Difficult History Education Via Design-based Research: Teaching Historical Empathy Using Lucie Aubrac and the French Resistance as a Case Study

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DIFFICULT HISTORY EDUCATION VIA DESIGN-BASED RESEARCH: 
TEACHING HISTORICAL EMPATHY USING LUCIE AUBRAC AND THE FRENCH 
RESISTANCE AS A CASE STUDY

By

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Major Professor: Amelia Lyons and Rudy McDaniel
ABSTRACT

Technology-enhanced learning environments (TELEs) are educational tools that enable students to acquire knowledge, improving the quality of their educational experience. Educators face many challenges when teaching difficult histories about French resisters in World War II, such as Lucie Aubrac. Resisters' histories include deep emotions, choices, and hard decisions. There is a need for a new approach for teaching these topics and designing innovative digital tools to encourage educators and students to explore them. The current study designs and evaluates a TELE to teach difficult history via a historical empathy approach that engages students with difficult histories and provides them with means to empathize with historical figures. French academic historians from different universities across the U.S. collaborated and informed the design of the TELE. This study answers two main questions: First, how can a project-based classroom TELE help teach difficult history via a historical empathy approach? And second, in what ways do educators think the final prototype will help in teaching difficult history content, such as the Lucie Aubrac scenario, thematically? The methods used in this study are focus groups and surveys. The outputs of this study are in the form of knowledge and products. These include design principles, the final prototype, and the revised historical narrative of Lucie Aubrac. The results indicate the potential for using the final prototype in classrooms. The significance of this study is found in its contributions to the literature of history, pedagogy, design, and technology.

Keywords: Difficult History – Historical Empathy – French Resisters- Design-Based Research- Lucie Aubrac- Augmented Reality- Chatbots- NLP
To my mom.
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“My success, my ability to do this [successfully] and [to enjoin] other acts of obedience, is only with God. In Him I trust and to Him I turn, I return, [repentant].” The Holy Quran (Hood, 88)

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CHAPTER 1: INTRODUCTION

Learning about difficult histories is essential in the classroom. Difficult histories include memories of pain, suffering, trauma, and violence. They inform students about their collective memories and instill them with a sense of social justice and the importance of human rights. Nevertheless, difficult histories cause anxieties for both educators and students. Teaching difficult histories is challenging for educators due to a lack of classroom tools. Technology-enhanced learning environments (TELEs) are educational systems in which students acquire skills and knowledge with the help of their teachers.\(^1\) The use of technology in higher education is increasing every day. TELE initiates positive feelings among both faculty and students. Educational technologies reduce anxiety, increase engagement, and create feelings of confidence because students can learn independently with their help.\(^2\)

This study adopted the interdisciplinary approach, which integrates different disciplines such as pedagogy, design, and technology. This study aimed to design a prototype for a TELE with the collaboration of academic historians to teach difficult history in classrooms. I used Design-Based Research (DBR) as the methodology for designing the prototype of the TELE. Design-based research is pragmatic in nature. This means it addresses crucial issues in society to get practical solutions in design, learning, and teaching. Wang and Hannafin defined design-based research as:

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systematic but flexible methodology aimed to improve educational practices through iterative
analysis, design, development, and implementation, based on collaboration among
researchers and practitioners in real-world settings, and leading to contextually-sensitive
design principles and theories.³

This chapter includes the problem statement, purpose of study, case study, research
questions, theoretical framework, ethical approvals, the significance of the study, and summary.

1. **Historical Background of TELE**

Throughout the 1950s, educators used TELEs through the theory of “programming
learning,” which guides students through tutorial steps. The function of the TELE is to assist the
learning process.⁴ Since then, the TELE has gained characteristics such as “learning through
technology; design of learning materials; individualized learning; [and] enhancing rather than
replacing human teaching.”⁵

With the introduction of computer-assisted instruction systems, TELE played a new role in
the personalized learning experience by constructing knowledge through technology. TELEs
were used to guide the learners to more materials if the input answer was wrong or to move to
the next question if it was right. In this way, the technology became more flexible and engaging
by enhancing the learner experience. From the 1970s until today, the improvements in
technologies used for the TELEs changed its functionality from a teacher assistant to online
tutoring systems that cooperate with educators to teach students. Carolyn Penstein Rose, Johanna

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⁵ Erik Duval, Mike Sharples, and Rosamund Sutherland, *Technology Enhanced Learning: Research Themes*
D. Moore, Kurt Van Lehn, and David Allbritton introduced the use of artificial intelligence when they used natural language processing to teach students about electronics.  

Nowadays, there is a paradigm shift in history education due to the improvements of TELEs. TELEs used in classrooms are websites, educational games, and augmented and virtual realities apps. Teachers’ attitudes changed from being skeptical to being more positive about these technologies and more interested in developing digital tools. The call for active learning in the 1980s urged for involving students in the learning process and moving towards “doing history.” Chickering and Gamson stated that:

Students must do more rather than just listen: They must read, write, discuss, or be engaged in solving problems. Most importantly, to be actively involved, students must engage in such higher-order thinking tasks as analysis, synthesis, and evaluation.

TELEs enhance the entire process for students and enable teachers to design personalized activities, assess students’ progress, and evaluate their learning. Design-based research is used nowadays in the development of the TELEs.

2. Problem Statement

Difficult histories are challenging to teach. Several authors have recognized four problems in teaching difficult histories. First, there is a contradiction between peoples’ prior knowledge and new knowledge. Students develop resistance against difficult histories. In recent years, scholars such as Epstein and Peck, Gross and Terra, Levy and Sheppard, and Rose have developed the

6 Rose et al., “A Comparative Evaluation of Socratic versus Didactic Tutoring, 1-7.”  
7 Chickering and Gamson, “Seven Principles for Good Practice in Undergraduate Education, 1-6.”  
8 Guàrdia, Crisp, and Alsina, “Trends and Challenges of E-Assessment to Enhance Student Learning in Higher Education, 1-21.”  
9 Barab and Squire, “Design-Based Research, 1-15.”
concept of difficult history to help address a range of topics that societies do not want to
acknowledge or grapple with (including slavery, imperialism, colonization, or the Holocaust)
because they bring up issues of shame or guilt.\textsuperscript{10} These feelings contribute to the avoidance and
denial of difficult knowledge.\textsuperscript{11} Epstein and Peck explain how students come to school filled with
incorrect knowledge from their parents and communities, creating biases and resistance to
learning new knowledge.\textsuperscript{12} This resistance initiated among students is a result of psychic self-
preservation.\textsuperscript{13}

Second, this project addresses the challenges of traditional learning. Magendzo and Toledo
state that difficult histories could cause anxieties that lead educators to self-censorship because
of their fears about the possible impacts of the lecture on the students.\textsuperscript{14} Rose, Gross and Terra,
Epstein and Peck, and Goldberg also point out that students are affected differently when
exposed to difficult histories. The Histories such as World War II may harm some students’ self-
esteem and affect some groups’ image. Others may attack the lecturer, causing confusion among
other listeners. Thus, motivation to learn difficult history is hard to obtain. Rose and Lindsay
describe how people lose engagement with difficult histories in public settings when lecturing
about the topic. People also lose interest because of the exposure to new knowledge that
contradicts their beliefs, ideologies, or cultural backgrounds.\textsuperscript{15}

\begin{thebibliography}{9}
\bibitem{11} Rose, \textit{Interpreting Difficult History at Museums and Historic Sites}, 80-93.
\bibitem{12} Epstein and Peck, \textit{Teaching and Learning Difficult Histories in International Contexts}, 1-85.
\bibitem{13} Rose, \textit{Interpreting Difficult History at Museums and Historic Sites}, 80-93.
\bibitem{14} Magendzo and Toledo, “Moral Dilemmas in Teaching Recent History Related to the Violation of Human Rights in Chile, 445-465.”
\end{thebibliography}
Third, there is a lack of design-based TELE for difficult history. Educators who are “risk-takers,” as described by Kitson and McCully (2005), accept responsibility for integrating difficult topics in their classes and help improve student understanding. This includes how difficult it is to risk one’s own life in a time of crisis. Those educators need innovative technologies to help them reduce the stress and the anxiety of difficult topics. During the past decades, TELEs have played a significant role in facilitating students learning. Educators used TELEs such as websites, games, or AR/VR technologies to achieve their learning goals. However, there is still a need to design a TELE that encourages educators to teach difficult histories. There is also a need to incorporate new historical approaches for understanding historical figures’ difficult histories to make it easier for students to empathize with them. Historical empathy enables students to investigate a historical event and actively reflect on the topic.

Fourth, topics such as World War II are one of the most intriguing topics to students. This period is fraught with individuals resisting the corruption and inhumanity of that time. Nodding and Brooks, in their recent book on Teaching Controversial Issues, state that civil disobedience is a difficult topic to teach; however, it is crucial for students to understand the relationship between the citizens and the state for better democratic practices. The Holocaust is an example of difficult history with a rich literature on the history of resistance and its limits. In particular, as French resistance historian, Robert Gildea, has recently pointed out, women’s experiences in

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18 Noddings and Brooks, Teaching Controversial Issues, 25-153.
resistance movements have been ignored until recently. Moreover, Lindsay explained the need to engage people with the daily life of the people of the past to understand how the context of their lives is different from our lives today. Students could use this perspective to understand the difficulty of the choices the people of the past made. Some of these choices cannot be justified within our right and wrong parameters because they lie in the grey zones.

My work contends that students need to be exposed to women’s resistance experiences because most of the history taught in schools and public historical sites highlights white-male experiences, even among victims. Instead, we should aim to include other types of struggles, such as the struggle between the state and the resisters in France rather than the repeated struggle over power and wealth. Moreover, exploring the daily life of the people of the past helps demolish stereotypes about historical actors while simultaneously allowing students to learn about the difficult choices people had to make during World War II. Teaching about resistance enables students to understand the relationship between citizens and the state. Students should learn history to become active citizens. To bring together multiple elements in one example of difficult history, I will use the history of Lucie Aubrac, a French militant resister in World War II. Aubrac’s story describes a dramatic shift from a pacifist to a militant resister. The dynamic relationship between state power and her internal moral compass and beliefs will help students to understand the reasons behind civil disobedience and resisters’ struggles. Moreover, the story of an individual and her everyday life in the past will help students understand these struggles in a

19 Gildea, Fighters in the Shadows, 1-84.
20 Lindsay, Reconsidering Interpretation of Heritage Sites, 40-45.
22 Lindsay, Reconsidering Interpretation of Heritage Sites, 1-10.
personal way. The case study builds a deeper connection with learners and encourages learners to respond to injustices they encounter in their lives.

3. Purpose of The Study

This design-based research study aims to create a technology-enhanced learning environment (TELE) for teaching difficult history using a case study of French resistance history in World War II. This study uses the historical empathy theory and mixed methods for learning about the French resister, Lucie Aubrac, in a project-based flipped classroom. The final prototype is a result of collaborative work with academic historians. The prototype can be generalized and used for other difficult history topics. This study contributes to the existing literature in design, pedagogy, and difficult history.

4. Case Study: Lucie Aubrac Summary

This study focuses on Lucie Aubrac, a French resister, from 1940 to 1944. Lucie described herself as a pacifist in her book Outwitting the Gestapo. Following the invasion of France in 1940, Aubrac shifted from being a pacifist to a militant resister. The political, economic, and social situations contributed to her motivations for joining the resistance. After the defeat of France, Petain and other traditionalists gained power. They moved the government to Vichy in the unoccupied zone. On June 16, 1940, the armistice divided France into two zones: an unoccupied zone under Vichy’s government and an occupied zone under the Germans. The new

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23 Lindsay, Reconsidering Interpretation of Heritage Sites: America in the Eighteenth Century, 40-50.
24 Rose, Interpreting Difficult History at Museums and Historic Sites.
26 Thomas Rodney Christofferson and Michael Scott Christofferson, France During World War II: From Defeat to Liberation (Fordham Univ Press, 2006), 35-38.
government announced the National Revolution, which changed France to an authoritarian regime.\textsuperscript{27} Lucie and her Jewish husband, Raymond, were among the first to establish a resistance network called the \textit{Libération-Sud}.\textsuperscript{28} She engaged in various types of resistance, including liberating her husband twice from the hands of Nazis. The first was in 1940 before they moved to Lyon to hide when the Nazis arrested Raymond during his service in the army. After moving to Lyon, they changed their name to Aubrac to hide Raymond’s Jewish family name—Samuel. In 1941, she was a mother of a little boy and a teacher in Lyon. She used history to expose students to state control. The resistance started politically and transformed into an active resistance in 1942.\textsuperscript{29} In February 1942, Vichy introduced a labor service, the \textit{service du travail obligatoire}, which required young Frenchmen to serve the Nazis. Many young people decided to escape, hide, and resist. They called themselves the \textit{Maquis}.\textsuperscript{30} Foreigners, Jewish individuals, North African immigrants, and communists joined the \textit{Liberation}. In 1942, General de Gaulle wanted to unify the resistance groups by sending Jean Moulin to Lyon to organize the resistance. The Nazis arrested a large number of the resisters, including Raymond, in March 1943. Lucie participated in freeing her husband by using a fake identity and threatening the prosecutor.

In June 1943, Raymond was arrested again and moved to Montluc prison in Lyon with Jean Moulin and other resisters’ leaders.\textsuperscript{31} Lucie was pregnant when the Nazis tortured her husband in Montluc prison. After they knew about Jean Moulin’s death, Lucie and the resisters were

\textsuperscript{28} Aubrac, \textit{Outwitting the Gestapo}, 1994.
\textsuperscript{31} Aubrac, "Outwitting the Gestapo," 29-85.
determined to get Raymond and the others out. She went to the office of the head of the Gestapo, Klaus Barbie, who they knew had been responsible for the torture and murder of resisters. She used a fake identity and asked for her husband, who she told Barbie was her fiancé. She acted as an innocent wealthy lady who was shocked that the Nazis arrested her fiancé. She begged Barbie to get married to Raymond because she was pregnant and wanted to avoid the shame of being an unwed mother. At that time, French law allowed people who would be executed to get married. However, Barbie refused. In December, she repeated her request after Barbie left to go to Paris with a Wehrmacht colonel who agreed. In October, after the wedding, a group of resisters, including Lucie, attacked the truck carrying Raymond and other resistance members, freeing them all. After months of waiting, in February 1944, the Aubracs flew to London with their child, and Lucie gave birth to her baby Catherine.32

5. Research Questions

This study has two questions. The first question is: How can a project-based classroom TELE help teach difficult history via a historical empathy approach?

I included four sub-questions to answer the above question: 1) What are the challenges of teaching difficult history in the classroom? 2) What technology works most effectively for developing TELE? 3) What design elements work for teaching Lucie Aubrac? 4) What is the best pedagogical framework to apply to use in the classroom? The first question aims to provide the basis for building the TELE. The data collected from the sub-questions will be used for the first design of the TELE.

32 Aubrac, Outwitting the Gestapo, 1994, 18.
The second question is: In what ways do educators think the final prototype will help in teaching difficult history content, such as the Lucie Aubrac scenario, thematically? The educators will set the educational goals for teaching the historical narrative of Lucie Aubrac in the first phase of this study. Educators will fill out a survey template in which they will provide objective goals. This question investigates how the final TELE achieves the educators’ educational goals, including changes to Lucie Aubrac's narrative.

6. Pedagogical Foundation: Theoretical Framework and Instructional Design

This section will provide the scholarly literature on historical empathy, the theory used in this study. The historical empathy will include a sub-section that describes the critical sociocultural approach and how it differs from the disciplinary approach used for teaching history. Then I will explore the literary work on flipped classrooms which is the instructional design used in this study.

6.a. Historical Empathy for Teaching Difficult History

Understanding difficult history requires a knowledge of its social and psychological components. Socially, it requires a deep understanding of the historical event, including the players and power mechanisms such as the state forces and their relationship with the resistance.\(^ {33}\) Psychologically, it requires an understanding of the emotions related to the historical event. These histories evoke a wide range of feelings, including denial, shame, pain, and social injustice. Teachers should understand the risk and students’ resistance caused by difficult histories.\(^ {34}\)


\(^{34}\) Rose, *Interpreting Difficult History at Museums and Historic Sites*, 1-69.
to research, have argued that teachers should learn to acknowledge the feelings aroused from difficult histories rather than ignoring them or repressing them. They encouraged teachers to adopt a pedagogy that motivates students to explore their pain with a deep understanding of the history to avoid the production of the status quo.  

Emotions play a significant role in adult education. The dominant approach for teaching history focuses on the reinforcement of rational doctrines building on factual information. However, emotions play a role in the learning process, particularly with difficult histories. John M. Dirkx argues for alternative methods in which meaningful learning should be based on an adult’s “emotional, imaginative connection with the self and with the broader social world.”

When applied to history education, students should be able to investigate themselves while learning. They should have the possibility to imagine the experiences of people of the past in their time and relate that to their own social world. Emotions are powerful and enable students to make meaning of their physical and social surroundings while investigating the self. They also play a role in students’ engagement or resistance to the educational process.

The goal of a historian is to interpret the past according to the facts and evidence available. However, historians are faced with the problem that history is not complete and needs investigation to accurately build a portrayal of the past. Historical thinking helps historians to connect causes with consequences. For example, in Lucie Aubrac’s case study, questions like: What was the socio-economic and political pressure on Vichy’s government? What are the

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values and beliefs Lucie Aubrac had? What did Lucie Aubrac do to help her husband? aim to build a historical context through understanding what happened and the consequences.

Nevertheless, there is a big part missing illustrated in the “how” and “why” questions. These questions investigate the grey area between the action and the consequences. They enable the exploration of the motivations, intentions, and feelings of a historical figure. These questions investigate the reasons behind a political law, an economic status, or a social norm in more depth. They also examine any changes in these factors. The historical empathy approach fills this gap. It enables historians to investigate the historical context and power mechanisms through an in-depth study of the historical figure’s beliefs, motivations, and feelings. This study adopts Endacott and Brooks’ definition of historical empathy:

The process of students’ cognitive and affective engagement with historical figures to better understand and contextualize their lived experiences, decisions, or actions. Historical empathy involves understanding how people from the past thought, felt, made decisions, acted, and faced consequences within a specific historical and social context.

Students should engage in a cognitive and emotional state with historical figures to understand their experiences, beliefs, and decisions. This study draws on Endacott and Brooks’ historical empathy framework which is built on a socio-psychological approach. In the following section, I will explain the critical sociocultural approach.

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6.a.1. Critical Sociocultural Approach

James V. Wertsch introduces the sociocultural approach by drawing on an extensive scholarship connected with “cultural psychology.” He introduced the term “mediated action” as a unit of analysis. Mediated action is the usage of the cultural tools provided in particular sociocultural settings. Humans’ internal processes, such as their beliefs, feelings, or thoughts, are connected and influenced by historical, cultural, and institutional settings. Wertsch explains humans’ internal processes as both rational and attached, i.e., an affective component contributes to understanding the historical narrative. The sociocultural approach examines the influence of the political, social, and cultural contexts and their impact on formulating the historical narratives produced by national, subnational, or transnational communities.

This study adopts Epstein and Peck’s approach for conceptualizing the historical narrative. They introduce a critical sociocultural approach. They analyze how powerful groups influence history and society by creating what they call an “official” collective memory, which reflects the ideologies of a particular group while neglecting others. Epstein and Peck view historical narratives through a web of power relations that influenced the historical figures’ actions. The critical sociocultural approach is concerned with “how” and “why” the historical narratives are constructed. The approach allows critical thinking about power relations and their impact on the production and circulation of historical narratives. It examines the political and sociocultural settings, their influence on marginalized groups, and how other communities resist dominant ideologies or power.

41 Epstein and Peck, Teaching and Learning Difficult Histories in International Contexts, 1–85.
42 Epstein and Peck, Teaching and Learning Difficult Histories in International Contexts, 1–19.
The critical sociocultural approach examines the teaching of the historical narrative within a classroom. Faculty and students might feel guilty or ashamed while teaching or learning difficult topics. That is because these emotions impact their present moral esteem and may have political and social implications.\footnote{Tsafir Goldberg, “‘It’s in My Veins’: Identity and Disciplinary Practice in Students’ Discussions of a Historical Issue,” \textit{Theory & Research in Social Education} 41, no. 1 (January 1, 2013): 33–64, \url{https://doi.org/10.1080/00933104.2012.757265}.} Difficult histories evoke different emotions depending on the cultural identity and affiliation of both the faculty and the students. Acknowledging these emotions is paramount for a meaningful learning experience. Otherwise, educators will censor these topics, or students will become resistant to the learning experience.\footnote{Epstein and Peck, \textit{Teaching and Learning Difficult Histories in International Contexts}, 151–61.} With this learning experience, students can investigate their own Self while learning and analyzing other people’s lives.\footnote{Carla L. Peck, “‘It’s Not like [I’m] Chinese and Canadian. I Am in between’: Ethnicity and Students’ Conceptions of Historical Significance,” \textit{Theory & Research in Social Education} 38, no. 4 (September 2010): 574–617, \url{https://doi.org/10.1080/00933104.2010.10473440}.} Comparing lessons of difficult histories with contemporary issues might help students analyze their own beliefs, ideologies, and affiliations.\footnote{Epstein and Peck, \textit{Teaching and Learning Difficult Histories in International Contexts}, 19–150.}

Critical sociocultural approach draws on the sociocultural approach, which is different than the disciplinary approach. Disciplinary approaches focus on re-conceptualizing the past based on evidence and rational thought. They are against presentism and the incorporation of contemporary modes of thought in understanding and evaluating the historical figure’s beliefs, motivations, and actions.\footnote{Samuel S. Wineburg, \textit{Historical Thinking and Other Unnatural Acts: Charting the Future of Teaching the Past} (Temple University Press, 2001).} To the best of their abilities, the educators teach students to be objective while analyzing and synthesizing evidence. Critiques for this approach stated that historical narratives are “not made in isolation but in conversation with others that occur in the
contexts of community, broader politics and social dynamics.”

Forcing students to suppress their emotions can be harmful because difficult history is tied to their beliefs, ideologies, religions, or culture. Moreover, there is no absolute objectivity. Even if most professional historians become aware of their mental model, they will still reflect their cultural framework.

Sociocultural learning focuses on the dynamics of the political, economic, and social factors in producing the historical narrative. Learning through the sociocultural approach is twofold. On the one hand, students are educated about power structures and their impact on the production of the historical narrative. On the other, the students examine their emotions related to their experiences tied to their cultural backgrounds. Teaching through the sociocultural approach acknowledges students' feelings and allows them to investigate history through a context of an “internal culturally mediated framework.” In this case, the sociocultural approach enriches history because two students might have the same evidence but come to different analyses according to their cultural framework.

6. b. Flipped Classroom for Teaching Difficult History

Flipped classrooms (FC) or partially flipped classrooms can help lower the anxiety caused by difficult topics because students will not directly connect with the educator when receiving the information for the first time. They will read and interact with the materials on their own, allowing more time for self-learning before the class. Moreover, it will allow more time

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50 Epstein and Peck, Teaching and Learning Difficult Histories in International Contexts, 1-85.
51 Wertsch and Wertsch, Voices of Collective Remembering, 26.
inside the classroom for activities and discussion about the topic. Students can access the materials before class when provided with readings before the class, watching videos about the lecture, or both.52

Recently, flipped classrooms are becoming more adopted and encouraged because they increase students’ engagement and technological skills. Both progressivism and re-constructivism fostered a student-centered approach. Personalized learning experiences enable students to engage with real-life problems and challenges.

A flipped classroom is defined for the purpose of this study as

An educational technique that consists of two parts: (1) active learning activity inside the classroom, most of the times in groups focusing on critical knowledge and (2) well-defined self-regulated learning outside the classroom assisted by technology and focusing on fundamental knowledge.53

Bonwell and Eison define active learning as any activity that can engage students in a meaningful learning process, i.e., allowing them to think about what they are doing.54 It is simply learning by doing history. The debates about how students should learn history started early in

1897 by Burke Hinsdale, who challenged lecturing students stating that students get too little and are left with vague ideas.\textsuperscript{55}

Combining FC with project-based learning can help students to learn through social interaction.\textsuperscript{56} Project-based learning incorporates many features of both cognitive constructivism and engagement theories, such as active learning, collaboration, and authentic focus.\textsuperscript{57} Collaboration between peers in a project will allow students to exchange ideas and deeply understand the lecture. Moreover, it will enable students to investigate complex problems, and improve their learning through the creation process. Chen and Yang’s recent meta-analysis indicates that project-based learning has a more significant effect on the learning process than traditional learning.\textsuperscript{58} Martelli and Watson used project-based learning in history classrooms. They investigated resilience of the past represented in Holocaust survivors verses a cancer survivor from the present community and the self.\textsuperscript{59}

7. Methods

Scholars have used design-based research in educational research for many years. Daniel C. Edelson and Carl Bereiter argue that design-based research is crucial for educational research. That is because design-based research provides suggestions for improving educational best

\textsuperscript{55} Burke Aaron Hinsdale, \textit{How to Study and Teach History: With Particular Reference to the History of the United States} (D. Appleton, 1894), 1–67.


\textsuperscript{59} Cynthia Dawn Martelli and Patricia Watson, “Project-Based Learning: Investigating Resilience as the Connection between History, Community, and Self,” \textit{Voices from the Middle; Urbana} 23, no. 3 (March 2016): 10–16.
practices and enables the invention and discovery of new practical solutions for challenging academic situations.\textsuperscript{60}

I conducted this study collaborating with eight voluntary French historians from different universities across the United States. Both qualitative and quantitative data were collected using focus groups and surveys. The flexibility of DBR allowed mixing various methods together. I divided this study into two phases of online focus groups conducted via Zoom meetings: phase one includes a consultation study (two hours and twenty-five minutes), and phase two includes three design cycles (forty-five minutes for each cycle.)

Phase 1 Consultation study: Academic historians attended focus groups. The commitment to the consultation study was a one-day workshop of two hours and twenty-five minutes with the academic historians. The first part of the workshop with the educators focused on the following question: what makes difficult history hard to teach? The second part focused on creating a curriculum for Lucie Aubrac and answered the question: what design elements work for teaching Lucie Aubrac? I emailed the educators a summary of Lucie Aubrac’s historical narrative. The third part was for introducing different technologies and determining which technology to use for the TELE. This session attempted to answer the sub-question: what technology works most effectively for developing TELE?

Phase 2 Design cycles: The time commitment to the three design iterative cycles was forty-five minutes conducted in the following manner: A design cycle focus group meeting held with the educators for building the first draft of the technology. The educators suggested ideas for

teaching Lucie Aubrac. Subsequently, I connected these ideas with research, and then I translated them into a first draft of the TELE. After Design Cycle One, there was a need to include a survey in the next two cycles. The second and third iterative cycles worked the same way, building on improvements based on faculty feedback.

8. Ethical Approvals

The IRB determined that the proposed activity is not research involving human subjects as defined by DHHS and FDA regulations. IRB review and approval by this organization is not required.

9. Significance of The Study

This study contributes to existing literature in design, pedagogy, and difficult history. There are three outputs from this study. The outputs of the design-based research are in the form of knowledge and products. There are three expected outputs from this research: Scientific, practical, and societal outputs. The scientific outcomes are evidence-based heuristics that include design principles, while the practical outputs include the final prototype and the modified historical narrative of Lucie Aubrac. The results from this study indicated the potential of using the final prototype in the classroom. Societal outputs include the rich knowledge gained from the educators and through the design process. These outcomes are insightful for any educator engaged in teaching difficult histories, whether from history or other fields that use these histories in the classroom, such as politics and communication. The design recommendations are inspiring for designers and developers who want to improve this prototype. The final content for
Lucie Aubrac, combined with the historical empathy framework developments, are valuable contributions to pedagogy.

10. Summary

This chapter explains educators' challenges when teaching difficult history, showing the need to design a TELE that educators can use in the classroom. The case study used is Lucie Aubrac from 1940 to 1944, and the method used is design-based research. This study had two main questions. The first question was: how can a project-based classroom TELE help teach difficult history via a historical empathy approach? and In what ways do educators think the final prototype will help in teaching difficult history content, such as the Lucie Aubrac scenario, thematically? This study adopts the historical empathy approach for teaching about Lucie Aubrac.
CHAPTER 2: LITERATURE REVIEW AND THEORETICAL FRAMEWORK

Educators incorporate technology to make history come to life. This study designs a TELE with the collaboration of academic historians about the French resistance in World War II using the case study Lucie Aubrac.

This type of research is interdisciplinary and combines different fields such as history, pedagogy, and technology design. The development of design-based TELE considers the interaction between four factors: curriculum design, media, and technology, learning and instruction\textsuperscript{61}, and design principles.\textsuperscript{62} I summarize the above factors under three main categories that I will cover in-depth. I will explore the literature and theories related to each category: education for difficult history and the emergence of historical empathy, pedagogy and learning instruction framework for difficult history, and previous technology used for difficult history and interface design.

1. Difficult History Education

History is taught as a story of national pride. David Thelen reminds us that since the nineteenth century, history has been closely tied to the construction of national myths. This means that national education has “served to provide stories that [linked] individuals to the nation — to make the nation seem a logical or desirable or inevitable fulfillment of experiences


for diverse individuals.”

Topics such as World War II are often taught in schools to raise patriotism and mostly simplified to the battle places. Teaching World War II, genocides, and resistance is difficult because it challenges patriotic views and pushes for analytical and critical thinking about the nation’s authority. Difficult history is an emerging field started with museums exhibitions and school educators who expanded the learning of history to include controversial topics from multiple perspectives such as the Holocaust, World War II, Slavery, and so forth. They challenged the dominant perception that teaching history is a part of building citizens’ loyalty to the state.

Educators such as Deborah P. Britzman, Elizabeth A. Cole, Carla van Boxtel, Maria Grever, and Stephan Klein used different terms to define difficult history according to their approaches such as “difficult knowledge,” “violent past,” “sensitive pasts,” and “traumatic pasts.” Britzman used the term difficult knowledge and based the teaching of difficult history on a psychological approach that tackles the impact of traumas on the self and the world.

According to Britzman, Difficult knowledge is the opposite of Lovely Knowledge. The Lovely Knowledge reinforces what you know and make us think about ourselves as a collective group with shared characteristics. Difficult Knowledge is the type of knowledge that forces us to

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64 Thelen, ”Making History and Making the United States,” 1117-1129.
confront ourselves with challenging information about our history or identity and leads to change our perception and initiate relationships with “others” due to this new Knowledge.

Cole based his definition on trauma as well using the term violent past; however, Cole used a reconciliation approach. Cole argues that difficult pasts have been acknowledged through political leaders, however, difficult histories need to go beyond that to the grassroots institutions such as schools and the public. From her perspective teaching history should engage with larger questions about the nation identity and social organization.  

Boxtel, Grever, and Klein used sensitive pasts to describe history from a learner's perspective to engage the learner through a historical conscious approach. Charis Psaltis, Mario Carretero, and Sabina Cehajic-Clancy combined social psychology theories with a history reconciliation approach to understand emotions of guilt, shame, apologies, and regret in the context of conflict transformation. This study draws on two recent definitions of difficult history: Epstein and Peck and Gross and Terra. Epstein and Peck argue for a critical sociocultural approach for teaching difficult history. This means history needs to be understood through a complex power relationship between the actors within a specific time; moreover, it unpacks the internal process for the historical figures to understand their acts within the historical context. Gross and Terra introduced five criteria for defining difficult history (1) they are central to a nation’s history; (2) they refute widely accepted versions of the past or national values; (3) they connect with current

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70 Cole, Teaching the Violent Past, 123-275.
72 Charis Psaltis, Mario Carretero, and Sabina Čehajić-Clancy, eds., History Education and Conflict Transformation (Cham: Springer International Publishing, 2017), 1-37, https://doi.org/10.1007/978-3-319-54681-0.
73 Epstein and Peck, Teaching and Learning Difficult Histories in International Contexts, 1-85.
questions or issues in the present; (4) they involve violence; (5) they create disequilibria and require a change in assumptions and beliefs. 74

Teaching French resistance in World War II is central to the nation. It requires a deep understanding of the historical context, including the power structure of the society and the motives and beliefs of the resisters. French Resistance refutes a widely accepted perception in American culture that undermines French resistance’s historical actions and maximizes the American role.75 Teaching civil disobedience and resistance is challenging and crucial to society because it addresses critical issues such as authoritarianism. Heggert and Flowers argue that educators should “help young people learn to challenge those systems [of oppression and marginalization] rather than simply teaching them how to act within the systems.”76 The case study of Lucie Aubrac will engage students with topics around human rights, women empowerment, and discrimination, allowing them to question their beliefs and reflect on events happening to vulnerable communities nowadays.

Difficult history also connects to places. According to the historian Anne Lindsay, difficult history has a connection with specific locations because it creates emotions of likeness, empathy, shame, and guilt depending on the knowledge and bonds people build while engaging with these sites.77 For instance, visiting the Montluc prison in France would not be the same for all the people. A German might feel ashamed, while others might empathize with the resisters who were

77 Lindsay, Reconsidering Interpretation of Heritage Sites, 40-50.
killed by the Nazis, such as Jean Moulin. Understanding the history of places is vital as it helps people to see and visualize the past.

