every single instance of liberatory play out there. The explanation of when and how the tool should be abandoned would be included in instruction cards that I would create after I had finished all the other activity cards. This section would also outline ideas for how to participate in the activities effectively and how to identify liberatory play in the teacher's regular practice through reflection about the best-practices outlined in these individual activity cards.

With the added emphasis that the prototype's new approach gave to each individual play activity, it became even more important to ensure that the activities themselves were both unified in basic outlook and format, but never actually overlap in what kind of play they proposed. As I had exhausted Fonseca, Lukosch and Brazier's (2022) model, having created one play activity for each of their own, I required an expanded play model from which I could draw inspiration to design more activities. After some research, I chose the expanded PLEX model (Arrasvuori, Boberg and Korhonen, 2010) for two main reasons. Firstly, its creation process was, like me, concerned with overlaps between different play theories and models. Therefore, the framework had been created through an analytical process that collated multiple others into a number of basic categories, presumably without conceptual overlaps already. As a result, the expanded PLEX model was expansive, containing more categories and basic descriptions of play elements

than any other model they had analyzed or that I had encountered so far. This meant that I would have even more starting points to generate new play activities. Secondly, the PLEX framework was designed not only for analytical work but also as a practical tool for designing playful engagement (Arrasvuori et al., 2011). From my experiences in Experiment 3, I had come to the conclusion that an analytical model whose main purpose was to piece apart the play experience would be ineffective as a source of inspiration to create comprehensive play activities. A practical framework, however, might facilitate the design process by including categories which I could use to inspire fully fledged forms of play.

To further avoid overlaps between the activities that I had created in experiment 3 and those that I would design based on PLEX, before starting to work with the new framework I mapped my existing activities onto some of its categories, and in the future I would avoid working with those. The following table shows how I associated the activities:

Activity Title (Fonseca, Lukosch and Brazier, 2022)	PLEX framework category (Arrasvuori, Boberg and Korhonen, 2010)
Artist	Expression
Athlete	Sensation
Detective	Challenge
Explorer	Exploration
Hunter	Discovery
Inventor	Challenge
Volunteer	Sympathy, Fellowship

Table 1: Mapping from existing play activities to PLEX categories.

This exercise proved fruitful not only in deciding what other categories to focus on, but also in refining some activities and further understanding the appeal of others. For example, in mapping Athlete to the concept of sensation, I realized that the previous text only implied physical activity as in physical exertion, when it should also suggest sensory experience. So, I updated the activity description to include that aspect. Detective and Inventor were hard to map

because they did not respond directly to any category in PLEX, so I eventually decided to consider them different individual challenges. This of course implied that there could be a potentially infinite set of non-overlapping activities that could be designed from any given category, a possibility that remains to be realized. Finally, even though Sympathy and Fellowship are described differently in PLEX, I found their meanings to overlap, to be central to any given liberatory play activity, and to be expressed particularly strongly in the Volunteer activity, which is why they were both mapped onto it simultaneously.

Design Process

Despite its expected advantages, I found PLEX to be uneven in its categorization from the get-go. As a result of its collation of a large number of different frameworks, it included categories that overlapped experientially, such as Sympathy and Fellowship, and broad types of experiences and play elements that did not correspond to each other. For example, I found categories like Simulation, Fantasy, and Subversion to be actionable play forms (one can fantasize, simulate, subvert as a central element of their play activity); others were abstract acts that could be applied to any of these play forms or arise from the particular social structure in which they were played (Control, Completion, Submission, Competition); and yet others were experienced as an effect of the play activity itself, such as Captivation and Thrill³. Moreover, my mapping of the existing activities onto the framework had also revealed that one single category could inspire multiple different activities. So, instead of sticking to selecting the categories I found appropriate and predetermining only one activity for each, I tried a different approach.

While working with Fonseca, Lukosch and Brazier's (2022) model I had found enormous inspiration not only in their descriptions of the different types of activity but also in their naming of each one after a role that the players could take on. I had replicated that in my own cards because I expected that, just as each role name had been enormously suggestive to me, so they would be when a teacher was attempting to design their own activities. I decided to explore

³ In pointing these differences in categories out, I am not trying to make an argument as to how these categories should be organized within PLEX. Rather, I found these distinctions helpful to understand why some categories were so much more fruitful as sources of inspiration for play activities than others.

each of the PLEX categories first through role correspondences and derive inspiration from those. I used ChatGPT to generate role analogies for each of the play categories in the framework, starting from Expression - Artist (you can find the full prompt that I used, as well as the AI's response in Appendix 2). From the list generated⁴, I chose five that I found inspiring, and that suggested no overlap with any of the activities I had already created: Role-Player (Simulation) which I renamed Actor, Dreamer (Fantasy), Rebel (Subversion), Gardener (Nurture), and Comedian (Humor). For each of these roles, I created new play activities that responded to the category they were inspired by and the role the students were expected to assume. Here, I found the earlier distinctions I had made between the PLEX categories helpful again, as it turned out that all roles except for the Comedian were associated with categories that described actionable play forms from which I could easily draw to design complete activities.

While I was designing these new elements to include in the cards, I also corrected and refined the text and design of my existing play activities. I remade the visual structure for the cards, and decided to color-code each activity so they would be perceived separately. As I mentioned before, I adapted the *Athlete* to include sensory experience as well as physical exertion, but I also simplified all the leading questions after it was suggested that, in the follow-up three-questions-in-one form that I had originally written them they were too rigid to jumpstart a freer discussion. So, I simplified each leading question to a single sentence, and limited the number of questions to only two per play activity. These adjustments I would make from the beginning to the new activities generated from PLEX. By the end of the activity design process, I had twelve cards, each with their own individual play form, complete with Considerations, Discussion suggestions, and leading questions. Crucially, they all described absolutely distinct ways of exploring a concept through play. Now, it was finally time to turn my attention back to the examples.

With the *Artist* card, I prototyped an example format that suggested three possible applications of the play activity, across three different subjects, each in a single line. I had carried over this idea from my conceptualization in experiment 3, but it was not until now that I had the chance to test it meaningfully in a better activity card. However, it quickly became clear that it

⁴ I decided to exclude the roles that corresponded to the categories of Cruelty, Eroticism and Suffering, as I reasoned that they would be inappropriate for most school environments.

was not an appropriate approach. While the one line examples were insightful in how to think about bringing an *Artist* mentality into any given subject, by limiting themselves to a brief description of the activity they failed to illustrate how to bring the Considerations, the Discussion, the teacher participation and the leading questions to bear in supporting the activity. So, it was suggested that I design one comprehensive lesson plan for each activity, such that the whole class could be related to the play itself.

I found generating examples in this way unexpectedly challenging. No matter the concept or the subject that I came up with, all my examples either deviated in small but meaningful ways from the best practices described by the cards, or I did not consider them insightful or innovative enough to present them as exemplary lessons to be inspired by. Through my inability to create acceptable examples for each play activity I realized that the tool to be abandoned approach, like all that preceded it, was flawed. If I, who knew the tool and the practices I was proposing better than anyone, could not generate what I considered good lessons from these so-called best practices, how could anyone else? Thus, I decided to conclude Experiment 4. Prototype 4, the result of these design sessions, consists of 12 complete play activities, each in their own card, without examples or instructions. It can be found in Appendix 1.

Experiment Analysis

Through Experiment 4, I was able to refine and reinforce an aspect of the theory that I had not been able to express in my prototypes successfully so far: the importance that liberatory play be situated to its context and its subject through specific activity. By committing to the play activity cards format, I was able to bring that into relief in the tool as I explored it further in the theory. Moreover, through the structure of the cards I was able to maintain the crucial connection between the activity and the collective reflection during and after play, which I had already explored in Experiment 3 but became even more present in the direct and simple leading questions and discussion texts in prototype 4. Focusing on cohesive play activities also proved to be enormously inspiring for generating further activity ideas. While the final prototype consists only of twelve different activities, the design process revealed the endless potential of this approach, where any number of different play forms could be devised from a single category in the PLEX framework, or in any other source used for inspiration.

However, experiment 4 also made clear two longstanding issues present throughout the project. Firstly, how to contextualize the tool such that it would remain accessible to non-specialist teachers, easily interpreted by all or most users, and have it reject a methodological approach at the same time. So far, all the structures I had attempted had failed to strike that balance, and the best practices paradigm of which this experiment is an example was no exception. In this case, the approach fails because it assumes that there is some basic structure to the activities that can be applied in all or most cases. By interpreting the text in each of my cards as a base correct approach to be built upon, I rendered the system rigid, unable to grow or change beyond what was suggested as the correct form of each activity. While the system might have been closer to rejecting a methodology, the suggestion that there is a correct baseline approach made it incapable of doing one of the most fundamental things a liberatory play approach needs to be able to do: change and adapt to the teacher's subject, their students, their context, their circumstances.

The second issue that experiment 4 revealed is the expectation that there is such a thing as an exemplary case for any given praxis of liberatory play. As I had already explored in experiment 2, specific examples cannot be abstracted from, since doing so would ignore that the success of any one instance of an activity is as much due to the context in which it happens as it is due to the design of the activity itself. By revisiting the idea of exemplary lesson design, this time from the perspective of a functional resource such as the play activity cards, I was able to rediscover that the expectation that there would be a perfect application, a flawless instance of any given play activity was unrealistic. For liberatory play to happen, the activities must be performed, experimented on, tried and tried again and refined according to the context in which they exist. No activity, no matter how elegantly thought out or written, can serve as a reference for an entire praxis of liberatory play, as there is absolutely no guarantee that it'll work even once. Through experiment 4, I realized that no liberatory play tool could exist that was *correct*: applicable in all or most cases without serious remaking, reframing, rethinking. In Experiment 5 I would bring these insights to bear and approach the toolmaking process under a newfound light.

A Radicalizing Tool (Experiment 5)

So far, I have analyzed how each of my experiments failed individually. Due to their specific characteristics, each prototype is unable to achieve the goal of being an accessible, comprehensive tool to facilitate teachers bringing liberatory play to their classrooms. In this chapter I will revisit the theory to explore how all my experiments so far had failed together rather than separately. From there, I will describe how I embarked on one final design process to arrive at a prototype that aims to be a tool for the active radicalization and re-radicalization of both teachers and students.

Radicalism and Method

Following my realization in experiment 4 that there might not be any *correct* approach to liberatory play that could be distilled into a tool, I returned to the theory to reevaluate the idea of method, and the concept and purpose of a tool itself. In Part I, I highlight how liberatory pedagogies reject the methodologization of educational practice, due to the primacy of the subject, the context, the situation in which any practice takes place. In fact “He [Freire] would probably quite correctly scoff at the notion that another person’s pedagogy could be reconstructed or reconstituted in another time or another place” (Dale & Hyslop-Margison, 2011, p. 74). In proposing a liberatory play tool, my objective was to allow teachers to more easily create their own methodologies for bringing about a liberatory education. In rejecting clear, carbon-copyable examples, in attempting to propose multiple potentially overlapping approaches to avoid all ideas to be funneled through one design process, in creating an inspirational tool rather than a step-by-step manual, I had attempted to establish a balance between supporting teachers and allowing them to remake their own practice from scratch. As Freire said, “Please tell your fellow American educators not to import me. Ask them to re-create and rewrite my ideas” (Freire and Macedo, 1998, p. 6).

Dale and Hyslop-Margison recognize the endless avenues that this re-creation can take: “Although there are no precise technical methods emerging from Freire’s pedagogy, its potential application is limited only by our creativity and imaginagion” (2011, p. 74). While this is a great advantage to the approach, it is precisely because the methodological possibilities of liberatory

pedagogies are endless that the process of developing one's own can be daunting. Where to start? Boal (1979) starts from theater, and attempts to guide others like him in using theater to develop their own practice. Shor (1992) starts from his practical experience with discussion and writing exercises in the classroom, and also attempts to guide others like him to their own methods. With liberatory play, I had intended to take these practical approaches one step further, to universalize the entry point to developing a praxis in such a way that a broad variety of teachers could more easily find a starting point to create their own. Thus the need for accessibility, for support, for clarity and brevity and conciseness. Thus, also, the pressure to create something that was recognizable to most teachers as a resource, something that they could pick up and use immediately as they are, rather than as I envision they should be. So far, the failures of all my approaches, the theoretical, case-study, toolbelt, and best-practices paradigms, hinged upon the fact that I had not been able to strike the correct balance between support and freedom in any one of them. However, through further analysis of the role of method in a liberatory pedagogy I came to see how, even as each paradigmatic approach failed individually, they all fail together due to the basic conception of tool I was operating with.

In discussing teaching methodology as a central practical question of bringing about liberatory pedagogies in schools, we (I, Shor (1992), Dale and Hyslop-Margison (2011), and others) forget that educational practice is not just method, but *praxis*: the union of action, through method, *and thought*. Overwhelmed by the question of how to bring about a liberatory pedagogy, practical approaches and books about practice take for granted the equal importance of active thought in educational praxis. We assume that the teacher aiming to bring a liberatory education to their classroom is already a radical thinker, has achieved critical consciousness, has figured out the thought element of their praxis and is looking for action to complement that thought. But, as I discovered at this point and explored in Part I, one does not become a radical. One is a radical actively through constant evaluation of their knowledge and the world, through re-radicalization. Similarly, critical consciousness is not achieved but exercised, and praxis can only exist when thought and action are enacted together, in total conjunction. Our approaches fail at being accessible because we assume that our teacher audience must already be a certain way in order to enact that form of being into their classrooms. And, for a teacher audience like that, any and all of the paradigms that I explore, any and all of the books that have already been written on

liberatory pedagogy praxis would work just fine, since they would already have the knowledge, insight, and critical capability to distinguish what applies to them and what not. But that teacher does not need the extra resources to become a liberatory educator. They have already found a praxis of their own.

Instead, to be truly accessible, a liberatory play tool must not address methodology but praxis itself. It must abandon the idea of there being a correct or easy starting point to creating one's own method, and focus on providing a platform to further develop one's own thought as one discovers their own practice. A liberatory play tool must be, above all, a vehicle for the constant re-radicalization of the teacher as well as the student.

Prototype Structure

While the play activity cards in prototype 4 were promising, in Experiment 4 I struggled with framing the tool and with generating examples that could help teachers approach the resources more effectively. These were the two issues that I would attempt to resolve in this final experiment.

For the issue of framing, the change in my design perspective towards designing a tool for radicalization rather than a tool to develop one's own play methods simplified the question and suggested a clear path forward. The key was to present the tool not as a self-justifying approach with claims of being effective, but rather as a jumping-off point into acquiring a new outlook on one's own practice. Thus, beyond the practical recommendations of participating in the play activities with students and always discussing the activity and the students' experiences, the tool would encourage teachers to evaluate things they had seen before and compare them to the play activities, to find what seemed to match up and what did not. Moreover, it would explicitly encourage them to iterate and expand their practice beyond the activities they designed with the play cards, and to eventually abandon the tool altogether; not when they had learned all the best practices like in experiment 4, but when they felt that they had taken all they could from the cards into their own praxis. Because these two types of recommendations, the practical and the reflective, are equally crucial to the success of the tool as a radicalizing facilitator, I also decided to present all these instructions together, as general guidelines to consider while exploring the cards.

As for examples, by reframing the tool towards its newfound teacher re-radicalization purpose I was also able to come to see the example section of the tool not as a catalogue of things that worked well already, but instead as a basic starting point to iterate upon. Thus, I would create a full lesson plan for each one of the play activities, but would explicitly present it as a basic starting point, not to be looked at too closely, in the instructions. The purpose, to see how the generative text of the play activity could indeed be turned into a more structured lesson and nothing more. This new approach would encourage teachers to think actively about how the play activities informed the lessons and simplify the prospect of generating examples substantially. Most importantly, it would finally render the reason for including examples into a tool such as this clear: they were never meant to be followed, or copied, or even adapted into one's own classroom. Instead, they should be analyzed, interrogated, questioned and torn apart as an exercise in understanding how and why the tool could work in the first place.

Design Process

While I decided to tackle the example generation aspect of this prototype first, it became immediately clear that I would have the same, recurring problems I had had with coming up with acceptable examples throughout the entire project. However, this time around I was finally able to understand why creating them was so complicated: good lessons are not instances of good methodology, but of good praxis. As such, they cannot be created in the abstract space, constructed only of thought divorced of action. A good example of liberatory play does not exist in paper, and the liberating reflections that can be reached through it cannot be predicted by a clever design. All of these things, from the planning of the lesson to the reevaluation of existing knowledge to the discovery of new ideas must by necessity be created with concrete, situated action in mind. Because of this, I had been and would be incapable of proposing good lessons in an abstract, decontextualized way. Moreover, in attempting to create concrete activities for a variety of subjects, I had also assumed myself already a radical thinker across all of the subjects I purported to explore, not recognizing my own need, as an individual and a teacher, for exploring the subjects through liberatory play myself.

So, instead of creating examples limited by my own perspective, I decided to once again turn to generative AI to create starting interpretations of what the play activities could do. For each

card, I used ChatGPT to create a lesson on a subject of my choosing. In every case, I included the entire text of the play activity and a specific structure to ensure consistency across the cards into a standardized prompt that asked the model to create three different lesson plans. From these, I chose the one I found most compelling and I added it to the backside of the card. In the instructions, I would make sure to both suggest that the teacher not pay very close attention to the example and also mention how they were created by a generative AI as a starting point for experimentation and refinement. All the prompts and responses from the AI can be found in Appendix 2.

Finally, I wrote the instructions for the tool. After a short presentation of what it is supposed to do, I added seven specific recommendations. *You might have seen something like this before...* encourages teachers to recognize instances of liberatory play and praxes similar to those in the cards in their teaching experience. *Iterate and Grow!* tells them to repeat and expand any given activity throughout their classes in an effort of improve their practice. *No Wrong Answers!* asks them to encourage exploratory thinking, rather than correct-answer seeking in their students. *Always Participate!* exhorts them to involve themselves fully in any given activity. *Always Discuss!* reminds them to engage their students in meaningful conversation about their experiences. *Don't Pay Attention to the Examples!* includes all the recommendations I mentioned above about approaching the example texts. Finally, *Most importantly: Stop Using this Toolkit!* solidly establishes the play cards as only a starting point in developing a liberatory praxis.

Thus, the final prototype consists of a complete tool that can be tested: it is comprised of five card sides of instructions at the beginning and twelve play cards, each with a description of the activity, considerations, discussion guidance and leading questions in the front, and an AI generated example on the back. It can be found in Appendix 1.

Prototype Analysis

Prototype 5, or The Liberatory Play Toolkit, is a promising first vision into what a resource that encourages the development of one's own praxis might look like. It fulfills my main goal of creating a tool that allows teachers to explore liberatory play within their own practice and integrate the praxes of play into their contexts. Furthermore, it achieves the three objectives I set out for my design processes: Through its examples and its encouragement that teachers compare

it to their own experiences, it presents a model that can be easily recognizable not only as playful, but also educational. The play cards provide a variety of direct suggestions for how to bring play into the classroom through situated activities without resorting to a clear methodology to be blindly adopted. Moreover, by explicitly presenting all the resources the tool includes as starting points for further exploration, the instructions remind teachers that the goal is never to adopt them in their entirety, but to find their own praxis from this basic, introductory document. Finally, because of its flexibility in approach, adaptability to different subjects and educational contexts, and clarity and conciseness, the Liberatory Play Toolkit is a functional resource to be explored out of the box in a variety of situations. By presenting a number of activities for liberatory play it becomes adaptable to a multitude of different practical contexts where one activity might be unfeasible, but a number of others might not. Also, by focusing on individual lessons rather than on broad overhauls of the teacher's practice, the tool positions itself as a valuable lesson-by-lesson resource where the risk of exploring its suggestions stays confined within a single topic, a single instance of teaching.

By reinventing the Liberatory Play Toolkit from a methodological resource to a facilitator in developing one's praxis, I have successfully reinforced the primacy of radicalization and re-radicalization in the liberatory teacher's practice, and created a new model for adopting a liberatory pedagogy that does not resemble any of the resources that have been created before. The key, to move away from questions of methodology and remember that a liberatory education must be considered as praxis, the continuous union between thought and action. Thus, the goal of further liberatory play and liberatory pedagogy resources should be to encourage the union of active reflection and educational practice in teachers, instead of assuming that any given teacher is already a radical as a starting point for developing new methodologies.

However, the current prototype is only a result of a critical making exercise. Even when its basic approach and outlook into toolmaking might be sound, it remains to be tested in the field to see if, in its current form, it is already an effective tool for teacher radicalization through play. Thus, the next step for research into the praxes of liberatory play is clear: to bring this prototype, or one such as it, into the practical world, and to evaluate its capability for radicalization of both teacher and student, together with the educators interested in using it. In that process, just as in this one, only a radical mindset, an attitude of openness to our own

experiences, those of our peers and the broader world, will allow us to achieve greater insight into the importance of play in liberatory pedagogies, and into our own role as educators in bringing about a critical consciousness for everyone.

Praxis Through Radicalization

In Part II, I have related how I explored the practical applicability of liberatory play through the making of tools to facilitate teachers encouraging it in their classrooms. In Chapter 1, I defined a set of research goals and objectives based on theory, a series of deconstructed personae from my and my collaborator's experience, and a non methodological, liberatory play through critical making perspective for the design sessions. Then, in every subsequent chapter I described a separate experiment in toolmaking. As I designed prototypes as filters (Lim, Stolterman & Tenenberg, 2008) for evaluation, I gained increasing insight on the complexities of making a liberatory pedagogy's praxis more approachable to new teachers without falling into methodologization. Thus, each experiment informs subsequent approaches, highlighting how certain aspects of a tool would or would not be conducive to an accessible, functional resource to encourage liberatory play in the classroom.

In Experiment 1, I attempted to design directly from the theory of liberatory play. This approach, closely related to scholarly books conceived as teaching resources, failed due to the impossibility of simplifying theory to become accessible to a non-specialist audience without losing its appeal, its subtleties. In parallel, no matter how sound the theory, it fails to clearly translate to practice because it is not made to be practiced in the first place. This renders any connection between theory and practical resource arbitrary. Thus, prototype 1 revealed the unfeasibility of the academic book, or in general theory-forward resources, as effective guidance for teacher praxis.

In Experiment 2, I approached tool design from the opposite end, and started by conceptualizing and analyzing examples to derive blueprints for how a liberatory play tool could look like. This time, I was confronted by the primacy of situation: the context within which a teacher practices, the specific subject, the school structure and their relationship with the

students, as a defining aspect of any given instance of liberatory praxis. Because of this, deriving a set of resources from a collection of examples, abstract or concrete, becomes impossible without disregarding the centrality of these contextual elements to the lesson. This prototype shares characteristics with case studies and example lessons as teacher resources that attempt to abstract practice from individual instances of praxis. It, too, proved unfeasible, inaccessible by those not specialized already, misleading in its implication that in order to achieve similar results as another teacher in another context one can imitate their specific practice.

By Experiment 3, I had abandoned the idea of sourcing the design of liberatory play resources from non-design elements. Instead, I attempted to leverage frameworks from game studies to create more accessible structures for teachers to implement in their classrooms. I created two kinds of resource: play activities, which suggested a specific form of engagement with knowledge, and more abstract resources that encouraged teachers to incorporate traditional play and game elements as the base of their activity design. Structurally, this prototype failed too. It attempted to create a broad toolbox of non-unified materials to give more options to the teacher when designing a new activity. Instead, it was confusing, the overlaps between different tool forms creating a complex, imperfect system for analyzing and creating activities. Thus, broad toolboxes also proved inaccessible, confusing for the non-specialist who might have the resources themselves but not the critical understanding to know what to use when.

However, by creating two different kinds of resource I also explored different approaches for inviting teachers to design their own play activities. The second one, the play element format, failed by not being able to consistently encourage the teacher to view play as a radicalizing component of their class. In contrast, the first approach, focusing on play activities, was successful in providing a specific idea of how an activity could look like and how its experience could be integrated into a classroom evaluation of subject without providing a blueprint for its methodologization. These play activities were suggestive and provided enough consideration and discussion resources that designing from them while adapting for specific subject and context was made possible. This insight, that a liberatory play resource should focus on specific activities rather than abstract play concepts to bridge liberatory pedagogy's specificity in activity and its rejection of method, would be crucial to future experiments, and would allow me to explore a great breadth of activities as potential praxis.

Experiment 4 started as a direct evolution of the play activity concept, and through it I attempted to establish a set of best practices to develop new activities. However, while the play activity structure continued to be a successful approach for designing individual activity resources, the best practices approach to a comprehensive tool failed as well. This time, it was because it became clear that there are no specific best practices whatsoever, that what these activities should do is serve as inspirational models, rather than prescriptive structures, to situate new play activities within one's own context and subject.

I realized that even as the previous structures I had explored failed individually as accessible formats for a liberatory play tool, their collective failure stemmed from one critical, flawed assumption. Like the liberatory pedagogy tools, books, case studies, and resources that have come before them, my tool structures started from the perspective that the teacher is already a radical, that what they need is a set of practices to allow them to marry their existing thought to effective action. If that was the case, then any and all of these structures could be effective at inspiring an evolution of praxis. Yet, this assumption ignores that being a radical does not rely on a single act of radicalization, but a continuous mentality of questioning one's own knowledge and reevaluating it through action. That is *praxis*, the development of thought and action as one, rather than the completion of pre-thought concept with found action. Thus, a liberatory play tool, and any pedagogical tool that attempts to encourage praxis for that matter, should conceive itself not as a resource to bring about action that mirrors radical thought, but as one that facilitates radicalization and re-radicalization in the teacher, that encourages the continuous evolution of thought and action in concert. Experiment 5 is an attempt to bring about such a tool, and The Liberatory Play Toolkit is a complete resource meant for constant re-radicalization through play.

The key takeaways for future research into the praxes of liberatory pedagogy are that we must not base our design of practice on existing theory or successful instances in the past, but rather in suggestive resources that, like liberatory play approaches, facilitate the teacher thinking productively about bringing together the world and the received canonical knowledge of their subjects. For liberatory play specifically, even as the theory suggests an endless number of praxes, teacher resources must focus on individual activities as mediums for creating a specific one instead of modular structures that could potentially be used to make anything, but are not specific enough to be used to their full potential. Most importantly, future research and tool

design must remember that the ultimate goal of a liberatory education is radicalization through praxis, and as such any resource created must focus on facilitating the constant re-radicalization of the teacher. What is needed are resources that encourage teachers to experiment not only with the specific activity they bring to the classroom, but with the knowledge they possess themselves, to develop new techniques and activities based on this dual experimentation of thought and action. With such a tool, there will be a much clearer path for both radical and non-radical teachers to create their own praxes of liberation.

Conclusion

In this thesis project, I have explored the praxes of liberatory pedagogy through the concept of liberatory play. I have expanded the definitions of liberatory pedagogy and play from both a theoretical and a practical perspective. While in Part I I have focused on the theory of liberatory pedagogy and in Part II I have explored the practical considerations of creating teacher resources inspired by theory, the two parts must be considered as a unified whole, a single research project where theory and practice were explored concurrently through liberatory play.

In the realm of theory, I have reconstructed the primary goals of a liberatory education through the concept of the radical, highlighting the importance of educational praxis in any liberatory approach. Then, I have greatly expanded on my existing concept of liberatory play (Martínez Sánchez, 2022), and explored not only how it relates to radicalism, praxis, criticality and liberation, but also how it facilitates a more active, more loving, more playful understanding of our relationship with knowledge and each other's experiences. Finally, I have explored new theory-based implications for further practical research into liberatory praxis.

These three elements are themselves the key takeaways from Part I: a construction of liberatory pedagogy that highlights the importance of radicalization and re-radicalization as the central aspect of an education and that shows the central role that educational praxis plays in the project; an expansion of the concept of liberatory play that can serve as a model to evaluate and compare the praxes of liberatory educations; and the recognition of practical implications of liberatory play for the design of further tools and practices to bring a liberatory education to ever more students.

In the realm of practice, I have explored the concept of a tool to facilitate teachers adopting liberatory pedagogy through liberatory play. Through a series of failed experiments, I interrogated varied approaches to tool construction, from theory and example bases to toolbelts and best practices. In the end, I rediscovered the centrality of the process of re-radicalization in any teacher's development of praxes, and created a tool that aims to facilitate that process instead. Thus, the key takeaways for this practical aspect of my research are the importance of focusing on design processes, rather theory or examples, in further liberatory pedagogy tool

development; the positive effect of conceptualizing comprehensive play activities when designing resources to make liberatory play approachable to non-specialists; and most importantly the need for tools that focus on teacher radicalization and re-radicalization as catalysts for praxis.

As I mentioned before, the theoretical and practical contributions of this work should not be considered independent of each other, but rather in close relation and informing one another. While the implications for practice I derived from theory informed the success criteria of the experiments, my practical research confirmed the need for a conceptualization of liberatory pedagogy based on the radical and their praxes. My liberatory play approach to the research project facilitated this concurrent investigation into theory and practice as one, and its success in tackling complex concepts with deep roots and implications in both the abstract and the concrete should also be considered a key achievement of this project.

Critics of this project might argue that in focusing on praxis in liberatory pedagogy, I have attempted to depoliticize what is historically a very politically motivated and committed movement. They might argue that my conclusions and takeaways are obvious, present in the theory of Freire, Shor and others from the start. They might further argue that by pursuing a flexible structure to my research I have produced results that are difficult to verify. To these criticisms I will reply in turn:

To the first point I would respond that I believe that the most central, most radical, most revolutionary political contribution that Freire and his contemporaries have made is the idea that everyone should possess the tools to think for themselves, to evaluate and understand the world and make up their own mind, to decide based on their examined experience and knowledge what the best possible course of action is. This is the political legacy that I have explored and attempted to cultivate in this work. Specific arguments of message, of social organization and historical injustice arising from the particular contexts in which we live I leave to radical teachers and their radical students to continue to discuss and explore actively, and I reserve the right to my own radical opinion just as I recognize their right to theirs.

To the second criticism I would point out that I am researching praxis in the context of liberatory pedagogy because I already believe in its mission, and I agree that many of the possible insights we could have we have had in the past. My objective is not to push this

pedagogical theory into new, uncharted ground, but to propose framings and understandings of its mission and its approaches that allow us to better evaluate what we are doing well, to reconstruct what we are not, to spread these educational values and perspectives further than they have been explored so far. In that mindset, I recognize that many of my conclusions might already be latent in previous texts, but I maintain that interpretation is as central to the application of these ideas as anything, and it is by advancing a novel interpretation of what already exists that I attempt to expand the reach of liberatory pedagogy.

Finally, I would agree that a flexible approach to research, like the one I pursued, is difficult to verify. However, I would like to point out that liberatory pedagogy, by its very nature, rejects methodology and replicating knowledge in favor of actual insight gained from experience. This is not only an educational tactic, but a particular conception of how knowledge is acquired and shared among individuals. My flexible approach allowed me to explore received knowledge experientially, to gain insight through active interaction with the source material, through keeping an open mind as to the results I might arrive at. Because of this, I have discovered knowledge that I was not looking for and I have expanded my understanding of liberatory pedagogy beyond the bounds that I initially set for myself. Moreover, I do not mean to present any of the insights gained here as absolute, correct knowledge, but rather as starting points to be questioned and investigated in the next research project. As Freire himself said: “I will be satisfied if among the readers of this work there are those sufficiently critical to correct mistakes and misunderstandings, to deepen affirmations and to point out aspects I have not perceived” (2000a, p. 39).

On this point, however, I do think it is important to highlight what is, as of now, still missing in our understanding of the praxes of liberatory play. Firstly, while my design processes yielded exciting insights and a promising prototype, they are yet to be tested with teachers in actual practice in the field. The natural next step for this avenue of my work is conducting research into the effects of radicalizing tools, and of liberatory play more broadly, in the classroom. Secondly, while through my twelve play activities I have outlined a broad range of practices that could be used to evaluate and devise new praxes, I maintain that the possible praxes of liberatory play are endless, so further research must be conducted into either developing a more absolute, elemental framework for their design, at which I have failed, or greatly expanding the range of play

activities to facilitate ever more praxes of liberatory play. Thirdly, while I have proposed that liberatory play arises in many cases, both outside the classroom and as an effect of other educational approaches and pedagogies, I have yet to analyze how these instances are related to play in the context of a liberatory pedagogy, and how they further our radicalizing mission. Thus, further research must approach alternative pedagogical structures and question them from a perspective of radicalization and praxis, and evaluate how they can or cannot serve as mediums of liberatory play.

As a final thought, I want to echo, once more, Freire's trust in the people, his vision of an informed, proactive society that builds itself for the benefit of all, and the construction of a world where it is easier to love. I will add, however, my own hope for a societal process that is not only meaningful, but also pleasurable, playful, and fun.

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Appendix 1: Prototypes

Prototype 1: Designing From Theory

A simplified vision of liberatory play

For this tool, when we talk about **play**, we are talking about a **mode** of engaging with subjects that we can break apart as **loving world-travelling**. In this section, we will focus on what each of these highlighted words mean.

Mode: We want to think about play in the classroom as a mode of interaction rather than an activity. When we think about it this way, we're focusing on the fact that play will be a lens through which we approach our primary activity: learning. This kind of play contributes to our learning goals, rather than interrupt them. This, of course, requires a shift in how we perceive the goals themselves: rote knowledge primed for vomiting into an exam page cannot be played, but developing a true understanding of the subject at hand can.

Loving: Quite simply, we want our world-traveling to be judgement free. While we are playing we are not bringing in external values to judge that which we are exploring, and we suspend value judgement of what we discover.

World: When we think about encouraging our students to play with our subject, it can be helpful to think of the subject as a **world**: a cohesive body of knowledge or perspective of experience that operates by its own rules. In this sense, we might think of the world we are trying to explore as, for example "Mathematics", or more specifically as "Statistics". In an English class, we might think of a world as "Narrative Prose" or as "Mid-20th English Literature" or more specifically as "The Lord of the Rings". While it is important to identify the particular

world we're trying to explore with our students, both to situate ourselves more clearly and justify to them why this perspective is valuable, strictly defining and bounding the specific world we are trying to describe is not central. Worlds, after all, can shift and change, share aspects and rules with other related bodies of knowledge, and so on. However, identifying the general world we are trying to explore will make it possible to **world-travel**.