2. **Design-Based Research for Teaching Difficult History**

Biggs and Healey describe a successful learning experience by the consistency between the content, pedagogy, methods, and technology used.\(^\text{78}\) Context-based knowledge and Meta-design knowledge are interrelated main parts of design-based research. Context-based knowledge includes content design, instruction and assessment, and pedagogical theories, while Meta-based knowledge includes design principles, procedures, and frameworks that are used to design and develop TELEs.\(^\text{79}\) Both context-based and meta-based knowledge should work in harmony together for a practical learning experience. Technology should be a part of the educational process that connects with the content and pedagogy.\(^\text{80}\) It should not be treated as a separate component or as a solution in itself.

This study adopts Wang and Hannafin’s definition of design-based research. Design-based research has five main characteristics: pragmatic grounded, interactive, iterative, integrative, and contextual.\(^\text{81}\) Design-based research takes into consideration the interaction between four dimensions: curriculum design (the content which will be taught), technology design (images,
videos, and new digital technologies), learning and instruction\textsuperscript{82} (pedagogy including the learning process and theories), and the context (formal or informal learning).\textsuperscript{83} All these four components complete each other for a better learning experience. The figure below demonstrates the structure I follow in this study.

![Diagram](image)

*Figure 1 Design-Based Research – Organized by the Researcher*

Design-based research is grounded in theory. This means before starting design-based research, the researcher selects a theory for learning and investigates it to understand the gaps and ways for improvement in the design process. Design-based research study refines the theory while solving practical problems. Finally, I have divided this chapter into four parts to include a review of the four areas mentioned above and their relation to difficult history.

\textsuperscript{83} Barab and Squire, “Design-Based Research,” 1-14.
3. Part one - The Content: Lucie Aubrac

One of the biggest challenges for design-based researchers is building the historical narrative.\textsuperscript{84} That is because of what historiographers call “central subject problem” which is the boundaries of the case itself is blurred because it can be addressed from multiple perspectives.\textsuperscript{85} My supervisor revised the following narrative, which I then shared with the participants and used as the basis for the third session of the Consultation study in which participants will build lesson plans that sets the boundaries for the case study.

3.a. Legacies of World War I and Interwar France

The French suffered massive causalities during World War I. Around 1.3 million men died and one million soldiers survived with mental and physical disabilities.\textsuperscript{86} The nation mourned the loss of a substantial portion of its adult male population. France became a nation of widows and orphans. France faced many challenges on multiple levels: economic, political, and social. By the mid-1920s, France enjoyed an economic growth due several reasons such as immigration policies, industrial production, foreign trade, technologically advancement, and modernization.\textsuperscript{87} In the 1930s, the Great Depression spurred social and political change, including the reforms of the Popular Front.\textsuperscript{88} With the deterioration of the economic status, the right wing raised the slogan “France for the French” which results in forcing hundreds of immigrants to leave. French

\textsuperscript{84} Barab and Squire, “Design-Based Research,” 1-14
\textsuperscript{87} Commerce Reports. United States: Bureau of Foreign and Domestic Commerce, Department of Commerce, 1926, 791-792; Popkin, A History of Modern France, 231-233.
\textsuperscript{88} Samuel Kalman and Sean Kennedy, The French Right Between the Wars: Political and Intellectual Movements from Conservatism to Fascism (Berghahn Books, 2014), 3-5.
people treated resident immigrants as second citizens because of the anti-immigrant mood created by the right wing, which resulted in prohibiting them from practicing prestigious jobs.  

As Mary Louise Roberts has argued, three images of women dominated the French society during the interwar era: the modern woman, the mother, and the single woman. The single woman resulted from many factors, chief among them demographic shifts due to the war. The ideal single woman fell between the two other archetypes, the independent sexually free modern woman, and a traditional bourgeois mother whose mission was to give life. As historian Miranda Pollard reminds us, traditionalists in French society worried about change. They feared that the “French people were not having babies, were abandoning traditional family values, were flouting authority—whether in the shape of fathers, government, employers, or the Church.” The massive loss of men, the adoption of modernization and taylorization techniques, coupled with political changes brought change to many women’s lives, but also placed the idea of women at the center of social and political anxieties. As a result, some reforms had a concrete, positive effect on women’s lives: women had more opportunities in education, gained access to previously male-dominated jobs, took part in new social services, and campaigned for voting rights.  

3.b. The Coming of The War and The Fall of Third Republic  

By 1937, the Popular Front government failed to control the financial crisis or to stabilize the social unrest, and German rearmament meant the threat of war loomed. The desire to avoid the
war even after the Spanish Civil War led to internal division in the Popular Front and its collapse. In 1938, the failure of appeasement in Munich meant that Britain and France abandoned Czechoslovakia. Then in 1939, the Germans signed the Non-Aggression Pact with the Soviet Union before invading Poland on September 1. After eight months of the “Phony War,” the German Blitzkrieg overpowered the Allies and France fell in just six weeks. Despite widespread of xenophobia and antisemitic tradition in France since at least the Dreyfus Affair, France accepted thousands of refugees between 1933 to 1938 especially from European Jews who fled from the Third Reich, Spain, and Italy.

The French defeat had a devastating impact on the society. During the invasion, “six million civilians, terrorized by German bombing raids, fled as best they could.” The defeat helped Pétain, the hero of the World War I Battle of Verdun, and other traditionalists amass power. They moved the government to Vichy, France, in the unoccupied southern zone. The armistice on June 16, 1940, divided France into two zones: unoccupied zone under Vichy’s government and occupied zone under the Germans. De Gaulle opposed the armistice and went to Britain where he addressed the French people in the first of many BBC broadcasts on June 18, 1940.

To usher in its conservative world view, Vichy declared a National Revolution which according to Miranda Pollard the regime included leaders who are “traditionalist, pro catholic,

94 Christofferson and Christofferson, France During World War II, 1-5; Popkin, A History of Modern France, 254-255.
97 Christofferson and Christofferson, France During World War II, 35-38.
and trying to reverse the modernism on French society.\textsuperscript{99} Robert Paxton, in his pathbreaking argument, described Vichy’s National Revolution by an authoritarian regime that is not imposed by the Third Reich but rather from Vichy.\textsuperscript{100} Vichy enforced new values \textit{work, family, fatherland} to replace the French Third Republican values of \textit{liberty, equality, fraternity}.\textsuperscript{101} Vichy’s regime implemented discriminatory laws targeting Jews and Jewish refugees,\textsuperscript{102} media censorship and wide propaganda for new family values,\textsuperscript{103} as well as control over the educational system.\textsuperscript{104}

3.c. \textbf{Libération-Sud and The Story of Lucie Aubrac}

The Aubracs, Lucie and her husband Raymond, were among the first to establish a resistance network. Lucie Bernard was born to a family of winegrowers in the Macon area of Burgundy in 1912.\textsuperscript{105} Lucie owed her strength, persistence, rebellious, and anti-fascism to her family. During World War I, her father suffered severe shellshock and as he could not remember his own name had been falsely declared dead. Yet, her mother never gave up searching for him and eventually she brought him home.\textsuperscript{106} As a result, she described herself as a pacifist.\textsuperscript{107} Yet, the rise of tension between Vichy’s government and the resistance played a role in shifting Lucie from a pacifist to a militant resister.

\textsuperscript{101} David A. Messenger, \textit{War and Public Memory: Case Studies in Twentieth-Century Europe} (University of Alabama Press, 2020), 121-123.
\textsuperscript{103} Marion Demossier et al., \textit{The Routledge Handbook of French Politics and Culture} (Routledge, 2019), 206-208.
\textsuperscript{105} Aubrac, \textit{Outwitting the Gestapo}, 18-20.
\textsuperscript{106} Reid, Germaine Tillion, Lucie Aubrac, and the Politics of Memories of the French Resistance, 106-127.
\textsuperscript{107} Aubrac, \textit{Outwitting the Gestapo}, 14-16.
As historian Donald Reid pointed out, “Lucie Aubrac incarnated the Third Republic self-representation as a meritocracy rooted in the peasantry.”\(^{108}\) Her fight against fascism started when she earned a place in the Sorbonne from 1931 to 1938. She joined the International Circle group and connected with friends in the PFC- the French Communist Party with whom she distributed the *Avant-Garde* magazine.\(^{109}\) Lucie graduated from the Sorbonne as a history teacher in 1938. During the 1938-1939 year, she fell in love with Raymond Samuel who was an engineer doing his military service and they got married in December 1939. \(^{110}\)

In June 1940, three hundred enemy soldiers attached Raymond and his company and took them as prisoners-of-war. The Germans captured two million French, wounded 200,000, and killed 100,000 French in the few weeks of fighting. They arrested Raymond with other French officers and held them in POW camp in Strasbourg, France which was in the occupied zone. Lucie knew if the Nazi transferred him to Germany, he would be in danger because of being a Jew. She got into action while most of the French people were in shock of the defeat waiting for what will happen. She traveled through France in very hard circumstances with a plan to free her husband. Her plan was to force the German officers to get Raymond out of the camp to a hospital. She contacted Raymond’s brother who she knew he was working in a military hospital in Champagne. He gave her a candy to pass to Raymond. The candy includes a substance that produced symptoms of tropical fever. The plan succeeds and the Germans transferred Raymond to a hospital where she flirted with the guard providing Raymond with workmen’s overall to

\(^{110}\) Aubrac, *Outwitting the Gestapo*, 14-16.
replace his uniform and allowing him to escape. After the escape, the Aubracs needed to hide, so they moved to Lyon in the unoccupied zone. When they settled in, the Aubracs started the Libération-Sud, the first resistance network, following a chance meeting with Jean Cavailles and Emmanuel d’Astier. In 1941, Lucie and Raymond had their child, a boy named Jean-Pierre. She secured a job at the Lycée for girls as a history teacher and Raymond worked as an engineer at the Bron Airport.

The Resistance began in small ways, symbolic as actions like chalking slogans on walls to let people know they could resist too. The situation changed after Operation Barbarossa. When the Nazis invaded the Soviet Union, breaking the Non-Aggression Pact, it gave the green light to French communists to join the resistance. Members of the PCF organized the first armed resistance activities in France. Working in small cells, they organized attacks on German occupation troops, and targeting German officers for assassination. The Libération-Sud and other resistance groups existed across the occupied and free zones. The resistance groups in the occupied zone were responsible for sending intelligence to the Allies or helping POWs to escape. While in the free zone, propaganda against the collaboration was crucial. On December 31, 1941, de Gaulle sent Jean Moulin as his emissary with the mission to organize the Resistance, which remained rather disparate, into one extensive network. Among other places, he traveled to Lyon to work with the Aubracs aiming for two goals: having a political voice for the resistance

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113 Gilda, *Fighters in the Shadows: A New History of the French Resistance*, 51-55, Operation Barbarossa was the code name for the invasion of the Soviet Union by the Nazi Germany.
through establishing a National Council of Resistance, and to form a secret army from the paramilitary groups.\textsuperscript{116}

While the effort to bring local resistance groups together moved slowly, for a range of other reasons, more people joined the fight. As a result, the Libération-Sud expanded in size in 1942.\textsuperscript{117} On September 4, 1942, because of the increase demand for more French labor by the Germans as they continued the war on two fronts, France continued to sap its manufacturing abilities.\textsuperscript{118} In response to these orders, Vichy passed a law service du travail obligatoire, the required Work Service prototype in Germany\textsuperscript{119} which enables the government to have the authority to place any worker to work anywhere for the interest of the nation. As a result, a wide wave of civil disobedience spread across France\textsuperscript{120} and many young people escaped, hid in the hills, and many eventually joined the Maquis—named for the shrubs in the Mediterranean Hills—a series of militant groups mostly from working-class backgrounds.\textsuperscript{121} In November 1942, the Germans extended the occupied zone, in part as punishment and in part because of fears of an Allied Mediterranean landing. As a result, Lyon became under the headquarters of the Gestapo Chief Klaus Barbie.\textsuperscript{122} To help the Nazis, Vichy government founded the Milice in January 1943,\textsuperscript{123} who are French trained police, and used extreme power against the resisters to enforce national

\textsuperscript{116} Aubrac, Outwitting the Gestapo, 29-31.
\textsuperscript{117} Lucie Aubrac, Outwitting the Gestapo, 65-67.
\textsuperscript{119} Richard Vinen, The Unfree French: Life Under the Occupation (Yale University Press, 2006), 247-250.
\textsuperscript{120} Fogg, The Politics of Everyday Life in Vichy France, 19-56.
\textsuperscript{122} C. Lloyd, Collaboration and Resistance in Occupied France: Representing Treason and Sacrifice (Springer, 2003), 19-23; Aubrac, Outwitting the Gestapo, 63-65.
\textsuperscript{123} Aubrac, Outwitting the Gestapo, 8-10. The Milice is a "French equivalent of the SS, was formed from elements of the Veteran's Legion. Those who joined swore to combat democracy, Jewish "leprosy", and Gau list dissent, that is the Resistance."
interest, arrested many resisters using informers, and identifying them as “terrorists”. Many resisters carried fabricated identities to cover themselves up including the Aubracs for example Raymond used François Vallet. The resistance used women as liaison agents, the women used their baby carriages, baskets, or shopping bags to transfer documents and weapons.

Lucie resisted in many ways. She used her class, taught her students about authoritarianism, refused to parade in the stadium with her students giving the Olympic salute because it resembled the Nazi’s, and refused government convocation. Meanwhile, Raymond was an Aubrac, an officer of the secret army of the Libération movement. He trained réfractaires, new resisters who resisted the compulsory labor, and organized the secret army with Jean Moulin. On March 15, 1943, the Milice arrested Raymond when he was heading to a meeting organized for training new resisters as part of its push to grow the Resistance instead of being disparate groups. The French police interrogated and sent him to the police court judge who favored a release on bail, but the prosecutor refused and did not sign it. To free him, Lucie went to meet the prosecutor. She felt he was a coward because of his hatred to the resistance and she wanted to scare him. She went to him and asked for a private meeting, then she claimed she was a representative from General de Gaulle and threatened him. The prosecutor signed the release, and her plan worked.

After the release, the resistance provided a new identity for Raymond to continue his work. He became known as Claude Ermelin a demobilized soldier from Tunisia. In June 1943, the Nazi made series of arrests among the resistance, including the chief leader of the secret army. As a

127 Aubrac, *Outwitting the Gestapo*, 15-120.
result, there was a need for organizing a new leadership for the secret army. While Raymond was attending a high-level secret meeting with Jean Moulin, the Nazi raided the meeting and arrested them. The arrest of Jean Moulin caused a great disturbance among high-levels of the resistance, raising accusation of an inside traitor. At the beginning, no one knew where the Gestapo held the prisoners. Lucie kept searching for her husband until she found out that her husband and other resisters were in Montluc prison.\footnote{Rees, Lucie Aubrac, 130- 140; Aubrac, Outwitting the Gestapo, 106-111.}

Lucie was in a terrible situation. She was a mother of a baby, pregnant with her second child, and a resister who refused to leave her husband to be tortured or killed by the Gestapo. After news spread of the execution of Jean Moulin, Lucie and the resisters took an action to free Raymond and the others. She went to the office of the head of the Gestapo, Klaus Barbie, who they knew had been responsible for the torture and murder of resisters, with a false identity, Miss de Barbentane, resembling a wealthy lady from a prestigious family to play the role of Claude Ermelin fiancé. In her meeting with Barbie, he told her that he has been sentenced to death. She begged Barbie and asked if she could marry the father of her unborn child before his execution, relying on a French law that allowed a woman to marry this way to avoid having an illegitimate child. The goal is to drag the Nazis to get Raymond out of the prison to the Gestapo headquarters and then hijack the caravan of prisoners, Barbie refused.\footnote{Aubrac, Outwitting the Gestapo, 61-119.}

She tried again a few months later, in December 1943. This time Lucie’s ruse worked with colonel Wehrmacht while Barbie was in Paris, and he agreed to allow her to marry the condemned man. After the wedding of Miss de Barbentane and Claude Ermelin, Lucie and the
rest of the resistance cell attacked the truck carrying Raymond and other resisters, freeing them all. After months of waiting, in February 1944, the Aubracs fled to London with their three-year-old son, not long before Lucie gave birth to their daughter Catherine. The landing of the Allies in France put an end to Vichy’s regime in 1944 and started the declaration of the Fourth Republic of France under Charles de Gaulle.

3.d. Lucie After the War

Lucie Aubrac was the first woman in the National Assembly when it returned to Paris. She became a celebrity and her story made as a film. She returned back to teaching and after her retirement she took the responsibility to represent the resistance to new generations. Klaus Barbie remained free until 1987 when the French government accused him of the crimes committed in Lyons, France between 1942-1944. Barbie’s lawyer prepared the so called “Testament of Barbie” in which he questioned the reason for not sending Raymond to Paris like two other prisoners. After Barbie’s death in 1990, the Testament of Barbie circulated creating a buzz around the two famous figures. In the same year, the journalist Gérard Chauvy published his book showing inconsistency in the Aubracs testimony across the years. The book showed that Raymond was arrested on the 13 not 15 of March 1943 according to an old document in Barbie’s office. As a result, the Aubracs asked to defend themselves by asking the help of historians of the era. Many historians refused the accusation that Raymond was an informer. However, they pointed out contradictions in Raymond statements about the day the German arrested him in

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130 Aubrac, Outwitting the Gestapo, 165-170.
131 Martin Thomas, The French Empire at War, 1940-1945 (Manchester University Press, 2007),100-120.
132 Rees, Lucie Aubrac, 130-140.
March. This led Lucie to write her memoir “Outwitting the Gestapo” to exonerate herself and her husband from betraying the resistance.

4. Part Two – Pedagogy: Theoretical Foundation and Instructional Design

Difficult history challenges traditional learning methods. In the following paragraphs, I will start with a background review of the scholarly work about historical empathy. Then I will introduce Endacott and Brooks framework. Following with a section showing the additions I made to Endacott and Brooks framework introducing critical historical empathy which I adopt in this study.

4.a. Historical Empathy for Difficult History Education

Teaching history should be a way for students to learn how to be humans. President Obama, in 2002 speech, on MLK day at the University of Chicago, encouraged educators to incorporate empathy:

> It seems like we’ve got an empathy shortage, an empathy deficit. More serious than the federal budget deficit. We’ve become so cynical that it almost seems naive to believe that we can understand each other across the gulf of race, or class, or region, or religion.

Empathy is different from Sympathy. When practicing sympathy, people do not leave their subjective positions; they engage in the experience from their perspective. For example, sympathizing with a person who feels angry does not necessarily mean you feel angry too. You

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133 Rees, Lucie Aubrac, 122-125.
might feel a completely different feeling. Empathy is about leaving the subjective position to engage in a mental process of understanding and imagining the other’s perspective and feelings.\(^{136}\)

Empathy has many definitions and measurements that sometimes conflict with each other.\(^{137}\) The purpose of this study is not to investigate the countless empathy definitions across multiple perspectives or to identify the similarities and difference among these perspectives. The goal is to focus on the commonly known among all these perspectives: empathy consists of two components: cognitive and emotional empathy.\(^{138}\) This study borrows from three approaches the social-psychology perspective,\(^{139}\) neuroscience approach,\(^{140}\) and digital empathy.\(^{141}\)

The social-psychology perspective on empathy explains cognitive empathy as the ability to analyze the world from a different perspective than one’s own. Emotional empathy is an emotional state that occurs when affected by someone’s emotional feeling and the ability to


\(^{139}\) Noddings and Brooks, *Teaching Controversial Issues*, 1-16.


respond to another person’s situation with the same emotion.\textsuperscript{142} There is a great interest in understanding the psychology of empathy and its relationship to interpersonal behavior, group engagement, and physiological/neurological process. Empathy encourages cooperation and helping.\textsuperscript{143} Empathy encourages individuals to take action and be good citizens. It is crucial for civic action and a democratic society. If we can educate students to understand other perspectives, they will probably make decisions that go beyond their selfish interests to include others' interests as well.\textsuperscript{144}

Historical empathy is based on a socio-psychological understanding of the concept of empathy through the theory of mind. Historical empathy started in Britain when the history classrooms were tenuous. Therefore, they needed a new structure for a curriculum that emphasizes three aspects: historical skills, looking beyond Anglocentric approach in history and helping learners become well-rounded individuals interested in the world.\textsuperscript{145} These new principles were the guidelines for a new history curriculum focused on epistemological knowledge, logical thinking, and a humanistic perspective.\textsuperscript{146}

Historical empathy was not used in the classroom immediately. The reason was because of the malleable definition of empathy. Nevertheless, these critiques did not stop educators from showing more interest in historical empathy. There was an increase in the literature from educators on how to incorporate historical empathy in classrooms. There were multiple reasons

\begin{footnotes}
\item[142] Noddings and Brooks, \textit{Teaching Controversial Issues}, 1-16.
\item[144] Noddings and Brooks, \textit{Teaching Controversial Issues}, 85-179.
\end{footnotes}
for that; first, educators such as Rogers and Nash believed that history should enable students to engage with causation, argumentation of historical narratives, and develop empathy towards the historical figures and events.\(^{147}\) Second, historical empathy increases students’ perspective taking.\(^{148}\) According to Sam Wineburg’s framework named “perspective taking”, he found that perspective taking is crucial for the history learning process.\(^{149}\) Third, scholars such as Doppen, Endacott, Foster, Brooks, Barton, and Levstik have stated that incorporating historical empathy enables students to connect with historical figures. It also increases the ability to understand complex contexts, promote decision-making skills and deepen multiple perspectives understandings. It also enhances students’ moral judgment when comparing and contrasting events within the past.\(^{150}\)


\(^{149}\) Wineburg, “Historical Thinking and Other Unnatural Acts,” 488-499.

Historical empathy literature shows a distinction between the two eras. Educators in the first era rejected emotions as part of historical empathy because it might hinder students from a rational understanding of historical contexts. Educators from this era developed three frameworks for measuring historical empathy. Shemilt developed the first framework. He argued for the use of empathy in classrooms. Ashby and Lee's framework, which was based on Shemilt’s and included five stages. Ashby and Lee saw historical empathy as a way to reconstruct the beliefs and motives of the people of the past. They argued for not using the dictionary definition for “empathy” as it incorporates high emotional attachment and uses “rational understanding” instead. They define the term as the ability
to see and entertain as conditionally appropriate (not necessarily to accept or share) connections between intentions, circumstances, and actions [...] and to see how that perspective would actually have affected actions in particular circumstances.

Their framework included five concepts built on Shemilt’s framework: 1) The Divi-Past (means the divided or partial understanding of the past); 2) Generalized Stereotypes; 3) Everyday Empathy, 4) Restricted Historical Empathy, and 5) Contextual Historical Empathy.

The difference between Shemilt and Ashby and Lee is in the achievement of historical empathy. Shemilt saw that historical empathy is achieved when students realize their misunderstandings and search for alternative sources to reconstruct their knowledge. In contrast, Ashby and Lee saw that historical empathy is achieved when the students develop new knowledge and not before that.

Portal considered historical empathy a bridge between historical reasoning and historical skills that enable students to understand human behavior. After the increased attention to historical empathy, researchers in the US and Canada started to research the impact of historical empathy on students. Seixas included empathy in the elements needed for historical thinking, “understand historical figures as agents who faced decisions, conflicts, constraints, and hardships under the circumstances and with ways of thinking quite different from our own.” His research is fundamental in empathy literature as he found out that students empathize with historical figures because of similar experiences. He used empathy in teaching historical conflicts such as Holocaust, World War II, and the atom bomb in 1945.

The third framework was by Foster and Yeager, who builds on Portal’s views reinforcing the historical empathy method and expressing the importance of having a cognitive balance between imagination, identification or empathy, and methodological investigation to be able to build accurate historical judgment that is built on the people of the past circumstances not on students’ presuppositions or biases.

Foster’s framework differentiates between empathy and sympathy. Foster’s framework consists of six qualities in which he avoided initiating any emotional response among students:

First, historical empathy is a process that leads to an understanding and an explanation of why people in the past acted as they did. Second, it involves an appreciation of historical context and chronology in the evaluation of past events. […] Third, historical empathy is reliant upon a thorough analysis and evaluation of historical evidence. Historical evidence is

the engine of history. […] Fourth, historical empathy involves an appreciation of the consequences of actions perpetrated in the past. […] Fifth, historical empathy demands an intuitive sense of a bygone era and an implicit recognition that the past is different from the present. […] Finally, historical empathy requires a respect for, an appreciation of, and a sensitivity toward, the complexity of human action and achievement.\textsuperscript{158}

He rejected the emotional feelings and focused on the cognitive part of historical empathy. His framework is fundamental because he introduced the concept “qualities.” This means historical empathy is non-hierarchical and does not follow a step-wise process. It is qualities that are left to the teacher to develop within the classroom.

After 2001, and with Wineburg’s book “\textit{Historical Thinking and Other Unnatural Acts},”\textsuperscript{159} historical empathy took a new path. The book analyzed how history is taught and introduced three essential concepts: perspective taking, sourcing, and collaboration. Wineburg stated that students should consider the differences between the ways people of the past thought and acted in their time and how we think and act now because of the differences in the historical context.\textsuperscript{160}

The introduction of perspective taking shifted the educators towards the examination of the affective part of historical empathy. From that time, historical empathy is used to enrich students with a deep understanding of history through multiple perspectives. Perspective taking is still used today in learning history at almost all levels of the educational system.

Barton and Levstik, Endacott, and Brooks are the most recent scholars who embraced historical empathy. All of them believe that empathy is a dual-process that includes an emotional element. Barton and Levstik introduced a framework in 2004 that is based on the sociocultural


\textsuperscript{159} Wineburg, \textit{Historical Thinking and Other Unnatural Acts}, 488-499.

\textsuperscript{160} Wineburg.
approach for “doing history,” stating that history connects with personal experiences. Their framework is one of the most cited frameworks. They combined Shemilt’s “stages” cognitive framework with Foster’s non-hierarchical framework “qualities” and introduced cognitive and emotional sides for historical empathy. The mental process of historical empathy is called “perspective recognition,” and the emotional part is called “Care.” They followed foster’s argument that historical empathy is non-hierarchal and should not be seen as linear. Historical empathy, in their perspective, is an element that educators should know and raise in the classroom to encourage students to be better historians and active individuals in society. They argued that learning history required reasoned judgment and engagement about human matters and that historical empathy without care is like an “oxymoron.”

The perspective recognition in Barton and Levstik framework contains five elements:

1-Self of otherness: educators should develop the understanding of that people’s values, actions, and viewpoints in the past are separate from the students’ values, actions, or perspectives. This means enhancing students’ skills to respect a diversity of views. Educators should protect students from falling in sympathy and over-identification with the historical figure.

2-Shared Normalcy: Educators should encourage students to understand that historical figures' actions are not foolish but a result of complex situations and hard decisions, and students might have gone through similar hard choices in their past experiences.

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161 Barton and Levstik, Teaching History for the Common Good, 50-228.
3-Historical Contextualization: Students should learn to explain the beliefs and actions of the historical figures by their time context. They should also know the complex event that led the historical figures to act in a certain way.

4-Multiplicity of historical perspectives: educators should enable students to learn about people of the past from different perspectives.

5-Contextualization to the Present: Students realize that their beliefs, culture, and misconceptions influence their interpretations of the past. Students also should understand that historical figures’ actions and values are related to their historical context. These actions are reflected somehow in our present today. Educators should promote self-awareness among students by educating students that the beliefs they take for granted are a result of a line of historical changes and development and that the present needs to be evaluated as they evaluate the historical figures context.

However, Barton and Levstik considered their framework as “culture tools” that contributes to civic life but not a scholarship procedure. They did not see learning history as part of democratic participation “we do not believe history’s contribution to participatory democracy depends on teaching students how historians as a professional community go about their investigations.”162

On the contrary, Endacott and Brooks see historical empathy as a procedure method to do history, understand it from different perspectives, practice emotional control, and become more engaged in the present depending on the knowledge learners gain. They assure that practicing these skills will enable students to practice perspective taking and be more active citizens in

162 Barton and Levstik, Teaching History for the Common Good, 187.
society. Endacott and Brooks introduced a dual-domain conceptualization of historical empathy. Their framework combines the cognitive and affective dimensions for learning history, in Barton and Levstik's framework, with a structured dimension that promotes civic actions and reflection on the present. The framework draws from a sociocultural and psychological approach. Their definition of historical empathy:

The process of students’ cognitive and affective engagement with historical figures to better understand and contextualize their lived experiences, decisions, or actions. Historical empathy involves understanding how people from the past thought, felt, made decisions, acted, and faced consequences within a specific historical and social context.

Students should engage in a cognitive and emotional state with the historical figures to understand their experiences, beliefs, and decisions. Their framework requires the conceptualization of three interrelated dimensions:

![Figure 2 Visual Conceptualization of Historical Empathy](image)

• Historical Contextualization—a temporal sense of difference that includes deep understanding of the social, political, and cultural norms of the time period under investigation as well as knowledge of the events leading up to the historical situation and other relevant events that are happening concurrently.

• Perspective Taking—understanding of another’s prior lived experience, principles, positions, attitudes, and beliefs to understand how that person might have thought about the situation in question.

• Affective Connection—consideration for how historical figures’ lived experiences, situations, or actions may have been influenced by their affective response based on a connection made to one’s own similar yet different life experiences. 164

4.a.1. Critical Historical Empathy Framework

Drawing on Endacott and Brooks framework, I developed a new framework. The new framework is designed to enhance the application of this framework when designing digital tools and to analyze history critically. The new framework shows my efforts to improve Endacott and Brooks framework historically and digitally. Below I will describe the new framework and its significance for teaching difficult history using historical empathy. Then I will describe its application in the classroom.

The first improvement concerns the historical contextualization section. Endacott and Brooks's historical contextualization goal is to engage students with the political, social, and cultural norms making connections between the causes and the consequences of the event. There is a missing part of “how” the historical context influenced the historical figure’s action. Therefore, I used Epstein and Peck’s critical sociocultural approach to develop the historical contextualization. It will add depth to the historical context. Because it allows the investigation of power structures, students can conceptualize the historical context and relate to it through their

cultural experiences. Epstein and Peck's critical sociocultural approach will explain the historical figures' actions and how the surrounding circumstances impacted their beliefs, motives, and ideologies. It will also answer questions like: how the socio-political created an atmosphere that limited the historical figure agency? How did the political, economic, and social factors play a role in enforcing specific communicative methods? How did the political, economic, and social norms create an atmosphere that marginalized, humiliated, or terrorized people?

Understanding the historical context enhances the learning of history because it opens a discussion about the historical agency. According to Barton, historical agency is defined as “the ability to act on decisions in order to bring about desired goals (whether those involve changing aspects of society or conserving them)”\(^\text{165}\) This means students need to explore the historical context deeply to understand the circumstances surrounded the historical figures and influenced their decisions. Students might feel more engaged with Lucie’s story because it ends happily, and she used her privileges to save her husband. But how would students understand that this was not the case for many others? How would they comprehend the agency of a victim? Understanding the historical context, including the political, economic, and social aspects, enhance the students' ability to conceptualize how these aspects are manifested across different class, race, and gender. Sexias described the importance of understanding the historical figure’s interaction with the social and cultural circumstances. These interactions increase students’ understanding of historical agency. They will allow students to conceptualize the wide range of choices and compare and contrast them with their own daily lives.\(^\text{166}\)

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\(^\text{166}\) Seixas, “Conceptualizing the Growth of Historical Understanding,” 303.
Also, being critical improves the historical empathy approach because it allows students to empathize with the historical figures in one situation and not empathize in another. This is a healthy balanced historical empathy as it does not blind the students from other historical conditions because they have an emotional attachment with the historical figure. For example, students might empathize with Lucie Aubrac when the Nazis arrested her husband. She felt threatened to lose him in 1943. At the same time, students might have different feelings about her participation in poisoning another resister because there is not enough evidence to support her claim that this resister was a traitor. In this way, students use reason to empathize with specific actions and situations and not with others.

Second, I follow Anne-Marie Fortier, Sara Ahmed, Michael Di Gregorio, and Jessica L. Merolli on adding a section to the historical empathy framework. I called it “Institutional affect” to distinguish this section from the affective connection dimension in Endacott and Brooks's framework. The Institutional affect and the affective connection are different in their purposes. In the Institutional affect, I put attention to the role of affect in the production of regimes of inclusion and exclusion and focus on the practice of emotions by institutions (state) or organizations (resistance). I used Institutional affect to define the pack of affect, emotions, and passions without distinguishing between them. Same as the above scholars but with a new name i.e., how the pack of affect, emotions, passions are “moved and is moved by the political.”

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means that the information provided for the students should unpack how these political, economic, sociocultural norms were packaged to the public. The affective connection in Endacott and Brooks's framework is different. It allows students to build connections with the historical figure's feelings according to similar experiences. Educators use different strategies to build these connections with historical figures, such as questioning the self and exploring the past and present relationship. Therefore, I needed a new name.