World-travelling: Having identified a world, we can inhabit it, explore it from the inside. This is what world-traveling means. Exploration might include finding and considering the rules that define a world (what are the basic concepts and axioms of “statistics”) and how more complex ideas are built from basic ones; it might also entail reconstructing the knowledge that the world contains (what does “Lord of the Rings” try to say), and how the rules and the content are related. World-traveling is always discovery oriented: We inhabit the world to explore it and understand it better, rather than simply to acquire its knowledge and move on.

Prototype 2: Designing from Examples

This is a narrated first draft of a lesson plan for teaching the Scientific Method playfully.

One central aspect of this lesson is that there are no wrong answers. And this has to be repeated every time, all the time. There are no wrong answers and this is a really key element of this lesson because what it's going to consist of is, first, a series of leading questions to invite the students to engage playfully with the world and engage in a mode of discovery that is supposedly central to the scientific method. And then, based on that playful attitude, to bring it into practice and to conduct an experiment and to see if they end up reconstructing something similar to the scientific method itself. Then, I bring it back and try to create some critical reflection by questioning whether these methods that the students developed and the scientific method are good ways of addressing the questions that they have and good ways of getting to know the world better.

In the first instance, to set the mood and encourage the students to start thinking playfully about their world, I would ask them to think about things in their experience that they don't understand how they happen, or that they have observed, but don't get very well. I would give them some time to observe the world, maybe even send them outside and have them explore by themselves and identify things that they do not understand well. Those initial reflections and observations will serve as leading topics throughout the whole exercise. I would have them discuss these topics with each other, and from among these discussions to form teams. Now, they would be going out into the world and asked to try to figure out the question they came up with by themselves.

The expectation is that based on their question, different teams would do different things. Nothing is forbidden. So some of them would Google it immediately and some might go and experiment a little, and so on and so forth. Of course, I would ask them to document everything that they do so that we can talk about it later. Once these teams came back with these things that they did, they would be asked to, based on this documentation, come up with a step-by-step of what they did, such that we would trade questions and methodologies with other teams. And these second teams would be asked to try to arrive at their own answer to the original question with the same methodology. Thus, each team would have first come up with their own methodology, and second, tried it out someone else's.

Then, and only then after they have tried these things out, would we come back and discuss how these methodologies allowed them or did not allow them to solve the questions that they made. We would go into a discussion forum in which we would talk about whether the questions that we asked ourselves were good to try to solve in this way. If they were, what made them special? If they weren't, what was complicated about them? What didn't work?

Then I would ask whether the steps that were described by the other team were good. And whether we should believe what the first team found out just by listening to their answer, or if knowing the steps they followed helped us believe them.

Now I would bring in leading topics, such as the different steps of the scientific method. Step by step we would explore, first the concept of the research question. Which one is valid? Which one isn't? Why is one valid and another one not? We would explore the concept of the hypothesis. Who started out with an idea of the answer to their question and who just went and

tried to find out without any idea of what would happen? We would address previous research: Who just went directly into experimentation and how did that work out? Who stopped and looked for answers in things that other people have done before experimenting? For those who didn't do an experiment, why did you believe the research that someone else had done, what made it credible? For those that did experiment, do they think that their experiment works to answer their question? What made the experiment imperfect? How many times did you have to try the experiment in order for it to work? Did it actually work at all? Is the answer that you found confounded by other things?

We would address conclusions and whether their questions have answers at all and what kind of results can be found from these methods. Finally, we would introduce the actual scientific method step by step and discuss how it might have some similarities to the things that they came up with and which are those. If it doesn't, what did the students do differently? Why? Would the scientific method have produced a better answer? A more trustworthy one?

Prototype 3: Designing from Play Models

Prototype 3 includes the texts for play activities based on Fonseca, Lukosch and Brazier (2022) (Play Types) and Caillois (2001) (Play Forms), and a mock-up of three cards.

Play Types

Most of the text in the Play Types cards is part of Prototype 5, and the cards that conform it marked with a ✓ there. Here, I include only the elements that changed significantly between this iteration and prototype 5: the leading questions.

Artist

- Are different perspectives addressed by different pieces? What are they?
- How does the need to produce artwork influence understanding of the topic?

Athlete

- Does the physical experience make the topic clearer? How so?
- Does the physical experience match u with theoretical understanding of the concept?
- How does the physical experience lead to abstract understanding?

Explorer

- Do sources agree or disagree on facts? Why?
- Do sources have an interest in a fact being a certain way? What could their agenda be?

Detective

- How does the topic change based on the experience of those who reconstruct it?
- Is it possible to reach different conclusions?
- Who determines who is right?

Hunter

- How does everyone understand the topic differently?
- Do the documented instances match the concept? Why or why not?

Inventor

- Do similar solutions exist in the world? Who benefits from them? How?
- Do different interpretations of the topic lead to different solutions?
- What other knowledge is required for these creations? Who has it?

Volunteer

- Did those you were helping understand things differently? How?
- How do different understandings of this topic create different work practices?
- How does your role as support affect your understanding?

Play Forms

Competition

Encourage your students to engage in a friendly competition as they explore your topic.

Consider: Remember that the objective is not the competition itself, but the exploration of your topic. How can your competition support and encourage this exploration?

Reflect: Discuss how a competition affects your students' perception of the topic. How does their understanding change with the need to perform?

Leading Questions:

- How does competing help or hinder in exploring this topic?
- Is there a benefit in approaching the topic from different perspectives when competing?

What is it?

Chance

Embrace randomness! Explore how chance and random outcomes affect your topic.

Consider: How does your topic deal with chance/randomness/coincidence in the world? How does exploring this relationship illuminate your topic?

Discuss: What is the role of chance in how your topic manifests in the world? How does it deal with randomness?

Leading Questions:

- Does randomness play a big role in how this topic manifests in the world? How is it dealt with?
- Does randomness force different perspectives of this topic? Are they all equally valid?

Pretend / Make-Believe

Have your students adopt roles related to your topic and explore it from those perspectives.

Consider: who is involved with your topic in the real world? How do they approach it/use it?

Discuss: Reflect on how adopting different roles forces a different understanding of the same topic.

Leading Questions:

- What is the approach to your topic required to fulfill each role?
- Do these roles lead to disagreements about your topic? How? Is one side more or less right?

- How do each role's priorities inform how they approach/understand the topic?

Sensation

Explore your topic with your students through sense-perception.

Consider: How can your topic be perceived in the world? Can it be seen or heard? Better yet: smelled, tasted or felt?

Discuss: How does first-hand perception of the topic affect students' understanding of it?

Leading Questions:

- Does perception of the topic confirm or contradict theoretical knowledge? How?
- How has perception been abstracted into this knowledge before?
- Do different students' perceptions, or different senses, lead to varying conclusions? How?

What are they?

Rules

You can control how structured your activity will be through rules. Depending on how structured it is, it will fall somewhere along the continuum between ruled and free-play.

Ruled/Game-like:

- Very Structured
- Easier to follow step-by-step
- Clearer roads to expected outcomes
- Less room for student creativity
- Might stifle students' original thought

Free Play:

- No Structure
- Student creativity guides the activity
- Provides lots of space for student thought and reflection
- Can be unpredictable in results and outcomes
- Harder to follow step-by-step
- Requires more student buy-in

Artist

Embark on a creative project: use your topic to create artwork (visual, video, music, writing, etc.) based on or informed by your topic.

Consider: Should the artwork be created individually or in teams? What would be the effect of collaboration in this case?

Discuss: Show the artwork generated to the rest of the class. Use it as a starting point for a meaningful conversation about your topic.

Leading Questions for Discussion:

- Are different perspectives addressed by different pieces? What are they? How are they different?
- How does the need to produce artwork influence the students' understanding of the topic? Did it inform a new perspective?

Athlete

Explore your topic through physical activity. Have your students move, walk, jump, run to experience your topic.

Consider: How does your topic relate to your bodily experience? Can it be explored physically? Is the activity safe and accessible to your students?

Discuss: Reflect on how this physical experience impacts your collective understanding of the topic.

Leading Questions for Discussion:

- Does the physical experience make the topic clearer? How so?
- Does the experience confirm or contradict theoretical understanding of the topic?
- How does the experience lead to abstract understanding of this topic?

Competition

Encourage your students to engage in a friendly competition as they explore your topic.

Consider: Remember that the objective is not the competition itself, but the exploration of your topic. How can it support and encourage exploration?

Discuss: Reflect on how competition affects your students' perception of the topic. How does their understanding change when they need to perform?

Leading Questions for Discussion:

- How does competing help or hinder exploration of this topic?
- Are there benefits to trying out different approaches to the topic when competing? Why or why not? What are they?

Prototype 4: A tool to be abandoned

Prototype 4 includes all the Play Types texts from Prototype 3 plus the rest of the play activity texts, as can be found in Prototype 5 (Cards marked ✓ for those originating in Prototype 3 and # for those from Prototype 4). It also includes a mock-up of two play activity cards with space for example texts.

The font for titles is Aleo by Alessio Laiso and Kevin Conroy.

The font for text bodies is Alegreya Sans by Juan Pablo del Peral and Huerta Tipográfica.

Artist

Embark on a creative project: use your topic to create artwork (visual, video, music, writing, etc.) based on or informed by your topic.

Consider

Should the artwork be created individually or in teams? What would be the effect of collaboration in this case?

Discuss

Show the artwork generated to the rest of the class. Use it as a starting point for a meaningful conversation about your topic.

Examples

- Explore the relationship between form and content in writing by writing original narratives in formats not traditionally used for them.
- Discover how quadratic equations work by creating visual art on the computer using only parabolas.

Leading Questions

- Are different perspectives addressed by different pieces? What are they? How are they different?
- How does the need to produce artwork influence the students' understanding of the topic? Did it inform a new perspective?

Athlete

Explore your topic through physical activity. Have your students move, walk, jump, run.

Consider

How does your topic relate to your bodily experience? Can it be explored physically? Is the activity safe and accessible to your students?

Discuss

Reflect on how this physical experience impacts your collective understanding of the topic.

Examples

Leading Questions

- Does the physical experience make the topic clearer? How so?
- Does the experience confirm or contradict theoretical understanding of the topic?
- How does the experience lead to abstract understanding of this topic?

Prototype 5: A Radicalizing Tool

Prototype 5, The Liberatory Play Toolkit is a complete tool with Play Activities, examples, and instructions. The text on cards marked √ originated in Prototype 3. Those marked # originated in Prototype 4. All the text highlighted in yellow was generated with ChatGPT. The corresponding prompts and responses can be found in Appendix 2.

The font for titles is Aleo by Alessio Laiso and Kevin Conroy.

The font for text bodies is Alegreya Sans by Juan Pablo del Peral and Huerta Tipográfica.

The Liberatory Play Toolkit

Welcome! In this toolkit, you will find twelve educational play activities, designed to serve as inspiration for you to create your own and try them out with your classroom. The purpose, to invite your students and yourself into a mindset of play and discovery; to encourage them to engage with your class topics in a more active, intentional way; to help them develop their own critical vision, and an understanding not only of your curriculum, but also of how its knowledge is constructed, deployed, and leveraged in the world.

Each play activity includes a description, some questions to consider when creating your own, an example activity, and recommendations for discussion, including important leading questions. For best use, make sure to take the following things into account:

1 (Turn this card to keep reading)

Most importantly:

Stop using this toolkit!

Eventually, you will find that some things included here will work better than others within your subject and context. Great! Take whatever is useful to you from here, and abandon the rest. As you gain experience designing playful interactions with your students, you'll find that you don't need these play activities as much. So, by all means, stop using them and carry on with your own practice.

That's it! Have fun!

5

No Wrong Answers!

While doing these activities, remember that the central purpose is students' discovery of your topic. As such, there are no wrong answers or solutions, and all contributions must be taken and analyzed in with a mindset of openness and curiosity. By allowing the students to explore without the pressure of being correct, you can help them develop their own tools for assessing what is right and what is wrong.

Always Participate!

For maximum benefit, you should involve yourself as actively as any other student in your activities. If you're doing a play, play a character. If you're doing a dance party, dance along with them. By participating fully, you will gain better understanding of how the students experience the activities and arrive at their own insight. Moreover, your involvement in the activity will invite students to participate more wholeheartedly.

3 (Turn this card to keep reading)

Always Discuss!

Without time to reflect, no activity leads to insight or knowledge. So, dedicate time during and after each activity to discuss your reflections collectively with the class. Hearing others' insights, students will be able to compare and contrast them with their own. Again, make sure to participate! As you will have experienced the activity will them, contribute as if you were one more, and bring to bear your experience and knowledge through open discussion rather than through lecturing. The leading questions included with each play activity can serve as starting points for meaningful discussion.

Don't pay attention to the examples!

While each activity includes an example lesson, these were generated using Generative AI and a simple prompt, as a showcase of the most basic inspiration the tool can provide. As such, these example activities are not high bars to aim to, but rather low bars to start from. The sky is the limit!

4

You might have seen something like this before...

That's great! Play and playfulness already exist in many schools and educational settings around the world, and there are countless activities out there that have successfully invited students to play in the past. Thus, when you find that one of the cards here is reminiscent of an activity you have conducted, or seen, or heard about, think about how the resources on the play cards could help make it even more engaging, or how the discussion questions suggested here could illuminate new aspects of the existing activity.

Iterate and Grow!

No two applications of a single activity are the same. So, pay attention to what works and what doesn't as you conduct new play activities, and reflect on how to make them better for next time you try them out. No activity is born perfect, but if you keep trying out new things, your activities will get better!

2

Artist	<h2>Artist ✓</h2> <p>Embark on a creative project: create artwork (visual, video, music, writing, etc.) based on or informed by your topic.</p> <p>Consider Should the artwork be created individually or in teams? What materials are accessible to your class and will allow your students to create freely?</p> <p>Discuss Show the artwork generated in class to each other. Use it as a starting point for conversation about your topic.</p>	<h2>Athlete ✓</h2> <p>Explore your topic through physical activity. Have your students discover and experience the topic through movement (running, jumping, etc) or sensory experience (touching, smelling, etc).</p> <p>Consider Is your activity safe and accessible for your students? How would they normally encounter your topic in the world? Can this be reproduced physically or sensorially?</p> <p>Discuss Reflect on how the physical or sensory experience impacts your collective understanding of the topic.</p>
	<h3>Leading Questions</h3> <ul style="list-style-type: none"> - How are different perspectives into your topic addressed by different pieces? - How does the need to produce artwork influence the students' understanding of the topic? 	<h3>Leading Questions</h3> <ul style="list-style-type: none"> - How does the physical experience match or diverge from theoretical understanding of the concepts? - How can physical experience be abstracted into conceptual knowledge?
Explorer	<h2>Explorer ✓</h2> <p>Have your students research new facts, news, opinions, or applications related to the topic, and connect them to different aspects of it.</p> <p>Consider What are the sources where your students usually find knowledge? How could you encourage them to find new sources of knowledge, that will present information different to what they usually encounter?</p> <p>Discuss Present to each other the new information that has been discovered. Reflect on how source and research process informs how facts are encountered and perceived.</p>	<h2>Inventor ✓</h2> <p>Have your students come up with new products, solutions or creations using knowledge from your topic.</p> <p>Consider How can your topic be interpreted to create new solutions to old problems? What are existing examples of products and solutions that utilize knowledge from your topic?</p> <p>Discuss Present your concepts and creations to each other. Discuss their usefulness, creativity, feasibility, and analyze how knowledge from your topic is leveraged in them.</p>
	<h3>Leading Questions</h3> <ul style="list-style-type: none"> - How do sources differentiate which information they present as opinion and which as fact? - What are the interests of the sources documenting this knowledge, and how does it influence the way they present information? 	<h3>Leading Questions</h3> <ul style="list-style-type: none"> - How have the problems these products solve been solved before? - How do different interpretations of the topic lead to different solutions?

For Example

Exploring Literary Modernism through Gender and Race

In this lesson, students will explore literary modernism by researching the ways in which gender and race are represented in modernist literature. They will connect modernist literature to the social and cultural issues of the time.

- Begin by introducing the concept of literary modernism and its characteristics.
- Ask students to research how gender and race are represented in modernist literature.
- Have students create presentations or essays that showcase the connections they found between modernist literature and gender and race.

Discussion Questions

- How do gender and race intersect with modernist literature?
- What new sources of knowledge did you use to research this topic, and how did they differ from your usual sources?
- How does understanding the representation of gender and race in modernist literature enhance our understanding of the literature itself?

For Example

Sustainable Agriculture Innovation Challenge

In this lesson, students will explore how the carbon cycle relates to agriculture and food production. They will develop a new product or solution that promotes sustainable agriculture practices.

- Introduce the concept of the carbon cycle and explain how it relates to agriculture.
- Each group must develop a new product or solution that promotes sustainable agriculture practices and reduces greenhouse gas emissions.
- Have each group present their product or solution to the class, explaining how it works and how it leverages knowledge from the carbon cycle.