Institutional affect is important for understanding the actions of the people of the past. This is not new. Wertsch mentioned the importance of understanding the action and mediated action to the historical context.\textsuperscript{171} The difference here is that Wertsch focused mostly on the interactions between cultural tools and human internal processes, showing the influence of these tools in the production of the action. This aligns with Ahmed statement about the circulation of narratives and how they play a role in creating collective bodies with or against “others.”\textsuperscript{172} She talks about “atmospheric walls” created intentionally and organized systematically through the state power to exclude or dehumanize certain groups in the society and its impact on them. These narratives are packed with emotions that influence the public. \textsuperscript{173}

For instance, it is crucial to understand how Vichy’s propaganda packed the National Revolution values to the French in Lucie's case and created an atmosphere against the resistors. It is also crucial for students to know how Vichy forced the National Revolution's values in media, education, and other state departments. How did the National Revolution values create an atmosphere against single women blaming them for the defeat? Thinking about the broader

\textsuperscript{171} Wertsch, \textit{Voices of the Mind}, 1-182.
picture from the lens of historical figure enable students to ask questions about “how” and “why” the action took place and encourage them to think about abstract concepts such as collaboration and resistance.

That said, students should be able to reconceptualize the atmosphere created when the state narrative identifies the resisters as “others” and how this impacted Lucie Aubrac and other resisters emotionally and how it influenced their actions. On the other hand, they also need to learn how the resistance used their propaganda to persuade the public to join them. The goal here is to let the students think about the impact of the Institutional affect on the beliefs, motives, and emotions of the historical figure and other communities. That is crucial because it helps students understand that power is not only seen from top-bottom or bottom-top, but it can also be top-top-bottom in which both the Vichy’s state and de Gaulle try to influence the public. The Institutional affect will help students think deeply about other communities’ actions and their reactions, which might be similar or different from Lucie Aubrac. Students should also understand that even if the resistance was small, they still used their methods to influence the public and create a counter affect. For instance, the resistance inside France used newspapers, wrote on the walls, and outside France de Gaulle used the BBC to deliver speeches to his allies.

The third improvement concerns the perspective taking. Educators who practice perspective taking in the classroom usually want students to read the text thoroughly, think about the motives

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175 Gilea, Fighters in the Shadows, 100-400.
176 Jackson, France, 17-25.
and feelings of the stakeholders, suggest solutions based on evidence, and think about the degree to which the historical context considered other variety of point of views. Students should consider the different ways the people of the past think and act according to their historical context. Perspective taking is usually associated with some characteristics such as more accuracy when judging others and reasonableness. It is beneficial for social interaction because it leads to reasonable decisions and evokes empathy. To evoke empathy among students, educators provide them with sources written by the other side of the story. However, this analysis is simplistic because it does not consider the different roles of humans. For instance, teaching Lucie Aubrac as a resister requires understanding various themes that played a role in her life, such as gender, citizenship, education, religion, ideology, and resistance. All of these themes interact with each other when making a decision. They show the complexity of understanding people of the past. Thematic learning help educators to explain the interaction between these themes. It also forges a connection between the past and the present and allows students to understand a situation across time, increasing their understanding of the historical figure and perspective taking. Rose has identified many benefits from learning difficult history thematically, such as advocacy, citizenship, commemoration, creating identity, honor, analyzing

178 Wineburg, Historical Thinking and Other Unnatural Acts, 488-499.
180 Wineburg, Historical Thinking and Other Unnatural Acts, 488-499; Foster, “Using Historical Empathy to Excite Students about the Study of History: Can You Empathize with Neville Chamberlain?” 18-24; Barton and Levstik, Teaching History for the Common Good, 185-267; Endacott and Brooks, An Updated Theoretical and Practical Model for Promoting Historical Empathy, 1-85.
181 Metro, Teaching World History Thematically, 2-25.
critical action, examples for inspiration, social justice, and warning from future violence. I will use these themes as the basis for project-based learning, which students can investigate.

The fourth improvement concerns affective connection dimension. Endacott and Brooks’s affective connection is to evoke emotional connections with the historical figure through students’ related experiences. Endacott and Brooks used idea formulation, decision making and acting as methods for evoking affections. Adding to that, the usage of first and third-person writing helps create balance while learning. It also lowers overidentification with the historical figure, a dangerous state in which students feel the same pain and terror as the historical figure. Endacott and Brooks’s historical empathy has the purpose of encouraging civic action. However, they do not explain a method for how this could happen. To overcome this problem, I used transformative learning as a method to guide student thinking. The reason is that difficult history creates difficult moments which is the primary environment in which transformative learning occurs. Moreover, to encourage civic actions, students need to adopt new habits. This process starts with students questioning their own beliefs, prior knowledge, and understandings of the world.

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182 Rose, Interpreting Difficult History at Museums and Historic Sites, 1-69.
Learning is about connecting ideas and social interactions this is based on cognitive and social constructivism theory. However, constructivism's central concept is that humans build on their previous knowledge. In difficult history, prior knowledge causes a conflict with new knowledge. Therefore, the usage of social interaction should be limited when new knowledge is introduced to help in emphasizing new knowledge. In the phase before, Learning is constructed through transformation theory which requires self-reflection, observations, and dialogue.

Jack Mezirow introduced transformative learning. He defines it as

The process by which we transform our taken-for-granted frames of reference (meaning schemes, habits of mind, mindsets) to make them more inclusive, discriminating, open emotionally capable of change, and reflective so that they may generate beliefs and opinions that will prove more true or justified to guide action.

It occurs when adults learn to reason their beliefs, values, and feelings and build their own judgment instead of following the other's judgment. He introduced a ten-step wise for transformative cognitive learning, which are: (1) a disorienting dilemma, (2) self-examination, (3) a critical assessment of assumptions, (4) recognition of a connection between one’s discontent and the process transformation, (5) exploration of options for new roles, relationships, and action, (6) planning a course of action, (7) acquiring knowledge and skills for implementing one’s plan, (8) provisional trying of new roles, (9) building competence and self-confidence in

new roles and relationships, and (10) a reintegration into one’s life based on conditions dictated by one’s new perspective.\textsuperscript{190}

These ten steps fall under four categories: experience, reflective discourse, critical reflection, and action. The experiences refer to the knowledge and the attitudes the students have. Reflective discourse refers to a process when people start questioning their prior knowledge and start thinking about alternatives. Critical reflection happens when people start assessing their prior knowledge and assumptions. Finally, people move to action state that is when they adopt new perspective. In this state, people will start trying new roles according to the new knowledge they learned.\textsuperscript{191}

Mezirow describes learning under challenging moments of life as a cognitive and rational process in which humans question their taken-for-granted schemes, habits of mind, and mindsets to be more inclusive, less discriminating, and open to making justified actions.\textsuperscript{192} On the other side, other scholars, including Dirkx argue that transformative learning is a cognitive process that happens when people are conscious and aware of their unconscious.

It is the ego that comes to represent or mirror conscious content of the psyche. For us to become conscious or aware of unconscious content in our lives, it must be represented in some manner in the ego. Insights or epiphanies are examples of the ego making conscious connections with psychic content that was previously unconscious. Such experiences are usually associated with a surge of psychic energy or emotion, such as surprise, enthusiasm, excitement, or anger.\textsuperscript{193}

\textsuperscript{190} Mezirow and Taylor, \textit{Transformative Learning in Practice}, 50-300.
\textsuperscript{191} Mezirow, \textit{Transformative Learning Theory}. 134.
\textsuperscript{192} Mezirow, \textit{Transformative Learning Theory}, 1-15.
Dirkx’s perspective of transformative learning describes learning about the self as a holistic experience of both rational and emotional processes because it includes the unconscious emotional part. This means that transformative learning is more than a cognitive process. It includes the person's inner world, which refers to the interaction between the learning texts and our inner selves. It considers the interaction between the social, cultural, and embodied and the Self in what he called “deep” learning. Emotions can trigger transformative learning. A person who is driven to a text will likely be more motivated to explore more about this topic and learn from it. Therefore, increasing students' engagement with the topic using digital tools is essential for the transformation process. In Dirkx’s perspective, dealing with these emotions should be through imagining their meaning in life. Encouraging students to investigate their own inner world will benefit the learning experience because they will be more aware of their beliefs, assumptions, and understandings of the world. He gave an example of a student with a negative feeling about an online course. There will not be transformative learning without understanding the meaning behind these negative feelings and digging into the subconscious. To do that, digital TELEs should include questions about students’ feelings allowing them to explicitly talk about these feelings and think about the reasons behind them. Adding these questions in multiple places would also help students track changes in their feelings and knowledge.

Transformative learning can help increase the affective connection through questioning the Self. In this process, students relate to relevant experience, which is helpful to connect history with current issues happening today. The creation of disorienting dilemma is vital for that purpose and should be included in the prototype. This strategy is not new. It is also used in classes that adopt cognitive constructivism. It is called “cognitive dissonance” and used for the
same purpose to allow students to question their prior knowledge. Adopting this strategy in the prototype will encourage students to relate to the problem and investigate the self as was intended in Endacott and Brooks approach. When students encounter an issue that need them to question their beliefs, feelings, and culture, they will take the time to do that. Deep learning might contribute to civic action based on their understanding of the self.

Another way for enhancing students' civic action is through imagination. Imagination is helpful for the analysis of historical situations and problems and also for self-awaken. Imagination enables people to access their subconscious, test it out, and build possibilities for the future. Imagination will enhance the students' critique of their previous knowledge. Finally, using metacognitive tools will encourage civic action. These tools allow students to question and reflect on what they have learned to make meaning from it cognitively and emotionally.

From the above, I introduced Critical Historical Empathy as follow:

- Critical Historical Contextualization: understand the power structure created by the socio-political, socio-cultural, and socioeconomic in influencing the historical figure's beliefs, motives, ideologies, and actions. This historical contextualization includes critical analysis of how, why, and what happened, including other choices that might not have happened.

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- Institutional affect: understand how the political move the pack of emotions, affect, and passion. Understand the production of inclusion and exclusion regimes and focus on the practice of emotions by institutions (state) or organizations (resistance).

- Perspective-taking: understand how the people of the past lived and acted differently according to their historical context. Understand the choices and the decisions people of the past had to make according to their time. Incorporate thematic learning in the learning experience to investigate the lives of the people of the past, such as identity, gender, citizenship, and so forth.

- Transformative affective connection: understand that the historical figure beliefs and actions are related to their historical context and not isolated from it. Enable self-awareness through transforming learning and imagination aiming for evoking civic action.

4.a.2. Instructional Design for Critical Historical Empathy for Flipped Classroom

To apply Critical Historical Empathy, I built a framework that I used for the prototype. I drew on Hartle, Baviskar, Smith,199 Shemit’s framework,200 Endacott and Brooks’,201 and Dirkx framework202 for learning history using historical empathy.

- Eliciting prior knowledge: the prototype will gather the students’ previous knowledge and misconceptions about the topic.

- First-person investigation: the purpose is to investigate the historical contextualization to build an emotional connection with the historical figure.

- Creating Cognitive dissonance or disorienting dilemma: students are asked to solve a problem that includes a historical dilemma from a third-person perspective. Third-person writing is to allow them to be critical and rational while assessing the problem and building judgment.

- Immersion with new knowledge: students understand the historical figure's feelings, beliefs, and motives. This immersion should allow them to investigate the Self.

- Emphasizing new knowledge through group work: students investigate together a problem from first-person to emphasize learning new knowledge.

- Display and Reflection: students build self-confidence about their new learning by displaying their work and making meaning from their experience.

5. Part Three: Designing Technology for Difficult History

Technology was used for many years to stimulate emotional responses among students. Yonty Friesem defines empathy from a digital media perspective as a holistic experience which is “the cognitive and emotional ability to be reflective and socially responsible while strategically using digital media.” This experience should provide means for students to observe, imitate, and adapt.203 This section will demonstrate prominent technologies used for history and their potential affordances for learning difficult history through historical empathy. Gibson and Hutchby identify affordances as the practical use of anything within the human perceptual range.204 Affordances have two main characteristics: functional and relational. Functional means

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that they provide possibilities for action, while relational means that their functionality differs according to the medium and the context. This section is a survey of the technologies in the market. This literature is used as the basis for the Consultation Study in which the educators will decide on which technology would be best in teaching difficult history.

Historians used many visual elements (paintings, photographs, films, maps, charts, etc.) as an essential part of analyzing the historical information. Peter Burke, the cultural historian, stated that images “allow us [...] to share the non-verbal experiences or knowledge of past cultures [...] In short, images allow us to ‘imagine’ the past more vividly.” Images were used seriously as a source from the eighteenth century, for example, the Bayeux Tapestry, which depicts a battle in England. Mayer’s cognitive theory for multimedia learning argues that students learn more effectively with words and images than words alone.

With the turn from analog to digital in the twenties century and the digitalization of former media, many projects started to offer digital images for educators to incorporate in the classroom, such as The Library of Congress’s American Memory Project and Picturing U.S. History, which include many digital images about the American history including World War II. Nevertheless, there is a challenge in building projects for difficult history. That is because of the ethical

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207 Peter Burke, Eyewitnessing: The Uses of Images as Historical Evidence (Cornell University Press, 2001), 13.
implications of exposing students to violent imagery. The United States Holocaust Memorial Museum warned against violent imagery. It may cause a process known as the empathetic substitution that is a state in which students are left with the impression that they have experienced the suffering of the people of the past in such a way that might cause them future pain and traumas.\textsuperscript{210} As a result, this study limited the violent imagery to encourage students to analyze difficult knowledge without being disturbed.

Another problem with using Images alone as a source for teaching history is that they lack interaction with the students. Teaching Divided Histories, a project funded by the European Regional Development and led by The Nerve Centre, described the need for more active and investigative approaches in designing and developing TELEs to encourage motivation and engagement among students who learn difficult history.\textsuperscript{211}

Modern web technologies or Web 3 revolutionize the way museums show their galleries on the internet. Museums used the websites combined with virtual tours or galleries to provide educators and students with educational materials and help them to investigate controversial historical topics. Virtual museums, which incorporate 3D objects/images for the artifacts and 3D navigations, are used as resources for students and the public.\textsuperscript{212} Virtual museums offer interactive 3D walkthroughs, 3D artifacts, videos, and hyperlinks. The accessibility of these web museums allows the user to cross time and space. A recent European project for cultural


\textsuperscript{212} Kathryn Brown, \textit{The Routledge Companion to Digital Humanities and Art History} (Routledge, 2020), 160-470.
heritage, known as Emotive,\textsuperscript{213} is based on a growing body of scholarship that investigates the visitors’ feelings and their knowledge and care for the sites in short and long terms.\textsuperscript{214} The results show that acquiring knowledge and care comes from personal and emotional connections embraced from the learning experience.

Regarding difficult history, the usage of emotions to generate empathy was one of the center points of museums exhibitions.\textsuperscript{215} For instance, The United States Holocaust Memorial Museum built a virtual tour for students to engage with the rich cultural and social life lived by the Jews before being murdered by the Nazis.\textsuperscript{216} However, Meesham-Muir states that many Holocaust museums emphasize the emotional level more than the cognitive level to make visitors more empathetic with the victims.\textsuperscript{217} This leads to superficial knowledge and avoidance of more profound analysis. Not only museums made use of Web 3 technologies, but also non-profit organizations interested in teaching controversial history to the public. The American Battlefield Trust used 360 cameras on the web to introduce information about the civil war and the

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American revolution. Websites enable videos to enter classrooms and engage with historical documentaries.

In the same vein, due to the improvements of technology, games, and simulations were used for teaching history inside and outside the classroom. Games engage students and immerse them with historical events. Nevertheless, Kingsepp’s study examines the learning outcome of three World War II first-person shooter: Medal of Honor: Underground, Medal of Honor: Frontline, and Wolfenstein 3D. He found out students who played these games developed a shallow understanding of the historical context and did not comprehend the complexity of the relations in a historical event. Although the usefulness of games in initializing emotional connections could influence the historical event's cognitive analysis.

New technologies such as Augmented Reality (AR) and Virtual Reality (VR) played a role in attracting new audiences to know about difficult history in museums. AR started with a stimulator called “Sensorama” in the 1950s and improved with the production of ARCore and ARKit frameworks which allow users to overlay objects real environments. They are also used to overlay virtual spaces such as AR Portals in which users can navigate through. Augmented

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reality (AR) is an experience that is enhanced by “computer-generated content which is tied to specific locations or activities.”

Augmented reality and virtual reality are similar. One of the key distinctions is the immersion of the user. In augmented reality, the user is not totally immersed as in virtual reality. Augmented Reality projects objects on real-world environments. Figure 3 below shows the “reality-virtuality continuum” described by Milgram and his team.

![Reality-Virtuality Continuum by Milgram et al.](image)

There are two affordances for virtual environments that distinguish them from other media types: presence and agency. Presence relates to the user experience's subjectiveness because of being in a virtual experience, not the actual place. Agency refers to the concept of doing something within this experience, such as interacting with an object. Educators use AR to

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222 Yuen, Yaoyuneyong, and Johnson, “Augmented Reality”, 119.
increase students' interest in the subject and motivate them to learn difficult topics. The affordances of overlaying the AR experience on any environment allow for out-of-class exploration. An example of that, a study that was used to increase students’ interest in geoscience. The scholars built three AR field trips, and the study showed significant interest among undergraduates to participate and visit all three field trips.226

AR also enhance students understanding of concepts that require abstraction or complex relationships, which can be enhanced by visualization.227 Studies in other fields such as physics demonstrate that undergraduates learn more about elastic collisions using AR than in 2D format.228 Educators also encourage the usage of AR to visualize and connect what they learn in the classroom with their daily life environment. AR is also an engaging tool when students are involved in producing the learning experience. A study on the ecological course allowed students to build their mobile location-based experiences, resulting in a high-level of engagement with the project.229

Recently, museums' interest was growing to engage the public with difficult history using new technologies. The increased loss of Holocaust survivors led museums to preserve their oral stories using AR technologies.230 Among these projects, Maitland Holocaust Museum
collaborated with Stapleton and Davies to build AR sensory system to increase empathy through imagination about the trauma of the Holocaust. The scholars depended heavily on AR affordances such as the visual, audio, artwork including 3D, and voices of the Nazi soldiers to initiate imagination about the context. Stapleton and Davis stated that “The power of Mixed Reality lies in bringing together realistic artifacts in context to relational stories with relevant issues that define the audience's experience and memories.”

The author's intention of the story evokes the audience's imagination in a way they connect it with their personal experiences. This situation happens differently with every medium, the way a book triggers the imagination is not like a movie or Mixed reality. In their study, they merged theatrical staging and cinematic language with a participatory and immersive exhibit. The gallery aimed to spark conversations among visitors that would lead to active empathy. They built the gallery on the first-person perspective, bringing to life children's diaries talking about the Nazis and the Holocaust.

The cooperation of the National Key Research and Development Prototype of China and Staffordshire University in the UK introduced an Immersive augmented reality environment (IARE) using HoloLens. The goal was to develop empathy for moral education. The researchers developed a game called Journey that uses interactive narrative. Qualitative methods such as interviews and observations were conducted to measure the effectiveness of the AR HoloLens app. Universities used Virtual Reality for initializing difficult history empathy. One recent example for VR, created at the University of Central Florida (UCF), teaches students about “The

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231 Stapleton and Davies, "Imagination," 58.
Middle Passage” of the Atlantic slave trade between Africa and the Americas (1750-1850). The project used virtual reality to immerse students in a first-person perspective. Schell’s stated that there should be a goal to drive the visitors' experience and prevent them from giving up and leaving the entire experience because it is tedious or difficult.

UK National Holocaust Center and Museum produced *INTERACT*, which was another AR project. A team of scholars used Natural Language Processing, mixed reality, and advanced film techniques to generate 3D humans of Holocaust survivors who can interact with the audience and reply to their questions. The focus of the study was not the mixed reality but the quality of the Natural Language Processing (NLP) in initiating real conversations with the audience and giving them information about the holocaust. NLP has been used to mimic natural conversations and analyze texts. NLP is used to analyze students’ online and in-person class discussions and disciplinary differences in students’ writings. Many tools are built on NLP and used for educational purposes, such as the Tool for Automatic Analysis of Text Cohesion and

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ReaderBench. Educators also used NLP for essays evaluation, such as LightSIDE. Another study aimed to analyze history textbooks in Texas between 2015-2017. The study found that many groups were marginalized and not mentioned in the history textbooks, such as Latinx people.

NLP is used as the basis for developing chatbots as well. For many years chatbots were used as teaching assistants. On the level of college education, a study shows the potential of the chatbot in delivering learning pillars. The researchers divided the chatbot, Piazza, into three categories: policy, assignments, and conceptual. The procedure: the chatbot should answer simple questions about the timing or a technical problem. Assignment questions: questions about the assignments. Conceptual questions: the chatbot should be able to answer questions about anything depending on its artificial intelligence. IBM Watson was used to design a chatbot that students can ask about their materials. The chatbot also had a recommendation system for courses. The Hong Kong University used a chatbot to train GTAs on teaching undergraduate students. The chatbot was built by Google Dialogue Flow. The chatbot was designed to be a dictionary for the GTAs in which they ask any question and the chatbot brings the answer.

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241 Li Lucy et al., “Content Analysis of Textbooks via Natural Language Processing: Findings on Gender, Race, and Ethnicity in Texas U.S. History Textbooks,” AERA Open 6, no. 3 (July 1, 2020): 2332858420940312, https://doi.org/10.1177/2332858420940312.
questions related to the course. The results showed promising and effective use of the chatbot; however, there is a need for a bigger database. Another study was also done on college students showed the effectiveness of chatbots in delivering course information.

The previous literature is a survey of technologies used for teaching difficult history to initiate empathy and assist in teaching. I used this survey as the basis for the PowerPoint presentation, which I introduced to the educators in the Consultation Study to familiarize them with the technologies in the market and help them decide which technology is practical for classrooms.

6. Part Four - The Context: The Learning Environment

Designing a learning TELE requires a consideration of the learning environment. The data collected from the dynamic of the context in which students learn and interact with their educators naturally help to design a TELE that can be effectively used in classrooms. There are mainly two types of learning experiences that use technology; the blending learning model referred to as “hybrid learning,” and flipped classroom. There is no universal definition for blending learning, but it is generally defined as “learning environment that combines face-to-face instruction with technology-mediated instruction.” This study considers flipped classrooms a useful learning environment for teaching difficult history that combines cognitive and social

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learning. Students learn on their own before the class, and in the class, they are guided by the educators to do learning activities.

Both blending leaning and flipped classroom combines face-to-face learning and online learning through video lectures uploaded for students. Although both incorporate learning technologies, there are some differences. Blended learning technology does not replace the classrooms time as in flipped classrooms. It is used as an additional resource for students to explore with multiple activities such as quizzes, short answers, mini-research questions, and essays. In flipped classroom, students get exposed to the lectures and materials before the class. The educators focus on problem solving, activities, analysis, and seminars that deepen students’ information in the classroom.²⁴⁸

There are six reasons for choosing flipped classroom as a learning environment for this design-based research. First, flipped classroom is used in history education for college students. Daniel Murphree and Kevin Mercer, at the University of Central Florida, used it in three classes for teaching American history. They provided sources for the students for historical contextualization and opened the class to wider discussions about the events in chronological order. They also used ‘Thematic’ learning to discuss historical events. The results show improvements in the students' grades.²⁴⁹

Second, Endacott and Brooks's historical empathy framework is based on social psychology research. Hatfield and other psychologists described how observers react to historical examples as the “tendency to automatically mimic and synchronize facial expressions, vocalizations,

postures, and movements with those of another person and, consequently, to converge emotionally."\textsuperscript{250} As empathy has an automatic response, stress and anxiety have too, and they are contagious. Transferring that to the interaction between educators and students, educators would face different types of fast and reflexive resistance from students to the new knowledge. This can happen immediately in various shapes, such as in showing sarcasm or offending questions.\textsuperscript{251} Therefore, allowing students to learn about the materials on their own would give them time to process new knowledge and be less offensive in the classroom.

Third, from the perspective of the critical sociocultural approach, we should consider the classroom dynamics from a cultural perspective. Educators and students come from different cultures with different backgrounds. The choices made for the materials students learn can have biases. Therefore, directing students to investigate and be critical about the materials without the control of the educators is paramount. In this way, students can study the same evidence and come to different conclusions based on the materials they found. Their interpretations are shaped by their culture, which enrich the learning process of history.\textsuperscript{252}

Fourth, a meta-analysis by Cheng, Ritzhaupt, and Antonenko stated that flipped classroom usage in Arts and humanities subjects has statistically improved students’ achievement compared to traditional learning. Vasiliki and Sampson study came to the same results. In their study they compared FC to traditional learning. They found out that FC increases students’ center-activities

\textsuperscript{252} Epstein and Peck, \textit{Teaching and Learning Difficult Histories in International Contexts}, 1-85.
and leads to better learning outcomes. Fielding, Gaughan, and Bergmann, and Sams state that FC increases teachers’ and students’ interest and engagement and makes students more responsible and active while learning about the topic. FC includes active learning. Active learning has many names, such as evidence-based instruction practices (EBIP)s, research-based instructional strategies (RBIS), high impact practices (HIPs), or student-centered instruction. Active learning is commonly known as instruction that engages students in learning. It is the opposite of traditional learning in which students are passive and lean on the educators as an expert to get the information. Innes argues that students come to the university with a long history of training themselves to say what the teachers want and not to investigate serious questions with their teachers. Fifth, active learning is used in controversial issues in many fields, including history. Martelli and Watson investigate resilience from the past represented in Holocaust survivors and a cancer survivor from the present community and self. In this study, I use student center activities as a method of active learning. Student-center activities or project-based learning helps students to learn history whether in groups or individually. Collaboration in a project allows students to

255 Emily M. Walter, Lillian Senn, and Evelin E. Munoz, “Navigating the Barriers to Adoption and Sustained Use of Active Learning,” in Active Learning in College Science: The Case for Evidence-Based Practice (Springer Nature, 2020), 59–70.
257 Martelli and Watson, “Project-Based Learning,” 71-81.
exchange ideas. Moreover, it would enable students to investigate complex problems, and the outcome improves their learning because they learn through the process of production. Chen and Yang's recent meta-analysis indicates that project-based learning has a large significant effect on the learning process more than traditional learning.258

There are two common reasons for using active learning in difficult topics: first, dealing with misconceptions and prior knowledge. Second, the nature of controversial topics requires thinking in complex ways. Active learning, according to Bransford et al. have four main aspects, which are: 1) students’ prior knowledge should be engaged and dealt with during the learning process; 2) active learning incorporate social learning among students, 3) the requirement of a framework in which students can investigate complex ideas, 4) students need to reflect on what they learned and adapt to what they have learned.259 This framework connects with Endecott and Brooks’s historical empathy approach and pedagogy.260

Finally, flipped classrooms can help in lowering students’ anxiety towards complex topics. Wilson found out that including a summary at the beginning of the class reduces students’ anxiety because they work without guidance before class.261

7. Design-Based Research for Difficult History

I used the literature above as the basis for the Consultation Study. I also used critical historical empathy as the framework for developing the prototype and the critical historical empathy pedagogy to guide the structure of knowledge in the prototype. Both frameworks would

258 Chen and Yang, “Revisiting the Effects of Project-Based Learning on Students’ Academic Achievement,” 71-81.
have the goal of addressing prior knowledge through transforming learning, imagination, and cognitive dissonance. I used the technologies mentioned in the literature as the basis for the prototype, with additional research between the design cycles if needed. The goal was to design this prototype for flipped classrooms.

8. Summary

This chapter reviews the scholarly work in difficult history, pedagogy, technology, and design-based research. This chapter aims to demonstrate the challenges of teaching difficult history and explain the importance and usefulness of teaching with historical empathy. This chapter also includes a scan of the technologies used for teaching difficult history. Moreover, it explains the reasons behind choosing flipped classrooms as an educational context for design-based research.
CHAPTER 3: METHODOLOGY AND METHODS

The purpose of this study is to design a TELE to teach about Lucie Aubrac through the historical empathy approach. This type of research requires a method that can explore in depth the educational challenges of teaching difficult history. Design-based Research (DBR) allows collaboration with educators in developing the TELE. Wang and Hannafin’s define design-based research as:

A systematic but flexible methodology aimed to improve educational practices through iterative analysis, design, development, and implementation, based on collaboration among researchers and practitioners in real-world settings, and leading to contextually-sensitive design principles and theories.\textsuperscript{262}

DBR is a flexible methodology that includes iterative processes of design in a real-world context. In the following sections, I explain the origin of design-based research. I then discuss my reasons for selecting this method and how it fits within educational research.

1. Design-Based Research

This review of the literature on design-based research does not offer an exhaustive analysis of all relevant articles, but rather focuses on defining the concepts and describing the characteristics most relevant to this study. The need for a new educational method emerged in the 1980s as a result of a “cognitive revolution.” Educators began to reject methodologies in which innovative educational technologies were tested in labs. The cognitive revolution was a movement that emphasized the complexity of acquiring knowledge, which built upon students’

previous knowledge and the educational environment. A further reason to move beyond laboratory settings was the desire to understand how and why certain innovations work within a specific setting or across different educational settings.

Design-based research has many other names. Scholars such as Ann L. Brown, Joseph C. Campione, Allan Collins, Van den Akker, Charles M. Reigeluth, Theodore W. Frick, Daniel C. Edelson, Rita C. Richey, James D. Klein, and Wayne A. Nelson have used different terms to describe it, such as design experiments, development research, formative research, developmental research, and design research. The difference between these terms is in their application of design-based research.

Brown and Collins, pioneers in design-based research, developed a methodological approach to educational research that they called “design experiments” for driving evidence-based claims. Brown introduced design-based research as a solution for building innovative

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technologies to solve critical design and educational problems. One of the challenges that educational designers faced: they could not achieve their design goals because of the dynamicity and complexity of the learning process. Therefore, they needed to incorporate many partners (e.g., educators, students, designers, researchers, and communities) as co-investigators and informers in the design to ensure that it would achieve its goals in real-world settings. Another problem was the lack of educational environments that motivated students to become “expert learners” and allowed them to feel comfortable sharing their ideas and what they had learned. Brown also rejected laboratory experiments because they did not reflect the synchronous interaction found in the typical classroom. Designs based on her perspective should have inputs and outputs. The inputs are based on interactions between teachers and students, the curriculum, and the technology used. The output is the assessment of the goals of the technology, such as critical thinking or problem solving.

Collins and his colleagues, drawing on Brown’s work, aimed to create a design science of education with practical methods that could be applied across several types of educational research. Therefore, they proposed three variables to be assessed through design-based research:

1. Climate variables, such as engagement, cooperation, risk-taking, and student control.
2. Learning variables, such as content knowledge, skills, dispositions, metacognitive strategies, and learning strategies.
3. Systemic variables, such as sustainability, spread, scalability, ease of adoption, and costs.

Collins and his colleagues also argued that educational designers should consider several aspects, four of which are linked to teaching difficult history: (1) cognitive level: what learners understand about the topic before interacting with the learning environment, and how this knowledge changes over time; (2) interpersonal level: how teachers and students interact, and how students interact with each other; (3) group or classroom level: whether all students participate; and (4) resource level: the resources available to students, the accessibility of these resources, and how these are integrated into the activities.\textsuperscript{272}

By the early 2000s, design-based research had become a new paradigm in educational research. Three educational journals dedicated special volumes to its possibilities and challenges: \textit{Educational Researcher}, (2003) vol. 32(1), \textit{Educational Psychologist}, (2004) vol. 39(4), and \textit{Journal of the Learning Sciences}, (2004) vol. 13(1). Scholars such as Sasha Barab and Kurt Squire advocated for design-based research as a viable and important method for educational research, as it is connected to the classroom’s setting and real-life learning environments. They argued that

Design-based research is not so much an approach as it is a series of approaches, with the intent of producing new theories, artifacts, and practices that account for and potentially impact learning and teaching in naturalistic settings.\textsuperscript{273}

Design-based research is linked to participatory action research, developing theory, and grounded theory. It also intersects with action research because it involves participants in

\textsuperscript{272} Collins, Joseph, and Bielaczyc, “Design research,” 35-36.
identifying and developing solutions. Nevertheless, it is distinguished from other participatory methods by two features. First, it is grounded in research and theory. It involves a continuous research process before and within the construction of the TELE. It is also flexible, i.e., it allows mixing different methods to achieve study goals. Second, in contrast to design-based research, other participatory studies focus more on accomplishing what the participants want. This results in a design that satisfies a few participants but is not applicable to a larger audience.

2. Why Use Design-Based Research?

In this section, I explain the rationale behind selecting design-based research. As stated above, design-based research has roots in grounded theory, this means it is a flexible, integrative method that enables the use of mixed methods and data collection from multiple sources to achieve its educational goals. This is important to my study because designing a TELE for learning difficult history is a complex process that requires understanding educators’ and students’ needs as part of the research and design process.

Design-based research is interactive and iterative, which enhances the quality of the intervention, given the interaction between different parties and the feedback received through each iterative design process. This study adopts Wang and Hannafin’s definition of design-based research because it draws on the literature on educational research and contains the six main characteristics proposed by previous studies: pragmatic grounded, iterative, flexible, integrative, and...
Design-based research is more suitable for educational research than traditional learning. It is pragmatic because its main goal is to solve real-world issues by designing interventions that contribute to the development of theories and design principles. Thomas C. Reeves illustrated the difference between the goals of design-based research and traditional research in the following figure:

![Figure 4 Empirical and development approaches to IT research](image_url)

The difference between design-based research and traditional research (e.g., experiments or correlational analyses) is that the former is concerned with extending and developing design and theory rather than testing existing theories. Collins also stated that design-based research studies are known as design experiments because they are conducted in real-world contexts. They also provide more information than traditional experimental methods. Traditional research also focuses more on descriptive knowledge and does not provide full descriptions of educational

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problems or of the solutions that emerge from complex learning environments and the
dynamicity of their components.\textsuperscript{280}

Design-based research is related and linked to TELE through three theories: domain, design
framework, and design methodologies.\textsuperscript{281} Another reason for selecting design-based research for
this study is that it is linked to two TELE theories: domain theory and design framework.
Domain theory is descriptive and is concerned with the nature of the problem. It focuses on the
learning process and means of support within a specific context.\textsuperscript{282} This study utilizes domain
theory in investigating and exploring the problem of teaching difficult history to find practical
solutions that satisfy both educators’ and students’ needs.

Design framework theory is also linked to my study. This theory is prescriptive and concerns
the introduction of systemic guidelines, generalized solutions, a practical framework, and a
prototype for the problem. The TELE that resulted from this study is based on a new framework
that can be generalized for use with other difficult history topics. The integration of multiple
methods in design-based research allowed for the gathering of data from various sources, thereby
enriching the resulting TELE. Barab and Squire pointed out that design-based research develops
and connects learning with design theories. Through the production of the intervention, designers
research and explore educational concepts in naturalistic contexts such as the classrooms. The
designed intervention can then be generalized to other contexts.\textsuperscript{283}

\textsuperscript{281} Edelson, “Design Research,” 105-121.
\textsuperscript{282} Paul Cobb et al., “Design Experiments in Educational Research,” Educational Researcher 32, no. 1 (January 1,
\textsuperscript{283} Barab and Squire, “Design-Based Research,” 1-14.
The production process of any product takes several steps such as research, design, development and deployment, testing, evaluating and redesign. This study aims for developing an educational TELE. Therefore, the study focused on learning variables. The study also does not include the development of the prototype nor the testing on the students. The output from this study is design recommendations that focus on how technology enhances learning and climate variables.

3. Methods

The purpose of this study is to design a TELE for teaching difficult history in higher education which can be adapted for use in various educational settings. The study has two main questions. First, how can a project-based flipped classroom TELE help students learn difficult history through the historical empathy approach? The first question includes four sub-components: 1) What are the challenges of teaching difficult history in the classroom? 2) What technology works most effectively for developing TELE? 3) What design elements work for teaching Lucie Aubrac? 4) What is the best pedagogical framework to apply to use in the classroom?

The second question is: In what ways do educators think the final prototype will help in teaching difficult history content, such as the Lucie Aubrac scenario, thematically? The following sections will describe the design methods and procedures, sample and participants, methods of data collection and analysis, assessment, and limitations of the study.

\[28^4\] Shneiderman et al., *Designing the User Interface*, 124-424.
3.a. Design Methods and Procedure

Design-based research has no specific structure due to the various theories developed within this approach. Philip Bell argued that design-based research should be considered a form of inquiry because its mission is to understand the real world in many fields. In design-based research the participants, including the designer and the researchers, draw on the methods from both fields and mix them in a hybrid methodology. In this study, I play the role of both the designer and the researcher. Figure 5 below shows the structure of the two phases.

Figure 5 The Consultation Study and Design Cycles

I divided the procedures into two phases: consultation study and design cycles. The goal of this study is to build a prototype of a TEL with academic historians. As a result, this study does not include testing the development and deployment of the final TEL on students.

3.1. Phase 1: Consultation Study

The Consultation Study was conducted on February 26, 2021, at 2:30 pm EST. It comprised of three sessions in which I worked closely with the educators. Each session’s goal was to answer one of the following sub-questions: What are the challenges of teaching difficult history in the classroom? What is the best technology for developing TELE? What design elements work for teaching Lucie Aubrac? Each session was forty-five-minute, and the total duration of the Consultation Study was two hours and thirty minutes, including breaks.

The first session aimed to gather data about real classroom experiences to guide the development of the TELE. The second session’s goal was to determine the technology requirements. As mentioned in the literature review, there are various technologies that can be used in developing TELE, such as images, videos, websites, mobile technologies, and recent technologies like augmented and virtual reality. To determine which technologies would be most useful to use in a classroom, I divided this session into a discussion and a presentation. The discussion was about the different technologies used in the classroom. It focused on which technologies the educators thought would achieve the educational goals while also being accessible to all of their students. I also offered the educators a presentation about the different types of technology used specifically for teaching difficult history. This provided the educators with the necessary information to contribute to the study throughout the design cycles. The goal of the technology used to build the prototype of the TEL was to demonstrate how technological
affordances (variables?) help teach about difficult histories. This focused on evoking empathy within the students as opposed to comparing different technologies in the market. There are two reasons behind this decision. First, the educators could be overwhelmed with describing the various types of similar technology in the market. Second, the focus here is educational and not technical.

The third session aimed to build a lesson plan on Lucie Aubrac. Educators were emailed a summary of Lucie Aubrac’s story. In the session, I divided the educators into groups and provided them with a template to fill out (Appendix B). Then, each group presented their ideas for the structure of the lesson plan they made to the other groups. The input from this session was used as a guide for the TELE’s content.

3.2. Phase 2: Design Cycles

This phase consisted of three one-hour design cycles divided across multiple weeks. I conducted the design cycles on April 2nd, 2021, April 9th, 2021, and May 14th, 2021. The main goal of this phase was to design a prototype to answer the study questions, repeated here for convenience: (1) How can a project-based flipped classroom TEL help in learning difficult history through the historical empathy approach? and (2) What are the affordances and constraints of the prototype design elements related to teaching difficult history using historical empathy?

According to Wang and Hannah’s definition, design-based research is iterative. It goes through a process of design, evaluation, and reflection. I added research as a vital part in the previous process.

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The iterative cycle worked as follows. The first stage was the research stage. Every design cycle starts with a section called “Linking Research with Practice,” in which I explored the scholarly work to overcome the problems of the prototype design and combined research with practice to build a framework for the next design cycle.

For the design stage, I designed a prototype of the TEL. I used Marvel and Axure Pro software to build the prototype. While designing the prototype, I kept in mind some design aspects that have an impact on students’ comfort while learning difficult history. Showing images of people being mistreated, humiliated, or killed is problematic for many reasons. From a historical perspective, historians want to evaluate the historical event without the risk of repeating the horror. Educators and Museums such as United States Holocaust Memorial Museum warned against using disturbing materials, such as painful images or a full-immersion stimulation that contains disturbing images or videos. That is because viewers get fully immersed in an emotional situation, causing trauma, which could place their mental health at risk and creates empathetic avoidance. Instead, it is advised to use indirect methods and minimize exposure to horrible images.

292 Andrew Wrenn, Teaching Emotive and Controversial History 3-19: A Report from The Historical Association on the Challenges and Opportunities for Teaching Emotive and Controversial History 3-19 (Historical Association, 2007).
In the evaluation stage, I showed the designed prototype to the educators and collaborated with them to improve it to meet the pedagogical goals of teaching difficult history with historical empathy. Finally, in the reflection stage, I analyzed the educators’ comments on the design. I redesigned the prototype according to the output from the evaluation and the research stages.

The second and third iterative cycles are the same; I recorded the academic historians’ feedback on the modified draft and their modifications. I then followed the same structure as in the first cycle. All focus groups were conducted online with Zoom.

3.b. Sample and Participants

The study sample includes eight French historians (six females and two males). Seven of the participants completed the research, and only one stepped down for personal reasons. I emailed both “h-France” academic list-serv and American Historians Association (AHA) list. The “h-France” list contained members of the Society for French Historical Studies, the Western Society for French History, the French Colonial Historical Society, the George Rudé Society, and the Society for the Study of French History. The email contained a full description of the study and a participation form. Twenty educators volunteered; however, given the limited scope of this study, we could not accommodate all willing participants. Teaching French history and being willing to contribute to the full study were the two major criteria for educator inclusion.

Druin’s taxonomy describes three levels of participation: tester, informant, and design partner. The educators informed the study with their real-world classroom teaching experience,

helped build a curriculum on Lucie Aubrac, and evaluated the prototype according to the learning objectives.

Thanks to a small grant from UCF, I compensated all participants for their time and effort. The educators who participated are: Dr. Melissa Byrnes, associate professor of history at Southwestern University; Dr. Christine Grant, lecturer at Carnegie Mellon University; Dr. Megan Brown, assistant professor of history at Swarthmore College; Dr. Mattie Fitch, assistant professor of history at Marymount University; Dr. Kit Heintzman, post-doctoral scholar at the Society of Fellows at the University of Southern California; Dr. Sarah Shurts, professor of history at Bergen Community College; Dr. Ben Poole at Texas Tech University; and Dr. Nathan Martin, assistant professor of history at University of Arkansas. The educators committed to a total of five hours and thirty minutes for the two phases of the study.

3.c. Data Collection and Analysis

I used the focus group method for the Consultation Study and the design cycles to answer the first and second questions. I used Zoom meetings, which allowed me to record and create transcripts of the meetings. I also used Dedoose software to code the qualitative data. Dedoose allows researchers to break data up into themes to look for patterns across the dataset.

3.c.1. Focus Groups

Focus groups offer a natural environment for interaction, allowing researchers to obtain in-depth information that surveys cannot gather. Focus groups are particularly effective for qualitative data collection. They are particularly useful when there is a need for a large amount

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of information in a small amount of time, as well as investigating opinions or attitudes, as in this study. The dynamic of focus groups allows members to bounce ideas off each other.296

In terms of group size, there is no rule: researchers vary in their opinions. Some considered four enough,297 but others have included up to thirty-one participants in one focus group.298 The expected size was between five to eight participants. A focus group’s duration generally depends on the number of participants. In this study, the meetings were one hour long to give enough time for all participants to discuss and to obtain as much information as possible. I facilitated since there was no bias from the researcher. This study used focus groups in an exploratory way to find out more about how to build the TELE in which the researcher had no “clear vision and stable opinion” while I conducted the meetings.299 My facilitation helped keep the focus group conversation on topic.300

3.c.2. Surveys

The usage of surveys in this study was added after Design Cycle One. I distributed online surveys (Google forms) in Design Cycles Two and Three to collect qualitative and quantitative data because online surveys are most efficient.301 These surveys allowed the educators to respond freely to the questions and write their opinions without judgment. I used the surveys also to

collect data about the content of Lucie Aubrac narrative. I used quantitative data collection to 
measure the educators’ satisfaction about the prototype as well as the effectiveness of the 
activities to teach using historical empathy. Both Valerie M. Sue and Lois A. Ritter describe 
surveys’ usefulness for that purpose.  

I used the data collected from the focus groups and surveys to answer the following question: 
How can a project-based flipped classroom TELE help to learn difficult history through the 
historical empathy approach? Including What is the best pedagogical framework to apply to use 
in the classroom? In what ways do educators think the final prototype will help in teaching 
difficult history content, such as the Lucie Aubrac scenario, thematically?

3.d. Reliability and Validity

One of the biggest challenges to design-based research is reliability because it depends on the 
context.  

In this study, the goal was to design a prototype that can apply to different contexts which increase the reliability of this study. To do that, Barab and Squire suggest including rich information about the context, the narrative, the guided theory, and the impact on the learning of the design elements. Moreover, design-based research seeks case-to-case generalizations. Therefore, the more teachers that were involved in the process made it more likely for the results to be replicated. Design-based Research is similar to scientific research as it provides three validities to the research. External validity in which tasks occur naturally and includes many

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connections such as the interaction between the educators and students, the students, and their peers, and both groups’ interactions with the technology. These connections can resemble the notion of internal validity in scientific research.  

3.e. Limitations

One of the limitations of this study is the size sample. The limited time and scope of this study made it difficult to have a large sample of educators and students. For future studies, I recommend testing the final prototype on a larger group of participants. Students also should be involved in the design process before testing the final prototype in classrooms.

4. Summary

In this chapter, I demonstrated the effectiveness of design-based research in educational studies. I divided the study into two stages: Consultation Study and Design Cycles. Moreover, I used focus groups and surveys to collect qualitative and quantitative data. Data was analyzed using Dedoose software, and the Marvel and Axure Pro software was used to build the prototype.

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CHAPTER 4 RESULTS AND ANALYSIS

This chapter includes the results of the two phases of the study, followed by the answers to the questions. The Consultation Study was the first phase, and its goal was to brainstorm for the prototype. It includes three sections: 1) what makes difficult history difficult? 2) how do you decide the technology used for teaching difficult history? and 3) how to teach Lucie Aubrac in the classroom? The second phase included three design cycles with the collaboration of the educators to design the prototype. I divided this chapter into five parts. The first is Design Cycle One, which includes: prototype feedback, framework feedback, and feedback on Lucie Aubrac's content. The second is Linking Research with Practice in Design Cycle One, which includes an analysis of educators' concerns, research, and prototype modifications. The third is Design Cycle Two, which consists of the prototype feedback, the feedback on the content of Lucie Aubrac, and the analysis of the content and design elements survey. The fourth is Linking Research with Practice in Design Cycle Two, including educators' concerns, research, and prototype modifications. The fifth is Design Cycle Three which includes the prototype feedback, the analysis of the content and design elements survey, and the final prototype. I followed these two phases with the answering the study questions section, which includes the answers to the main two questions in the study, which are: 1) How can a project-based classroom TELE help teach difficult history via a historical empathy approach? and 2) In what ways do educators think the final prototype will help in teaching difficult history content, such as the Lucie Aubrac scenario, thematically?
1. **Phase One - Consultation Study**

I conducted the Consultation Study on February 26, 2021, at 2:30 pm EST (Eastern Standard Time). I used Zoom for the Consultation Study because of the time difference between the participants who collaborated from universities across the United States. Eight academic historians attended the meeting: two males and six females. The meeting was recorded and lasted for two hours and thirty minutes, including breaks. The Consultation Study had three sessions. Each session was forty-five minutes. The goals of the Consultation Study were to help with the brainstorming of the TELE and to brainstorm solutions for the central question: How can project-based flipped classroom TELEs help in learning difficult history through historical empathy? Each session had a sub-question connected to the main question.

1.a. **First Session: What Makes Difficult History Difficult?**

I led a forty-five-minute discussion to answer the following sub-questions: What are the challenges of teaching difficult history in classrooms? How do we incorporate flipped classrooms and project-based learning in teaching history? How do we teach resistance? The session started with some basic instructions followed by introductions.

When I posed the question, "how would you define difficult history?" some educators were not aware that difficult history is an emerging field.

**Dr. Grant:** I didn’t really know that there was like a specific kind of field [...] I guess, just assumed, it was any kind of history.

Others were familiar with the field and defined difficult history as any topic that causes anxiety for both educators and students.
Dr. Byrnes: things that seem to make students uncomfortable or me uncomfortable […] whether it’s delving into sort of political or things that sort of effect on people’s own experiences.

Educators agreed that many topics are hard to teach. Examples of these topics include the Holocaust, the history of slavery, genocides, any issues surrounding social injustice, trauma, violence, racism, any forms of oppression, and anything related to the history and present Western understandings of the Middle East, Islam, Palestine, or Israel.

Dr. Shurts: Islam. Palestine. You know anything in the Middle East, basically Israel, and also the Balkans areas […] anything surrounding genocide anything surrounding racial injustice, all of these issues or trigger points.”

Dr. Grant: [It] could be kind of traumatic for somebody to read […] about violence, racism [or about any] kind of oppression.

Educators described difficult history as history that people do not want to acknowledge and as history that is traumatic and painful to examine.

When asked, “what makes difficult history hard to teach?” Educators engaged in a dynamic conversation expressing six problems for teaching difficult history. These problems include: (1) the topics make students too uncomfortable to analyze them successfully; (2) students come to the class without guidance on how to analyze primary sources regarding biases and subjective; (3) students interpret difficult history events outside of their historical context; (4) students’ perceptions about themselves impact the learning process; (5) students use unreliable sources; (6) students' previous knowledge and misconceptions add a burden on the educator to correct and reconstruct new knowledge.

Dr. Fitch: Potentially or generally traumatic topics and, for example, the Holocaust or any sort of genocide that students have a very hard time, or they feel uncomfortable being analytical, and so it can be very hard to get them to dig into these topics in an analytical way and not […] to remain on the surface level like Oh, this is so horrible this is so horrible.
Dr. Poole: Well, one example was recently I assigned a primary source that was written by a slave-owning white person in a Caribbean plantation, and it gave a very rosy picture of the life. I had a lot of students saying wow I didn't realize it wasn't that bad you know, and I thought, okay, we need to go back to the beginning here and go through what we do when we are reading a primary source, you know, and thinking about their biases and their objectives and all those kinds of things.

Dr. Brown (she/her): So, I don't teach this course anymore, but I told you I previously taught it at Brooklyn college, where I taught global history. […] Both the transatlantic slave trade and the Holocaust, among other things, in the same course and I had a lot of students with questions like which was worse: slavery or the Holocaust and I don't think I ever really came up with a good solution of how to be like that's not how we study history.

Dr. Heintzman added another problem about the reliability of sources. She was concerned that students could find unreliable sources that could shape their initial impression of the topic.

Dr. Byrnes built on that and noted students’ previous knowledge plays a role in the learning process and makes it hard to teach without the burden of reconstructing new knowledge.

Dr. Byrnes: “especially with the Holocaust, I find that one of the big barriers or one of the biggest challenges is not the teaching, but the sort of unteaching right there. There are all of these heroic and various or particular narratives that students come in with. They’ve heard about this in grade school, and they’ve seen certain movies and there’s sort of this repetition […] and to undo that [adds] burden […] and pushing against a lot of those sort of misconceptions? also adds to the struggle.”

I asked: “what strategies did the educators use for teaching difficult history?” Few educators were optimistic about the success of these strategies; however, they provided some examples they used in the classroom. Dr. Fitch suggested a step-by-step approach to guide student analysis through scaffolded questions. Dr. Brown suggested providing controversial documents by historians to students, such as older historiographical conversations or the Goldhagen Debate.306 She found that helpful because it engages students with historical debates.

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306 Daniel J Goldhagen et al., “The ‘Willing Executioners’/ ‘Ordinary Men’ Debate,” n.d., 48. Daniel Jonah Goldhagen argues against the notion that the Germans were forced to murder and kill the Jews. He provides a solid literature demonstrating how the Germans believed that they were doing the right thing by killing the Jews.
**Dr. Fitch:** I have to be really careful and provide sort of step-by-step guidance, either through analytical questions or very carefully selected primary sources so that they can feel comfortable that it is okay to analyze a text describing the Holocaust.

**Dr. Brown:** I'm actually very explicit about a historiography at its kind of a moment where I just toss out like here's something historians debate and often, I go to the older historiographical conversations that might be done.

Educators used two different strategies in dealing with difficult topics. One of them was step-by-step guidance, and the other was student engagement in controversial historical conversations. The first strategy aligns with the literature around difficult history because it makes students feel comfortable and increases their empathetic motives more than the second.\(^{307}\)

There were distinctive perspectives among the participants on how they defined historical empathy. Some educators defined historical empathy similarly to Endacott and Brooks’s historical empathy approach, emphasizing historical contextualization to students. Some thought that it was hard to achieve in the classroom, while others linked the meaning of historical empathy to emotions.

**Dr. Shurts:** think outside of your own experience and to be able to understand that people in different places in time may have different sets of norms, morals, and values that don’t necessarily align with ours today

**Dr. Grant:** A deceptively simple term because it seems to us, I think, sometimes when we read it for a resource that you know with certain things will be said, certain turns of phrase that experiences describe anything, oh yeah I can relate to that like I can empathize with that and you know and there’s a whole field of history of emotions and history experiences that says that that simplistic connection isn't always reliable. So yeah I don't have got a really good answer but it's just that it's more complicated than it appears.

**Dr. Heintzman:** It adds a new layer to like put time on that because the historians’ historical empathy in many ways stems from more information rather than a moral imperative to just be empathetic

**Dr. Fitch:** I agree with Sarah that what I am feeling that I am supposed to accomplish as an instructor is more of the cognitive side- that the point of this is to try to get students to

understand why people who are in a different time in place would have different opinions or make different decisions.

Most of the educators had the same concerns around historical empathy because they focused on the emotional component. They considered their role as educators to focus on the cognitive side of learning. This understanding is similar to the earlier scholars of historical empathy. This explanation was also expected as most educators follow the disciplinary approach that distances students' beliefs, emotions, and ideologies from their work, aiming for objective observations. However, as discussed before, this is problematic because difficult history is already packed with deep emotions. Ignoring these emotions is problematic for student learning. It limits the diversity in investigating historical events in which students can have the same evidence and reach different analyses because of their cultural background. Historical empathy enables both educators and students to examine these feelings and understand history by understanding humans' complexity under certain conditions.

In response to the question, “how would they define flipped classrooms?” Participants were familiar with the term and used similar techniques for multiple reasons: (1) the move to online education due to COVID-19 and (2) as a push from the university to integrate active learning and inquiry-based learning. They described flipped classes as active learning with less lecturing.

310 Wineburg, Historical Thinking and Other Unnatural Acts, 488-499.
**Dr. Byrnes:** I think, like my default mode, is what is a flipped classroom right where it’s discussion-based it’s not lecture heavy it’s much more sort of inquiry and doing things in the room, as opposed [to] outside, and so I think, […] again, it’s like my default place.

**Dr. Poole:** And so, the way I’ve done most of my courses, the past year or so has been to record lectures that can be viewed, you know, asynchronously, right, and then to complement that with synchronous live discussions that are much more interactive.

**Dr. Grant:** The idea was that the lecture is what they do at home and then what they do in the classroom is kind of more interactive like much more kind of like active learning.

**Dr. Shurts:** I think the way I always thought about it was passive versus active and I’m listening versus doing, so the idea is when you’re in the classroom you’re actually doing something, […] you’re doing some sort of activity, something hands on and then, when you are home, you’re doing the more passive part: we’re absorbing something, either reading or listening to action.

Despite the willingness to use flipped classrooms, educators had doubts about its effectiveness in teaching difficult history. Some participants stated that lecturing allows more control and organization but less time for discussions.

**Dr. Byrnes:** I would say it’s actually the opposite right like if you're lecturing, you're in control, you have things planned out, there's not a lot of space, right. What's difficult is when people can speak off the cuff right when you're in the midst of things; when people are in the act of sort of learning and interpret and like that's where people misspeak, that's where misunderstandings happen, that's where weird comments or questions from like out of nowhere come out, and you know, catch you wrong-footed. So actually, that's I think the hardest part.

**Dr. Fitch:** It's hard to sort of monitor every group, and so, if there is some sort of weird racist comment that somebody makes in a small group and you don't catch it, and then there's a lot of upset, it's harder to manage these difficult situations when students are given more freedom.”

**Dr. Brown:** I definitely agree that sort of feeling in control as the instructor and sort of feeling like you would be present for any potentially troubling interactions between students feels important. I do think that it can be useful if the lecture or the sort of facilitated discussion is not the first time that the students are being introduced to the historical event in your classroom, [they should] have the readings first. […] I would say that there needs to be
one more step, which is that I think for me, almost in every class one of the most vital things we do, is we set out ground rules for discussion.

Educators preferred traditional classroom activities because it gives them more control over students. Students' offensive responses happen when they work in groups or when the educators open a class discussion about the topic for a long time. The topics include emotions, and students come to the class without first reading the materials. Other participants were also concerned about working in groups, as they were concerned it would be challenging to monitor every student to avoid potential racial comments.

I asked, “if money and time did not constrain them, how would they facilitate learning history?” Participants responded they would translate more primary sources into English and incorporate new technologies such as AR /VR to enable students to experience being in a historic place.

1.b. Deciding on The Technology for Teaching Difficult History

The goal of the second session was to decide which technology to use for teaching difficult history. The session included a discussion and a presentation of diverse technologies used for teaching difficult history. The aim was to familiarize the participants enough with these technologies to be able to inform the study.

I started the conversation by asking, “What kind of interactive student-centered assignments have they used in the classroom?” They responded with the following:

Dr. Byrnes: Okay you’ve looked at a few things now design your own exhibit using like pick a few of these and talk to me about like what's the narrative that you're creating like what story can you put together.
**Dr. Fitch:** I've done some things sort of similar actually using the Holocaust Memorial Museum site in which […] students choose some of these personal stories that are really highlight that that museum and then, […] short assignment but sort of construct a timeline of what is the historical context that that led to this trajectory of their life and what are the historical events intervening in their life at each moment.

**Dr. Marvin:** I do literally the exact same thing.

Most of the participants incorporated project-based activities as a means for engaging students with history. Students created an exhibit or website, constructed a timeline, and wrote a plan for a historical game to encourage student engagement.

Participants had no answer to the question: “If money and time do not constrain you, what technology would you use to facilitate learning difficult history?” A long silence suggested they did not know what technology to tell or how these technologies were used in difficult history. This silence led me to move to the presentation, which included technologies such as images, films, websites, mobile apps, games, and new technologies such as AR/VR. After the presentation, the participants' feedback focused on websites, games, and AR/VR technologies.

**Dr. Brown:** One thing I do have experience, making a website with an interactive map. It's one class that I teach.

**Dr. Shurts:** I was just gonna say I think that allows you to house a lot of different things so that might be the best platform and then you can sort of spin out from there, I don't know if there's a way to attach any sort of virtual experience to a website?

**Dr. Brown** (she/her): So something that I think I like about websites as a tool is because […] there's more of an opportunity to pitch it to different types of users, because to me some of the tools that you showed us of the examples […] So I think that a website that can include, for example, like it sounds like the Marcelo APP could maybe, be a good example[…]or that interactive map website, because I think something that pops up is like actual primary source documents, as well as kind of the narration that makes it easy to dive in, and so I would see myself using more [of that in the classroom.]
All the participants favored designing a website for two reasons: (1) it was accessible to many students; (2) it could include a variety of experiences such as virtual technologies, audio, and interactive primary sources.

Mostly all participants agreed not to use gamification for presenting historical information. Educators noted that:

**Dr. Shurts:** it's this general idea of these games as simulations where you're asking the students to engage as some sort of historical figure group that makes me nervous, for the same reason that you know you see these teachers getting their students to act like Nazis or being assigned a part as being a slave […] I know that that's a very dangerous path for history educators.

**Dr. Grant:** she's [refereeing to her daughter when she plays video games] not always going to play the role of the good guy on there, she likes to sit in on those Games, and you know being the evil invaders sometimes.

**Dr. Marvin:** I had […] a student who was inclined dangerously to since he was a Nazi sympathizer like I don't know how else to say it, and it was really terrifying you feel very alone […]It was nothing from my course that prompted this; it was, in fact, and I don't mean to demonize video games or anything like that, but he had clearly his entire understanding of history came from digesting things like that, and really it was really hard to undo that.

Games were rejected because: (1) they make some students uncomfortable when they play some difficult roles, such as a student playing the role of an enslaved person, (2) students might enjoy playing the evil side of the story, which is dangerous for young students especially if they play or sympathize with Nazis, (3) games add burden on the educator to correct the misunderstandings of the historical information which these games have developed, and (4) the problem with games is that it also limits the historical figures’ options to a good versus evil dichotomy. Other participants tried to reconcile the use of games in learning difficult topics.
**Dr. Byrnes:** I feel like weirdly that’s my sort of instinctive go to is like I would want them to create a website or drop a plan.

**Dr. Shurts:** The idea that you could take a video game, just a short segment of it, let the students watch it and then critique it.

**Dr. Poole:** Personally, I like the idea of games potentially being involved in history courses, but I think you have to weigh that against some of these other potential negative consequences right, and so that's not to say that there can't be serious topics covered with some of these games, but perhaps focusing them on less, you know, violent, less traumatizing topics would be advisable, I think.

They suggested using games as an assignment for students to either design a game with less violence, correct historical information from the materials provided to them, or critically analyze a game by adding more in-depth historical information.

Participants were also interested in incorporating virtual technologies.

**Dr. Grant:** Rather than having them go to virtual museum[s], I think it might be even more interesting to have a virtual visit of some of the real sites in Europe, and it may be nice to have something that's not just like I am reading a document on a screen […] I like the idea of I mean to me the idea of having a VR. It is like reading a digital version of a document [so] in case you can't be within those four walls, you can kind of have a digital experience of that so to me that's kind of like the primary source I like.

**Dr. Marvin:** Yeah I totally agree with that about the spaces […] You know if you put them in a little helmet or whatever and they're like […] on the Great Wall of China, I can see that that could be really useful in certain [situations] like you can put them at the World War One cemeteries in France or something [to] just see the immensity of the space or something. Augmented reality virtually right like if there's some way, they're like […] narrating the experience essentially to like three texts or through audio.

The educators wanted to use AR or VR to enable students to interact and visualize places that are hard to visit physically, such as WWI cemeteries in France. They wanted to use AR/VR ability to break space and time to enable students to view places in Europe directly in front of
them. Few participants were concerned about the required vision technology for VR experiences, including problems of total immersion and technology accessibility.

**Heintzman:** I mean you just need a certain acuity of vision so like accessibility is massive. [...] and it's part of what makes universal design so difficult and teaching with technology actually almost always makes that harder as we introduce new things. [...] the way I have handled this when teaching with technology is actually to embrace near total pedagogical anarchy, which are opt out assignments for students with accessibility needs where they can design something else.

However, they were not against incorporating this technology in classrooms. One solution to this problem was offering an alternative assignment for students who do not have access to these technologies.

In terms of digital classroom technologies, participants used technologies such as Persuall, Padlet, digitalized primary sources, and archives to engage students with history.

**Marvin:** So, I use this thing called Perusall [...] it’s really terrific because we talked about flipped classrooms [and] it puts the onus on the students to do the knowledge production [...] you set the ground rules [...] you can add reading questions along the way throughout the week, but it works asynchronously.

**Fitch:** Yes, I second Perusall I love it my students love it. I also use Padlet for similar reasons I sort of discovered it when I started teaching online and trying to facilitate discussion and [...] finding the students had a harder time on zoom offering verbal comments. In Padlet students can offer their comments in real time in writing, and they don't have to unmute and everything that goes on with the zoom.

At the end of this part of the workshop, the participants all agreed they preferred not to use social media for students’ reflections.

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Grant: And I have a lot of international students, especially for China, and there are issues for them.

That is because the educators have international students, and social media can expose them to dangerous situations. Therefore, they preferred Canvas discussion boards in which students could express their opinions freely.

1.c. Building a Lesson Plan for The Case Study

The goal of this session was to build a lesson plan for learning about Lucie Aubrac. I started with a discussion about resistance and how to teach resistance in the classroom. Then I showed two examples for lesson plans from Facing History and Ourselves 313 and The United States Holocaust Memorial Museum. 314 The goal was to familiarize the participants with what we aimed to accomplish in this session. Then I divided the participants into four groups to brainstorm and provided them with a template to fill out (Appendix A-1). Before starting the group work, the participants wanted to decide on the class type for this lesson plan. After a discussion, they agreed that this study is suitable for classes such as Modern France in the Twentieth Century or France and World War II.

After that, I opened a discussion about the term resistance. Most participants were familiar with the term resistance when I asked them, “how would they define resistance?” Nevertheless, there were different views and perspectives on its characteristics.

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**Dr. Brown**: I [...] go with big R and little R resistance [...] I would define big R as armed resistance in the form of like FFE, Maquis, de Gaulle and then little R we spend a lot more time with [...] That’s like you’re hiding the Maquis in your home

**Dr. Marvin**: And then there's all this this beautiful ambiguity and all the rest of what could be considered resistance [...] abortion, quite controversially, is not seen quite defiantly, so not recognized by many of my students as resistance, and very much is by others

**Dr. Poole**: The people who stormed the capital a few weeks ago, they didn’t think of themselves as the Fascists they thought of themselves as the resistance.

**Dr. Shurts**: There is extreme collaboration that is a minority, there is extreme resistance that is minority, and most everybody falls in that sort of middle

Dr. Brown saw resistance from the violence perspective, and she differentiated between armed resistance and non-armed resistance. At the same time, Dr. Marvin added that the term is ambiguous. Dr. Poole agreed with the ambiguity of the term resistance as an exercise in critical thinking. Dr. Shurts looked at resistance as a spectrum with two extremes on the ends. She allowed the students to place lines on that spectrum to represent how the people of the past viewed themselves on that spectrum. She also emphasized complicating the concept of resistance by integrating concepts such as the morality of resistance and the perception of resistance by the French community.