Discussion Questions

- How can sustainable agriculture practices help reduce greenhouse gas emissions? What role does the carbon cycle play in this process?
- What are some challenges associated with implementing sustainable agriculture practices on a large scale? How can your group's solution help address these challenges?
- What are some trade-offs between maximizing food production and minimizing greenhouse gas emissions in agriculture?

For Example

Trigonometry Photography

Students will use photography to demonstrate the concept of angle of elevation.

- Introduce the concept of angle of elevation and how it is used in trigonometry.
- Divide students into pairs or small groups and provide them with digital cameras or smartphones.
- Instruct students to take photographs that demonstrate the concept of angle of elevation (e.g. a person looking up at a tall building, a bird flying overhead).
- After completing their photographs, students will present and explain their work to the class, highlighting the trigonometric concepts they included and how they are related.

Discussion questions

- How did the photographs help to demonstrate the concept of angle of elevation?
- How did the need to produce artwork influence the students' understanding of the topic?
- How do different photographic techniques contribute to the understanding of the topic?

For Example

The Cell Cycle Dance Party

Students will create in a dance party where each dance move represents a different stage of the cell cycle.

- Create a playlist that includes songs that match the different stages of the cell cycle (e.g. "G1 - Waiting on the World to Change" by John Mayer, "S - DNA" by Kendrick Lamar, "G2 - Let's Get Physical" by Olivia Newton-John, "M - Jump" by Van Halen, "Cytokinesis - Celebration" by Kool & The Gang).
- Have the class listen to each song and identify which stage of the cell cycle it represents.
- Have the class create a dance move that represents each stage of the cell cycle.
- Start the dance party and have the class dance through the different stages of the cell cycle to the playlist.

Discussion Questions

- How did the dance moves represent the different stages of the cell cycle?
- Were there any challenges that arose during the dance party that relate to the challenges cells face during the cell cycle?
- How can this physical experience help us remember the different stages of the cell cycle?

Detective	<h2 data-bbox="321 216 578 268">Detective ✓</h2> <p data-bbox="321 300 716 373">Have your students reconstruct your topic from basic principles and their own experiences.</p> <p data-bbox="321 451 428 478">Consider</p> <p data-bbox="321 485 716 569">Is it possible for them to reach this knowledge on their own? What extra knowledge or experience would facilitate them being able to do so, and how could they get it?</p> <p data-bbox="321 617 412 644">Discuss</p> <p data-bbox="321 651 727 758">Reflect on the challenges of reconstructing knowledge from your students' experience and first principles. Explore how these two sources of basic knowledge are more or less useful for this particular topic.</p> <p data-bbox="321 823 542 850">Leading Questions</p> <ul data-bbox="321 871 716 989" style="list-style-type: none"> - How do the particulars of the topic change based on the experiences of the individuals that reconstruct it? - If it is possible to reach different conclusions from this exercise, who is considered to be right? 	<h2 data-bbox="927 216 1125 268">Hunter ✓</h2> <p data-bbox="927 300 1352 373">Have your students look for instances of your topic in their own environments and document their findings.</p> <p data-bbox="927 451 1034 478">Consider</p> <p data-bbox="927 485 1325 527">How can your topic be observed in the world? How can it be documented and shown to others?</p> <p data-bbox="927 617 1018 644">Discuss</p> <p data-bbox="927 651 1352 737">Create a gallery of instances of your topic and reflect on how each of the instances found represent it. Explore how knowledge was used when creating each particular instance.</p> <p data-bbox="927 823 1148 850">Leading Questions</p> <ul data-bbox="927 871 1304 989" style="list-style-type: none"> - How similar are the different documented instances and how do they reflect each hunter's particular understanding of the topic? - How does each instance reflect or contradict theoretical knowledge?
Actor	<h2 data-bbox="321 1075 472 1127">Actor #</h2> <p data-bbox="321 1159 683 1283">Simulate with your students a real-life situation where your topic is used or explored. Your students can take on different roles to experience different perspectives into your topic.</p> <p data-bbox="321 1310 428 1337">Consider</p> <p data-bbox="321 1344 727 1409">How is your topic approached outside of school and by professionals? Who are stakeholders in those situations, and what are their goals and intentions?</p> <p data-bbox="321 1478 412 1505">Discuss</p> <p data-bbox="321 1512 711 1577">Reflect on how adopting the role of stakeholders, with specific goals and interests, affects understanding of a theoretical topic.</p> <p data-bbox="321 1682 542 1709">Leading Questions</p> <ul data-bbox="321 1730 727 1848" style="list-style-type: none"> - How does the need to apply knowledge in a practical setting affect theoretical understanding of it? - How do people's different goals and interests affect how they interpret this topic? 	<h2 data-bbox="927 1075 1166 1127">Dreamer #</h2> <p data-bbox="927 1159 1352 1255">Imagine with your students what would happen if the knowledge in your topic were different. Explore the consequences this would have in the world.</p> <p data-bbox="927 1310 1034 1337">Consider</p> <p data-bbox="927 1344 1341 1409">How could your topic be meaningfully different? What aspects of the world would also be different in consequence?</p> <p data-bbox="927 1478 1018 1505">Discuss</p> <p data-bbox="927 1512 1333 1598">Reflect with your students on your imagined world. Explore how the relationships between your topic and the real world are evidenced by imagining a different version of it.</p> <p data-bbox="927 1682 1148 1709">Leading Questions</p> <ul data-bbox="927 1730 1325 1848" style="list-style-type: none"> - How would the topic need to change to create a meaningful effect in an imagined world? - What are unexpected impacts this change would have in the world?

For Example

Alliances in World War I

In this lesson, students will simulate a diplomatic negotiation between the European powers over the formation of alliances. Each student will represent a different European power, with the goal of securing the best alliances.

- Introduce the concept of alliances and their role in the lead-up to World War I.
- Assign each student a different European power to represent.
- Give each student time to research their assigned power and its alliances.
- Conduct a simulated diplomatic negotiation where students try to secure the best alliances for their power.
- Conclude the activity by discussing the real-world consequences of the alliance system.

Discussion Questions

- How did the simulation change your understanding of alliances and their role in World War I?
- How did the goals and interests of the different European powers influence their decisions during the simulation?
- How did the alliance system contribute to the outbreak of World War I?

For Example

Solving Quadratic Equations by Completing the Square

The class will work together to solve a series of quadratic equations by completing the square, leading them to discover the quadratic formula.

- Start by introducing the concept of quadratic equations and the idea of completing the square to solve them.
- Provide an example quadratic equation and guide the class through the process of completing the square to solve it.
- Have the class work in small groups to solve a set of quadratic equations using the completing the square method.
- As a class, discuss the patterns and steps involved in completing the square, and how it can be used to solve quadratic equations.
- Introduce the quadratic formula and have the class derive it by looking for patterns in the solutions they found using completing the square.

Discussion Questions

- What did you find challenging or confusing about completing the square to solve quadratic equations?
- How did you use patterns or prior knowledge to help you solve the equations?

For Example

The impact of the Cold War on culture and society

Overall activity: Students will imagine a world where the Cold War did not occur and discuss the impact of this change on culture and society.

- Introduce the concept of the Cold War and its impact on culture and society.
- Ask students to imagine a world where the Cold War did not occur and discuss how culture and society may have been different in this alternate reality.
- Have students discuss in groups the implications of this change, including how international relations and political ideology influenced art, literature, and entertainment during the Cold War.
- Ask groups to present their ideas to the class.

Discussion questions

- How did the Cold War influence culture and society during the time period?
- What cultural and societal developments may not have occurred without the Cold War?
- How did the conflict shape artistic expression and entertainment?
- Could cultural and societal developments have occurred differently without the Cold War?

For Example

The Industrial Revolution and the Environment

In this lesson, students will look for instances of the industrial revolution and its impact on the environment in their own environment and document their findings.

- Begin with a brief lecture on the impact of the industrial revolution on the environment.
- Ask students to look for instances of environmental pollution or degradation in their local environment, such as air pollution or deforestation.
- Instruct them to document their findings through photographs or videos and explain how each instance relates to the industrial revolution and its environmental impact.
- Organize a class discussion where students can share their findings and create a gallery of instances of environmental pollution or degradation.

Discussion Questions

- What were the main environmental problems caused by the industrial revolution?
- How did industrialization change the relationship between humans and the environment?
- How can we address the environmental challenges of the industrial revolution and its aftermath?

Volunteer	<h2>Volunteer ✓</h2> <p>Have your students help others working in areas related to your topic. This can be with professionals, members of their community, or even other students!</p> <p>Consider What kind of applications does your topic have outside the classroom, and who does them? What support role could students take that would enable them to assist meaningfully in the work of others?</p> <p>Discuss Reflect on how supporting others' work enhances the students' understanding of the topic. Explore how classroom knowledge is applied practically by different groups.</p> <p>Leading Questions</p> <ul style="list-style-type: none"> - How did the people the students' were volunteering with understand the topic differently from how it is presented in the classroom? - How do different understandings of the topic create different work practices? 	<h2>Rebel #</h2> <p>Break your topic! With your students, explore how you could subvert, deny, and challenge the received and canonical knowledge of your topic.</p> <p>Consider What are weaknesses in how your topic is usually approached or used? How can these weaknesses be challenged and exploited meaningfully?</p> <p>Discuss Reflect with your students on how challenging your topic reveals what pieces of received knowledge can be dismantled, and which cannot. Explore the effect that subversion has on understanding the canonical knowledge received in school.</p> <p>Leading Questions</p> <ul style="list-style-type: none"> - How crucial are the challenged aspects of your topic to its canonical understanding? - How does dismantling certain ideas affect our understanding of what remains?
Gardener	<h2>Gardener #</h2> <p>Leverage your topic's knowledge to build or grow something with your students. This can be nurturing a plant, building a model, or even using a digital simulation to make something new.</p> <p>Consider How is your topic used in the world to build and grow structures, systems, plants, etc? Which of these processes can be explored meaningfully using materials or programs accessible to your students?</p> <p>Discuss Reflect on how the exercise of creating or growing something confirms or denies your topic's knowledge. Explore how understanding of theoretical knowledge changes as it is applied to make something.</p> <p>Leading Questions</p> <ul style="list-style-type: none"> - How is this topic directly useful when building or growing something? - What, if any, knowledge in this topic is negated or cannot be confirmed by this exercise? 	<h2>Comedian #</h2> <p>Make fun of your topic! With your students, come up with jokes that include or poke fun at the canonical knowledge included in your topic.</p> <p>Consider What aspects of your topic can be interpreted as funny or ridiculous? How are the serious, canonical interpretations of your topic structured, and how can they be exposed?</p> <p>Discuss Reflect with your students on how making fun of your topic reveals the strengths and flaws of the canonical interpretations of it. Question the jokes themselves, and explore what makes them funny given knowledge of your topic.</p> <p>Leading Questions</p> <ul style="list-style-type: none"> - How does presenting knowledge as ridiculous affect how we interpret it? - Does making fun of this topic reveal any flaws hidden when it is presented seriously?

For Example

Building a Trellis

In this lesson, students will build a trellis for a plant using basic statics principles. They will learn about the forces acting on the trellis and how to make it stable.

- Introduce the concept of forces acting on a structure, including tension and compression.
- Show students different types of trellises and explain how they work.
- Divide students into groups and give them materials to build a trellis.
- Have students test their trellises and make adjustments as needed.
- Discuss the results as a class and explain the principles of stability and balance.

Discussion Questions

- What are the different forces acting on a trellis?
- How can you make a trellis stable?
- How can these principles be applied to other structures?

For Example

Exploring Literary Analysis through Humor

In this lesson, students will learn how to analyze literature by creating comedic interpretations of a classic text.

- Choose a classic text that is well-known to the class, such as Shakespeare's *Romeo and Juliet* or Jane Austen's *Pride and Prejudice*.
- Discuss the basic elements of the story, such as characters, setting, and plot.
- Brainstorm humorous interpretations of these elements, such as "What if Romeo was a werewolf?" or "What if Mr. Darcy was secretly a superhero?"
- In small groups, have students develop one comedic interpretation into a short essay, using evidence from the text to support their argument.
- Share and discuss the essays as a class, analyzing the use of humor to reframe the text.

Discussion Questions

- How did creating a comedic interpretation change your understanding of the text?
- What themes or ideas in the original text were emphasized or subverted by your humorous interpretation?
- Can humor be used to make serious literature more accessible, or does it trivialize important themes?

For Example

Supply and Demand in Action

Students will volunteer at a local food bank and assist with inventory management and distribution. They will learn about how supply and demand affect the availability of food for those in need.

- Introduce the concepts of supply and demand, using examples from everyday life such as popular toys or fashion trends.
- Explain how supply and demand can also affect the availability of food.
- Organize a visit to a local food bank where students can volunteer their time and learn about how supply and demand affects the availability of food.
- Have students work with the food bank staff to manage inventory and distribution, while observing how supply and demand affects the availability of different types of food.

Discussion Questions:

- How did the students' experiences at the food bank illustrate the concept of supply and demand?
- How did the food bank staff's understanding of supply and demand differ from how it is presented in the classroom?
- What are some other ways supply and demand affect the availability of goods and services in our communities?

For Example

Democracy Through the Lens of Power Structures

Students will subvert the traditional understanding of democracy by examining how power structures influence democratic societies.

- Introduce the concept of democracy and its significance in modern societies.
- Provide examples of power structures, such as social class, gender, and race.
- Break students into small groups and assign each group a power structure to research and analyze.
- In their groups, students will create a presentation that explores how their assigned power structure affects democracy and democratic societies.
- Presentations will be shared with the class and discussed as a whole.

Discussion Questions

- How do power structures influence democratic societies?
- What are some weaknesses in the traditional understanding of democracy that power structures expose?
- How might a different interpretation of democracy affect our understanding of modern societies?

Appendix 2: ChatGPT Logs

Play Activity Names

Prompt: Expression - Artist. Using the previous analogy, propose three roles that might make for a similar analogy for the following phenomena. Present your results in table form:

Exploration, Discovery, Challenge, Competition, Thrill, Captivation, Sensation, Sympathy, Simulation, Fantasy, Fellowship, Subversion, Control, Nurture, Completion, Cruelty, Eroticism, Suffering, Relaxation, Humor, Submission

Answer:

(Copied and pasted directly from ChatGPT. Original format not preserved)

Phenomena	Analogy	Role 1	Role 2	Role 3
-----	-----	-----	-----	-----
Exploration	Adventurer	Explorer	Trailblazer	Navigator
Discovery	Scientist	Researcher	Analyst	Observer
Challenge	Athlete	Competitor	Contender	Challenger
Competition	Gladiator	Fighter	Champion	Opponent
Thrill	Stuntman	Daredevil	Risk-taker	Acrobat
Captivation	Magician	Illusionist	Enchanter	Trickster
Sensation	Chef	Flavorist	Artist	Innovator
Sympathy	Therapist	Counselor	Listener	Empathizer
Simulation	Gamer	Player	Strategist	Role-player
Fantasy	Writer	Storyteller	Wordsmith	Dreamer
Fellowship	Musician	Collaborator	Ensemble	Soloist
Subversion	Activist	Rebel	Protester	Revolutionary

Control	Pilot	Captain	Driver	Navigator
Nurture	Gardener	Caretaker	Cultivator	Green thumb
Completion	Carpenter	Craftsman	Artisan	Finisher
Cruelty	Torturer	Sadist	Abuser	Tormentor
Eroticism	Dancer	Seductress	Sensualist	Performer
Suffering	Masochist	Endurer	Survivor	Victim
Relaxation	Masseuse	Healer	Relaxer	Therapist
Humor	Comedian	Jester	Entertainer	Trickster
Submission	Domination	Submissive	Slave	Servant

Activity Examples

Note

All prompts used followed the same structure:

Propose three different lesson concepts to teach [*SUBJECT*] to a high school class. For each of them, include a section describing the overall activity, a section providing a short step by step procedure for teaching the lesson, and a section proposing specific discussion questions. All the lessons must be based on the following activity type: [*ACTIVITY text as included in Prototype 5*]

For the following prompts, I will only include the subject and the text response. The Activity text for each prompt can be found in Appendix 1, Prototype 5.

Artist

Subject: trigonometry

Response:

Lesson Concept 1: Trigonometry Painting

Activity: Students will create a painting based on the unit circle and trigonometric functions.

Procedure:

Introduce the concept of the unit circle and the trigonometric functions (sine, cosine, tangent)

and how they are related.

Divide students into pairs or small groups and provide them with painting supplies (e.g. canvas, paints, brushes).

Instruct students to use the unit circle and trigonometric functions to create a painting that visually represents the relationships between the functions and the angles in the unit circle.

After completing their paintings, students will present and explain their work to the class, highlighting the trigonometric concepts they included and how they are related.

Facilitate a discussion on the different perspectives that were addressed by the different paintings and how they help to deepen the students' understanding of the topic.

Discussion questions:

How do the paintings help to reinforce the concept of the unit circle and trigonometric functions?