Opinions varied regarding how to teach resistance: as a higher moral imperative or promote social change as opposed to destruction and chaos?

**Dr. Brown**: I don’t know that I would, um, I think that to me the moral fuzziness, even though, right, they were on the side of good, I think, is really exciting, so I don’t.[...] so one of the examples that always stood out to me, right, is there’s literally monarchists fighting, but it’s not because they have hearts of gold, it’s because they think that, like, French sovereignty, so that the pretender can reclaim the throne, is the best thing. So, I’m not very interested in my students coming out feeling like there is some greater social good in it; I’m interested in the chaotic mist of those choices.
**Dr. Byrnes:** I want to let that happen, and you can sort of seed [civic action]. It’s gotten much easier right, like if you’re talking about sort of the rise of fascism and you can sort of start listing up characteristics and concerns and let some of that come out, it means that it doesn’t always come out in the same way, but I think that’s an important thing I would say, sometimes I do.

**Dr. Grant:** I say when they [means the students] have to write an actual paper. Those who write a good [paper] so often it comes out in the conclusion paragraph they bring [means the history context] back to the present day.

**Dr. Marvin:** I agree 100%. It’s my most high stakes assignment. I call it the current problems historical roots project and they have to kind of make an argument about the historical ramifications of some historical process for the present. I love it they do really well with it.

Dr. Brown said she was more interested in understanding the moral fuzziness about resistance than going out of the class interested in the greater good. In contrast, Dr. Byrnes and Dr. Grant favored enabling the possibilities for effective social change to take place. Dr. Marvin emphasized the importance of linking the past with the present. Overall, most educators encouraged the class to seek civic action but would not force it on the students. Interestingly, some of the educators were open to presentism and contemporary thinking about history.

After this conversation, I divided the educators into groups and provided them with a template that included nine questions. The purpose of the template questions was to guide the lesson plan outline by determining the themes, learning objectives, essential questions, guiding questions, assessment questions, materials, and reflection questions for teaching Lucie Aubrac. I enabled the educators to add open-ended questions for assessing historical empathy. That is because I adopted Endecott’s position against quantifying historical empathy. Previous frameworks have used tests and quizzes to score students’ understanding and engagement with

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historical events. Still, they lack the depth and knowledge of the historical figures' complex relationships and the historical context. The empathy that arises from understanding the historical context is more profound than the empathy measured by such scoring. Open-ended questions allow for the collection of more data than closed-ended questions would. The group work lasted for twenty-five minutes. Participants had the chance to present their work to other groups, comment, and develop ideas. I summarized below the analysis of the templates collected from the groups.

In response to the question, “What themes can be used to teach Lucie Aubrac?” The participants determined eighteen important themes that I categorized into gender and citizenship. The gender theme included positive eugenics/pro-natalist policies, the influence/impact of WWI on French society, and the intersection between resistance and gender. They placed the relationship of personal to the political, nation and community/community identity, militant resistance, collaboration, and the Front under the citizenship category. Additionally, the participants suggested two other themes: morality (including universalism) and the construction of narratives and memory.

After analyzing the rest of the questions in the templates, I found that the participants responded to these questions with only two themes in mind: gender and citizenship. As a result, there was not enough information to build a lesson plan for the resistance theme. Nevertheless, educators put resistance in conversation with the other two themes. Below, I organized their suggestions in two lesson plan outlines for teaching Lucie Aubrac.
1.c.1. Gender Theme Lesson Plan Outline

The participants provided four overarching objectives for learning about Lucie Aubrac through the gender lens. These objectives are: (1) Have a sense for what sort of boundaries were created by gender roles in this period; (2) Understand historical agency, empathy, and identities; (3) Understand how our definition of “resistance” can include or exclude people with specific gender identities; (4) Evaluate how one’s ability to resist and be recognized for their resistance is shaped by positionality, including gendered positionality.

The essential questions are: (1) How did Aubrac use and subvert gender norms? (2) What were her expectations and priorities? (3) How did she uphold or undermine these narratives? (4) What were the interactions between Lucie as a mother, wife, militant, teacher, and hero? (5) How does this impact what we understand about resistance?

All the groups filled the template provided to them. They provided guiding questions for gender theme: (1) What was the outcome of the war for France? (2) What specific gender norms limited Lucie Aubrac? (3) What specific gender norms were useful to her? (4) What were her beliefs and worldview? (5) What were her objectives and motivations? (6) What roles did she fulfill, and how did they complement each other or complicate each other? (7) How does she present herself? (8) How do we read gender as a category of analysis in historical narratives? (9) How might gender roles have changed over time?

The participants suggested seven materials to guide students: (1) Excerpts from Aubrac’s, *Outwitting the Gestapo*;317 (2) Clips from the 1997 Lucie Aubrac film;318 (3) images from the Lyons Resistance museum; (4) excerpts from Paula Schwartz, *Redefining Resistance: Women’s

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Activism in Wartime France; \(^{319}\) (5) two historiographical excerpts (for comparison); (6) Propaganda posters (women in the home, on the Homefront, First World War, Vichy, post-war) with translated annotations; (7) Translated government documents about demography including census data and policy papers.

Many groups provided students-centered activities. The participants’ ideas included using primary and secondary sources, digital tools, and group work in the classroom. The suggested activities included: (1) student annotations of Aubrac’s memoir in (Perusall/Hypothes.is); \(^{320}\) (2) student discussion about the Lyons Museum images; (3) student completion of the graphic organizer: specific actions - on a continuum from transgressive to conforming to gender roles (x-axis) and from “small” to “great” resistance on the y-axis; (4) student creation of a movie poster: imagined various (fictional) filmmakers that have differing views on gender.

For assessing students’ learning, participants provided open-ended questions. The questions included (1) How did Aubrac use and subvert gender norms? (2) Imagine Lucie was imprisoned, and Raymond was working to free her: what are three things he might do differently? (3) How did learning about the story of Lucie Aubrac change the way you imagine Resistance figures? (4) To what extent individuals can choose their own story, and to what extent is their story shaped by historical circumstances? (5) How did Lucie navigate gender norms during and after the war, and how did those norms change over time? (6) What is “gender” as a category of historical analysis? (7) How are ideas of resistance and collaboration “gendered” in the story of Lucie Aubrac?


Last, participants added questions to guide student reflection on contemporary issues. Some of these questions included: (1) How does gender affect political participation? (2) Is there something unique about women’s resistance? (3) How have women participated in contemporary movements? (4) How has their identity as women impacted their participation?

1.c.2. Citizenship Theme Lesson Plan Outline

The participants suggested two overarching objectives for learning about Lucie Aubrac through the citizenship lens, including (1) analyzing how citizenship is expressed or enacted; (2) defining how citizenship and acts of resistance are interconnected.

The participants provided two essential questions: (1) How do we define citizenship? And (2) How do we define good citizenship? When it came to the guided questions, participants added nine questions. The questions enable the students to discover the relationship between the citizen and the authority. The questions provided are: (1) What is social citizenship? (2) What is legal citizenship? (3) Are there other forms of citizenship? (4) What does citizenship involve? (5) Does gender affect how people perceive their role as citizens and perform that role? (6) How is “good citizenship” defined? (7) Who or what does the defining? (8) What is the relationship between a citizen and their community? And the state? (9) What is the relationship between resistance and citizenship?

The participants focused only on primary and secondary sources. They suggested that primary sources should be used in conversation with Lucie Aubrac’s memoir. Among their suggestions for memoirs were: (1) Agnès Humbert’s Resistance;321 (2) Irène Nemirovsky’s


The list above demonstrates the participants’ concerns about the limited number of primary sources in English translation for monolingual students.

The participants suggested two activities: (1) Brainstorm words for a word cloud exercise about what words come up most often that highlight good citizenship or Resistance/resistance, or (2) a mini mock trial of Lucie - how might she defend her actions? How did she view her resistance? How did she understand her role as a citizen of France under occupation? Did her view share by all Frenchmen If not, why not? How was their experience different from that of Lucie Aubrac or other women?

The participants provided two open-ended questions to assess students learning: (1) What defines a good citizen? (2) Who chooses what citizenship means? Then, they provided questions to help students reflect on resistance and citizenship: (1) What does it mean when a citizen resists a state that they believe is wrong or treasonous? How does that resistance look to contemporaries

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322 Irene Nemirovsky, *Suite Francaise* (Knopf Canada, 2009), 450.
323 Jean Guéhenno, *Journal des années noires 1940-1944* (Gallimard, 2002), 441.
compared to a perspective with the benefit of historical hindsight? (2) Can people without voting rights be citizens/act as citizens?\textsuperscript{329}

1.d. Linking Research with Practice

This section demonstrates the link between previous research on difficult history, discussed in the literature review chapter, and practical classroom implementation. This section is repeated after each Design cycle. Here, I analyzed the Consultation Study with its three sessions and reflect on them using scholarly work from the literature and additional research if needed. This section includes difficult history challenges, strategies for teaching difficult history, historical empathy, and the flipped classroom, teaching French resistance through technology, and the design of the prototype.

1.d.1. Research

After the Consultation Study, I found out that more research is needed regarding pedagogy and technology. From the first session, the educators preferred a traditional classroom to a flipped classroom. However, they were willing to participate in the experience. Based on the strategies of the educators, it was apparent that some used the constructivist approach to education. Those educators use a constructivist approach in which learning occurs when students make meaning through social interactions.\textsuperscript{330} The Constructivist conception of learning is defined as:

\begin{itemize}
\item \textsuperscript{329} Michel Rosenfeld, \textit{Law, Justice, Democracy, and the Clash of Cultures: A Pluralist Account} (Cambridge University Press, 2011), 72. Voting was mute during the war; however, women did not vote until 1944.
\item \textsuperscript{330} L. S. Vygotsky, \textit{Mind in Society: The Development of Higher Psychological Processes}, 50-150.
\end{itemize}
Constructivist conceptions of learning, on the other hand, assume that knowledge is individually constructed and socially constructed by learners based on their interpretations of experiences in the world. Since knowledge cannot be transmitted, instruction should consist of experiences that facilitate knowledge construction.\(^{331}\)

Students should be able to construct their knowledge individually and collaboratively through interactions with their peers. Constructivism has two main foundations: Piaget’s theory of cognitive development and Vygotsky’s constructivism theory. The basis of Piaget’s theory is that learning is based on discovery and invention, which requires students to be productive and creative.\(^{332}\) On the other hand, social constructivism emphasizes that learning is social, and that culture provides learning tools that enhance the cognitive process.\(^{333}\) Dewey explained that learning is an active process in which the construction of knowledge happens in the mind. Therefore, educators should design both hands-on activities and mental activities. Students would be able to learn while inventing and interacting with their peers. He also emphasized the importance of reflection checking for understanding.\(^{334}\) I adopted Dewey’s view that education should focus on the production of good habits of thinking. Students should be both active producers of knowledge and critical thinkers of themselves.

I also examined the types of sources needed to enhance historical empathy. In Endacott’s study, he used more than twenty sources to achieve historical empathy. He concluded that immersing students with materials led to historical empathy. However, he also stressed the


\(^{332}\) Piaget, *To Understand Is to Invent*, 1-75.

\(^{333}\) Vygotsky, *Mind in Society*, 50-150.

importance of the selection of materials by the educators. Ellenwood found out that the usage of primary sources, role-playing, and writing evoke empathy in his study on the Great depression. Moreover, Letters, speeches, essential questions, histographies, and first-person and multiple perspectives narratives can increase cognitive and affective dimensions. Breaking the content into small chunks also enhances the learning experience.

From the Consultation Study, the educators mentioned some classroom activities, such as the timeline. The educators were also interested in new technologies such as AR/VR. I researched building a web timeline. I found out that digital timelines are used as encouraging projects for undergraduates, particularly when the topics are controversial. A study by Kate Litherland and Gill Forrester described how their course was challenging for the students because it included politics related to education and required students to think about their misconceptions. They found out that using a timeline was useful because students could organize historical events according to social, political, and economic contexts. Another study encouraged the timeline because the creation of a timeline helps students actively learn.

335 Endacott, “Reconsidering Affective Engagement in Historical Empathy,” 6-47.
337 Endacott, “Reconsidering Affective Engagement in Historical Empathy,” 6-47.
342 Kate Litherland and Gill Forrester, "Undergraduates as Co-Producers of a History of Education Timeline", 2013, 1-17
Moreover, educators can quickly build the assignments from the timeline. I also found out that educators commonly use web timelines. There are a variety of timelines that are easy to integrate into a website, the main host for all the design elements that the educators chose. Some examples of these timelines are Preceden, Tiki-Toki, and Slider Revolution HTML/CSS timeline. This information was helpful to conceptualize a design for a website with a timeline.

One of the common problems between the literature and practice was the students’ anxiety while learning difficult history. I searched psychology databases for technologies used for lowering anxiety. A majority of studies focused on using chatbots. Chatbots use Natural Language Processing (NLP), which allows building modules that mimic natural conversations and analyze text. The results of a study on the general public describe the potential of using a chatbot for lowering anxiety. The scholars developed the chatbot to include natural questions, emojis, and gifs to mimic natural human interactions. The chatbot initiated the conversations, and the users replied by picking a predefined answer. The chatbot had different modules, such as a greetings module triggered when the student says “Hi” or “good morning.” It also included a risk module triggered when the students say, “life is not worth living.” Chatbots were also used to reduce stress and improve behavioral change. A recent study shows that chatbots

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helped significantly lower university students' anxiety and stress during Covid-19. The Atena chatbot always initiated the conversation at a specific time and date for the session. It was prototyped to show a recorded video, mimic the situation according to the user, and invite the user to perform an exercise to lower their anxiety.

### 1.d.2. Difficult History Challenges

The first session in the Consultation Study discussed the challenges of teaching difficult history. The table below shows difficult history problems gathered from research and the Consultation Study. I included suggested solutions on the right side of each problem.

<table>
<thead>
<tr>
<th>Table 1 Difficult History Challenges</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Difficult History Challenges in Research and Practice</strong></td>
</tr>
<tr>
<td><strong>Problems Gathered from Research</strong></td>
</tr>
<tr>
<td>There is a need to teach difficult history, especially topics related to women’s resisters in World War II.</td>
</tr>
<tr>
<td>The difficulty in teaching difficult history</td>
</tr>
<tr>
<td>Students come to class with no previous knowledge about historical analysis and how to analyze primary sources.</td>
</tr>
<tr>
<td>Students analyze historical events out of their context.</td>
</tr>
</tbody>
</table>


Difficult History Challenges in Research and Practice

| Students may use unreliable sources, which might affect their understanding. | Build a reliable material database for students. |

Problems Mentioned in Both Research and Focus Group

<table>
<thead>
<tr>
<th>There is a contradiction between prior knowledge and new knowledge.</th>
<th>Give more attention to how to change prior knowledge through the critical historical empathy pedagogy framework—use of Chatbot to elicit prior knowledge.</th>
</tr>
</thead>
<tbody>
<tr>
<td>Traditional learning causes self-censorship for educators because they worry about students’ reactions. Students feel uncomfortable and lose their engagement with the topic.</td>
<td>Mix the flipped classroom and traditional learning to lower the students’ and faculty’s anxiety by using a summary at the beginning of the class.</td>
</tr>
<tr>
<td>Students’ perceptions about themselves affect the learning process.</td>
<td>Minimize social interaction to allow students to confront their perception about themselves and their cultures on their own while learning new knowledge.</td>
</tr>
</tbody>
</table>

1.d.3. Strategies For Teaching Difficult History

Educators did not have a specific successful way to deal with difficult topics; they participated in this study to consider how to address these issues and how to better engage students with difficult topics. They talked about broader strategies such as a step-by-step approach or sparking conversation in the classroom through controversial debates among historians. I used the questions they provided in the Consultation Study as a guide for students to investigate the life of Lucie Aubrac. They noted that giving students texts related to a controversial debate among historians does not always work as expected. On the contrary, some educators mentioned problems in class from students who get offended. These situations align with the research, demonstrating a need to acknowledge students’ resistance to new knowledge.350

350 Rose, Interpreting Difficult History at Museums and Historic Sites, 1-69.
The classroom, ideally, provides a safe place for students to confront their misconceptions on their own. This aligns with cognitive constructivism before being forced to deal with their misconceptions in social interaction, i.e., in a class discussion.\textsuperscript{351} Although communication reinforces the gained knowledge because learning is also described from making meaning through social interactions, it contains many verbal and non-verbal factors that might lead students to avoid interacting with conflict topics.\textsuperscript{352} Therefore, I used two approaches: first, exposing students to the materials with minimum social interaction, followed by social interaction for knowledge reinforcement.

\textit{1.d.4. Setting The Educational Goals}

The goal was to achieve historical empathy with its two sides: cognitive and emotional empathy. I developed the educational goals for the content of Lucie Aubrac from the overarching questions in the gender and the citizenship themes lesson plans. I made some modifications for the questions to ensure they match the purpose of this study. The educators wrote the questions focusing on how students learn, not how the prototype teaches the gender theme lesson plan. However, this study does not include testing the prototype on students. Therefore, I modified the questions to how the prototype will assist in teaching the gender theme lesson plan. I also focused on the questions related to history, particularly our case study, more than purely gender or political fields.

The educational goals for the content through the gender theme are: (1) how the prototype show what sort of boundaries were created by gender roles in this period; (2) how the prototype

\textsuperscript{351} Piaget, \textit{To Understand Is to Invent}, 1-75.
\textsuperscript{352} Vygotsky, \textit{Mind in Society}, 50-150.
teaches about historical agency, empathy, and identities; (3) how the prototype allows students to evaluate how one’s ability to resist and have their resistance recognized is shaped by positionality, including gendered positionality. For the citizenship content, the educational goals are: (1) how the prototype will help students to analyze how citizenship is expressed or enacted; (2) how the prototype will teach students about the connection between citizenship definitions and acts of resistance.

The educational goals also included knowledge structure considering the students' anxiety and resistance to new knowledge.

1.d.5. Historical Empathy and Flipped Classroom

Most of the educators linked historical empathy with emotions more than historical analysis. They were skeptical about the effectiveness of historical empathy in the classroom. Therefore, there was a need to share more information about the historical empathy approach with them. I prepared a document that included the historical empathy framework and the difference between the Institutional affect and the affective connection. I emailed this document to them before Design Cycle One.

Educators were familiar with flipped classroom concepts and described it as an active perspective. They preferred to incorporate some aspects of flipped classrooms into their traditional classrooms to avoid students maintaining misconceptions or learning new ones. In other words, they were skeptical about the effectiveness of an entirely online flipped classroom to teach difficult history. They felt that a traditional classroom with problems was better because they controlled the class and limited the interactions. There were also concerns that the students who did flipped classrooms on their own would not learn. Educators felt the need to guide the
students directly in their learning process. This situation showed a gap between research and practice. While research encouraged the usage of flipped classrooms, the educators felt that traditional classrooms delivered hard topics better. In the second workshop, Design Cycle One, I introduced a structure that combined both flipped and traditional classrooms. I followed the same pattern. I designed the prototype to include an online video before class, followed by a summary by the educators in the classroom.

1.d.6. Teaching French Resistance Through Technology

Participants had distinctive interpretations about the definition of resistance which aligned with the scholarship. The educators’ activities showed that they aim to teach resistance by highlighting the differences in its degree. For instance, educators showed a spectrum with two extremes with one side collaboration and on the other side active resistance. This was also demonstrated by measuring the differences between armed resistance and small acts of resistance, such as hiding a resister or helping them. These activities align with the Baaz framework, which requires a deep understanding of resistance based on the diverse types, including everyday resistance.353 As a result, there is a need to understand the historical context, level of control, and what choices people have at a specific time. Vichy state forced a National Revolution. Students need to know how every state department practiced control over the public. I introduced that in Design Cycle One within a framework of two weeks. The first week focused on the meaning of control through an analysis of the Vichy state. It examined the types of control

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enforced across different sectors such as the police, media, education, and so forth. The second week focused on resistance education, including different types of resistance.
The Table 2 below demonstrates the instructional design for two weeks of learning difficult history topics built on the critical historical empathy pedagogy framework on pages 73-74.

**Table 2 Critical Historical Empathy Pedagogy Framework**

<table>
<thead>
<tr>
<th>Design Cycle One: Critical Historical Empathy Pedagogy Framework</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Week 1 Goals:</strong></td>
</tr>
<tr>
<td>Minimize the stress of building technology by pre-made projects.</td>
</tr>
<tr>
<td>Minimize social interaction between students and their peers as well as the educators.</td>
</tr>
<tr>
<td>Minimize the anxiety level of learning through flipped classrooms by providing assistance and quick feedback.</td>
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<tr>
<td>Enable students to learn and work individually at this level.</td>
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<tr>
<td>Increase the students’ understanding of control in France under the occupation.</td>
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<tr>
<td>Encourage thematic learning such as gender, citizenship, or resistance.</td>
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<tr>
<td>Engage students with familiar technologies such as digital maps, posters, art, and archives.</td>
</tr>
</tbody>
</table>

**Understanding Vichy’s Control and Its Impact on the French society**

<table>
<thead>
<tr>
<th>Week 1</th>
<th>Phase of Instruction</th>
<th>Method of Instruction</th>
<th>Purpose of Instruction</th>
</tr>
</thead>
<tbody>
<tr>
<td>Before Class</td>
<td>Eliciting prior Knowledge</td>
<td>Chatbot initiates the discussion</td>
<td>1-Using the guiding questions to gather information about students’ previous knowledge and misconceptions about the topic. 2-Finding the source of the previous knowledge and the percentage of correct information.</td>
</tr>
<tr>
<td>Lecture week 1 - France between the two wars and under the occupation</td>
<td>Online Video</td>
<td>1-Students learn about the historical events that led to the fall of France. 2-Students know about France’s internal political, social, and economic situation before and after the fall of France.</td>
<td></td>
</tr>
</tbody>
</table>
### Design Cycle One: Critical Historical Empathy Pedagogy Framework

3. Students learn about the essential events in France under the occupation and France’s relationship with the Allies and with the Nazi occupiers.
4. Students learn about the role of Institutional affect in the production of control. An example would be Vichy propaganda.
5. Students learn about different types of control such as media, police, and judiciary. In addition, the connection between these types and the implementation in the society.

| In class                      | Lecture Summary Week 1 | Face-to-face with the educator | 1. Summary of the lecture highlighting important points.  
2. Educators should answer questions collected from students about the lecture.  
3. Introducing activity 1 |
|------------------------------|------------------------|-------------------------------|----------------------------------------------------------|
| Activity 1: Gender (first-person narratives) (Personalization of decision) | Online timeline          | 1. Students learn about the impact of control on people of the past from first-person perspectives demonstrating the different types of control (primary source excerpts)  
2. Students investigate methods of using control and how Institutional affect was used to influence the public audience.  
3. Students learn about the boundaries control imposed over people of the past.  
Perhaps a goal re: chronology, to make good use of the timeline itself? |
## Design Cycle One: Critical Historical Empathy Pedagogy Framework

<table>
<thead>
<tr>
<th>After Class</th>
<th>Writing Narrative - Chatbot help</th>
<th>1-Students investigate a historical paradox from a third-person perspective. I suggested a paradox of collaboration vs. resistance in which students investigate both sides' beliefs, values, and motivations. 2-Students investigate the consequences of the choice of collaboration or resistance by comparing either two people or two movements.</th>
</tr>
</thead>
<tbody>
<tr>
<td>Creating Cognitive dissonance (confrontation of Historical paradox)</td>
<td></td>
<td></td>
</tr>
<tr>
<td>(third-person narratives)</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Appendix A/ Essay-Analysis-Assignment- Gender</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

### Week 2 goals:

- Social interaction between student groups
- Increase level of engagement through new technologies such as AR
- Allow display and reflection

### Understanding resistance and its impact on the authority and the French society

<table>
<thead>
<tr>
<th>Phase of Instruction</th>
<th>Method of Instruction</th>
<th>Purpose of Instruction</th>
</tr>
</thead>
<tbody>
<tr>
<td>Before Class</td>
<td></td>
<td>1-Students should investigate how Lucie Aubrac responded to control according to their assigned or student Chosen theme (gender, citizenship, or resistance).</td>
</tr>
<tr>
<td>Investigation phase 2</td>
<td>Develop the visuals and narrative for Lucie Aubrac Bot's activity by answering guided questions.</td>
<td>1-Students should learn about Lucie Aubrac and French resistance in World War II. 2-The lecture should cover main concepts about gender, citizenship, and resistance.</td>
</tr>
<tr>
<td>Lecture Week 2</td>
<td>Online Video</td>
<td>1-Students should learn about Lucie Aubrac and French resistance in World War II. 2-The lecture should cover main concepts about gender, citizenship, and resistance.</td>
</tr>
<tr>
<td>Week 2</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>
Design Cycle One: Critical Historical Empathy Pedagogy Framework

| Appendix A/ Lucie Aubrac Chabot-Gender | 2-Students should try to understand the feelings, beliefs, and values Lucie Aubrac had and how they changed over time.  
3-Students should think about what choices Lucie Aubrac made and the reasons for those decisions.  
4-Students should also consider other historical sources that accuse the Aubracs of collaboration with Barbie and investigate their authenticity. |
|----------------------------------------|---------------------------------------------------------------------------------------------------------------|
| Lecture Summary Week 2 | 1-Summary of the Lecture highlighting important points.  
2-Answering questions collected from students about the lecture.  
3-Introducing activity 2 |
| In class | Face-to-face with the educator |
| Activity 2 (first-person narrative) Personalization of decision | Social group activity |
| Appendix A/ AR Statue -Gender | Educators should provide guidelines for collaboration and guided questions. |
|                           | 1-Students from different themes come together to analyze Lucie Aubrac's actions from the different perspectives they learned. For example, each group should have a student who focused on gender teamed up with two other students from the citizenship theme. Educators should allow each student to be the 'expert' on their theme and work together to deepen their knowledge and see how the themes interrelate.  
2-Students should combine their work in one narrative telling the story of Lucie Aubrac at a specific time. |
### Design Cycle One: Critical Historical Empathy Pedagogy Framework

| After Class | Display and Reflection – Metacognitive (compare between first- and third-person narrative) | Online Chatbot AR exhibit | 1-Students should complete the narrative by adding a reflection paragraph.  
2- Students should also comment on their peers’ reflections. |
<table>
<thead>
<tr>
<th></th>
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<tbody>
<tr>
<td></td>
<td>Appendix A/ Essay-Analysis for AR exhibit - Gender</td>
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</table>


The educator participants reached a consensus about using a website as a platform because it can host many projects. The gender and citizenship lesson plans we built in the Consultation Study encourage students to be more active in their learning. The educators provided many questions to guide the students’ learning and many ideas for interactive projects. Therefore, designing the website took an interactive approach that worked well with project-based learning. The goal was to motivate students to investigate the questions collected in the Consultation Study. The website would then allow students to input their data. Project-based learning enables students to learn through developing multiple projects.

1.d.7. Prototype Preparation for Design Cycle One

I based the prototype on the critical historical empathy framework. The link to the first prototype is here: https://marvelapp.com/prototype/a9iadfj/screen/83479427

In the first week, I used a chatbot activity to introduce thematic learning to students and guide them through the learning objectives of every theme. The reason for using a Chatbot is to lower anxiety, as found in the research.354 The Chatbot has four modules; 1) natural conversation to chat with the students (elicit their prior knowledge and lower their anxiety), 2) walk you through the activity module, which includes all the activity instructions, 3) suggest materials to immerse students with sources.355 The students should design their own Chatbot, which would be


their assistance through the learning process. This increases their empathetic motive toward the prototype.\textsuperscript{356}

\begin{figure}[h]
\centering
\includegraphics[width=\textwidth]{figure6.png}
\caption{A Mimic of a Natural Conversation With the Chatbot}
\end{figure}

\begin{figure}[h]
\centering
\includegraphics[width=\textwidth]{figure7.png}
\caption{The Chatbot Allows the Students to Select a Theme}
\end{figure}

\textsuperscript{356} Zaki, "Empathy," 1608-1647.
The second reason for using a chatbot is to elicit students’ previous knowledge for later comparison. The goal was to allow students to revise and confront their misconceptions after learning more about the topic.

Figure 8 The Chatbot Provides the Learning Objectives of the Theme

Figure 9 The Chatbot Asks Students about Their Prior Knowledge
Learning history through chronological order would enable students to understand the changes of Vichy’s control and the resistance across time.

**Figure 10 The Collection of Students Prior Knowledge**

**Figure 11 The Week1-Activity1-Gender Timeline Activity**
I chose a timeline activity (Appendix A, Timeline-Activity-Gender) to be the first-class activity to come after the lecture summary. This activity should take the most significant part of the class to allow students to think about the historical context from a first-person perspective. As seen in the image above, students should choose an image or a map and a category relating to women’s roles in France during the war, such as housewives, single women, women, and politics, resisters. The goal was to immerse students in the historical context to understand the motives and everyday life experiences of people who fit into one or more of those categories before discussing resistance and its development. The timeline will help students to explore any of these categories at a particular time. For instance, the French community's perception of single women has shifted because of Vichy’s National Revolution propaganda. The goal is to engage emotionally through imagination by thinking about how social and political situations influenced people’s lives. In addition, to analyze critically why these situations was forced on them to understand control.

After the students work individually on this assignment, they can see their work linked to the Timeline, as in Figure 12 below. The Timeline design aimed to allow students to learn from each other and read their peers’ work. I used HTML page technology to design this timeline. It will enable students to edit and upload images to their pages and connects automatically to the year they chose. The design drew on the Slider Revolution HTML/CSS timeline.\textsuperscript{357}

\textsuperscript{357} Staff, “HTML and CSS Timeline Snippets You Can Use on Your Site.”
Figure 12 The Final Structure of The Timeline Activity After The Students Enter Their Work

The first week assignment, was writing an essay analysis with the assistance of the chatbot (Appendix A, Essay-Analysis-Assignment- Gender). The chatbot helps the students by walking them through their essays, historical analysis, and suggesting more materials. It also enables students to send urgent questions to their educators. After the students write their articles, they press on analyze button. I used the dimensions political, economic, and social norms as aspects for analyzing the essay. The prototype examines the text showing the percentage of this information in their text. Because educators stressed the importance of reliable sources and materials, the prototype will also analyze the use of sources, allowing students to get a percentage of how many they used. Another factor was analyzing the adjectives. Dr. Fitch expressed in the Consultation Study that students learning is superficial. They always describe difficult contexts such as the Holocaust with horrible adjectives that do not show the complexity of the historical events. To enhance the students’ writing skills, I aimed to let the prototype
highlight these adjectives. Then, guide the students' thoughts to explain what they mean and why they described it in that way? This process will guide their learning and help them to be more analytical. On the right side of the page, students will get a percentage of each category to improve their work. Then when they improve their work, they will be able to upload their file as a webpage to view it and share it with other peers.

Figure 13 The Essay Assignment-Gender

In week two, students learn from the recorded lecture. They then investigate how Lucie Aubrac reacted to the Vichy’s state and different types of control they learned about in week one. I chose to build a chatbot for Lucie Aubrac (Appendix A, Lucie Aubrac Chatbot-Gender). The goal of the chatbot is to immerse students in the learning experience cognitively and emotionally. Students in this activity will teach Lucie Aubrac Chatbot about herself. I used the questions provided by the educators in the Consultation Study. Students also can add more questions if they want to investigate new areas.
This activity works as follows, imagine that Lucie Aubrac chatbot has no memory and cannot remember anything about her life. The students' role here is to teach her about her life without identifying with her. Say student A will pick a question about Lucie’s life, such as how Lucie was politically engaged? Then write the answer from a third-person perspective. After that, this student will enter the answer to Lucie Aubrac’s Chatbot. When student B comes and asks this question to Lucie’s chatbot, the chatbot will respond that Student A has taught her that “she was a resister.”

Figure 14 Lucie Aubrac Chatbot-Gender

The goal is to engage students on multiple levels. Cognitively, students critically analyzed the information about Lucie Aubrac. The focus here is on her actions. Wertsch stated that sociocultural circumstances affect and influence the action. Students will learn to investigate the action and the cultural tools that mediated this action. They will also explore the power relations to teach her what she did, how she did it, and why. Emotionally, they interacted with her chatbot, which increased their empathetic motives because of the enjoyment of the

358 Wertsch, *Voices of the Mind*, 1-182.
experience. Also, when student B finds Lucie’s Aubrac Chatbot, answers are in the third person, i.e., she is telling a story someone else taught her. This student will know that history is subjective, and any student can easily disagree with what student A wrote. This is one of the significant aspects of teaching using the sociocultural approach. Every student can investigate the same evidence and come to different analyses because of their backgrounds based on different cultures, beliefs, and ideologies. In case if two students, for example, wrote contradictory answers about the same question. The chatbot will answer with both answers asking whoever was asking this question to think about these answers.

Figure 15 Students Select a Question and Answer It

Once the students choose the questions, they will teach Lucie Aubrac bot, as seen below.