How did working collaboratively affect the students' understanding of the topic?

How do different painting styles or techniques contribute to the understanding of the topic?

Lesson Concept 2: Trigonometry Photography

Activity: Students will use photography to demonstrate the concept of angle of elevation.

Procedure:

Introduce the concept of angle of elevation and how it is used in trigonometry.

Divide students into pairs or small groups and provide them with digital cameras or smartphones.

Instruct students to take photographs that demonstrate the concept of angle of elevation (e.g. a person looking up at a tall building, a bird flying overhead).

After completing their photographs, students will present and explain their work to the class, highlighting the trigonometric concepts they included and how they are related.

Facilitate a discussion on the different perspectives that were addressed by the different photographs and how they help to deepen the students' understanding of the topic.

Discussion questions:

How did the photographs help to demonstrate the concept of angle of elevation?

How did the need to produce artwork influence the students' understanding of the topic?

How do different photographic techniques contribute to the understanding of the topic?

Lesson Concept 3: Trigonometry Graphic Novel

Activity: Students will create a graphic novel that tells a story involving trigonometric concepts.

Procedure:

Introduce the concept of trigonometry and provide examples of how it can be used in real life situations (e.g. navigation, architecture).

Divide students into pairs or small groups and provide them with graphic novel supplies (e.g. paper, pens, pencils).

Instruct students to create a story that incorporates trigonometric concepts (e.g. a character using trigonometry to navigate through a maze).

After completing their graphic novels, students will present and explain their work to the class, highlighting the trigonometric concepts they included and how they are related.

Facilitate a discussion on the different perspectives that were addressed by the different graphic novels and how they help to deepen the students' understanding of the topic.

Discussion questions:

How did the graphic novels help to reinforce the concept of trigonometry?

How did the need to produce artwork influence the students' understanding of the topic?

How do different graphic novel styles or techniques contribute to the understanding of the topic?

Athlete

Subject: the cell cycle and its context

Response:

Lesson Concept 1: "The Cell Cycle Relay Race"

Overall Activity: Students will participate in a relay race where each member of the team will represent a different stage of the cell cycle. The team will have to pass a baton to the next member of the team who represents the next stage of the cell cycle. The first team to complete the race wins.

Step by step procedure:

1. Divide the class into teams of 4-5 students each.
2. Assign each team member a specific stage of the cell cycle (e.g. G1, S, G2, M, and Cytokinesis).
3. Set up a relay race course where each team will have to run a specific distance before passing the baton to the next team member.
4. Start the race and have the teams race to complete the relay race.
5. Once the race is over, have a class discussion about how the relay race relates to the cell cycle.

Discussion Questions:

- How did the relay race represent the different stages of the cell cycle?
- Were there any challenges that arose during the race that relate to the challenges cells face during the cell cycle?
- How can this physical experience help us understand the cell cycle better?

Lesson Concept 2: "Cell Cycle Dance Party"

Overall Activity: Students will participate in a dance party where each dance move represents a different stage of the cell cycle. The class will dance through the different stages of the cell cycle to a specific playlist.

Step by step procedure:

1. Create a playlist that includes songs that match the different stages of the cell cycle (e.g.

"G1 - Waiting on the World to Change" by John Mayer, "S - DNA" by Kendrick Lamar, "G2 - Let's Get Physical" by Olivia Newton-John, "M - Jump" by Van Halen, "Cytokinesis - Celebration" by Kool & The Gang).

2. Have the class listen to each song and identify which stage of the cell cycle it represents.
3. Teach the class a dance move that represents each stage of the cell cycle.
4. Start the dance party and have the class dance through the different stages of the cell cycle to the playlist.
5. Once the dance party is over, have a class discussion about how the dance party relates to the cell cycle.

Discussion Questions:

- How did the dance moves represent the different stages of the cell cycle?
- Were there any challenges that arose during the dance party that relate to the challenges cells face during the cell cycle?
- How can this physical experience help us remember the different stages of the cell cycle?

Lesson Concept 3: "Cell Cycle Scavenger Hunt"

Overall Activity: Students will participate in a scavenger hunt where they will find different objects that represent the different stages of the cell cycle. Once all the objects are found, the class will use them to create a visual representation of the cell cycle.

Step by step procedure:

1. Divide the class into teams of 3-4 students each.
2. Give each team a list of objects to find that represent the different stages of the cell cycle (e.g. G1 - a seed, S - a strand of DNA, G2 - a clock, M - a stopwatch, Cytokinesis - a pair of scissors).
3. Have the teams race to find all the objects on their list.
4. Once all the objects are found, have the class work together to create a visual representation of the cell cycle using the objects.

5. Once the visual representation is complete, have a class discussion about how the scavenger hunt and visual representation relate to the cell cycle.

Discussion Questions:

- How did the objects represent the different stages of the cell cycle?
- Were there any challenges that arose during the

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Explorer

Subject: literary modernism

Response:

Lesson 1: Exploring Literary Modernism in Historical Context

Overall Activity: In this lesson, students will explore literary modernism by researching the historical and cultural context in which it emerged. They will connect modernist literature to the social, political, and artistic movements of the time.

Step-by-Step Procedure:

Begin by introducing the concept of literary modernism and its characteristics.

Ask students to research the social, political, and artistic movements that influenced literary modernism.

Have students create presentations or posters that showcase the connections they found between modernist literature and the historical and cultural context.

Finally, lead a class discussion about the connections between literary modernism and its historical context.

Discussion Questions:

How did the social, political, and artistic movements of the time influence literary modernism?

What new sources of knowledge did you use to research this topic, and how did they differ from your usual sources?

How does understanding the historical and cultural context in which literary modernism emerged enhance our understanding of the literature itself?

Lesson 2: Exploring Literary Modernism through Gender and Race

Overall Activity: In this lesson, students will explore literary modernism by researching the ways in which gender and race are represented in modernist literature. They will connect modernist literature to the social and cultural issues of the time.

Step-by-Step Procedure:

Begin by introducing the concept of literary modernism and its characteristics.

Ask students to research how gender and race are represented in modernist literature.

Have students create presentations or essays that showcase the connections they found between modernist literature and gender and race.

Finally, lead a class discussion about the connections between literary modernism and gender and race.

Discussion Questions:

How do gender and race intersect with modernist literature?

What new sources of knowledge did you use to research this topic, and how did they differ from your usual sources?

How does understanding the representation of gender and race in modernist literature enhance our understanding of the literature itself?

Lesson 3: Exploring Literary Modernism and its Legacy

Overall Activity: In this lesson, students will explore the legacy of literary modernism by researching its influence on contemporary literature and culture. They will connect modernist literature to contemporary artistic movements.

Step-by-Step Procedure:

Begin by introducing the concept of literary modernism and its characteristics.

Ask students to research the influence of modernist literature on contemporary literature and culture.

Have students create presentations or essays that showcase the connections they found between modernist literature and contemporary artistic movements.

Finally, lead a class discussion about the connections between literary modernism and its legacy.

Discussion Questions:

How has literary modernism influenced contemporary literature and culture?

What new sources of knowledge did you use to research this topic, and how did they differ from your usual sources?

How does understanding the legacy of literary modernism enhance our understanding of the literature itself?

Detective

Subject: the quadratic formula

Response:

Lesson Concept 1: Solving Quadratic Equations by Completing the Square

Overall Activity: The class will work together to solve a series of quadratic equations by completing the square, leading them to discover the quadratic formula.

Step-by-Step Procedure:

Start by introducing the concept of quadratic equations and the idea of completing the square to solve them.

Provide an example quadratic equation and guide the class through the process of completing the square to solve it.

Have the class work in small groups to solve a set of quadratic equations using the completing the square method.

As a class, discuss the patterns and steps involved in completing the square, and how it can be used to solve quadratic equations.

Introduce the quadratic formula and have the class derive it by looking for patterns in the solutions they found using completing the square.

Discussion Questions:

What did you find challenging or confusing about completing the square to solve quadratic equations?

How did you use patterns or prior knowledge to help you solve the equations?

Why is the quadratic formula useful for solving quadratic equations?

Lesson Concept 2: Deriving and Applying the Quadratic Formula

Overall Activity: The class will work through a guided lesson to derive the quadratic formula and apply it to solve quadratic equations.

Step-by-Step Procedure:

Begin by reviewing the basic structure of a quadratic equation and the steps to solve one.

Introduce the idea of completing the square and have the class practice completing the square for a few simple quadratic equations.

Guide the class through the process of deriving the quadratic formula by completing the square for a general quadratic equation.

Once the formula is derived, have the class practice using it to solve a set of quadratic equations.

Discuss how the quadratic formula can be used to solve real-world problems and provide examples for the class to work through.

Discussion Questions:

How did you use completing the square to derive the quadratic formula?

What are some real-world applications of the quadratic formula?

How can you check your work when using the quadratic formula to solve a quadratic equation?

Lesson Concept 3: Graphing Quadratic Equations and Finding Their Roots

Overall Activity: The class will explore the relationship between the graph of a quadratic equation and its roots, leading them to discover the quadratic formula.

Step-by-Step Procedure:

Begin by introducing the concept of quadratic equations and graphing them on a coordinate plane.

Have the class explore the relationship between the roots of a quadratic equation and the x-intercepts of its graph.

Provide the class with a set of quadratic equations and guide them through the process of graphing each equation and finding its roots.

Once the class has graphed and found the roots of several quadratic equations, introduce the quadratic formula as a shortcut for finding the roots.

Have the class use the quadratic formula to find the roots of additional quadratic equations and verify their work by graphing the equations.

Discussion Questions:

How does the graph of a quadratic equation relate to its roots?

What patterns did you notice when graphing quadratic equations and finding their roots?

How can you use the quadratic formula to find the roots of a quadratic equation?

Hunter

Subject: the industrial revolution and its context

Response:

Industrial Revolution and Society:

Overall Activity: In this lesson, students will look for instances of the industrial revolution in their own environment and document their findings.

Step-by-Step Procedure:

Begin with a brief lecture on the social and economic context of the industrial revolution.

Ask students to look for instances of industrialization in their local environment, such as factories, power plants, or modern transportation systems.

Instruct them to document their findings through photographs or videos and explain how each instance relates to the industrial revolution.

Organize a class discussion where students can share their findings and create a gallery of instances of industrialization.

Lead a reflective discussion on how each instance reflects the impact of the industrial revolution on modern society and how theoretical knowledge has influenced the creation of these instances.

Discussion Questions:

How did the industrial revolution transform society, economy, and politics?

What were the positive and negative consequences of industrialization?

How did the industrial revolution change people's lives and work?

The Scientific Revolution and the Enlightenment:

Overall Activity: In this lesson, students will look for instances of the scientific revolution and the enlightenment in their own environment and document their findings.

Step-by-Step Procedure:

Begin with a brief lecture on the scientific revolution and the enlightenment.

Ask students to look for instances of scientific discoveries or enlightenment ideas in their local environment, such as modern medicine or political institutions.

Instruct them to document their findings through photographs or videos and explain how each instance relates to the scientific revolution or the enlightenment.

Organize a class discussion where students can share their findings and create a gallery of instances of scientific discoveries or enlightenment ideas.

Lead a reflective discussion on how each instance reflects or contradicts theoretical knowledge of the time, and how these ideas transformed society and culture.

Discussion Questions:

What were the main characteristics of the scientific revolution and the enlightenment?

How did the scientific revolution and the enlightenment contribute to modern knowledge and culture?

How did scientific discoveries and enlightenment ideas challenge traditional beliefs and values?

Industrial Revolution and the Environment:

Overall Activity: In this lesson, students will look for instances of the industrial revolution and its impact on the environment in their own environment and document their findings.

Step-by-Step Procedure:

Begin with a brief lecture on the impact of the industrial revolution on the environment.

Ask students to look for instances of environmental pollution or degradation in their local environment, such as air pollution or deforestation.

Instruct them to document their findings through photographs or videos and explain how each instance relates to the industrial revolution and its environmental impact.

Organize a class discussion where students can share their findings and create a gallery of instances of environmental pollution or degradation.

Lead a reflective discussion on how each instance reflects or contradicts theoretical knowledge of the time, and how environmental issues have been addressed during and after the industrial revolution.

Discussion Questions:

What were the main environmental problems caused by the industrial revolution?

How did industrialization change the relationship between humans and the environment?

How can we address the environmental challenges of the industrial revolution and its aftermath?

Inventor

Subject: the carbon cycle and its context

Response:

Lesson Concept 1: Carbon Footprint Reduction Challenge

Overall Activity: In this lesson, students will work in small groups to develop a new product or solution that reduces carbon footprint. The goal is to encourage students to apply their knowledge of the carbon cycle to real-world problems and explore creative solutions to environmental issues.

Step-by-Step Procedure:

Introduce the concept of carbon footprint and explain how it relates to the carbon cycle.

Divide the class into small groups and explain the challenge: Each group must develop a new product or solution that reduces carbon footprint.

Allow time for research and brainstorming.

Have each group present their product or solution to the class, explaining how it works and how it leverages knowledge from the carbon cycle.

Lead a class discussion on the usefulness, creativity, feasibility, and environmental impact of each product or solution.

Discussion Questions:

What existing products or solutions already address carbon footprint reduction? How is your group's idea different?

How can we measure the effectiveness of a product or solution in reducing carbon footprint?

What are some potential drawbacks or unintended consequences of the solutions proposed by different groups?

Lesson Concept 2: Sustainable Agriculture Innovation Challenge

Overall Activity: In this lesson, students will explore how the carbon cycle relates to agriculture and food production. Working in groups, they will develop a new product or solution that promotes sustainable agriculture practices and reduces greenhouse gas emissions.

Step-by-Step Procedure:

Introduce the concept of the carbon cycle and explain how it relates to agriculture and food production.

Divide the class into small groups and explain the challenge: Each group must develop a new product or solution that promotes sustainable agriculture practices and reduces greenhouse gas emissions.

Allow time for research and brainstorming.

Have each group present their product or solution to the class, explaining how it works and how it leverages knowledge from the carbon cycle.

Lead a class discussion on the usefulness, creativity, feasibility, and environmental impact of each product or solution.

Discussion Questions:

How can sustainable agriculture practices help reduce greenhouse gas emissions? What role does the carbon cycle play in this process?

What are some challenges associated with implementing sustainable agriculture practices on a large scale? How can your group's solution help address these challenges?

What are some trade-offs between maximizing food production and minimizing greenhouse gas emissions in agriculture?

Lesson Concept 3: Renewable Energy Design Challenge

Overall Activity: In this lesson, students will explore how the carbon cycle relates to energy production and climate change. Working in groups, they will design a new renewable energy system that utilizes knowledge from the carbon cycle.

Step-by-Step Procedure:

Introduce the concept of the carbon cycle and explain how it relates to energy production and climate change.

Divide the class into small groups and explain the challenge: Each group must design a new renewable energy system that utilizes knowledge from the carbon cycle.

Allow time for research and brainstorming.

Have each group present their design to the class, explaining how it works and how it leverages knowledge from the carbon cycle.

Lead a class discussion on the usefulness, creativity, feasibility, and environmental impact of each design.

Discussion Questions:

What are some existing renewable energy systems that utilize knowledge from the carbon cycle? How is your group's design different?

What are some challenges associated with scaling up renewable energy systems? How can your group's design help address these challenges?

How can we measure the environmental impact of different renewable energy systems, and what factors should be considered in these measurements?

Volunteer

Subject: basic economic principles

Response:

Lesson 1: Supply and Demand in Action

Activity: Students will volunteer at a local food bank and assist with inventory management and distribution. They will learn about how supply and demand affect the availability of food for those in need.

Procedure:

Introduce the concepts of supply and demand, using examples from everyday life such as popular toys or fashion trends.

Explain how supply and demand can also affect the availability of food.

Organize a visit to a local food bank where students can volunteer their time and learn about how supply and demand affects the availability of food.

Have students work with the food bank staff to manage inventory and distribution, while observing how supply and demand affects the availability of different types of food.

After the volunteer work is complete, have a class discussion about how supply and demand played a role in the work they did at the food bank.

Discussion Questions:

How did the students' experiences at the food bank illustrate the concept of supply and demand?

How did the food bank staff's understanding of supply and demand differ from how it is presented in the classroom?

What are some other ways supply and demand affect the availability of goods and services in our communities?

Lesson 2: Opportunity Cost in Action

Activity: Students will volunteer at a local animal shelter and assist with animal care and adoption. They will learn about opportunity cost and how it affects decision-making.

Procedure:

Introduce the concept of opportunity cost, using examples from everyday life such as choosing between different leisure activities or spending money on different items.

Explain how opportunity cost can also affect decision-making in areas such as animal care and adoption.

Organize a visit to a local animal shelter where students can volunteer their time and learn about how opportunity cost affects decision-making.

Have students work with shelter staff to care for animals and help with adoption, while observing how opportunity cost affects the decisions that shelter staff make.

After the volunteer work is complete, have a class discussion about how opportunity cost played a role in the work they did at the animal shelter.

Discussion Questions:

How did the students' experiences at the animal shelter illustrate the concept of opportunity cost?

How did the shelter staff's understanding of opportunity cost differ from how it is presented in the classroom?

What are some other areas where opportunity cost affects decision-making in our communities?

Lesson 3: Externalities in Action

Activity: Students will volunteer at a local park and assist with litter clean-up and maintenance. They will learn about externalities and how they affect the environment.

Procedure:

Introduce the concept of externalities, using examples from everyday life such as pollution or noise.

Explain how externalities can also affect the environment, and how it is everyone's responsibility to minimize negative externalities.

Organize a visit to a local park where students can volunteer their time and learn about how externalities affect the environment.

Have students work with park staff to clean up litter and maintain the park, while observing how externalities affect the environment and how everyone's actions can minimize negative externalities.

After the volunteer work is complete, have a class discussion about how externalities played a role in the work they did at the park.

Discussion Questions:

How did the students' experiences at the park illustrate the concept of externalities?

How did the park staff's understanding of externalities differ from how it is presented in the classroom?

What are some other areas where externalities affect the environment in our communities?
How can we minimize negative externalities in these areas?

Actor

Subject: the lead up to the first world war and its context

Response:

Lesson Concept 1: The Arms Race

Overall Activity:

In this lesson, students will simulate a meeting of the arms manufacturers of Europe in the years leading up to World War I. Each student will represent a different arms manufacturer, with the goal of convincing the others to purchase their products.

Step by Step Procedure:

Introduce the topic of the arms race and its role in the lead-up to World War I.

Assign each student a different arms manufacturer to represent.

Give each student time to research their assigned manufacturer and the products they made.

Conduct a simulated meeting where students present their products and try to convince the others to buy them.

Conclude the activity by discussing the real-world consequences of the arms race.

Discussion Questions:

How did the simulation change your understanding of the arms race and its role in World War I?

How did the goals and interests of the arms manufacturers influence their decisions during the simulation?

Do you think the arms race was an inevitable part of the lead-up to World War I?

Lesson Concept 2: Imperialism

Overall Activity:

In this lesson, students will simulate a diplomatic negotiation between the European powers over control of Africa. Each student will represent a different European power, with the goal of securing the most territory.

Step by Step Procedure:

Introduce the concept of imperialism and its role in the lead-up to World War I.

Assign each student a different European power to represent.

Give each student time to research their assigned power and their imperial ambitions in Africa.

Conduct a simulated diplomatic negotiation where students try to secure the most territory for their power.

Conclude the activity by discussing the real-world consequences of imperialism in Africa.

Discussion Questions:

How did the simulation change your understanding of imperialism and its role in World War I?

How did the goals and interests of the different European powers influence their decisions during the simulation?

What role did competition for resources play in the lead-up to World War I?

Lesson Concept 3: Alliances

Overall Activity:

In this lesson, students will simulate a diplomatic negotiation between the European powers over the formation of alliances. Each student will represent a different European power, with the goal of securing the best alliances.

Step by Step Procedure:

Introduce the concept of alliances and their role in the lead-up to World War I.

Assign each student a different European power to represent.

Give each student time to research their assigned power and its alliances.

Conduct a simulated diplomatic negotiation where students try to secure the best alliances for their power.

Conclude the activity by discussing the real-world consequences of the alliance system.

Discussion Questions:

How did the simulation change your understanding of alliances and their role in World War I?

How did the goals and interests of the different European powers influence their decisions during the simulation?

How did the alliance system contribute to the outbreak of World War I?

Dreamer

Subject: the effects of the cold war

Response:

Lesson concept 1: The Cold War without nuclear weapons

Overall activity: Students will imagine a world where the Cold War did not involve nuclear weapons and discuss the implications of this change.

Step-by-step procedure:

Introduce the concept of the Cold War and the role of nuclear weapons in the conflict.

Ask students to imagine a world where the Cold War occurred without the use or threat of nuclear weapons.

Have students discuss in groups the implications of this change, including how the conflict may have been different, how international relations may have been affected, and how the world might be different today.

Ask groups to present their ideas to the class.

Facilitate a class discussion on the consequences of the Cold War without nuclear weapons.

Discussion questions:

How would the conflict have played out differently without nuclear weapons?

How would international relations have been affected?

Would the world be a safer or more dangerous place without nuclear weapons?

Could the absence of nuclear weapons have prevented the arms race and other developments in military technology?

Lesson concept 2: The impact of the Cold War on culture and society

Overall activity: Students will imagine a world where the Cold War did not occur and discuss

the impact of this change on culture and society.

Step-by-step procedure:

Introduce the concept of the Cold War and its impact on culture and society.

Ask students to imagine a world where the Cold War did not occur and discuss how culture and society may have been different in this alternate reality.

Have students discuss in groups the implications of this change, including how international relations and political ideology influenced art, literature, and entertainment during the Cold War.

Ask groups to present their ideas to the class.

Facilitate a class discussion on the impact of the Cold War on culture and society.

Discussion questions:

How did the Cold War influence culture and society during the time period?

What cultural and societal developments may not have occurred without the Cold War?

How did the conflict shape artistic expression and entertainment?

Could cultural and societal developments have occurred differently without the Cold War?

Lesson concept 3: The legacy of the Cold War on international relations

Overall activity: Students will imagine a world where the Cold War ended differently and discuss the legacy of the conflict on international relations.

Step-by-step procedure:

Introduce the concept of the Cold War and the outcome of the conflict.

Ask students to imagine a world where the Cold War ended differently, such as with a different winner or without the collapse of the Soviet Union.

Have students discuss in groups the implications of this change, including how the world might be different today and the legacy of the Cold War on international relations.

Ask groups to present their ideas to the class.

Facilitate a class discussion on the legacy of the Cold War on international relations.

Discussion questions:

How did the outcome of the Cold War shape international relations in the post-Cold War era?

Would a different outcome have resulted in a different international system?

What are the lasting effects of the Cold War on international relations today?

Could a different ending to the Cold War have prevented current global issues such as nuclear proliferation and regional conflicts?

Rebel

Subject: the basics of democratic societies

Response:

Lesson Concept 1: Democracy Through the Lens of Power Structures

Overall Activity: Students will subvert the traditional understanding of democracy by examining how power structures influence democratic societies.

Step-by-Step Procedure:

Introduce the concept of democracy and its significance in modern societies.

Provide examples of power structures, such as social class, gender, and race.

Break students into small groups and assign each group a power structure to research and analyze.

In their groups, students will create a presentation that explores how their assigned power structure affects democracy and democratic societies.

Presentations will be shared with the class and discussed as a whole.

Discussion Questions:

How do power structures influence democratic societies?

What are some weaknesses in the traditional understanding of democracy that power structures expose?

How might a different interpretation of democracy affect our understanding of modern societies?

Lesson Concept 2: Democracy Through the Lens of Civic Engagement

Overall Activity: Students will subvert the traditional understanding of democracy by examining how civic engagement influences democratic societies.

Step-by-Step Procedure:

Introduce the concept of democracy and its significance in modern societies.

Provide examples of civic engagement, such as voting, activism, and community

involvement.

Break students into small groups and assign each group a type of civic engagement to research and analyze.

In their groups, students will create a presentation that explores how their assigned type of civic engagement affects democracy and democratic societies.

Presentations will be shared with the class and discussed as a whole.

Discussion Questions:

How does civic engagement influence democratic societies?

What are some weaknesses in the traditional understanding of democracy that civic engagement exposes?

How might a different interpretation of democracy affect our understanding of modern societies?

Lesson Concept 3: Democracy Through the Lens of Globalization

Overall Activity: Students will subvert the traditional understanding of democracy by examining how globalization influences democratic societies.

Step-by-Step Procedure:

Introduce the concept of democracy and its significance in modern societies.

Provide examples of globalization, such as trade, immigration, and cultural exchange.

Break students into small groups and assign each group a aspect of globalization to research and analyze.

In their groups, students will create a presentation that explores how their assigned aspect of globalization affects democracy and democratic societies.

Presentations will be shared with the class and discussed as a whole.

Discussion Questions:

How does globalization influence democratic societies?

What are some weaknesses in the traditional understanding of democracy that globalization exposes?

How might a different interpretation of democracy affect our understanding of modern societies?

Gardener

Subject: basic statics

Response:

Lesson Concept 1: Building a Trellis

Overall Activity:

In this lesson, students will build a trellis for a plant using basic statics principles. They will learn about the forces acting on the trellis and how to make it stable.

Step-by-Step Procedure:

Introduce the concept of forces acting on a structure, including tension and compression.

Show students different types of trellises and explain how they work.

Divide students into groups and give them materials to build a trellis.

Have students test their trellises and make adjustments as needed.

Discuss the results as a class and explain the principles of stability and balance.

Discussion Questions:

What are the different forces acting on a trellis?

How can you make a trellis stable?

How can these principles be applied to other structures?

Lesson Concept 2: Balancing a Planter Box

Overall Activity:

In this lesson, students will balance a planter box on a fulcrum using basic statics principles. They will learn about the center of mass and how to balance objects.

Step-by-Step Procedure:

Introduce the concept of the center of mass and how it affects balance.

Show students how to find the center of mass of different objects, including the planter box.

Divide students into groups and give them materials to build a fulcrum.

Have students test their planter boxes on the fulcrum and make adjustments as needed.

Discuss the results as a class and explain the principles of balance and stability.

Discussion Questions:

How does the center of mass affect balance?

How can you find the center of mass of an object?

How can these principles be applied to other objects?

Lesson Concept 3: Designing a Bridge

Overall Activity:

In this lesson, students will design a bridge using basic statics principles. They will learn about the forces acting on a bridge and how to make it strong and stable.

Step-by-Step Procedure:

Introduce the concept of forces acting on a bridge, including tension and compression.

Show students different types of bridges and explain how they work.

Divide students into groups and give them materials to design and build a bridge.

Have students test their bridges and make adjustments as needed.

Discuss the results as a class and explain the principles of strength and stability.

Discussion Questions:

What are the different forces acting on a bridge?

How can you make a bridge strong and stable?

How can these principles be applied to other structures?

Comedian

Subject: basic essay writing

Response:

Lesson Concept 1: The Art of Persuasion

Overall Activity:

In this lesson, students will learn the basics of persuasive essay writing by creating humorous arguments on a given topic.

Step by Step Procedure:

Introduce the concept of persuasive writing and its purpose.

Discuss the importance of using humor to engage and persuade the audience.

Choose a topic that allows for humorous arguments, such as "Why cats are better than dogs"

or "Why pizza is the best food."

Brainstorm a list of arguments that use humor and exaggeration to make a point.

In small groups, have students develop one argument into a short persuasive essay.

Share and discuss the essays as a class, analyzing the use of humor to persuade.

Discussion Questions:

How did using humor affect the persuasive power of your argument?

Did you find it easier or harder to write a persuasive essay using humor? Why?

Can humor be used effectively in serious persuasive essays, or is it only appropriate for lighthearted topics?

Lesson Concept 2: Exploring Literature

Overall Activity:

In this lesson, students will learn how to analyze literature by creating comedic interpretations of a classic text.

Step by Step Procedure:

Choose a classic text that is well-known to the class, such as Shakespeare's *Romeo and Juliet* or Jane Austen's *Pride and Prejudice*.

Discuss the basic elements of the story, such as characters, setting, and plot.

Brainstorm humorous interpretations of these elements, such as "What if Romeo was a werewolf?" or "What if Mr. Darcy was secretly a superhero?"

In small groups, have students develop one comedic interpretation into a short essay, using evidence from the text to support their argument.

Share and discuss the essays as a class, analyzing the use of humor to reframe the text.

Discussion Questions:

How did creating a comedic interpretation change your understanding of the text?

What themes or ideas in the original text were emphasized or subverted by your humorous interpretation?

Can humor be used to make serious literature more accessible, or does it trivialize important themes?

Lesson Concept 3: Analyzing Current Events

Overall Activity:

In this lesson, students will learn how to write a persuasive essay on a current event by using humor to make their point.

Step by Step Procedure:

Choose a current event that is relevant and important to the class, such as climate change or immigration policy.

Discuss the different perspectives on the issue and the arguments for and against it.

Brainstorm humorous ways to make a persuasive argument on the topic, such as "Why aliens should be allowed to immigrate to Earth" or "Why we should all move to Mars to escape climate change."

In small groups, have students develop one humorous argument into a short persuasive essay, using evidence to support their point.

Share and discuss the essays as a class, analyzing the use of humor to engage and persuade the audience.

Discussion Questions:

How did using humor help or hinder your ability to make a persuasive argument?

Did the humorous approach allow you to see the issue from a different perspective?

Can humor be an effective tool for raising awareness and promoting action on important issues, or does it risk trivializing them?

Appendix 3: Liberatory Play: Reframing Freirean Pedagogics as playful, loving world-travelling

I presented this paper as the final project for the class Advanced Topics in Game Studies (KGADTGS1KU) on December 16, 2022. The class was taught by Miruna Vozaru, who also advised in the construction of this paper.

Abstract

In this paper, I propose liberatory play, a mode of engagement with subjects based on Lugones's (1987) playful, loving world-travelling, as a way of reframing Freirean pedagogics. I first describe liberatory play in detail, and then shown how it fits conceptually within the liberatory pedagogics proposed in Freire's (2000) Pedagogy of the Oppressed, thus redefining Freirean pedagogics as the praxes of liberatory play. I highlight how liberatory play is not meant to be interpreted as a radically new concept or approach, but rather as a reframing that will allow us to productively analyze existing, successful educational activities and pedagogical methods. Then, I propose four advantages that this reframing offers for the future application of liberatory education: 1, that it universalizes its application beyond the immediate contexts within which it has been developed; 2, that it facilitates thinking about liberatory forms of engaging with technical subjects; 3, that it opens the door to a potentially endless number of praxes and contexts of application; and 4, that it facilitates leveraging existing frameworks within play studies to design new educational activities. These advantages must all be further explored and tested in the field, with experiments geared towards applying liberatory play in new contexts and with new subjects, and bringing in existing frameworks from play design to create new activities.

When I started thinking about this paper, my original idea was clear: to propose a tool, or a set of

tools, that would allow us to think productively about all the experiences I identified as play within education; both from my experience as a student and as a Mathematics teacher. However, as I read Paulo Freire's (2000) *Pedagogy of the Oppressed* the idea evolved, and I have come to see play as a fundamental part of a liberatory education. Thus, in this essay, I aim to present how this idea fits into the Freirean praxis by proposing the concept of liberatory play, a mode of playful, loving world-travelling based on Lugones's (1987); and reframing Freire's approach as the praxes of this liberatory play.

This essay is divided into three parts: in the first one, I will propose a working definition of liberatory play, reconstructing and expanding Lugones's (1987) playful, loving world-travelling, and combining it with aspects of Nippert-Eng's (2005) boundary play. In part II, I will reframe Freire's (2000) dialogic praxis as the praxes of liberatory play. Finally, in part III I will propose four advantages that this reframing has for the future application of Freirean pedagogics: 1, that it universalizes this application; 2, that it facilitates thinking productively about technical subjects; 3, that it opens the door to new and innovative praxes; and 4, that it facilitates leveraging existing knowledge from play studies for education.

Before diving in, however, I want to point out a few particularities of this project. First, what follows is a reframing of Freire's work from within the field of Freirean pedagogics. As such, I will address how liberatory play fits within the tradition, but I will not be substantially defending the tradition itself from outside criticism, regardless of how accurate this criticism is, except in the cases where liberatory play can address some of these critics' concerns. Second, because this reframing is based primarily on Freire's work, I will be using his vocabulary rather than that of the critical pedagogists that have been influenced by him and continued his work. Thus, I will call education liberatory, rather than critical, and in general use the former term rather than the latter. This is not meant as a rejection of the term "critical", but instead as an attempt to situate my contribution as derived and inspired primarily by Freire (2000) and Shor & Freire (1987), and their liberatory education. When I do use the term critical, I will do so either referring to the work of the critical pedagogists or, as Freire does, to talk about critical consciousness.

Third, and most importantly, while I am proposing a "new" concept in liberatory play, I do not believe that the experiences that it describes are at all new. To the contrary, liberatory

play aims to describe many experiences that I and others have had, as both teachers and students, where the classroom becomes playful, explorative, and engaging, and in so doing facilitates a critical understanding of the subject at hand. Many of these experiences are not even regarded as innovative in practice: an excellent lecture, a good exercise, or an exciting prompt for a written homework are all examples of day-to-day educational activities where I have experienced moments of liberatory play. Thus, I encourage the reader to approach liberatory play in this more practical manner, rather than trying to understand it as a revolutionary new mode of engagement. However, I strongly believe that by naming these experiences liberatory play we stand to gain enormous insight into when and where they work, and what it is about these particular day-to-day activities that makes them stand out. Because of the applicability I envision for liberatory play, I have decided not to capitalize it, so as to not draw too much attention to the abstract, ideal concept, but instead to focus on the ways it can be applied, and observed, in day-to-day life.