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360 Epstein and Peck, Teaching and Learning Difficult Histories in International Contexts, 1-85.
On the left side, the other chatbot adds a new layer. It asks the students to investigate their previous knowledge and think about what they previously knew and what they are learning while answering the question. In the classroom, just like in week one, the students listen and participate with the educator’s summary to clarify any material confusion. Then, the educators guide them through the class activity. The goal of the week two class activity is to emphasize their knowledge through social interaction. Students from different themes work together to answer a question about Lucie Aubrac. The activity is to build a Lucie Aubrac statue in augmented reality (Appendix A, AR Statue – Gender). The statue should have clickable areas in which students can view what they have written about her.
To complete this activity, students should select a year of the war to examine, then think about other categories regarding Lucie’s Aubrac actions. For instance, if they pick the year 1940, Lucie’s husband was arrested, and she crossed to the occupied zone to free him. If they pick housewives categories, the students will face the question: will housewives do the same as Lucie? And why not? The purpose is to engage students with “why” people acted in a different way even if they lived in the same circumstances. After they write their answers, they can add a plus sign on the statue and upload their document. Then a new window will enable them to scan a QR code to view the statue in augmented reality.
The assignment for week two builds on the assignment for week one. The students go back and revisit assignment one and the activities they did and write more about Lucie Aubrac discussing the relation between the past and the present. I focused on the psychological impact of visuals and writing for different audiences. I chose an AR exhibit (Appendix A, Essay-Analysis for AR exhibit – Gender) to allow students to learn more about expressing the past to a different audience. The activity structure is the same as assignment one, allowing students to write an essay about any topic. Students also can insert an image. It also allows students to engage with the chatbot and analyze their text.
After uploading their work, students can view the gallery on the web or in AR or VR.

They can click on the image and view their text.
2. Phase Two – Design Cycles

This is the second phase of the study, which included three Design Cycles. In each Design Cycle One, I showed the educators the prototype and the pedagogy framework to get their feedback. Then, I analyzed their input concerning the research. After each Design Cycle, I included a section which I called Linking research with practice. I used this section as a bridge in which I link scholarly work with classroom practice. In the Linking research and practice section, I organized the educators’ concerns, conducted new research to overcome the challenges during the Design Cycles, and modified the prototype.

2.a. Design Cycle One

I prepared a medium-fidelity prototype and a framework that included a two-week plan for teaching Lucie Aubrac. I provided the participants with Google documents that included the framework suggested for the two weeks and the activities and assignments (Appendix A). I started the meeting by showing the participants the prototype I described above; then, I gave the
participants time to read the content of the activities and the assignments. I collected the participants' feedback on the prototype then we discussed the affordances and constraints for each activity and their potential in teaching history using historical empathy. The following sections discuss the participants’ feedback on the prototype, framework, and Lucie Aubrac content.

2.a.1. Prototype Feedback

After showing the prototype, I received questions out of the focus of the study. These questions are concerned with the development of the prototype and whether it will be an open source for all educators or not. When I asked if they thought this prototype could apply to other difficult history topics, some educators confirmed that the tool's goal is to use it on different topics.

Dr. Shurts: Are you asking if we think the format would work with something other than Lucy Aubrac. Yes, yeah absolutely.

The prototype contained five projects (Timeline, Essay-analysis, Lucie Aubrac Chatbot, AR Statue, AR Exhibit) built and ready for students to add their research. I combined the educators' comments on the framework Google document and their views in the upcoming paragraphs. Some educators viewed the timeline as an excellent method to create a foundation for students’ historical knowledge. Educators noted:

Dr. Marvin: This is a terrific idea. Students are the primary drivers here, correct? If so, are there ways to prototype “guardrails” into the process? In other words, if the student tried to register a completely inaccurate piece of information into the timeline, could the prototype flash a message to the student to get them back on track.
**Dr. Heintzman:** I’m really interested to see how this works in practice. Will a part of the lesson involve having students think through (even briefly) the distinction you draw above [at the beginning of the document] about “affect” as something politically charged, and other aspects of emotions and empathy at individual scales?

Dr. Brown: Perhaps a goal […] of chronology, to make good use of the timeline itself?

Dr. Marvin suggested "guardrails” to correct students’ information. Dr. Heintzman also suggested that this framework could act as a way to enable students to evaluate the difference between empathy at an individual scale and affect as an institutional practice. Another suggestion was to link the Timeline to specific topics to use the historical chronology and allow students to view changes across time.

When I asked about the affordances and constraints of the Timeline in the focus group, there was a lot of engagement among educators to analyze how the Timeline or other technologies would achieve the goal of teaching through historical empathy.

**Dr. Brown:** insert the urgency, or the increased urgency, of the war and of individuals’ experience[s] into the timeline, and so I guess that would be a way you know it, for example, if they had to show laws that were changing or if they had to highlight specific examples of around roundups of populations that that might be a way that this students can start to have that basis to understand Individual decision making.

**Dr. Shurts:** I'm going to go on that I agree completely that if you are if the goal is to teach historical empathy, then the timeline needs to be more than just here’s an event that happened here, it has to be checked in with some real intensive [events] to show how the beginning of the war, the environment is very different from the end of the war.

**Dr. Heintzman:** I think you need to state really explicitly what you're showing the students because it's so easy for students, especially of history, to think like they're just supposed to memorize these dates, but they don’t know why they're important when you're actually trying to show something aggregate.
Educators suggested including more information to show development across time and understand peoples’ decisions over time.

Another suggestion was about the Institutional affect. Dr. Poole noted:

**Dr. Poole:** propaganda is particularly good at this because they can imagine the point of view of someone viewing this, but they can also imagine what's the point of view of the creator, right?

It is vital to guide the students to think about Institutional affect by using propaganda posters as described in the framework from the perspective of the propaganda's creator and audience.

**Dr. Byrnes:** I can imagine, most of my students don't really know who Joan of Arc is or why she's showing up here right. So is there a way to have information [such as] who's [Joan of Arc], who published this, [and] when did it show up.

**Dr. Heintzman:** It doesn't necessarily need to be like a long description. but like Why would we use […] that figure just give them something to hang on to the image.

Another logistical suggestion was to add translations and a small description about the poster and its significance to students to understand the importance of these posters.

The assignment in week 1 (Essay-Analysis-Assignment- Gender) was about writing an essay with the guidance of the chatbot. This design element allows students to analyze their work through the text they enter online. This is based on NLP, which analyzes text and organizes it into categories. Here, it shows the students the percentage of the information entered into each category: political, economic, and social. In addition to a percentage of the number of sources they use. It also analyzes the language and underlines the adjectives to guide students to
elaborate more about them and think about why they used them. Comments from the educators included:

**Dr. Brown:** the idea is that the technology itself is able to analyze that I would probably never use it as an instructor. I would say [...] I like having a lot of autonomy, especially in terms of sort of determining what content is what.

**Dr. Shurts:** I mean [it] ends up looking more like lab report where you've included all of these factual bits to get to 100% and you haven't actually put together something that's coherent or useful.

**Dr. Byrnes:** I care about how the student is explaining and connecting those sources.”

Some educators opposed the prototype organizing the text into components such as political or economic information as they were worried about its impact on grading. Their concerns were about changing the main goal behind providing students with sources from reading these sources and making connections between them to add more seeds to fulfill the requirements of the technology. As a result, students will not be keen to build a coherent argument, focusing on fixing their low scores.

The investigation activity was about creating a Lucie Aubrac bot (Lucie Aubrac Chatbot-Gender). The activity allows students to select one of the guiding questions and respond to that question with the help of the chatbot. Students will engage with the bot as a class by writing the questions they did, and the Chatbot will provide the answers with their names. Here, the Lucie Aubrac bot does not work from a first-person perspective but, it allows students to show how they saw her life which aligns with the goal of recognizing that Lucie’s beliefs differ from the students. This is to balance empathy and emotional attachment. One suggestion was to encourage
students to think about how their own emotional responses might be to a similar situation that would compare with the feelings of Lucie Aubrac.

**Dr. Poole:** I like the way students would be participating in developing this interactive technology together. That use of this kind of technology, much more because it’s interactive and its sort of helping to show students how history is interactive.

**Dr. Heintzman:** I would want something like this to engage the difficulties in historical empathy. So, I would want students to think: “how they think they would feel?” vs the range of possibilities of emotional responses. With the added extra tricky layer that emotions aren’t transhistorical.

**Dr. Brown:** I’m curious if the online tool will invite students to think about LA as representative of French women in general or as a unique figure?

**Dr. Marvin:** Yes, how is this controversy introduced? [talking about Barbie’s trial]

Other educators were concerned about how the TELE would represent Lucie Aubrac to the students and how Barbie’s trial controversy would be represented. I considered their thoughts in my design improvements; however, Barbie’s trial is out of the scope of the study.

AR Statue -Gender is a social group activity. Students from different themes would gather to answer questions about Lucie’s life from different perspectives while building an AR statue for Lucie Aubrac. They can later project this statue onto their environment and interact with the materials they built using QR codes. Although this activity gained more acceptance among educators as building Lucie’s chatbot, there were many concerns about its application online or in classrooms.

**Dr. Grant:** This bot and the virtual gallery I think my two favorite parts of it because I really like how interactive it is. They're kind of synthesizing and evaluating the knowledge within the system which put it together, which I think is actually quite exciting to create something, and you know connects [ideas] of […] public history and memorials and stuff and it's really fun, I really like this.
**Dr. Shurts:** This is a better use of the flipped classroom time than week 1. This really would need a lot of preparation for students to understand how to approach history from thematic perspectives. I think this is requiring a lot from students in two weeks and putting a lot of the responsibility for teaching complex ideas on a bot instead of an instructor.

Some concerns were about the amount of work required from students and instructors and how the Chatbot will deliver complex concepts. The educators did not prefer that chatbot would deliver a lecture with complex historical information. They also felt that the way this activity is structured would overwhelm the students.

Assignment 2 (Essay-Analysis for AR Exhibit - Gender) included displays and reflections in which students display their work on the AR statue and reflect on the present issues.

**Dr. Shurts:** I think learning how to write that caption and the context is possibly the most important thing here that you're picking a visual you're having them try to explain it to a different audience in a different format, […]so you're trying to help them think through the process of public history and I like that a lot.

**Dr. Heintzman:** How many reflections will each student comment on? Is this pre or post instructional assessment of the students' work? Are students graded on their comments upon a peer's work?

**Dr. Byrnes:** I worry a bit about presentism here. I really like thinking about relevance and resonance but want to encourage more nuance. I also wonder if this exercise could bring them back to how Lucie's actions were expected/unexpected as encountered from our moment but also from her own moment—this might help with the presentism concern.

Educators were excited about building the gallery because it connects visuals and writings. Nevertheless, some educators were worried about presentism. The term means students should focus on how Aubrac’s actions were unusual in her time, not only uncommon to the present.
2.a.2. Framework Feedback

I used Google Documents to get the educators’ input. It allows them to collaborate among the educators and comment directly on the framework description. Educators’ comments on the Google document emphasized the importance of having a reliable materials database for students.

**Dr. Shurts:** This is the most helpful component, in my opinion

**Dr. Byrnes:** Absolutely

Some participants saw that an assistant bot could minimize the anxiety level of learning and provide quick feedback.

**Dr. Marvin:** In my view, the bot has the potential to achieve this goal.

Others were skeptical about minimizing the social interaction in the first week, arguing that this might not be something educators would like to do.

**Dr. Brown:** I’d love to discuss this as a goal. It would not be a goal I necessarily would think many educators would seek.

Regarding students’ engagement with digital content, many of the participants saw that the demo presented could improve students’ technological skills.

**Dr. Marvin:** The format you showed us in your demo is excellent for this kind of engagement
Participants were excited about eliciting students’ misconceptions in a natural conversation with the bot for future comparison with what they will learn.

**Dr. Heintzman:** I’ll be really interested to see what this looks like in practice.

**Dr. Marvin:** Me too. So much potential here. Terrific as a low-stakes way to introduce students to the content, help them feel engaged [...] In my view, this approach will pay dividends when their misconceptions are addressed later in the activity. Learning by association (or in this case, “mis-’association”!)

Some educators saw teaching students about Institutional affect, in this case, Institutional affect refers to all the mediated methods used by the state or the resistance to influence the public and generate an atmosphere of inclusion or exclusion\(^{361}\) as a great idea. The Institutional affect will enable students to feel and engage with the historical events as they generate similar emotions towards state/resistance affect.

**Dr. Marvin:** A good, basic definition of “propaganda” would be useful to incorporate into this video as well (or maybe even the prior knowledge bot). In my experience, this word is so loaded, and it tends to trip students up right away.

In our meeting, I asked them about dividing the historical contextualization into control and resistance. Most educators thought it was a good idea and would increase students understanding of the historical context and practice perspective recognition.

**Dr. Byrnes:** underneath each of these activities and assignments is something that’s getting them to think about contextualization and personalization and all of this. I think that’s the part that’s really useful.

\(^{361}\) Di Gregorio and Merolli, “Introduction,” 933-942.
**Dr. Poole:** I think that idea of a week on control and a week on-resistance is fine. I think that makes total sense.

Although Dr. Poole mentioned a week, he meant the structure of dividing control and resistance, not literally a week, because he stated later in the session that the two-week period is not suitable for students to absorb the content or acquire the technological skills needed.

### 2.a.3. The Feedback on the Content of Lucie Aubrac

The framework included three activities and two assignments. I used Lucie Aubrac’s narrative in Chapter Two as the main source for the content and the lesson plans created in the Consultation Study. The lesson plans included overarching goals, guiding questions, and assessment questions. Regarding the content of the Timeline Activity-Gender, some educators could not visualize how the students would use the maps. Another concern was the limitations of the activity only using first-person perspective.

**Dr. Benjamin Poole:** Is the purpose here to analyze historical images as primary sources, or are the images just used as icons meant to represent these general topics?

**Dr. Brown:** I’m noticing that first-person perspective is a major part of this teaching tool in general. Wondering if there are limits to focusing on this, opposed to focusing on analysis as a historian/a person from the year 2021?

The purpose of using the images was actually to analyze them as primary sources and write about them. However, mixing these two goals confused some educators. Therefore, there is a need to focus on one of these goals. There was a balance between the first-person and the third person across the framework. Still, it was not clear to the educators that I treated this framework
as one whole in which some parts I focus on first-person perspectives and others I train students to use third-person perspective.

About AR Statue -Gender, very few educators left comments on it. The comment was on the question, “What specific actions will you put on a continuum from transgressive to conforming to gender roles (x-axis) and from “small” to “great” resistance on the y-axis?” The comment stated that this question would be helpful in the classroom to spark conversation.

**Dr. Brown:** “This is an interesting assignment. I would say that historians often shy away from labeling things in such concrete manners, but I think if properly introduced, this could be a cool project - probably more in class than out of class as it would spark discussion and debate.”

For Assignment 1 (Essay-Analysis-Assignment- Gender), participant responses were divided. Some felt that it was conventional, and others thought that students could benefit from writing their essays using the TELE.

**Dr. Poole:** This strikes me as a rather conventional assignment, so I am curious how it fits with the more novel technologies used in the other activities.

**Dr. Brown:** I’m interested in the idea of “decision” here [ talking about question number four in the assignment] and I wonder if notions of constraint, etc., need to be introduced (for experiences of women, Jews, and more)?

**Dr. Byrnes:** This assignment and questions seem a bit overwhelming. Perhaps asking students to give some short background, but focus in on only ONE of questions 2-5?

**Dr. Heintzman:** I think that, given the concerns about work and student time, this second piece could be one task to cut. Comparing two people of their choice might risk over generalizations. [ She suggested deleting the comparison between two people or two movements of collaboration and resistance because of risks of generalization]
For the question portion of Assignment 1, some educators felt they were overwhelming for the students and suggested they only choose one question instead of answering them all. Moreover, this assignment limited the students to a particular path. They suggested allowing students to have more choice over a broad content area and encouraging independent investigation. There were very few comments on Assignment 2 (Essay-Analysis for AR Exhibit). Most of these comments were outside of the focus of this study, such as how educators can transfer grades and how many comments the students should post to get a grade.

2.b. Linking Research with Practice Design Cycle One

This section aimed to tie research and practice to develop a practical prototype that meets educational goals of the study. I divided this section into concerns which included the problems the educators pointed out. Followed by a research section in which I conducted new research to overcome the issues highlighted by the educators. I ended this section with prototype modifications according to research and practice.

2.b.1. Educators Concerns

Educators had concerns about the amount of work needed for both educators and students to accomplish the framework in two weeks. The notion of recording a video and summarizing the lecture was overwhelming for the course construction. Educators worried that the chatbot would replace them and asked how the recorded lectures would be introduced. This raised a discussion about whether the recorded lecture is automated or recorded by the educators.

Dr. Shurts: This is a lot to expect from a video-- how long will the videos be on average?
The discussion ended with an agreement that the lectures should be video recorded by the educators, which was the initial intention of my design. Another concern was about the length of the lecture, as some educators felt that the lecture could not quickly address all the points included in the framework. The timeframe of the framework was a concern for many participants. Educators

**Dr. Brown:** I am wondering about the amount of out-of-class time for both students and educators. For students, written assignments, reading, and watching a lecture might take more time than they traditionally expect for homework. For educators, recording an online lecture in addition to holding traditional class will likely take more prep time than a typical course prep.

**Dr. Byrnes:** This does indeed seem like a lot to accomplish in only two weeks (for both educator and students). [commenting on Dr. Brown]

They saw that it requires a lot of labor from the educator and students, which will raise students’ anxiety regarding the amount of content they need to learn and the technological skills they need to acquire. Some educators felt that this framework load is heavy for both them and students. Some educators felt that it was overwhelming to prepare a video before class and hold a class.

**Dr. Brown:** the online percentages calculated in the [...] assignments. I'm wondering what control the educator has to assess the content, versus the tool itself?

Other concerns were related to educators' control to assess the assignment versus the chatbot analysis control.
2.b.2. Research

While preparing to Design Cycle Two, I had to do more research regarding the content. In terms of the content, I searched about the types of citizenships. Educators indicated that they wanted students to learn about the different types of citizenship and in particular social citizenship. I searched social citizenship and found out that it was a term introduced by T.H. Marshall in 1949. He divided citizenship into three categories: civil, political, and social citizenship. The civil is concerned with individual freedom such as freedom of speech, property rights, and the right to justice. Political citizenship is concerned with voting and office representation. Social citizenship is shaped as a result of the relationship between the market and the state. He emphasized social citizenship because it enabled citizens with the right of economic welfare and the security to share full social heritage and civilized society standards. In addition to these types, Hinck discussed a different kind of citizenship related to Lucie Aubrac's history: affective citizenship. He described that as the feelings of belonging and togetherness. It is also important to consider when analyzing Lucie Aubrac's story because the feelings of belonging to the principles of the Third republic values kept the resistance together even when they were described as “others” by the Vichy’s state. Kantrowitz calls it the citizenship of the heart. I added this information to the content of the Timeline Activity-Citizenship and Essay-Analysis-Assignment-Citizenship.

2.b.3. Prototype Modifications

All the following paragraphs show the modifications based on the educators’ feedback discussed above. Among the modifications I made to respond to the participants' suggestions was to remove the two-week timeline from the framework. The reason was to address their concern that the workload needed to be done within one week. My idea was to allow the educators to decide the time for each activity. Instead of two weeks, one on control and the second on resistance. They might decide to half a semester on control and the other on resistance. It was left to them and their class. It will allow them to use the website more effectively according to the needs of their courses.

For the timeline activity, some educators suggested that the prototype correct the students' information. So, as shown below, I made the connection between the students’ essay and the timeline change color to red if it contains wrong information. Then it changes back to green when the students correct the information. I added topics to make connection between the categories and the images. This connection will allow students to write about a specific topic and pick images and categories that fit this topic.
Another suggestion was to explain the images to the students and include more information.
about who produced this image and the sources. So, I added a lightbox that pops up when the student clicks on the image. An example is shown below.

**Figure 24 Clickable Images**

**Figure 25 The Lightbox Which Enlarges the Image**
Regarding the Essay-Analysis-Assignment-Citizenship, I changed the percentages because educators were against the idea that the prototype analyzes the text. They felt that the essay would look like a lab report rather than a historical essay that comprises a connection between many sources. They also wanted to have more control over assessing the quality of the paper rather than a machine. I changed the percentages to highlighters, allowing students to highlight their own text to identify historical contextualization, including political, economic, and social-cultural norms. The highlighters also enable students to identify text markers. The highlighters can overlap to show connections between sources. I also added a heatmap as an indicator for the students to know what they have analyzed and what they ignored. For example, the heatmap below shows the dominated aspects. For example, in Figure 26 below, the student paid more attention to political contextualization than other aspects.

Regarding Lucie Aubrac Chatbot-Citizenship, there were no changes in the activity. The educators' concerns were how Barbie’s trial would be presented, which is worth investigating. However, this is beyond the scope of this study. Therefore, there was no change in the structure of this activity for Design Cycle Two.

The majority of participants had concerns about the application of the AR Statue -Citizenship in classrooms. The first concern was because it is overwhelming for the educators and the students. For two reasons, first, it needs technical help from the educators to manage the groups while working with the technology. Second, the students will not know what to do or how to start the conversation among the themes. Therefore, I thought of simplifying the process to make it easier for the students, then there will be minimal problems for the educators.

The first change was providing a word cloud exercise to think about the topic from different themes. Students, in this case, will discuss what words represent Lucie Aubrac at a specific time and why. After that, they publish their word cloud, writing a paragraph about why they chose these words on the AR Statue, as shown below. The word cloud was a suggestion from some educators in the Consultation Study.
Figure 27 AR Statue - Citizenship

For Essay-Analysis for AR Exhibit - Citizenship, I changed the essay assignment to include the highlighters and a heatmap. So, instead of a prototype used to analyze the text students. I changed that to allow students to highlight the text to identify the document's political, economic, and social context.

Figure 28 Essay-Analysis for AR Exhibit - Citizenship
The highlighters can overlap because these categories are interrelated. I also added a visual heatmap to enable students to understand which aspects influenced the historical context while writing. The students will upload their work and view it in AR Exhibit, same in Design Cycle One.

2.c. Design Cycle Two

Design Cycle Two was set to show the citizenship lesson plan. After showing the prototype, we discussed the design and how to include the citizenship lesson plan into the framework. Then, I distributed the survey asking the participants to express their views and feedback about the prototype and how these technologies achieve historical empathy to collect more information about the content and the activities.

2.c.1. The Prototype Feedback

I started by showing the new modifications added to the prototype. In the first part of the third workshop, I focused on the citizenship lesson plan which was developed in the Consultation Study. Before showing the prototype, Dr. Grant brought up a discussion about the flipped classroom and its purpose. She referred to blended classrooms where the lecture is given in the classroom in cooperation with technology to enhance the learning experience instead of having a flipped classroom.

Dr. Grant: I was wondering why there wasn't an option for the like [referring to the lecture] to just be given in class.

There was kind of a silent agreement with Dr. Grant’s view among the participants.
**Dr. Shurts:** I do understand what you're trying to do with it, that you want to kind of remove the anxiety about talking about it, but some anxiety is good, you know, maybe some of that emotional stress.

Dr. Shurts supported Dr. Grant by adding that Interactions between students and instructors in the classroom were imperative even if this interaction would increase anxiety.

Modifications to the timeline included adding topics and allowing the prototype to underline the students’ incorrect information in their historical writing. I also allowed students to suggest a topic so that they could investigate new areas as well. I made some more modifications, such as translating the French sentences on the images to English and adding basic information about the posters, including when they were created and by whom.

Then I stopped to ask about the maps. I wanted to know what the educators expected the students to learn from the maps. The first response from the educators was that the students should get a sense of occupation geography which divided France into two zones; occupied under the Nazi’s authority and the unoccupied zone.

**Dr. Brown:** learning to read a map and understand the utility of a map is in itself a lesson. It takes a lot of conversations about the actual geography of Paris […] then I would have to map on to that the geography of the occupation. Believing that they would be capable of interpreting on their own, the human experience of an interaction with just France?? Check he said French, I bet? You have to be sure you don’t have transcription errors in these quotes. geography, if that makes sense because it's just not a knowledge base that they have.

**Dr. Heintzman:** I have a further thought on the maps, which is similar to the statement about the timeline. I would make a very clear statement about what it is they're supposed to be looking for, based on the fact that they probably don't know how to work with maps as objects at all. Like the visual interpretation of maps isn't something I got to until Grad school, so I would sort of, say, pick one don't feel overwhelmed by having to look at every single one, just choose one, and give them a sense of a task of like how to look at it.
**Dr. Shurts:** I would definitely use one of the ones that very clearly shows differences between Vichy and occupied [zones] I think that's something that's really essential to get out of this particular exercise as well, is to see when and where those lines change, and what that means for people living in both sets that's it.

**Dr. Grant:** I like the idea of having the one map, together with maybe like photos [...] of the border between those two zones and look like for example if you were living on the board or in a particular zone that might be good.

Another thought was to use only one map, show the differences between Vichy and occupied zones, and then give students specific tasks to understand what they are looking for on this map.

Essay-Analysis-Assignment- Citizenship sparked a conversation about the categories on the right such as the adjectives tracing. Some comments below

**Dr. Poole:** so, they will write a short essay sort of answering a question right and then who does the highlighting the student does the highlighting? [I answered yes] the student highlights their own writing [...] see yeah okay that's interesting I like that. The question that there'll be answering is it completely open ended? [I answered yes, and I provided the questions in the Google document to view] that's literally what you would ask the students to [analyze] historical paradox from a third-person perspective? [I answered yes].

**Dr. Heintzman:** Thinking of the highlighting as a kind of like trend super transferable skill in writing [...] I do wonder in their highlighting um if they need sort of a larger sense of guidance of what are sort of like standard errors That being said, if you really want to drive home the issue of empathy above issues or sort of general writing style I would understand the decision to stay with things like horrible and difficult [...] I have taught at very fancy universities and not all of my students really understand what an adjective is.

**Dr. Brown:** I think that it's cool to see that the students can be highlighting their own work and sort of being forced to immediately have some like introspection about it [...] I still find the categorization of information as not really being the thing I've necessarily [asked] students to do, and so, something that I asked students to do, but never to highlight is: What is your evidence and then, how are you analyzing and proving that your evidence proves your thesis, and [...] I would probably be interested [...] to color code evidence and analysis [...] I don't think that it would be useful to me to say, do you have these three things in your paper, but rather do you have these two things evidence and analysis.
**Dr. Shurts:** I’m [willing to] second Megan's point again, which is, I find that more useful than the other categories, so I will actually make that one of the defaults that you know if the Professor wants to get rid of it that's fine.

The comments about the highlighters included suggestions for rules for the students to guide them while highlighting. Moreover, the categorization of political, economic, and social was problematic to the educators. This is expected as most educators teach using the disciplinary approach and far from the sociocultural approach. The majority of the educators agreed with Dr. Heintzman's point that not all students would understand the adjectives checkmark as they might not understand what the word adjective means. Other educators, such as Dr. Brown, felt that this feature would not help in learning history. She would not ask students to highlight political, economic, or social aspects. She would ask them to highlight their thesis statement, evidence, and analysis.

For the AR Statue activity, I explained the word cloud and how it will help students spark conversation about the topic from different perspectives. Then I asked the educators for feedback on adding a word cloud and organizing the questions into groups. Their comments included:

**Dr. Shurts:** I kind of like the idea of word cloud where you're asking students to kind of think about prioritizing how they view this person or how this person is viewed themselves, you know what sort of rises to the top. I think I would definitely ask them to associate it with some source like some primary sources so then they're not [adding] their own personal opinion about Lucie Aubrac. Then I would I really think it's a good idea to them as the second part of it, make them explain why […] why do you think this word is particularly representative of this person's life.

**Dr. Heintzman:** “I would imagine when I have students work with word clouds, I would have a word cloud pre-curated from a source that they can see and again, this is about thinking about how much time the assignment is taking. My impulse would be to pre-curate those and then ask students to look at the primary source and think about what they're doing.”
**Dr. Byrnes:** I [will] say maybe picking up on what Kate was just saying, I think even preparing a set of words [to] be like hey choose from these words you know so it's not like they're just coming out with them and then actually picking up as well, the idea of like Okay, can you connect these two sources like having something I don't know how this works technologically but like can you have a thing, where you like either hover over it, or something where […] they've had the option to be like [a] short quotation from a primary source [and] connecting evidence? If that makes sense, like if there's a way to make it that interactive so they can see like not just okay here's my explanation for why it's important but then [they] can also hover over it and be like here's where she [means Lucie Aubrac] says this.”

Although the educators liked the word cloud idea, they found it difficult to apply within a limited time of the classroom. The conversation shifted after Dr. Brown comment:

**Dr. Brown:** “I’m envisioning that this [framework is applied in] a class of mine, that means […] the word cloud alone with the way that everybody is describing [it], would be a full class. Because if I would introduce it then they would be with their group, and then there would be some sort of share back to the class. I’m worried that something will be sacrificed whether it's the professor being able to guide or the students really being able to have some sorts of reactions from the professor and their peers outside of their group conversation. Realistically, like too heavy of a volume of outside work that they're being asked to do, especially if there's no time in class to process what is like quite a bit looking much, much more written homework than I would assign a student in a week.”

She felt that it was hard to follow up with this activity in the class's limited time, which would lead to a heavy load for both professors and students, and that the activity might end without achieving its goal.

**Dr. Brown:** “I mean because […] the point of the exercise is not to me that they end up with a word cloud [but] they've had like really dynamic conversations about all of these ideas and so, even if they end up [with] just […] two words like that could have potentially been an incredibly fruitful conversation.”

**Dr. Byrnes:** I just want to sort of jump in and agree that word cloud exercise taking a full week of itself, to some extent right to give them time to reflect and to work and to talk to each other.
She also had concerns about how the students will submit the activity and how it will be graded. She was also concerned with the practicality of this activity. She felt that the conversations and thoughts behind the choice of words were more significant than creating the word cloud on its own. Giving students the time to present their evidence and have valuable discussions about the choice of words would take potentially more time in the classroom than an instructor could give. Her comments opened a discussion among educators about the practical application of this activity in classrooms.

Dr. Shurts suggested implementing this into the classroom successfully. These activities could be limited to a final project for the students to complete in small steps. It would be most beneficial if the professor could choose this project.

**Dr. Shurts:** Can I offer suggestions for how you present that, and this may not be what you want to do, because it is going to cut back on the amount of activity that the students are doing [and] the amount of work. Instead of making them all [means the activities] maybe let each one of these things be an option as a final product. You know where it's the museum or it's the build the Bot or it's the word cloud and the Professor can choose you know; this is the activity that we're going to do we're going to learn all of these things during class and then you know as that final week we're going to do this. So, they wouldn't be doing all of it, but the instructor would be choosing, or you know, let the students choose, but that might be a little more complicated.

**Dr. Poole:** and if [...] the class together is making a website right or an app or whatever that's going to introduce the topic of the Lucie Aubrac to a general audience, then I think with that end goal in sight, what the purpose of the timeline is and what the purpose of the bot and so forth, would make would make more sense to me because I would know what is the context in which we're creating this.

**Dr. Byrnes:** choose one of these and here's the way that each one of these is going to accomplish this set of goals.
Dr. Poole and Dr. Byrnes backed up Dr. Shurts’ suggestion by stating that this would be useful for all the class to work toward one project and beneficial for the educators to understand how these activities create the final project. I then moved to the last part of the prototype, where students collaborate in building the AR exhibit in which students can view the virtual web gallery in either 3D virtual web, AR, or VR.

**Dr. Marvin:** I think this [meaning the AR exhibit] has the most potential, I think, because you can see especially actually in an online and asynchronous classroom you can see a way in which students are contributing together and then, if, like Megan was saying, need to build in more time. But if they're able to walk through this kind of gallery I think it's actually much more effective than the statue AR. Yeah, I think it has a lot of potential.

Dr. Marvin encouraged the potential of the AR exhibit activity and saw that it is more effective than other activities because it can be applied in traditional and online classes.

**2.c.2. The Feedback on The Content of Lucie Aubrac**

I prepared another Google document to contain the content for all the activities (Appendix B). The educators felt very confused about how this content is linked to the activities. Although I used Lucie Aubrac’s narrative, which they read before, and the citizenship lesson plan developed in the Consultation Study and more information about citizenship, most of the educators had many comments on the application of this content. They saw that the questions of the activities could only be used as a final assessment paper because it requires a lot of research from the students. The educators were confused because the prototype is low fidelity which does not include the content. The content was written in an outside Google document which was hard for them to visualize who the content would fit into these activities. They wanted to see a prototype that included all the content inside it.
The content for the timeline activity (Appendix B, Timeline Activity-Citizenship) had the most significant discussion among the educators. They felt that the activity's content and structure needed to be modified because they were not in harmony. Educators were also confused about the anticipated length or the final product.

**Dr. Poole:** So, I have a question here what is the actual product of this [timeline?] activity is it a paragraph?

**Dr. Byrnes:** I think I’m having sort of trouble looking at this prompt and getting to this activity, I think that's maybe I don't know Ben was in the same place but like [...] I’m having trouble seeing how [...] what I’m seeing on your screen connects to what I’m sort of reading in this document and how they're going to get from this prompt to that product.