Part I: liberatory play

Now, I will propose a working definition of liberatory play, which I will then identify in Freirean thought in section II. In developing this definition, I will adopt and expand Lugones' (1987) concept of playful, loving world-travelling. Each of these terms is central to our understanding of liberatory play, so I will develop them individually, in reverse order:

World-Travelling

In order to understand what world-travelling is, we must first turn our attention towards *worlds*. Lugones (1987) explains: "A 'world' in my sense may be an actual society given its dominant culture's description and construction of life, including a construction of the relationships of production, of gender, race, etc". A world is a construct, a product of human experience that is guided by certain rules, relationships, and norms. "A 'world' need not be a construction of a whole society. ... Some 'worlds' are bigger than others". Worlds need not be of a certain size, or of a certain independence, to be worlds. They do not even need to have a specific completeness: "A 'world' may be incomplete in that things in it may not be altogether constructed or some things may be constructed negatively". Importantly, worlds are inhabited: "For something to be a 'world' in my sense it has to be inhabited at present by some flesh and

blood people. ... It may also be inhabited by some imaginary people” (Lugones, 1987).

While Lugones rejects the “fixity of a definition” (1987) in order to preserve the suggestiveness of the word, I will attempt to provide a partial explanation and set of characteristics that should allow us to identify worlds for liberatory play: Worlds are constructed sets of discourse, systems of thought and knowledge, frameworks of engagement with reality’s phenomena, that present themselves as unified, even when they might not be in practice. This is a key aspect of the limits of a world: How big it perceives itself to be. But worlds are not entirely independent of each other. Many worlds have sub-worlds, and many more overlap significantly with others. Worlds are inhabited, that is, they are tied to the experience of people, constructed by people and maintained, expanded, modified and destroyed by them. People live within these worlds: they adhere to their rules and norms, construct their worldview based on their worlds’ arguments and frameworks, and fight to preserve or destroy particular sets of worlds. Not everyone who inhabits a particular world knows they do, and this difference between the inhabitants of it might, or might not, define the world itself.

Worlds are mutable. Some of them are only loose confederations of other worlds, like how one would think of Mexicanness, or Americanness, as a catch-all world for the multitude of worlds inhabited by the people of a particular nation or region. Many (perhaps all) are incomplete: they cannot account for the entirety of the human experience within their area of influence, or their inhabitants choose not to for a particular reason. In many worlds the boundaries are loose, and increasingly becoming rigid, while in many others the opposite is true. This is all to say that proposing a definition with which one can identify, categorize, and relate all worlds is, due to their number and enormous complexity, impossible. Rather, one should identify worlds holistically, in the realm of human experience. When it seems that there is a system of thought, or a particular collection of knowledge, or a consistent set of frameworks that are being applied, it is probable that one has encountered a world.

World-travelling is, then, the act of coming to inhabit a particular world, of reconstructing oneself, temporarily, according to its rules and norms, frameworks and outlooks. To travel to a different world is to look at it from the inside. Yet, not all world-travelling is voluntary or desired: “It seems to me that inhabiting more than one ‘world’ at the same time and ‘travelling’ between ‘worlds’ is part and parcel of our experience and our situation. One can be

at the same time in a ‘world’ that constructs one as stereotypically latin, for example, and in a ‘world’ that constructs one as latin” (Lugones, 1987). People world-travel every day, by necessity or desire, and in turn each world constructs them and perceives them differently.

Loving

To world-travel lovingly is to do so without *arrogant perception* (Lugones, 1987). When we perceive others arrogantly, we perceive them with the judgement of our perspectives, with the prejudice of our values. We also perceive them incompletely, as caricatures, focusing on individuals as only service or as only workers or as only a single or a single set of things. In doing so, we prejudge them and their worlds from the perspective of ours, and attempt to slot their experience into the frameworks that define ours. Instead, to travel lovingly is to be willing to perceive individuals, and their worlds, in their own terms. We must be willing to see worlds as valid and viable when we travel to them, and reserve judgement until we are able to understand what those worlds entail, and how the people that inhabit them perceive themselves. We must be willing to see how those worlds are constructed from similar realities as those from which we construct ours, and to perceive the people that construct them as agents, as complete and capable as us at constructing their own complete, cohesive visions of reality.

Playful

Lugones describes playfulness as “the attitude that carries us through the activity, a playful attitude, turns the activity into play. (..) The playfulness that gives meaning to our activity includes uncertainty, but in this case the uncertainty is an *openness to surprise*.” (1987). Playfulness implies, first and foremost, an attitude of discovery and a disposition towards “self-construction”, the recognition of rules where they exist but also the willingness to test and bend those rules, to hold them in one’s eye and to decide whether they are desirable to this particular experience. Lugones elaborates: “We are not worried about competence. We are not wedded to a particular way of doing things. While playful we have not abandoned ourselves to, nor are we stuck in, any particular ‘world’. *We are there creatively*. We are not passive.” (1987).

From this definition, there are a few key aspects to pay attention to. First, playfulness is characterized as a disposition, a mode of engagement, rather than an activity in and of itself.

Borrowing from Goffman (1986, p. 45), we should think of this playfulness as a *keying*: firstly, playfulness transforms a particular perspective, or schema of interpretation, without which the playfulness itself would be meaningless. This also implies that one cannot be playful without an object of playfulness. Said positively, playfulness requires a world, an activity, to be playful towards. Second, participants in this playfulness participate openly and voluntarily. One cannot be forced into playfulness, only invited in. Additionally, one must be free to leave the state of playfulness more-or-less whenever they choose. Third, playfulness is active. While Goffman characterizes playfulness as make-believe (p. 48), we should rather think about it as a particular form of real activity, rather than as a putting-on, or fake reenactment, of activity. Being playful is doing something for real while maintaining the keying of playfulness.

Central to our understanding of playfulness must be its relationship with rules. While the playful activity might be constrained by some rules, none of these are absolute, but instead optional and negotiable. In fact, rule exploration will be a central aspect to playfulness. Nippert-Eng's (2005) boundary play becomes essential: playfulness includes identifying a certain boundary, such as a rule, norm, or even accepted canonical knowledge, whether in the "real world" or on the activity; and being willing to explore it, to bend it to discover its purpose, its limitations, its reasons. This exploration is expansive: "A good boundary player can make a most enjoyable move by shifting one's attention to yet another boundary that —although any fully socialized member of the culture knows is connected to the pairing at hand— no one else would have thought to turn to at that moment". Yet, because playfulness is necessarily voluntary, it cannot disregard the desired limits of the players. Thus, playfulness must allow boundary work, that is the re-establishment of a boundary and its removal from play (Nippert-Eng, 2005), by those who are playing. Other players, in turn, must be willing to accept this boundary work and move on to more fruitful pursuits (this, however, does not deny the possibility of exploring why the boundary that has been reaffirmed by a player is considered necessary. Even in boundary work there can be playful exploration). Furthermore, playfulness is creative. This does not mean that it is oriented towards the production of an object, but rather that it is not pre-scripted and pre-defined. Playful activity is defined as it is performed.

Now, let us return to define liberatory play. In short, it is the act of playful, loving world travelling. Liberatory play means to identify a world, to travel to it to explore its systems

and experiences from the inside out. It means to travel lovingly, to be willing to observe this world on its own terms. Most importantly, it means to travel playfully, to enter this world voluntarily with a desire for discovery and exploration; with a disposition to engage in boundary play with the world, with a willingness and openness to being wrong, to be made a fool. Liberatory play means to travel to a world creatively, constructing one's engagement with the world through playful activity.

Part II: Freirean pedagogics as the praxes of liberatory play

Howlett (2013) summarizes Freirean approaches as such:

Freire proposed that the basis of radical action should stem from particular activities undertaken by those in schools to change modes and ways of thinking. Central to this was developing a dialogic relationship between students and teachers which he refers to in his early work as 'problem-posing' education. These problems did not relate to specific substantive queries but more to reaching a general understanding of the world through mutual discovery by both student and teacher – indeed such is the relationship between the two that the terms become interchangeable in Freire's language... As Freire himself makes clear, it is only when children partake in this kind of investigation that their educational experience becomes validated. (pp. 261-262)

In this section, I will link the basic elements of Freirean pedagogics: the particularity of activity, the dialogic relationships, the focus on discovery, to liberatory play, thus constructing a reframing of his dialogical education to that of the praxes of liberatory play, centered on the core elements of playfulness, lovingness, and world-travelling.

Freire (2000) argues that Solidarity is the basis for a liberatory education. "Solidarity requires that one enter into the situation of those with whom one is solidary; it is a radical posture. (...) The oppressor is solidary with the oppressed only when he stops regarding the oppressed as an abstract category and sees them as persons who have been unjustly dealt with, deprived of their voice, cheated in the sale of their labor (...) True solidarity is found only in the

plenitude of this act of love, in its existentiality, in its praxis”(p. 49-50). Freire stresses that only through our willingness to regard the oppressed as agents, as complete people, can we begin to educate ourselves. It is from a loving attitude that education is born, just as a loving attitude is required for liberatory play. But Freirean solidarity is not achieved in the abstract, but rather through the practice of this love. In terms of liberatory play, this praxis must be the act of world-traveling, that is the voluntary action of inhabiting lovingly the worlds of those who we wish to understand better, to stand in solidarity with. Moreover, the praxis of education must be centered on the worlds of the oppressed themselves: “No pedagogy which is truly liberating can remain distant from the oppressed by treating them as unfortunates and by presenting for their emulation models among the oppressors. The oppressed must be their own example in the struggle for their redemption” (Freire, 2000, p. 54). The subjects of this education must first regard themselves as individuals within worlds, and become capable of identifying the worlds they inhabit, and the roles they play within them. The first step, then, is the act of loving world-travelling to one’s worlds, to learn to identify their own experience and the parameters by which it is guided.

Freire (2000) further states that “Those truly committed to liberation must reject the banking concept in its entirety, adopting instead a concept of women and men as conscious beings, and consciousness as consciousness intent upon the world” (p. 79). To achieve a liberatory education, the educator must be willing to see people as complete agents. In terms of liberatory play, this could be rephrased as the necessity to see people lovingly, as full inhabitants and participants of their worlds. Just as the subjects of an education must learn to regard themselves lovingly, so too must would-be educators, all learning to understand and see each other as agents within their respective worlds.

In rejecting the banking model of education, Freire (2000) stresses that mechanized learning cannot lead to liberation or critical consciousness: “Apart from inquiry, apart from the praxis, individuals cannot be truly human. Knowledge emerges only through invention and re-invention, through the restless, impatient, continuing, hopeful inquiry human beings pursue in the world, with the world, and with each other” (p. 72). Knowledge can only arise from exploration, from the creative, active testing of boundaries within the worlds that are being known. Similarly: “The more students work at storing the deposits entrusted to them, the less they develop the critical consciousness which would result from their intervention in the world as

transformers of that world” (p. 73). Critical consciousness will not arise from passive acquisition, but rather from active testing, exploration and inquiry. Playfulness encompasses all of these approaches. It stresses exploratory inquiry, the testing of rules and norms through boundary play, and an acquisition of knowledge not from rote memorization but from creative activity.

Liberatory education must engage in a particular form boundary play: that between the real world and the abstracted observation from the classroom. Shor & Freire (1987) state: “(Shor): I agree that connecting classroom work to the transformation of society is basic for a teacher’s transition to liberatory methods, but the classroom and the rest of society remain physically separate areas of practice” (p. 34). By recognizing the boundary between abstracted knowledge acquired in the classroom and the source of that knowledge, the existence of the world being explored in reality, those engaged in liberatory play must blur the boundary, recognizing the relationships between the abstracted and the concrete phenomena they represent. To connect these two is to recognize the effect that worlds have on their inhabitants, thus allowing the student to understand the discourse of the world being explored. This recognition is central to liberatory education: Shor & Freire describe the current state as: “(Shor): in schools and colleges, science, engineering, technology, business and many social science courses generally present knowledge as value-free, free of ideology or politics” (p. 12). Instead, “(Freire): In liberating education, we do not propose mere techniques for gaining literacy or expertise or professional skills or even critical thought. The methods of dialogical education draw us into the intimacy of the society, the *raison d’etre* of every object of study” (p. 13). By engaging in boundary play, by relating the abstracted, “value-free” systems of a world (science, engineering, etc.) to its role in reality, we aim to reveal how and why these systems are constructed as they are. We learn to understand how worlds are inhabited and constructed by their inhabitants, how they are embedded into the lives of everyone that interacts with them.

Freire also stresses another form of boundary play: that which occurs with the social boundary between teacher and student: “Through dialogue, the teacher-of-the-students and the students-of-the-teacher cease to exist and a new term emerges: teacher-student with students-teacher” (Freire, 2000, p. 80). By engaging in boundary play with the social roles within the classroom, the worlds explored become truly discoverable by everyone: “In this process, arguments based on ‘authority’ are no longer valid” (p. 80). In fact, this exploration of the world

becomes collective, creative in that it is based on active communication between the participants rather than on pre-created, pre-digested insights: “‘Problem-posing’ education, responding to the essence of consciousness —*intentionality*— rejects communiqués and embodies communication” (p. 79). The importance of this blurring of positions, of the necessity to invite students to become co-players in their own education cannot be overstressed: “The role of the problem-posing educator is to create; together with the students, the conditions under which knowledge at the level of the *doxa* is superseded by true knowledge, at the level of the *logos*” (p. 81). The objective, then, is to bring about a space where exploration can be carried out collectively, where student-teachers and teacher-students can transcend the prescribed rules and bodies of knowledge, and instead interrogate them, explore their limits and foundations, come to understand them as systems and corpuses through creative activity. The objective is to create a playground, where everyone involved in the educational activity can playfully world-travel.

At this point, it is important to highlight the voluntary nature of this playfulness. Shor & Freire (1987) discuss it practically: “(Shor): when I begin teaching a course, I can’t take student motivation for granted... But first, I must establish an atmosphere where students agree to say, write, and do what is authentic to them” (p. 6). Similarly: “(Shor): I can’t impose liberatory pedagogy against anybody’s will to receive it” (p. 25). At most, the educator can create the space for liberatory play, but it cannot be forced on any student. Instead, it is up to both parties to find a common ground where both students and teacher can behave playfully together: “(Shor): If I come in front of a new class, I can’t presume that this class will repeat the development or transition of the last class... I have to rediscover the distance that this new group can travel” (p. 26). Liberatory education requires active participation, the willingness of the student to engage in the playful activity of exploration. Moreover, it cannot be abstracted from its subjects, standardized a priori: “(Shor): It has to be situated, experimental, creative —action that creates the conditions for transformation by testing the means of transformation that can work here” (pp. 26-27). Liberatory education, like liberatory play, cannot be pre-defined. It is an active, creative endeavor, produced as it is performed. Because of this, it cannot be abstract, but must instead be situated to a particular world, and a particular activity.

Freire (2000) and Shor & Freire (1987) stress dialogue as the central activity of a liberatory education. Yet, their definition of dialogue remains vague: “Dialogue is the encounter

between men, mediated by the world, in order to name the world. Hence, dialogue cannot occur between those who want to name the world and those who do not wish this naming” (Freire, 2000, p. 88). Also, “since dialogue is the encounter in which the united reflection and action of the dialoguers are addressed to the world which is to be transformed and humanized, this dialogue cannot be reduced to the act of one person’s ‘depositing’ ideas in another, nor can it become a simple exchange of ideas to be ‘consumed’ by the discussants” (p. 89). In this context, dialogue should be understood as the invitation, and acceptance, to collectively explore and analyze a world; to engage, together, in liberatory play. Shor & Freire (1987) recognize the versatility of this praxis when they acknowledge that lecturing can also be a viable practice for liberatory education: “(Freire): You can still be very critical while lecturing... Here the importance is that the speech be taken as a *challenge* to be unveiled, and *never* as a channel of transference of knowledge” (p. 40). What is really important is less the specific activity of “dialogue”, but rather the keying of it: that it is given and received as a collaborative exploration of a world, that it is creative and constructed as it is performed, that the focus is not on the transfer of knowledge but on its co-creation.

In sum, we can understand Freirean liberatory education, and the praxis of dialogue, as the praxes of liberatory play. Firstly, liberatory education must be loving: students and teachers must see themselves and each other as full agents and participants in both their education and in the subjects they will study. They must also be willing to observe and explore the world from a position of solidarity, both with themselves and with the inhabitants of that world. Secondly, liberatory education must be playful: it must invite the participants to voluntarily explore the world; to engage in dialogue, that is co-exploration and co-creation of knowledge. Moreover, it must engage in boundary play: both in the boundaries between students and teachers so all can become co-participants; and in the boundaries between the concrete happenings of the world and the abstracted knowledge explored in the classroom. Only by playing with these boundaries can critical consciousness of a world be achieved. Finally, because all dialogue and all playful activity must be situated, liberatory education must be world-travelling: it must identify the worlds that it is to discover and explore them from the inside, in the process discovering their limits, rules, norms and corpus of knowledge. Only through exploratory investigation of these worlds, through playful engagement with their components, through collective construction of

knowledge, can *conscientização* be achieved.

Interlude: On the continued relevance of liberatory pedagogics

Over the past decades, we have found ourselves and our educational systems increasingly in crisis. Giroux (2011) mentions that “In recent years, there has been a resurgence of the logic and arguments that were first used against critical education in the 1970s and 1980s —today, ironically, they are put forth by their proponents in the name of ‘educational reform’” (Chapter 1, para. 1). He describes the attacks on critical pedagogy as motivated by the politics of economic growth, scientism, and technical rationality, which has in the 21st Century evolved into a vicious mode of dominant ideology which he terms “neoliberal pedagogy”. Giroux further describes neoliberal pedagogics in the context of the recent pandemic: “Public goods such as education become instrumentalized and education is reduced to training, empty careerism, and market-based discourses of calculation and networking. Or, more recently, educational discourse is dominated by a technocratic rationality obsessed with methodological considerations regarding online teaching and learning” (Giroux, 2021, p. 6). In this system, education is seen primarily as a method of economic advancement: one must go to school to become more productive, to have any chance to compete in an increasingly cut-throat market. The value of the individual is measured by their success in climbing the economic ladder.

Because of this individualizing aspect of education, we are divorced from our social identities, incapable of solidarizing ourselves with others for the benefit of all: “The Covid-19 crisis was part of a historical moment defined by a pedagogical catastrophe of indifference and a flight from any viable sense of social and moral responsibility. This was and is an age marked by... the collapse of civic culture, and an obsession with wealth and self-interest” (Giroux, 2021, p.31). In parallel, the rapid advancement of Information Technologies has prioritized a kind of knowledge that divorces us from our situated experience: “Computer technicians and scientists working on artificial intelligence sanctify data and information grounded in print-based cultural storage and thinking. This reinforces surface knowledge, ignores tacit knowledge, presents a false sense of objectivity, and ultimately misrepresents the relational and emergent information-intensive pathways of both cultural and natural ecologies” (McLaren and Jandrić, 2020, p. 43). These processes leave us increasingly alone, divorced from our immediate communities and

from forms of knowledge passed on through generations.

But not all is yet lost. Critical pedagogists all believe that, through their practice, by educating the people to see themselves critically in their world, some (or all) of these issues might be assuaged. McLaren and Jandrić state that “We need an earth-centered ecological intelligence. Critical pedagogy can join in such an effort” (2020, 44). And critical pedagogists have certainly joined. Kahn (2010), Evans (2012), and Grosfoguel (2008) have focused on linking ecology and other 21st Century problems to the practice of critical pedagogy. From a more praxis-oriented perspective, Boal (1979) innovated by adapting liberatory pedagogics for the stage. Frasca (2001) expanded their avenues of applicability to digital simulations. So did Iuama (2022) for LARP. With liberatory play, I aim to contribute to these efforts by constructing a conceptual understanding that can expand liberatory education’s fields of application, ease of access, and the praxes through which it can be achieved. Thus, in the following section, I will propose four advantages of thinking about liberatory education from the perspective of liberatory play, and how those advantages can help us rethink the future of liberatory pedagogy.

Part III: Looking to the Future

1: Reframing liberatory education as liberatory play universalizes it beyond any particular social, temporal, and political context.

Ecclestone and Hayes (2008) raise the question of whether certain Freirean ideas can be applied to the modern, westernized world. In fact, they refuse to “adopt the safe form of verbal radicalism of liberals who cite the emancipatory rhetoric and beliefs of educators such as Paulo Freire without any recognition that the structural and material conditions that shaped it are starkly different from current conditions” (p. 161). They equate the educational practice with the particular rhetorics of the moment and place where Freire first developed his theories. But, by reframing his pedagogics as the praxes of liberatory play, we can understand how they are adaptable to any place and time where there are worlds worth investigating.

Even when his original inspirations and testing grounds were in rural Brazil, it is a mistake to equate the objective of Freire’s educational practices with the context in which they evolved. As we have observed before, a key characteristic of the praxes of liberatory play is that they are situated, individualized to the context in which the students and the teacher are to carry

out their investigations. Because of this, of course Freire's educational work in Brazil was centered around the particular issues present there, but this by no means signifies that they are only applicable to those issues. In considering liberatory play, it becomes clear that the practice of playful, loving world-travelling requires the specificity of its context (Freire could never have explored British colonialism in rural Brazil), but is universal in the sense that any context could be approached in this manner.

The universalism of liberatory play can also serve to assuage the fears of people who are turned off by liberatory pedagogy's historical and current association with the radical left. Howlett (2013) criticizes latter critical pedagogists as such: "In particular, the sort of society which is seen as 'desirable' is one which is defined exclusively by Giroux and his colleagues.... Why should not the views of other educators be considered when defining a set of desirable educational outcomes?" (pp. 266-267). Liberatory pedagogics, while born out of the left wing, were never about bringing about one particular future: "Freire thus used established Marxist categories to explain aspects of the world to his reader but only insofar as they acted as the framework for his educational viewpoints" (Howlett, 2013, pp. 255-56). While deeply grounded in Marxist politics, Freire's work was never about indoctrination into any particular political tendency but rather about the radicalization of individuals in the face of sectarianism: "In fact, however, *conscientização* does not lead people to 'destructive fanaticism'. On the contrary, by making it possible for people to enter the historical process as responsible Subjects, *conscientização* enrolls them in the search for self-affirmation and thus avoids fanaticism" (Freire, 2000, p. 36). By virtue of its emphasis on exploration and discovery of particular situated worlds, it becomes clear that liberatory play is liberatory not in a grand-scale, students-to-social-revolutionaries way, but rather in a more individualized, students-as-active-thinkers way, which Freire believes will bring about a society more engaged with its future, more capable of taking control of its own destiny in whichever way its people choose.

2: Liberatory play facilitates thinking about bringing liberatory education into technical subjects as world-travelling.

While recognizing the importance of technical subjects in the modern world (Giroux (2022) proposes public pedagogics that include modern communications technologies such as

mass media and the internet; McLaren and Jandrić (2020) analyze the impacts of modern technology on people), so far the particulars of how a liberatory education could be applied towards mathematics, the sciences, and engineering remain vague. This is, of course, in part a result of the experiences of the critical pedagogists themselves: many of them were, and are, humanists, with their pedagogical experience grounded in the teaching of grammar and language (Shor & Freire) and history (Giroux). While the humanities have a long history of critical approaches, the formal, empirical and practical sciences have focused more on the acquisition of tools and skills, with knowledge traditionally removed from critical inquiry and instead geared towards objective competency: “can the student solve this set of problems, or not?”.

Liberatory play proposes a clear way forward for approaching technical subjects by presenting them as worlds to be explored. Under this paradigm, the question shifts away from an issue of competence towards one of understanding: instead of focusing on the objective ability of the student at solving a given set of problems, the goal of a technical education is for the student to comprehend how algorithms for solving different types of problems are arrived at; how the problems themselves are abstracted from reality using the set of frameworks that the subject entails; and how these frameworks and algorithms are themselves discourse that affects how we view and interpret reality. Thus, liberatory play facilitates the student’s understanding of the relationship between technical perspectives and the myriad worlds that they inhabit. Moreover, this approach allows us to grapple with the enormous impact that computers have had on technical subjects: as they have proliferated, human computational capacity has been completely overshadowed, and traditional emphasis on memorization of formulae has been rendered obsolete by immediate access to the internet. In the face of these developments, a student’s capability to perform a complex operation or to remember an intricate formula is no longer a significant advantage, since a computer could do these things easier and quicker. In contrast, being able to observe the world, identify problems, abstract them into a technical language, and create algorithms to solve them remain the most important abilities for any technical subject. Liberatory play, with its emphasis on exploring, testing, and challenging the boundaries of particular worlds, becomes then the perfect tool to guide students to a more comprehensive understanding of the underlying systems of technical subjects, and thus of how these can be manipulated to address complex problems.

As an example of its advantages for technical subjects, I want to briefly compare a liberatory play approach to statistics with that proposed by Frankenstein (1987). Her practice, designed to provide a “Critical Mathematics Education” (p. 195), was created to teach adult students basic statistics and to counter students’ “Mathematics anxiety”. It starts with an investigation of the students’ interests, after which the teacher can “link up the students’ issues with an investigation of the related hegemonic ideologies. Any topic can be so connected; for example, art can lead to an exploration of such areas as the ideology of ‘high status’ knowledge” (p. 196). Then, her lessons in mathematics are formed around explorations of these social topics: “most basic math and statistics skills and concepts, as well as the critical nature of statistical knowledge, can be learned in the context of working on applications that challenge the contradictions involved in supporting hegemonic ideologies” (p. 195). These two points define Frankenstein’s approach. For her, Critical Mathematics means to receive the basic concepts of Mathematics, and to practice their use with datasets that will inform the students’ worldview. As the course advances, “students and teachers are equals in problematizing what other statistics would clarify the theme of racism... Further depth is added to the investigation by students and teachers jointly finding and considering various social science studies that use more advanced statistical techniques to clarify the theme” (p. 198). While this is a perfectly adequate critical education, in that it seeks to guide students through exploring the nature of their society and learn to see it for themselves, I contend that it is not a critical *mathematics* education. The rules and formulae of statistics are learned and practiced, and statistics is said to be critical itself, but no attention is paid towards evaluating the field of statistics itself critically, to reveal how the basic formulae that form it are composed, and why they are composed that way. In focusing on the explicitly political, Frankenstein’s approach fails at providing the students a critical understanding of how and why Mathematics function the way they do, and how these axioms are abstracted and presented, value-free, onto the world.

From a liberatory play approach, these questions would be at the forefront of a statistics education. Instead of rote learning of formulae, students would be encouraged to observe the relationship between the datasets, the formulae, and the results. This could consist of activities that asked students to calculate averages on datasets with varying distributions, and to notice how these distributions are reduced into a single number. Then, they could be challenged

to explore better ways of reducing a complex dataset into a single descriptive number, and allow them to realize for themselves the limitations of this endeavor. Through these exercises, students would be encouraged to world-travel, to identify the axioms of the world of statistics they're engaging with, and to challenge the formulae that are usually only delivered to them. In focusing on exploration rather than calculation, students would learn to observe basic concepts from many different perspectives, analyzing their behavior with multiple datasets and trying to break and bend their formulae to know it more fully. By doing this with different aspects of statistics, the teacher could act as a guide, introducing new concepts and more complex ideas as fresh boundaries to be played with. Thus, by constructing their knowledge of mathematics through exploration, testing, and self-discovery, students would gain a critical conscience of how mathematics work, and what is implied when, for example, entire populations are reduced to a simple average.

However, I do not disagree with Frankenstein (1987) that it would be productive to utilize as examples datasets drawn from the interests and lives of students. Because this liberatory play with statistics must be situated, it makes perfect sense that the object of these studies would be closely linked to the students themselves. Rather, I contend that only through playing with mathematics itself would the students be able to acquire an accurate understanding not only of the social issues presented to them through the data, but also of how the tools and discourses of mathematics color our understanding of the data, and the social issues themselves.

3. Liberatory play opens the door to potentially endless different praxes for liberatory education.

As I mentioned before, Freirean pedagogics have already been expanded to many diverse praxes. Beyond Freire's (2000) practice of dialogue, Boal (1979) developed multiple techniques for liberatory theatre, and Frasca (2001) based himself on Boal's work to propose computer simulations as another medium for liberation. More recently, Iuama (2022) suggested that LARP is a "medium of the oppressed", also implying its power as a praxis for liberatory education. But, by conceptualizing liberatory education as the praxes of liberatory play, we can go a step further. Indeed, any activity that encourages students to engage with the subject they are studying as playful, loving world-travelling has the potential to be a praxis of liberatory

education. Thus, the question ceases to be “Can X be used for liberatory education?” and instead becomes “How can X serve as liberatory education?”. Shor & Freire (1987) already display some of this flexibility when describing lecturing as a potential praxis of liberatory education (p. 40), but their language lacks the specificity to describe how, and why, lecturing can be a form of Freirean dialogue. Liberatory play can serve to bridge this gap: one could analyze how a particular form of lecturing behaves playfully towards its content, in turn inviting the students to be playful themselves. Shor & Freire (1987) suggest that the lecture should be presented as a *challenge* rather than as transfer of knowledge (p. 40), and I would agree, further specifying this challenge is in fact a call to play, an invitation to involve oneself in the process of playful, loving world-travelling.

The possibility of all these diverse praxes of liberatory play also opens the door to its easier adoption by non-specialized teachers, and its inclusion in more limited forms into the traditional school system. Howlett (2013) and Shor & Freire (1987) recognize that the application of liberatory pedagogics, even by teachers amicable to its goals and politics, remains complicated due to the perceived difficulty of it and by the difficulty of incorporating the methods into the existing school system. However, by focusing on liberatory play, educators could carry out more pointed, more tactical applications that aren’t as daunting nor, because they are more limited in scope, as conflictive with the existing educational models. Thus, liberatory play during lecture or during specific activities, with pre established timeframes, could be encouraged and designed for.

This is not to say that these activities, these lectures, don’t already exist. Across the world, committed teachers innovate constantly, designing new activities to try to get their students to engage with the content critically. They improve their lectures, trying to make them more interactive, more critical for students to become engaged. The beauty of liberatory play is not that it has never been seen, but that through its vocabulary, individualized learning about why a particular activity, a particular lecture, works well or fails could be abstracted and more easily transmitted between teachers. By having a shared language and framework for understanding what happens when a lesson transcends its content delivery and becomes a vehicle for students’ exploration and discovery, teachers could continue to explore and perfect their techniques, share their insights with each other, and construct collective knowledge of how to

bring about a critical understanding of the subjects they are teaching.

4. Liberatory play facilitates educators bringing analytical and practical frameworks for play design into education design.

In points 3 and 4, I highlighted how liberatory play expands the scope of a liberatory education in both subject and method. However, in both cases the explicit methods to bring about liberatory play in new contexts remain vague. But liberatory play can also serve to bridge this gap of practical knowledge by facilitating the application of the numerous analytical tools and frameworks that have been proposed for designing and evaluating play and games. By reframing the process of this liberatory education as a series of praxes of play, techniques that have been applied successfully to design play experiences could then be reframed to design educational activities, that would have pedagogical value because of their focus on playful, loving world-travelling.

Thus, analytical frameworks such as Caillois's (2001) and Calleja's (2011) could serve to piece apart educational activities and analyze explicitly how they invite the students and the teachers into play. Using these tools, educators could examine their practice to ascertain what elements in their activities are succeeding in bringing about playful engagement for their students, and share their insights with one another using these shared vocabularies. Meanwhile, frameworks focused on designing for play, such as Flanagan's critical play (2009), and Isbister's (2015) and Figueiredo's (2022) frameworks for social play could be leveraged to design new activities and praxes to facilitate student engagement in liberatory play.

The effects of all these frameworks and existing tools on liberatory education would be twofold: first, they could serve to fill in the practical blanks that Howlett (2013) identifies as one of the challenges of implementing liberatory education due to its historically limited application in the field. Second, they could facilitate the expansion of practice that I mentioned in points 2 and 3, by providing a starting ground, both theoretical and methodological, from which to design new praxes for bringing about liberatory play in both new subjects and contexts. By grounding future experiments in practical know-how for play design, educators could produce more focused methods and activities, that would serve to advance knowledge of liberatory education in practice faster. Moreover, by basing their experiments in existing vocabulary, the success of

these could be more easily measured and transmitted to other educators interested in trying out similar strategies.

Conclusion

In this paper, I have proposed liberatory play, a mode of engagement with subjects based on playful, loving world-travelling, as a way of reframing Freirean pedagogics. To do so, I have first described liberatory play in detail, and then shown how it fits conceptually within the liberatory pedagogics proposed in Freire's (2000) *Pedagogy of the Oppressed*, thus redefining Freirean pedagogics as the praxes of liberatory play. Next, I have proposed four advantages that this reframing offers for the future application of liberatory education: 1, that it universalizes its application beyond the immediate contexts within which it has been developed; 2, that it facilitates thinking about liberatory forms of engaging with technical subjects; 3, that it opens the door to a potentially endless number of praxes and contexts of application; and 4, that it facilitates leveraging existing frameworks within play studies to design new educational activities. These advantages must all be further explored and tested in the field, with experiments geared towards applying liberatory play in new contexts and with new subjects, and bringing in existing frameworks from play design to create new activities. At various points, I have highlighted how liberatory play is not meant to be interpreted as a radically new concept or approach, but rather as a reframing that will allow us to productively analyze existing, successful educational activities and pedagogical methods, so educators can more effectively design new approaches into existing subjects, innovative activities, and praxes that will encourage students to engage playfully with their studies, thus acquiring a critical conscience. This must be a key element of further research: in order to successfully bring about more liberatory play in education, attention must be paid to observing, analyzing and abstracting the approaches that already work in practice, and constructing new pedagogical tools from them. If we succeed in creating new frameworks for the application of liberatory play, the results could be exceptional: teachers will have an easier time engaging their students actively in their subjects, and the students themselves will more easily develop a critical consciousness about the things they learn in school, and how these relate to their everyday lives. The goal, as always, is to bring about the liberation of all people, to realize their capacity to engage with the world they live in as free

agents, and to invite everyone, regardless of background or privilege, to participate actively in shaping their societies. In Freire's (2000) own words: "From these pages I hope at least the following will endure: my trust in the people, and my faith in men and women, and in the creation of a world in which it will be easier to love" (p. 40).

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