**Dr. Poole:** Right [...] what will they do? They’ll write answers to the questions here? [...] I’m having trouble sort of visualizing like how this all kind of comes together.

**Dr. Byrnes:** Even if they're only answering one [question], this feels like something setting them up to write like a fairly lengthy paper. There’s just so much here in this preparation for the activity that [...] again, it just it feels sort of mismatched with what the actual activity is.

I explained that the timeline consists of HTML pages that can hold a lengthy paper. However, this led to another discussion about the effectiveness of long paper essays.

**Brown:** So, it's just a lot, I think that one of the issues [...] is to differentiate between where the Professor before the classes [...] chooses what they want to do and where you're giving students choice because telling a student, you know you could write as much as you want [is] usually like not a great thing.

The lengthy paper alone was a problem for some educators as they saw that giving the students the control to write as much as they want will end in a long article, which is a burden on the professors. Other educators did not understand how it works and felt that the activity was heavy.
for students and required a lot of time to understand. Dr. Brown continued providing suggestions for working on propaganda images.

**Brown:** “for example, in looking at […] the propaganda image, […] maybe they could have like three prompts questions and they can choose one and write 100 words or 200 words, and so the prompt question for this one might be imagine you are either a French woman or a Frenchman, how would you feel looking at this poster and then you could say, or you could choose the map and say imagine you lived in in Paris and believed, you had to flee the Nazis how would you feel or you know what experiences may you have had fleeing the capital, and I think it needs to be, I think that the question needs to guide them to use an image, whether it's a map or a poster.”

One of the suggestions is to have three prompts linked to a poster that students can choose from and write 100 -200 words.

Another suggestion by Dr. Poole was to focus the activity on one goal at a time. This will allow students to think deeply about the activity and not to work on the surface.

**Dr. Poole:** what I like about these activities is that you're inviting students into how to create […] 21st century interactive media versions of history right rather than the old-fashioned book reviews and things that I usually assign. But I wonder if making that a little bit clearer as to what the overall direction or purpose of these activities are [might be useful]. I think it might be better to ask them to sort of do one thing at a time […] I think sort of streamlining the activity as Megan said, [with] more guided kind of focus […] here’s exactly what you need to do.

**Dr. Byrnes:** And this may be, I think, to apply to some of the other ones […] what we were saying about the word cloud […] sort of like walking them [means the students] through a couple of steps like okay pick an image okay now pick [that].

Also, he stated that the activity should have instructions to guide the students to what exactly they should do step by step. Dr. Grant supported the other educators’ ideas saying that the content requires high-level thinking while the timeline activity requires low-level of thinking.
**Dr. Grant:** I believe that the reason [why it] is overwhelming, as I think you're going straight to some very higher-level kind of thinking activities [...] before the students have got a chance to just get familiar with some really basic things like oh that was Vichy France and occupied France. On the other hand, in the framework you've got I, I wonder whether it would be good to focus this particular activity on something much lower level [for] just kind of some basic understanding.

Dr. Grant brought up a discussion again about the time frame in which the educators and the students have to do all these activities. She brought back discussion about the workload and the limited time for both educators and students. Even when I have stated that this the framework can be adjusted according to the educators’ class, the educators felt that the prototype should clearly give more options for the period of time or should not be linked to a specific time and left for the educators to assign the suitable time which can extend to a whole class unit. The other educators seem to agree again with Dr. Grant’s point that the time frame needs to be more flexible.

**Dr. Grant:** Whether it's taking two weeks or where they [means students] you know take more [time] I would save this stuff for the end of the unit.

Concerning the assignment (Appendix B, Essay-Analysis-Assignment-Citizenship), Dr. Poole suggested replacing the idea that students highlight their own work by highlighting materials.

**Dr. Poole:** But if they're [means students] highlighting something written [...] from Lucie Aubrac’s memoir [...] saying here's where she's talking about politics and here's where she's talking about gender and here's how they're overlapping, that might be a really useful way to use that kind of technology, something I would definitely consider.
Dr. Byrnes: And I would say right if they do that on a primary source and then at some point, you ask them to do it on something they've written right that's again a way of like building that skill set.

For instance, the prototype should allow the students to highlight parts from Lucie Aubrac’s memoir and identify political, economic, or social.

After the discussion, there was a need for substantial changes in the prototype. The discussion also showed that some educators value keeping the political, economic, and social categories because it helps in historical contextualization.

2.c.3. The Analysis of The Content and Design Elements Survey

The content survey contained seven questions. Only four of the participants completed the survey. The questions focused on what propaganda posters the educators would like to use to teach about gender, citizenship, and resistance. Moreover, the survey asked the educators to suggest poster images and questions to guide students to understand France under occupation. They filled the survey for the gender and citizenship themes. I also asked the educators to write 250 words describing what they want the students to learn about Vichy’s concerning gender and citizenship.

Regarding the propaganda images, educators provided images from different sources. Some of these sources were academic sources, and others were from non-academic websites. For the gender theme, the educators wanted students to learn many concepts. Their responses/thoughts include the following:

I would emphasize how the propaganda uses family and family values as well as the peace/stability/economic stability that accepting occupation would provide-- the appeal is to women as mothers and wives. I would give them a 400-word excerpt from the book by
Francine Muel-Dreyfus entitled *Vichy and the Eternal Feminine* 366 and a 400-word excerpt from Miranda Pollard's *Reign of Virtue: Mobilizing Gender in Vichy France* 367 then ask them to relate that text to the images.

I would focus on "horizontal collaboration" and images of young women carousing with German officials; discuss the STO [refers to mandatory work conscription of men during Occupation] and how that impacted men and the families they potentially left behind; and Vichy's celebration of Mother's Day.

I would want to emphasize how Vichy used images of women as victims (Joan of Arc, mothers, and wives of French soldiers, etc.) to emphasize the peril that the Vichy regime was supposedly saving France from. I would also discuss what kind of culture and society Vichy envisioned and associated with "Frenchness", and what role it envisioned for women in particular. We see extremely traditional images of women primarily as wives and mothers, or even as peasants.

Introduce the [concepts of] “National Revolution” prototype; gender, and family [which] are crucial pillars [for] traditional gender roles (in the domestic sphere, in labor, in civic participation, even in collaboration with Germany)

Motherhood and childhood [are] celebrated. Posters suggest the most important duty of patriotic French women is to produce more French citizens (especially male ones.)

Close association between athleticism, health, anti-urbanism, masculinity, agriculture, [and] artisanal/traditional trades (linked to ideas about social and economic renewal, especially in the particularly rural territory that is Vichy-controlled France.)

Idealization of peasant life, artisan trades at home, honor in manual labor (even when it comes to collaboration with the Germans: poster manages to code this as patriotic exportation of "Frenchness" abroad: the image has Paris--not Germany--in the background).

New role models for youth: Joan of Arc, saintly female figure representative of Catholic piety, French national identity, sacrifice, honor, and, conveniently, resistance to the English. Joan is a young woman but the active part of “saving France” is gendered male in these posters. The figures invited to follow in Joan’s footsteps and “revive in our hearts the spirit of Joan, who at 18, saved France” are young men, scouts, and scholars. Young women are not featured. Young women, it is inferred from the other images, can best help restore France by remaining dutiful wives and mothers in the home.

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The survey was anonymous; therefore, the comments above do not include the name of the educators. For the gender theme, the concepts focused on family values, motherhood, occupation stability, collaboration, the meaning of Frenchness and patriotism, and the usage of women from French history such as Joan of Arc, the National Revolution, and the use of masculine images, especially in rural areas. For the citizenship theme, educators focused on France’s internal and external relations. Some comments included:

Need to emphasize that Vichy propaganda promoted the idea that submission was patriotic and good citizenship for the following reasons: (1) Nazism was the enemy of Soviet communism (2) England had been France's traditional enemy for centuries (3) National Revolution values were associated with French traditional family values (4) Benefits of supporting Vichy (employment, supplies, etc.) for French families and economic/political stability (5) Resistance is presented as terrorism, criminal behavior, and action by foreign communists.

For women, motherhood, duty, sacrifice; for men, labor, obedience, defense of Vichy. For both, expectation of not being "decadent" and of being "healthy" members of society.

I would want to emphasize how Vichy was able to draw on long held French beliefs and stereotypes, including anti-Semitism, Anglophobia, and valorization of peasants as "true" French people. On the other hand, I would point out the ways that French democratic traditions of citizenship were being subverted or abandoned. Finally, I would point out the ways that patriotism and xenophobia were manipulated in order to justify some seemingly un-patriotic actions, like subordination to a dictator and working for Germany.

"Liberté, égalité, fraternité" gives way to "travail, famille, patrie": New Heroes, New Holidays.

One way to understand the political project attempted by the Vichy state (resting on a denial of republicanism and democracy, ultranationalism, hierarchy, tradition, Catholicism, and the cult of personality surrounding the figure of the Maréchal Pétain) is to view the propaganda produced by the state in France’s empire. In those colonies that proclaimed fealty to Vichy, as historians such as Eric Jennings have shown, officials enthusiastically disseminated National Revolution values through prototypes, ceremonies, and propaganda. National “renewal,” driven by honoring tradition, authority, and glories of the past, is a major theme. Most prominent is the cult of personality of Pétain himself. Under the watchful eye of an authoritarian but well-meaning and grandfatherly Maréchal Pétain, France continues on the
“right path” thanks to the steady hand of the “Hero of Verdun,” as seen in two North African images, one depicted in the style of a Persian miniature. In the second, Pétain is depicted watching over the empire just as he watches over metropolitan France. In that poster, photographic editing is used to render the Marshall a semi-divine paternal figure—both protector and overseer of colonial subject populations, hovering over a nondescript North African village scene. Titles are rendered in Arabic.

Here we have a reminder of collaboration not only with Germany but with the other Axis power, Japan, and French Indochina (Vietnam), dominated by Vichy loyalists. Schoolgirls representing the three regions hold hands; the girl representing France is dressed in a similar “Western” fashion to the Japanese school girl, who is not “otherized” or caricatured as were, for example, Jews in Vichy propaganda. Collaboration as a route to peace, stability, and the maintenance of hierarchy and order.

New holidays introduced to reinforce the values of the new regime and new understandings of French citizenship. May 1, associated with socialism, the Popular Front, and the Third Republic becomes a celebration of reconciliation and national unity; new “Fete du Travail” introduced. Bastille Day (July 14), associated with the Third Republic, democracy, and republicanism, was replaced by celebrations on the Feast Day of Saint Joan of Arc (May 30). National heroes from France’s distant past hint toward the renewed emphasis on Catholicism and conservatism.

Educators also emphasized the role of the internal relations of France in the war. Moreover, the importance of some concepts such as patriotism, good citizenship, duty sacrifice, collaboration versus resistance, and Vichy’s strategies for enforcing National revolution values. After collecting the content data, I made some modifications to the prototype design and the educational goals. It is evident that the prototype needed substantial changes. I have decided to focus only on the gender theme. Therefore, the prototype focused on achieving the educational goals for the gender theme, which are as a reminder; (1) how the prototype show what sort of boundaries were created by gender roles in this period; (2) how the prototype teaches about historical agency, empathy, and identities; (3) how the prototype allows students to evaluate how
one’s ability to resist and have their resistance recognized is shaped by positionality, including gendered positionality.

Regarding the activities, the survey included a question about the expected length for a recorded lecture. Approximately fifty percent of the educators agreed that the recorded lecture length should be between 15-20 mins. The other half was divided equally between 30-40 mins and 20-30 mins. As mentioned by the educators, the lecture length should match students’ expectations from the class, or they will feel overwhelmed and have to give more time and effort.

![Figure 29 Recorded Video Length](image)

In regard to how many questions students should answer by activity or assignment, half of the participants agreed that it should be only one question. This result is consistent with Dr. Byrnes’ comment on Design Cycle One documents. The other half was differentiated between quick content or fact questions and complex questions which require analysis. Overall, the average was three to five lower-level questions and only one for higher-level analysis.
Figure 30 Number of Questions According to The Activity Level

I also asked about the length of the essay expected from the students. This would help design the activities. The opinions surrounding this question varied, as some educators favored small essays from one to three pages for weekly assignments or ten to fifteen for final assignments. Others preferred three to five pages for weekly assignments.

For a reflective piece to get them thinking about material, 1-page is usually about right; if it's a longer evaluative piece, probably 3-5 pages (but final papers in most of my class are more like 10-15).

This depends on the type of assignment-- is it a formal summative assignment for the end of a course or unit? Then 4-5 pages for regular, 7-10 for honors. Is it a weekly assessment or essay exam question? Then 1-3 pages.

Another question concerned about assignment one. I asked educators about the usefulness of the highlighters and whether to keep them or not. There were distinctive opinions among the educators. Some liked the highlighters the way they are, and others suggested focusing on highlighting the evidence, analysis, and thesis more than the historical context's political, social, and economic aspects.
One reason included that highlighting the evidence, thesis, and analysis will enable students to understand and showcase to their professor how they understood the lecture or the materials.

This would be information that they get via lecture and readings and that they would showcase to their professor via their choice of evidence and analysis.

I love the highlighting system personally (student self-highlight). My preference would be that the student simply highlight all info they see as necessary "context" (you could remind them of pol., econ., social factors, but the proportion of each is less important than the contextualization itself).

Another reason was the importance of contextualization more than identifying or separating the aspects into political, economic, or social. Therefore, even if these aspects are still important, the way the students use them is crucial. This shows the difference between the sociocultural approach and the disciplinary approach. The importance of identifying the political, economic, and social aspects is to allow students to understand how these factors interact and influence the historical figure. The design of the highlighters did not help in showing this purpose.
The AR Statue and AR Exhibit activities came on top of other activities for engaging students. Five of the participants favored them by 80 percent, followed by the timeline activity with 60 percent. However, the Lucie Aubrac bot came in the fourth level with 40 percent.

**Figure 32 Engaging Activities**

The AR Statue and AR Exhibition also came on the top with 80 percent when I asked about which activities would promote civic actions. The Lucie Aubrac bot went in the third level as well, with 60 percent.

**Figure 33 Activities for Civic Actions**
The timeline, interaction with the chatbot, and building connection activities were the top three with 80 percent historical contextualization knowledge.

Figure 34 Activities Which Improve Historical Contextualization

The AR Exhibit and the AR Statue came on the top again with 80 percent for the activities that would increase student understanding of another’s prior lived experience, principles, positions, attitudes, and beliefs. On the third level was the Lucie Aubrac chatbot with 60 percent.

Figure 35 Activities for Perspective Taking
The AR statue, AR exhibition, and Lucie Aubrac chatbot were on the top with 60 percent over the other activities in regard to the question: “Which activities or assignments will let students consider how historical figures’ lived experiences, situations, or actions may have been influenced by their affective response based on a connection made to one’s similar yet different life experiences?”

Figure 36 Transformative Affective Activities

Lucie Aubrac’s chatbot came on the top with 80 percent to evoke empathy among students and enable students to put themselves in another person’s shoes. The AR Statue, AR Exhibit, and
working with the chatbot with 60 percent came second.

On a scale of one to five, while one is very satisfied and five is very dissatisfied, I asked the educators to describe their satisfaction with the prototype so far. The results included that 50 percent of the educators were neutral, 25% were strongly satisfied, and 25% were satisfied.
On a scale of one to five, while one strongly agrees and five disagree, I asked the educators if they would use this prototype in the classroom. About 40 percent of the educators strongly agreed, 40% were neutral, and 20% disagree.

Educators’ opinions varied on the word cloud activity and whether it will improve the students' understanding of the historical contextualization and enable students to feel empathy. The responses were equally split between strongly disagree with 25 percent and agree.
The last question enabled the educators to write their opinions about whether they think something is missing that needed to be added to the prototype, as shown below.

You could also (though this would be a lot of work on your part) offer scaled versions of each assignment (a version that could realistically be done in 20 minutes in class, a 1-hour version that might be asynchronous and individual, a version that works as a major class assignment [group or individual] that would take a few hours of preparation, etc.).

These activities/assignments should be provided as options for final assessment projects after the unit rather than expecting all of them to be completed in two weeks by every student.

I would not want to add from the prototype but rather to subtract. I fear this will create too much work for both the instructor and the students. In particular, I am uncomfortable with the bot feature and other "teachable" AI portions. What I think is the great strength is that the prototype builds in very fun digital assignments that could be really useful, like the timeline and the exhibition.

If anything, this prototype has too many parts rather than too few. I think reducing some of the parts will be just as effective in conveying historical empathy and in engaging students. The bot at the beginning is a terrific idea; the AR exhibit is my personal favorite. What I love most about this prototype is its ability to be adapted (with minimal effort) to all modes of course delivery (in-person, online asynchronous, online synchronous).

At this point, I'm not sure. I think maybe a final assignment that brings the whole class together to reflect will be beneficial.
I really love the bot and statue activities. The written assignments through the portal make me nervous—I worry about how well the bot can elicit thoughtful responses and real connections (v counting coded elements, which seems formulaic/prescriptive and far form how I approach historical pedagogy). I think a reflective piece at the end is a good idea but would prefer to do it without the website bot guiding it. I guess this isn't adding, but rather subtracting.

I think making the workload more of a final project option rather than a series of assignments that all students will complete in a short time period will help them get more out of the material and produce more thoughtful, effective final analyses in these assignments.

Activities where the prof can provide instant, simple feedback.

I think right now, the module is underselling the value of "sources" and specific instructor behaviors. For example, when I think of what will increase a student’s awareness of historical context, I really don't think of the "activities": I think of the importance of the lecture and the primary sources. I'm not really sure right now how the assignment provokes civil engagement, that being said: when we think about the values of teaching not every lesson can do everything that we hope our students get from the course as a whole. I think it is okay to have a narrow focus with Aubrac and to have a shorter list of goals (which is still pretty long): engage thoughtfully with difficult material, learn some French history, develop their writing skills and critical thinking skills and source analysis skills, and practice "putting themselves" in historical actors' shoes while recognizing that they aren't actually the same person. I think this is already a lot to ask.

The comments showed that the prototype needs a lot of improvements. The educators focused mainly on minimizing the activities, scaffolding, and increasing the value of the lecture and the materials for a better learning experience.

2.d. Linking Research and Practice Design Cycle Two

As in Design cycle One, I used this section to organize the educators' concerns, conduct research, and show the prototype modifications.
2.d.1. Educators Concerns

I started the design process of the prototype for flipped classrooms. Flipped classrooms lower the anxiety and allow students to learn and investigate the difficult topic independently, giving them time to process the information and protect the classroom from the offended immediate response. There were many challenges among educators to follow with the idea of the flipped classroom. Recording a video and holding a summary of the lecture in the class represented a load of work within a limited time for them. The out-class workload for the students and in-class observations while working with the technology was also challenging. Students need time to investigate and research on the one hand, and on the other, learn how to incorporate their answers into the TELE, which is a challenge. Not all students are technologically savvy enough to understand the technology they are using from the first time. Therefore, lower-level questions are essential to guide students through the materials while learning the content and the technology simultaneously. This was applied in the Institutional affect and maps/places sections in the historical contextualization. Educators also wanted and stressed the importance of the face-to-face lecture with the students many times. Educators felt that traditional classrooms are more suitable for difficult history learning, and they view technology as a mediated instrument that supports their lectures.

Another problem concerns the content of the prototype. Educators wanted the content to allow to investigate broad questions, and the prototype would not qualify for a lengthy paper that burdens them while grading. They also wanted to see a complete prototype with all the materials, sources, and questions ready to go to the classroom. Therefore, I moved to high fidelity
prototype so that they could see all the content. I also decided to focus the design on only the gender theme because of the limited time of the study.

2.2 Research
To overcome the above concerns, I researched blending learning to move away from flipped classrooms. When I designed the flipped classroom, the class time was mainly used for doing activities. The role of the educators was to oversee the students while working in groups. There were critiques about the possibility of monitoring students in class while working in groups. Therefore, I moved to online discussion boards. Dr. Grants also recommended discussion boards in the Consultation Study because they represent a safe place for students to talk about difficult topics with their peers without being subject to danger. That is because some students come from authoritarian regimes. Discussion boards are online tools used for increasing engagement and dynamic conversations.368

Dr. Pool suggested that the students use highlighters to identify text markers and clues on the materials and sources reading for the class. Adopting this behavior would be a good reading practice for their learning process. This is also more useful than the usage of NLP to analyze the text into percentages. Therefore, I did more research on the highlighters. Studies on the highlighters and their effectiveness in raising the students’ performance varied. While some studies found that highlighters only help students when the text is difficult 369 or when there is a

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guide for using them because students can excessively use them. Other scholars found it a valuable tool because it helps students identify specific text, unpack the clues, and think about the text they highlighted.\(^{370}\) Another study also indicated that reading and memory are better when information is highlighted. Readers can recall important details even with less highlighted text.\(^{371}\) Moreover, highlighters are effective when they are designed to be used wisely.\(^{372}\)

Moreover, highlighters are used in the educators’ two software which the educators recommended: Hypothesis.is\(^{373}\) and Perusall.\(^{374}\) From a practical perspective, educators talked about these educational tools and how they engage students in the classroom. I integrated the highlighters in the prototype modifications. Highlighters are usually accompanied with notes section in which the students have full autonomy on the text they highlighted. They can quickly go back to it and review it. Therefore, there was a need for a notes tab. Both of these strategies help in memory retention while learning.\(^{375}\)

2.d.3. Prototype Modifications

I moved to blended learning; therefore, the new prototype does not include the video lectures as they will be conducted in the class. I also prepared a full version of the prototype so the educators could visualize the content structure inside the prototype. In the upcoming paragraphs,

\(^{371}\) Yeari, Oudega, and van den Broek, “The Effect of Highlighting on Processing and Memory of Central and Peripheral Text Information,” 1-19.”
\(^{374}\) Perusall, “Perusall.”
I will use the words website and prototype as synonym for each other because the final design of the prototype is a website.

I built a homepage to explain the different parts of the framework for the students. Then I added an inner page for each theme to guide the students through the theme's structure. The homepage contained a banner designed from the educators' images in the Design Cycle Two Content Survey. The goal was to familiarize students with the propaganda posters from this era to immerse them in the historical context. That is because images have powerful affordances in sharing the non-verbal experiences of the people of the past.376

![Final Prototype Home Banner](image)

*Figure 42 Final Prototype Home Banner*

The second section contains a definition of difficult history. This section defined difficult history to enable students to understand the content they will analyze.

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The third section introduces a Personalized Chatbot. Students can personalize their chatbot avatars. In this section, students will get familiar with their avatar, which they will use later in writing their papers. The chatbot was encouraged by the educators as a method to lower anxiety, same as research. According to Design Cycle Two Survey, forty percent of the educators scored that the chatbot will engage students and promote civic actions. In comparison, sixty percent voted that it will also improve students’ historical contextualization.

In the fourth section, I explained thematic learning to students to give them an idea about each theme, the objectives, and what to expect. This will help in removing the ambiguity about the website and familiarize the students with learning across themes.

Next is the project section, which contains the three projects the educators found promising for teaching difficult history: Lucie Aubrac Chatbot, AR exhibit, and AR statue in Design Cycle.
Two survey. For the limited time of this study, I focused on the AR exhibit. As seen in Design Cycle Two survey, AR projects were always on the top when it comes to increasing historical contextualization, engagement, civic actions, and students' understanding of prior lived experiences, which leads to historical empathy. The AR Exhibit will allow students to critically analyze the topic from an oral history perspective and select the images for the public audience.

![Projects](image)

*Figure 46 Introduction to the Final Projects*

Then the last section is a contact form for any technical problems the students might encounter.
The gender-theme section, the only one I have built out entirely, comprises four units: Historical Contextualization, Building Connections, Difficult History (DH) Questions, and AR exhibit. It is worth noting that the DH abbreviation is commonly used in the history field to describe digital history. In this study, I will use it to describe difficult history section because it simplifies the section's name. I divided the theme into these four sections to organize how students acquire their knowledge. I was trying to find solutions for two problems: first, the educators are more familiar with traditional classrooms in which they lecture and evoke discussion more than flipped classrooms in which they will have to supervise activities. The problem here was the immediate exposure to new knowledge in the class, which causes problems because of the students’ immediate responses and resistance to new knowledge. As Dr. Byrnes said before, these responses are contagion and affect all the class causing empathetic avoidance. The second problem was that educators are not also familiar with teaching through the sociocultural approach. They wanted to have a place in the technology in which they practice
their disciplinary approach, which requires students to engage with evidence and analyze scientifically.

I wanted to create a blended learning experience that organizes students’ learning and interaction with their peers to lower resistance to new knowledge. Moreover, I wanted to improve the essay assignment to be more analytical to comply with the educators' disciplinary learning approach. Therefore, I started by organizing the process of knowledge in structure. Managing social interaction was my priority in building these sections. To help students learn new knowledge, lower their anxiety, and increase their empathetic motives through enjoyment. I thought of processing knowledge on multiple levels because it will be extremely useful.378 Students learn first by analyzing the materials and observing their peers' views about the topic in the historical contextualization section, the first level of the framework. This aligns with Piaget’s cognitive constructivism379, which allows students to develop their understandings on their own. It is also helpful for confronting their misconceptions before getting into social interaction.

As mentioned before, structuring an assignment with social interaction before students learn anything about the topic might lead students to resist the new knowledge.380 The second level of knowledge development is working in groups; I called this level “Building connections.” In this section, students from different themes will discuss what they learned from the historical contextualization section. This small interaction will help in emphasizing knowledge through social constructivism.381 Social interaction here would be helpful to discuss and use their anxiety

379 Piaget, To Understand Is to Invent, 1-75.
381 Vygotsky, Mind in Society, 50-150.
for better critical thinking. The third level is a whole class discussion, called “DH Questions.” The students write a short essay between one to three pages in which students analyze a topic in-depth with the help of the assistant chatbot. Then the students can discuss it with the whole class before uploading the final essay to the AR Exhibit. Students at this level will be more analytical about the historical context because they have passed through that in the two levels above and can control their anxiety.

I also added a lock feature for these sections. The educators can lock any of these sections if they feel their students are not ready to deal with this specific section. The gender homepage includes an introduction for each section to prepare the students. The gender theme homepage and then move to each section in detail. The historical contextualization section in the gender homepage has a picture of Paris in 1940 after the defeat by the Nazis.

![Figure 48 Gender Theme Homepage-Historical Contextualization Introduction](image)

The Building Connections section is built for learning across themes, as mentioned before. I gave the students a definition of each theme and what they would learn from it.
The DH Questions section contains questions about the topics discussed. In this section, the students will write a short essay between one to three pages, as the educators prefer in Design Cycle Two survey. I used a slider to navigate through the questions.
The introduction to the AR section contains instructions on how to use the QR code. I provided a demo for the AR Exhibit the students will build to give them an overview of the project.

![AR Gallery](image)

**Figure 51 Gender Theme Homepage – AR Exhibit Introduction**

The goal of the historical contextualization section is to immerse students in the historical context and to enable them to absorb new knowledge individually before engaging in discussion with their peers. The educators appreciated that I organized Learning the context of the historical period in chronological order. Students needed to understand how the war and the occupation developed and how people lived the events, which influenced their decisions, including resistance (Design Cycle Two survey). Nevertheless, the way I constructed the timeline and how I intended to use it confused the educators, who indicated that this section would be overwhelming for the students without changes and clear instructions. They suggested using the timeline with lower-level questions to help students develop critical thinking and historical
analysis while learning the historical context. Therefore, I revised the timeframe in the shape of years shown below.

*Figure 52 Historical Contextualization- Timeline*

Each year the students are exposed vertically to Vichy state power and the growing resistance movement. The left side show is built on the sociocultural approach to show power structures and the struggle between control and resistance. Horizontally they can learn and analyze the information about these two powers through four categories: History, Institutional affect, Maps/Places, and Materials.
For both Vichy and the resistance themes, students have highlighters to identify the document's social, political, and economic context while they read. The Vichy theme has a highlighter to identify types of control by the state. The resistance category has a highlighter to identify forms of resistance. The middle section contains the historical contextualization tab. Students will learn about how people lived under Vichy and why so few decided to become part of the illegal and dangerous resistance movement through this tab. I based the historical contextualization on Lucie Aubrac’s historical narrative in chapter two, literature review. I used educators’ recommendations and improved the quality of the content (Appendix C, Lucie Aubrac Historical Narrative). Educators wanted to use their own excerpts in Design Cycle Two survey. Therefore, I made it flexible so educators could add their materials.

Regarding the highlighters, which included three categories; the political, economic, and social highlighters, the sources highlighter, and the adjective check highlighter, I deleted the adjectives check. I used Dr. Poole’s idea to allow students to highlight the materials to identify
the political, economic, and social factors from the sources, which will be more beneficial for the students than highlighting their work. According to my previous research, good reading is about identifying text markers that reveal the text and unpacking the clues inside it.\textsuperscript{382} I also kept the political, economic, social, types of control, and types of resistance aspects to allow students to think about the development of the events from these aspects. The sociocultural approach requires investigating historical events from a social frame that socio-economic, socio-political, and socio-cultural knowledge.\textsuperscript{383}

\begin{figure}[h]
\centering
\includegraphics[width=\textwidth]{figure54.png}
\caption{Example for How Educators Can Insert Their Materials}
\end{figure}

On the right side, there are three items: Think, Notes, and the Chatbot. The “Think” component enables students to examine different categories from a contemporary perspective, forcing them to think about how they may have reacted in that time to similar situations. It also enables students to consider how these categories have changed over time. Through the “Think”

\textsuperscript{382} Grabe and Stoller, \textit{Teaching and Researching}, 5–32.
section, students should understand that people of the past made hard decisions according to their circumstances. Even though the students are not living the same experience, the people of the past they study share similar experiences that students have gone through. While students can see what their peers wrote about other categories, there is no interaction among students. Therefore, they cannot reply to each other, encouraging them to contemplate what others wrote instead of defending their views. I also followed the Design Cycle Two survey comments when revising all subsequent activities concerning the number of questions per activity. I used three to five questions for writing facts, assessing reading comprehension and understanding of historical context, and only one question in the DH questions section as it requires a higher level of thinking and analysis.

In the Notes section, students highlighted text appears. The goal was to help students conceptualize the historical context, think about which elements of the passage are most important to their learning on particular themes, and help them understand history from different perspectives. The chatbot’s goal was to assist students in three main avenues: suggesting materials, resolving technical problems, and providing answers from the materials.
The chatbot also collects students’ previous knowledge for future comparisons, so its goal was to allow students to rethink what they know according to the additional information they are learning. I modified the structure of the Chatbot modules to include; 1) suggest materials that recommend materials to students, 2) ask a question which includes the instruction for the activity but I also open it to anything related to the course, 3) technical problem which I found helpful as many educators talked about the challenges of overseeing a technology, 4) just chat which include the natural conversation to elicit students prior knowledge and include a module triggered if the student shows stressful expressions or anxiety, 5) before and after module which compare the students’ prior knowledge with what they have learned. The before and after module should only allow students to access it after finishing the Historical Contextualization section. The inner structure of the modules is not the same. All the modules use predefined answers except the “just chat” module based on natural language processing.
1940

The French defeat had a devastating impact on the society. During the invasion, "six million civilians, terrorized by German bombing raids, fled as best they could." The reasons behind the fast fall of France was primarily a military failure to respond quickly to German invasion, however, Petain put the blame on the internal decay driving the attention away from the military and enforcing a necessity of "resuscitating traditional morality in order to realize rational salvation." The situation in France after WWII made Petain's claim acceptable to the public because of the internal political unrest and social division.

The defeat helped Petain, the hero of the World War I Battle of Verdun, and other traditionalists amass power. They moved the government to Vichy, France, in the unoccupied southern zone. The armistice on June 16, 1940 divided France into two zones, occupied zone under Vichy's government and occupied zone under the Germans. De Gaulle opposed the armistice and left for Britain to where he addressed the French people in the first of many BBC broadcasts on June 18, 1940.

To usher in its conservative worldview, Vichy declared a National Revolution which according to Miranda Pollard, the regime included leaders who are "traditionalist, pro catholic, and trying to reverse the modernism on French society." Robert Paxton, in his pathbreaking argument, described Vichy's National Revolution by an authoritarian regime that is not imposed by the Third Reich but rather from Vichy. Vichy enforced new values work, family, fatherland, and replace the French, Third Republican values of liberty, equality, fraternity. Vichy's regime implemented discriminatory laws targeting Jews and Jewish refugees, media censorship and wide propaganda for new family values, as well as control over the educational system.

Figure 56 Chatbot - Eliciting Students’ Prior Knowledge

Figure 57 The Chatbot Modules

The Institutional affect link leads to another page where the students can learn through visuals and text how affect was manipulated by the political in both the Vichy government and the resistance.
I built the content according to the Design Cycle Two Content Survey. From the gender perspective, educators wanted students to learn about family values, motherhood, Vichy’s National Revolution, and the history of Joan of Arc, a national symbol of female sacrifice that Vichy regularly used in its propaganda. When the students click on Vichy’s propaganda, for example, they can see plus signs to input quick answers for some questions about the image to help them think critically and analyze the image symbols. I designed the plus signs based on a suggestion made by Dr. Brown about having a place in which students can answer short questions by writing 100-200 words (Design Cycle Two).
Figure 59 Institutional affect – Plus Signs Questions

Figure 60 Allowing Students to Imagine Situations and Think About Their Emotions
Figure 60 above shows the intersection between Institutional affects and Transformative affective connection. I used questions that required students to imagine different situations and write about them and questions that allowed students to analyze their emotions to what they were learning.

Figure 59 Maps and Places Tab

The map section plays a significant role in linking students with places. In her book on public history sites in the United States, historian Anne Lindsay argues that difficult history is linked to places, which aligns with what the educator participants in my study mentioned regarding a desire for their students to get a sense of occupation geography. I used a map that shows the differences between Vichy and occupied zones as suggested by the educators. It is also linked to the timeline and changes according to the years. I have translated some maps into English to

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384 Lindsey, Reconsidering Interpretation of Heritage Sites, 40-50.
cross the language barrier and help students read the map. Students also will find plus signs on the maps to guide their thinking through minor questions.

The last section in the historical contextualization is the materials section. It includes preselected primary and secondary materials the students will use to learn and to do the assignments. It enables the students to highlight the materials in the same way discussed above to categorize the text into political, economic, social, types of control, and types of resistance and then use this understanding of the period to complete the other assignments.

Once students have completed the small initial assignments, the students begin to work in small groups in the building connections part of the project—generally the second of two weeks. I removed the word cloud exercise from the initial draft as the educators recommended it would not achieve its intended goal and required more preparation than most faculty could complete for one assignment in a real-world setting (Design Cycle Two). The revised design for the next
assignment has three steps. First, students choose a group, or faculty can assign groups if they desire. Then, students analyze their peers' writings by summarizing their posts into the different themes from the first part of the project. Finally, they will discuss what they learned by answering a focused question about the topic in a discussion board, or if they are in class, group members can upload notes of their discussion to the system.

Figure 61 Building Connection Section – Small Group Work
This section enables students to use what they learned in the first series of small assignments, apply them to these questions, and engage with their peers in other themes.
The DH Question comprises two subsections: writing and discussion. In the writing section, students can use their chatbots to suggest materials. The length of this essay is between one to three pages maximum as recommended by the educators in Design Cycle Two survey. Whether the students write directly in the prototype or upload their PDF, they will have to highlight their thesis, evidence, and analysis before publishing their work as suggested in Design Cycle Two.

Figure 64 Example of DH Question- Writing Section
This essay aims to integrate the disciplinary approach with which the educators are familiar. It also enables students to learn how to write for a public history audience.

The chatbot will also guide them to think about their prior knowledge by providing the answers they input at the beginning of the course and asking them if their thoughts or feelings have changed and why.

**Figure 65 Example of DH Questions Upload PDF Section**
Figure 66 Mimic of The Chatbot Before and After Module

Figure 67 The Chatbot Asks Students to Think About the Changes in Their Perspectives
Once they upload their finished essays, they can see them and discuss them with the whole class.
Students can click on any of these topics and view it in another window to immerse with it and read it.

**Figure 70 Representation of How Students Can Read the Essays**

After discussing and editing their work, they can publish it to the AR Exhibit to see it in an AR museum. The students can view their work in two ways; a virtual web museum, shown in the picture below, and an AR museum, using the QR code. The AR museum should overlay the big immersive images on a real environment. It should also allow students to navigate through the images and interact with them to read the text.
2. Design Cycle Three

In this session, I prepared a high-fidelity prototype according to the feedback from the previous session. All seven participants attended the meeting. I started by going through the prototype, explaining the changes I made to the historical empathy framework. Then I moved to present the prototype and how it works. At the end of the session, I distributed a survey to collect their feedback on the prototype.

2.e.1. The Prototype Feedback

The educators’ feedback falls under two interrelated categories: pedagogy improvements and enhancing the interface. The pedagogical suggestions and ideas focused on providing the students with more materials, especially primary sources, improving the understanding of the questions, and improving the goal of the activities to meet the pedagogy requirements for teaching Lucie Aubrac. Educators were excited about the new interface. It sparked much useful
discussion about the functionality of some of its new and revised features such as the Timeline, highlighters, and the Think, and Notes functions. The first piece of feedback came from Dr. Brown about the Building Connections section. She praised the tool for teaching students across themes and helping them to be analytical. There was an agreement among the educators on what Dr. Brown said.

**Dr. Brown**: “I really like the plus sign question feature over the images, I thought it was really cool and I think it’s a great sort of possibility […] for students to click between themes, because I think it’s a sort of nice shorthand for a professor to not have to be like gender is a bubble and citizenship is a bubble, but kind of to force it to think and make connections through those analytical frames, so I think that that’s a really amazing feature on this.”

The second comment came about the DH Questions section. Some had a concern about the need for historical materials to guide the students when answering the following question:

“Imagine Lucie had been imprisoned and Raymond was working to free her: what are three things he might have done differently?”

**Dr. Shurts**: You know that anytime you can give them more material to work with you'll get better answers is always sort of my opinion.

Following up on her comment, I asked if providing the students with a specific situation to discuss would be beneficial, such as when Raymond was imprisoned in Montluc, and she agreed. She also added that linking the question with the materials we want the students to read would be useful to give them an idea of what they should read to analyze rather than giving their own opinions and straying away from historical analysis.
Dr. Shurts: You know that anytime you can give them more material to work with you'll get better answers is always sort of my opinion.

Dr. Grant added: It says that to use their personalized chat Bot [...] so it is doing what Sarah was talking about.

Dr. Poole: I agree with what Sarah was saying, I think it's important, especially with you know difficult topics to keep students focused historically rather than letting their opinions and imagination run wild. I second Sarah suggestion to make sure to keep these prompts very historically focused and tied to specific materials.

Dr. Marvin: I agree with Ben that it's I love historical imaginings I love that you just use that expression. But if it can encourage students to think historically that's great right, so I just I agree with everyone else, a lot of guidance needs to be provided a lot of guard rails, so to speak, but I think it can be really productive.

Dr. Marvin also referred to a new article, “Deep Play? Video Games and the Historical Imaginary” by Andrew Denning to justify the usage of imagination in learning history. The paper he referred to discusses how video games shape the public knowledge and philosophy of history. The article also encourages historians to use imagination as video games do in their research and teaching. This shows aligns with the transformative affective connection in the critical historical empathy framework. The transformative affective connection includes imagination as a vital aspect for helping students explore the Self. Following up on Dr. Marvin's point, I asked: how can we apply that idea? He replied by guiding students through questions to understand the change over time, pointing out the timeline in the historical contextualization section.

Dr. Marvin: by asking questions about historical analysis and specifically like if you can point them to the timeline because they’re you’re seeing change over time. So, they can formulate their thesis based on actual events, and then they can make some kind of informed

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speculation about what could have happened right, but like Ben said that’s really grounded in an imagining of the past but it’s one that shows evidence of historical thinking.

Another suggestion from Dr. Shurts was to use an analogy by showing students another example of a man rescuing another man vs. a woman rescuing a man and then ask them about the differences regarding how people from this period and the present understand these events based on assumptions about gender roles.

**Dr. Shurts**: If you could find something, where a male was rescuing a male, you know or something where you do have that kind of evidence of how something was slightly different that they could work with.

After this dynamic discussion, I suggested participants check the questions in the DH sections. Both Dr. Shurts and Dr. Grant agreed that the following question shown below does not need any edits because it asks students to analyze the propaganda images demonstrated in front of them.
Figure 72 Example of DH Questions

**Dr. Grant**: right there and they're analyzing that that you're not asking me to imagine things so it's fine.

**Dr. Shurts**: I agree with Christine, that one got something that they can see and work with that's the source and you're not just saying how might propaganda images encourage patriotism you're actually showing them something, so this one is different.

Dr. Brown also suggested starting the questions with historical statements that guide them and help them focus more on the analysis rather than basic information. For example, Vichy state chose to highlight Joan Arc- consider why Vichy chose her as a symbol.

**Dr. Brown**: If these questions could have a line of fact first […] like [the] Vichy state chose to highlight Joan of Arc, consider why they chose her as a symbol, and I think that that could be you know, taking away a little bit of the guesswork and give the student more time to think about the analysis. I actually think that could be a way to fix the first question to some degree like you know Lucy used these strategies to try to free her husband, consider what types of strategies would have been available, […] you know just something where you give them a little bit of the history.
She also liked the visual format and how it connects the questions with an image, stating that adding some historical facts will not contradict with the design format.

**Dr. Brown:** I really like the visual format of this, and I think it would still look great.

**Dr. Poole:** I agree with that and I think my reaction when I read this one compared to the previous one, for instance, was this one feels a little bit like quick kind of my quiz questions you know, rather than discussion questions and I try to avoid those unless it is literally a quiz because otherwise students will figured out an answer to your question and then they move on without really doing the part that's important, which is: why? Why did they do that? What did that signify? So, don't let the students get away with providing the basic stuff.

In regard to the timeline in the historical contextualization section, participants agreed to the usefulness of providing the timeline complete with information for the students rather than asking students to build it in the previous Design Cycles. Moreover, educators can add their materials to Lucie Aubrac’s narrative, which was an important feature and gained attention and agreement among the participants.

**Dr. Grant:** I thought this was a much better use of the whole prototype than the original idea of having them build the timeline. Having it just there for them is again focusing their work which they have a limited amount of time and attention for on the things that are important, and I also very much like that the space and the opportunity for the presenter to add specific things because you know as a teacher, we don't use prerecorded lectures from somebody else, we focus on our own. It's nice that the flexibility built into this is good.

In the previous Design Cycles, I designed the prototype to analyze control and resistance by dividing the course into studying control then resistance. The educators explained that the previous structure would cause many problems for them and the students. I changed the structure to have types of control and resistance on the left side with highlighters. In this way, students
explore control and resistance through the development of the story events. Some educators praised this idea.

**Dr. Byrnes:** I think the idea of like trying to figure out different types of control or different types of resistance like that’s interesting, but I don’t know it might just be me but I’m having trouble thinking about why I would want them to identify a factor, a specifically political versus economic.

Nevertheless, there was a concern from Dr. Byrnes about asking students to highlight specific factors such as political, economic, and social because they are interconnected. Dr. Byrne’s comment opened a discussion about the effectiveness of the highlighter tools. I had to explain that my goal with the highlighters was to enable students to understand the motivation for the resisters. For example, some resisters engaged in the resistance for economic reasons. After my explanation, Dr. Brown suggested moving the political, economic, and social highlighters from here and adding them in the DH questions. This, they reasoned, would help students be more analytical while learning about these factors.

**Dr. Brown:** I don’t mind it as much in this is in the version [taking about the highlighters] here you were having the students write that way, but I agree […] right they’re all connected. I would not think of this as an especially useful tool, [this] is like the number one analytical question that probably needs to be asked, which is you know, consider the political, economic, social, ideological motivations of somebody to join the resistance. I don’t think that they need the highlighter.

**Dr. Marvin:** I could just see my students just scrambling and confused about even precisely what political means right versus economic, social.

Another suggestion was to use the notes, think, and DH question sections to emphasize the political, economic, and social motives.
Dr. Brown: [let the students] think about these big terms [on] the space on the right, which I really like, and I think that you can trust them to pull out and make the connections without needing the different color highlighting there.

Dr. Shurts: I agree with Megan on that too, and I would say, the more times you ask that question, the better so put it in think put it in the notes and then make it one of the big questions you know back on that page that we were looking at before where it was about imagining. It doesn’t hurt to repeat this for students in multiple places it just makes it stick better for them.

Educators also had concerns that the students would struggle to understand the goal of the activity in the historical contextualization section because of the lack of connection between the left side of the page and the right side. As mentioned before, the left side had highlighters, and the right side had the Think section, which allows students to practice first-person writing to understand how people of the past acted.

Dr. Marvin: The part of the Left then would be even more confusing because it's almost like you're asking a student to operate on these two registers kind of like you're on the one level you're asking them to kind of to develop [political, economic, and social] contextualization like politics versus economy and then in this other section you're asking them to kind of embody a person right and then see how they would experience this period.

Dr. Poole: I think, maybe what several of us are kind of suggesting here is it feels like the activity on the Left seems disconnected from the activity on the right.

Educators suggested different solutions for this problem. The first solution was to change the question in the “Think” section to ask students explicitly to use the highlighter to analyze and answer this question.

Dr. Poole: I think, maybe one idea I had was rather than having the highlighting activity be sort of an end in itself, like as it is now, what if those highlighters were used as a tool that students can use a little bit for themselves right, but have it directly tied to whatever question or activity that you're having them do. So, if there's a question that they have to answer,
whereas like you know what our political, economic and social forms of control or something, then it would make sense to have those highlighters because they can sort of use that to take notes to prepare for the question that they have to answer, but in this case, it seems like the question doesn't really connect to the to what the highlighters are doing. I sort of feel like there has to be a little bit more of a singular aim to the activity that that all works together towards producing.

Following up, I had to explain the meaning behind the “Think” section again. I elaborated on the advantages of having students think about different categories and not only Lucie Aubrac to build a deep understanding of the whole historical period and see it from different perspectives. My explanation gained wide acceptance and sparked discussion about how to achieve this goal. One of the suggestions was only to focus on Lucie Aubrac in this section.

**Dr. Marvin:** Now I understand what you're trying to do, I think, and correct me if I’m wrong. You are kind of merging the historical empathy lesson with the contextualization. So, I think that that is really productive, and it is really cool […] I think what you just said, might be even a more productive way to go about it, which is just okay choose one kind of lens. But I just, I keep getting stuck on the choose one of these categories, because without a lot of background, I think a student could just kind of go over with it. […] just do Lucie.

I reminded them of the research I made, and some educators have pointed out that students would think that all French people acted the same way as Lucie. Therefore, the “Think” section was meant to allow students to get into the mindset of people from different categories. The educators agreed and modified the idea, suggesting making Lucie an anchor point. From there, students could analyze the differences between Lucie’s experiences and perspective compared to those in other sections of society.

**Dr. Marvin:** that's a really good point actually, what if you start with Lucie [as the] principal anchor through […] they're going to formulate their understanding of how somebody would
experience this period and then all the different kind of realms political, economic and then as kind of a question that comes after. [for example] What might be the differences between Lucie experience and somebody just anybody else in this category. Maybe they are not going to prove something as grounded in historical fact but, starting with the person they know best from the lesson might be a good way to keep them grounded in fact essentially right.

In addition, educators discussed how to link the “Think” section with materials that investigate the political, economic, and social life of the people at that time and help the students understand the resisters' beliefs and motives. Among the secondary materials, could selected excerpts from historian Robert Gildea’s book Marianne in Chains,\textsuperscript{386} and the second is a faculty selected clip from Marchel Ophuls’ 1969 film, “The Sorrow and the Pity”\textsuperscript{387} however, the documentary is from another era which is outside the scope of this study.

\textbf{Dr. Shurts}: I might make a suggestion and I don’t know if this is something that you can incorporate without copyright laws being broken, but just in terms of providing them with a book that really talks about the experience of both collaborators and resisters and the choices that they have to make […] I believe it's called Marianne and chains and if you could maybe take an excerpt [it] and then the other would be maybe a film clip from The Sorrow and the Pity, the film is a documentary so it would add that kind of primary oral history context, and I think that would really give a little more to work with for students

\textbf{Dr. Byrnes}: I think, just to sort of build on that right, like the in the spirit of what we’re saying of sort of like have the like little factual introduction to some questions right. Whether they’re in the material section generally for people […] have an expert here but sort of have the prompt be like […] this chapter talks about different experiences imagine X category or […] come up with a category and compare to Lucie Aubrac.

Regarding the “Notes” section, Name suggested making it more productive for the students by adding questions that allow students to think about the notes they take.

\textsuperscript{386} Gildea, \textit{Marianne in Chains}, 618.

**Dr. Brown:** I wonder if [the] notes instead could be like a little bit more guided thought [for example] what do you notice in the text or [what are] the different types of resistance people participated in and then it could just be a way to help students, […] and just have that as a question, I think it can be a lot more useful for students, and I think especially because some students highlight too much that's like a very common thing that a lot of professors deal with is when they see a student's book a student might have highlighted like an entire page. So, I think reducing ways that you're encouraging them to highlight and instead saying here's how I want you to be reading this text.

There was an agreement among educators on Dr. Brown’s idea to guide the students through the questions in the notes section.

### 2.e.2. The Analysis of The Content and Design Elements Survey

All of the educators completed an anonymous final survey. The comments focused on adding more materials, the highlighters, and their admiration of the prototype. Regarding the materials, one comment stressed linking the materials and giving the student excerpts from books before answering the questions.

Additional reading and information resources either as excerpts in the timeline or as links to the additional materials section. I would recommend excerpts from books and articles and documentary films or interviews to provide additional information for students before they have to answer questions.

There were straightforward suggestions about the survey's highlighter tool, which did not appear in the focus group. The comments varied between deleting the highlighters to keeping them and limiting them to fewer categories with some modifications.

“The prototype could do without the "highlighter" feature.”

“Just refining the part where the students annotate or highlight the text - thinking about how to get them to focus on the most important questions and making sure none of the activities end up distracting from that.”
“Shifting some of the highlighting function to guided questions for the notes section so students have a clearer sense of what they should be reading for.”

“I think the highlighting is a great idea, actually, but I think it could be more productive with fewer categories of analysis. I think that's the section that will require the most improvement.”

These comments showed that the educators' views on the highlighters varied. I decided to keep the highlighters. Understanding the political, social, and economic factors enhances students' historical contextualization. For instance, many women joined the resistance for financial reasons. Same for migrant men, many of them worked in the coal mines and joined the resistance. In addition, understanding the economic status shows the stressful life of the French and the resisters. Lucie Aubrac, in her memoir, describes how hard it was to get bread, wine, or any essential food for a living. This helps in building affective connections with the historical figure. Keeping the highlighters will also help students understand the world around them and reflect on it, raising their civic engagement levels.

Regarding whether this prototype can be applied to other difficult history topics, the majority of participants, 85.7%, strongly agreed, and 14.3% agreed. Participants were satisfied with the final prototype. The majority of the participants were satisfied, with 71.4% satisfied compared to 28.6% strongly satisfied. This is shown as well in the comments below:

“This version is extremely promising and looks highly useable and useful for professors and students alike. I am still least certain of the chatbot feature as a tool, but I like the structure of the questions asked (where and how) and I love the "plus sign" feature on the images.”

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389 Robert Gildea, Fighters in the Shadows, 6-35.
390 Aubrac, Outwitting the Gestapo, 56.
“I really like all of the changes and am impressed at the types of things this prototype can accomplish in terms of encouraging student thought and learning.”

“It's great. The posters section is terrific, as is the customizable chat bot and the AR piece. This is an innovative and exciting way to broach historical empathy/difficult histories in the classroom!”

“On a scale of 1-5, Would you use this prototype in a classroom?” My answer would be "strongly agree". A part of what I see you doing that is so productive is tied to the way that education has increasingly "gone digital", a process long underway before COVID.”

“I also just want to take this moment to thank you for letting me participate in the research for your dissertation. Wanting to find creative ways to engage in difficult history is an important contribution to thinking about ethics and pedagogy, and I am especially grateful to see that your approach to this issue is grounded in a concrete case study. You are doing great. And you are making an important contribution to historical pedagogy.”

Educators also were motivated to use the prototype in the classroom. A majority, with 71.4%, would use it while 14.3% were strongly motivated and only 14.3% were neutral. From the comments, I found a significant suggestion. It requires more explicit details about the activities not only for students but also for the educators to understand the framework's structure and why the historical contextualization, building connections, and DH questions are organized in this way. Moreover, how these sections are related to building the AR exhibit.

“I think some of the activities, specifically the timeline for instance, need more detailed instructions for what you want students to do and why (i.e., what this activity is designed to teach or how it will feed into another assignment, etc.) Secondly, I think, as much as possible, if you could have different assignments and activities building on one another, and building toward a specific major assignment, that would help to keep students focused and give a clearer sense of purpose and direction to this rather complex set of activities that could otherwise feel a bit confusing or overwhelming to students. On the other hand, as a teacher, I think I would like the ability to select certain activities, elements, and have them work well, even if I choose not to use/assign some of the others. This flexibility would allow teachers to use the prototype to emphasize the themes or skills that best fit their course.”
From the above comment, the relationship between these activities was unclear, and the structure of knowledge was also unclear. This was because of the limited time for the Design Cycles, which was mostly used to talk about the affordances and constraints of the prototype and not present the theoretical framework in detail. I added a page in the final prototype to explain the framework and the connections between these activities.

The survey also showed that the activities which will make students feel comfortable while learning difficult history are AR Statue and the AR exhibit with 100% for both. Then historical contextualization with 66.7% and DH Questions with 50%.

![Figure 73 AR Statue and AR Exhibit Are on The Top for Comfortable Learning](image)

The educators voted that all four activities (historical contextualization, Building Connections, DH Questions, and AR exhibit) will promote civic actions.
Figure 74 All Activities Have the Potential for Promoting Civic Actions

Regarding which activities will enhance perspective taking, historical contextualization scored the highest. Then the AR exhibit following by Building Connections and DH Questions with 66.7% for both.

Figure 75 The Activities Which Will Improve Perspective Taking

Concerning which activities increased Transformative affective response among students. The historical contextualization scored the highest with 100% following by Building Connections and AR exhibit and lastly with the DH Questions with 50%.
Figure 76 The Activities Which Will Increase Affective Connection Among Students

Educators voted for Historical Contextualization and Building Connections as the two potential activities for initiating empathy, with 83.3% for both. Then DH Questions and AR exhibit with 50% for both.

Figure 77 Activities Which Will Evoke Empathy

At the end of the survey, I asked the educators to explain why they chose the activities above and how they connect to historical empathy. The comments are anonymous. I have listed them below:
I still think the gallery is a great project and hope that explaining each part of the exhibit would cultivate some empathetic response.

I like the effort to connect with a particular historical figure (or collection of experiences) to see the work of collaboration and resistance through a personal lens and the use of images analysis to deepen understanding of the context/experience of the time. The two lenses of gender and citizenship are useful ones for this particular topic too and help students focus their ideas more effectively in their analysis of a big topic.

I think that these kinds of activities encourage students to see history as a (necessarily subjective) story that is always told from a particular perspective (or perspectives). This helps students not only to see the complexities of what history is and what historians do, but it also can foster empathy for historical figures by connecting with their individual perspective and imagining their subjective view of their own place in that story.

I really appreciate you [dedication] to engaging your students on a personal and emotional level. I think it is important to remember that there is no universal design for teaching students’ historical empathy. Students have different learning styles and different strengths for showcasing what they have learned. The real testing of this will need to happen on the ground, and to think both with the students it "worked for" and those it did "not work for" to understand how to engage more of the students in the (mostly) digital classroom. The models are great and interesting, but it is a teacher's finesse that will ultimately shape the experience. In any technological design, user engagement is the best way to test its efficacy to your desired ends. Congratulations on work well done.

I think the strongest activities guide the students to tackle hard questions while being grounded in historical thinking and fact.

I liked the facilitation of engagement with a variety of primary sources, and I loved the AR exhibit - allowing students to create a high-value end product without having to spend time mastering the technology needed to create the site. I think that the historical empathy approach is a subtle thing - one pitfall would be to have students imagine how historical subjects felt without enough context, and thus encourage them to impose their own worldviews, values, and emotional schemas in a way that doesn't respect the lived experiences of the historical subjects - and so I like that in this, students are pointed back to primary sources and encouraged to engage with them before producing the final assignment.

The summary of the above comments shows that the educators are impressed with the novelty of the prototype and the usage of the historical empathy approach. They also liked how the AR exhibit is structured because it enables students to ground their learning on historical
facts on the one hand, and on the other, it does not require them a lot of time in the creation of the technology. The usage of thematic learning was also praised by the educators as well as the integration of imagination to generate empathy while teaching students about other communities. The personal lens of the study was useful because it shows the subjectivity of history and fosters empathy. The way historical empathy was structured is also praised because it allows students to feel empathy based on historical facts.

2.3. **The Final Prototype**

The final prototype includes the modifications I made according to the educators’ feedback in Design Cycle Three. The link to the final prototype is here:

[http://smeissa.com/Final_Project/dh_home.html](http://smeissa.com/Final_Project/dh_home.html)

The first modification concerns the Think tab in the Historical Contextualization section. Dr. Marvin suggested starting with Lucie’s action and then moving to other communities providing students with materials to imagine the similarities or differences from Lucie’s action. I rewrote the question as below:
1940

The French defeat had a devastating impact on the society. During the invasion, six million civilians, bombarded by German bombing raids. Not as bad as they could have been. 

The main reasons behind the defeat of France was primarily a military failure to respond quickly to German invasion. However, Petain put the blame on the external decay, saying that the attention away from the military and enforcing a necessity to keep growing traditional morality in order to realize national salvation. The situation in France after World War I made Petain's claim acceptable to the public because of the internal political and social division. The defeat helped Petain, the hero of the World War I Battle of Verdun, and other traditional elements become more powerful. They pushed the government to Vichy, France, in the unoccupied southern zone. The arrest on June 16, 1940 divided France into two zones: unoccupied zone under Vichy's government and occupied zone under the Germans'. De Gaulle opposed the arrest and left for Britain where he addressed the French people in the first of many BBC broadcasts on June 16, 1940.

To usher in its consensual world view, Vichy declared a National Revolution which, according to Miranda Pollard, the regime included leaders who are ‘traditional’, pro-catholic, and trying to reverse the modernism on French society. Robert Parson, in his pathbreaking argument, described Vichy's National Revolution by an authoritarian regime that is not imposed by the 'Third Reich' but rather from Vichy. Vichy enforced new values work. To fully implement the French Third Republic values of liberty, equality, fraternity, Vichy's regime implemented discriminatory laws targeting Jews and Jewish refugees, media censorship and vote propaganda for new 'national values', as well as control over the educational system. For example, Vichy's discriminatory laws against the French Jews and Jewish refugees, including restricting their entry to public service, stripping them of their citizenship, and handing them to the "Légion d'Honneur." These measures were part of a broader effort to create a "Vichy France," a state that was outwardly French, but inwardly German-dominated. Vichy's policies were implemented through a network of agencies and departments, including the Office of the Premier, the Ministry of the Interior, and the Office of the Eastern Territories. These agencies worked together to enforce Vichy's policies, which included the persecution of Jews, the regulation of the economy, and the suppression of dissent. The result was a state that was outwardly French, but inwardly German-dominated. Vichy's policies were implemented through a network of agencies and departments, including the Office of the Premier, the Ministry of the Interior, and the Office of the Eastern Territories. These agencies worked together to enforce Vichy's policies, which included the persecution of Jews, the regulation of the economy, and the suppression of dissent. The result was a state that was outwardly French, but inwardly German-dominated.
Educators were divided on the highlighters. While some described it as a useful tool others wanted to delete it. To balance between the purpose of having a highlighter and the educators' views around it, I followed a suggestion made by Dr. Poole, so I linked the highlighters to the question in the Think tab. The question now asks the students to highlight the historical context then to think and imagine other communities' actions. This solved a problem the educators mentioned: the need for a connection between the highlighters and the question in the Think tab.

I also added a drop-down menu. When the students choose any materials, it takes them to the materials tab because the educators also wanted the students to connect with the materials to think historically.

Another suggestion from Dr. Brown was about the Notes section. She wanted the notes section to function as an area that guides students’ thoughts about the text they highlight.

As Notes section is commonly known in most of the prototypes as an area in which the students write their ideas. Therefore, I did not change the structure because I did not want them
to feel that it is also an activity. I only added a drop-down menu filled with questions they can link to the text, such as what do you notice in the text above?

Figure 81 Students Can Add Comments to Help Them in Learning

The students can select a question, link it to the text, and then provide their comments. Once they do that, a phrase will appear with the number of comments next to the text as shown below:

Figure 82 Students Comments Appear at The Top Right
I provided the students with the ability to add the questions they feel are more related to the text and want to comment on. This is done through selecting the option Add a question from the drop-down menu.

<table>
<thead>
<tr>
<th>France before Vichy</th>
</tr>
</thead>
<tbody>
<tr>
<td>Politics</td>
</tr>
<tr>
<td>Economy</td>
</tr>
<tr>
<td>Social Life</td>
</tr>
<tr>
<td>Types of Control</td>
</tr>
</tbody>
</table>

**1940**

The French defeat had a devastating impact on the society. During the invasion, "six million civilians, terrorized by German bombing raids, fled as best they could." The reasons behind the fast fall of France was primarily a military failure to respond quickly to German invasion, however, Pétain put the blame on the internal decay driving the attention away from the military and enforcing a necessity of "rejuvenating traditional morality in order to realize rational salvation." The situation in France after WWI made Pétain's claim acceptable to the public because of the internal political unrest and social division. The defeat helped Pétain, the hero of the World War I Battle of Verdun, and other traditionalists amass power. They moved the government to Vichy, France, in the unoccupied southern zone. The armistice on June 16, 1940 divided France into two zones: unoccupied zone under Vichy's government and occupied zone under the Germans.

To usher in its conservative worldview, Vichy declared a National Revolution which according to Miranda Polak the regime included leaders who are: traditionalist, pro-catholic, and trying to reverse the

Once the students add the question, it will automatically be added to the drop-down menu, and then they can easily select it, link it to the text, and comment on it.

The last modifications concerned the DH questions section. The educators wanted to link the questions with materials. Therefore, I made some modifications to the DH Questions sections. I added the materials under the questions as below:
The educators also wanted to add a line of fact at the starting of the questions, in particular the question of Joan of Arc. The reason is to focus students to think about the causes and the meaning of the symbol.
Therefore, I modified the question shown above with Dr. Brown's wording. I also added to the chatbot another method to immerse the students with the materials in the DH Questions section.

*Figure 86 Example of Institutional affect Questions With a line of Fact at The Beginning and The Materials Included*

*Figure 87 DH Writing Section with New Material Tab Added*
As shown above, I added a material tab. The tab includes a drop-down menu with the names of the materials linked to the question. When the students select a material, it opens under the drop-down menu allowing them to read directly without leaving the DH questions window. This will enhance the learning experience as the students now have two ways to connect with the materials. The chatbot with the ‘suggest materials’ module will allow them to investigate more materials above what they have in the drop-down menu.

3. Answering the Study Questions

This study had two main questions. The first question was How can a project-based classroom TELE help teach difficult history via a historical empathy approach? And it included four sub-categories which are: 1) What are the challenges of teaching difficult history in the classroom? 2) What technology works most effectively for developing TELE? 3) What design elements work for teaching Lucie Aubrac? 4) What is the best pedagogical framework to apply to use in the classroom? The second question is: In what ways do educators think the final prototype will help in teaching difficult history content, such as the Lucie Aubrac scenario, thematically?

3.a. How Can a Project-Based Classroom TELE Help Teach Difficult History Via a Historical Empathy Approach?

The answer will be at the end after demonstrating how the sub-questions contributed to the prototype's development.

3.a.1. What are The Challenges of Teaching Difficult History in The Classroom?

After the Consultation Study, I linked the educators' challenges with the research in the literature review in Table 1 Difficult History Challenges. However, educators pointed out
educational challenges that the scholarship does not address during the design cycles. Some of these challenges included: the limited time allocated to address difficult topics in-depth and the overwhelming workload for the students when calculated with their other courses and jobs. These challenges were taken into consideration while designing the TELE. This led to simplifying the steps and minimizing the workload and time allocated for each activity. In addition, there were more challenges concerning the content. The lack of translated materials from French to English led to fewer materials to give students for their research. Although modern technologies can provide translation for the materials, there are constraints around copyright and the quality of translation using automated prototypes like Google translate. Therefore, this issue was left for future add-on features to the prototype or for other designers who want to address this challenge in future studies. Also, this is an issue that anyone teaching history in the non-Anglophone world faces in US classrooms. Faculty are well aware of the issues surrounding primary source materials in translation. So, this issue would remain for other topics in World History.

3.a.2. What Technology Works Most Effectively for Developing TELE?

In the Consultation Study, I introduced the educators to several types of technologies. Some examples of these technologies include images, films, websites, games, mobile technologies, and recent technologies such as AR/VR.

**Dr. Shurts:** “it's this general idea of these games as simulations where you're asking the students to engage as some sort of historical figure group that makes me nervous, for the same reason that you know you see these teachers getting their students to act like Nazis or being assigned a part as being a slave […] I know that that's a very dangerous path for history educators.”

**Dr. Marvin:** “I had […] a student who […] a Nazi sympathizer like I don't know how else to say it, and it was really terrifying […] It was nothing from my course that

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prompted this; it was, in fact, and I don't mean to demonize video games or anything like that, but he had clearly his entire understanding of history came from digesting things like that, and really it was really hard to undo that.”

There was a strong agreement against games among the educators. Only very few educators supported games with conditions such as less violence and less trauma. Most educators shared stories about how their students are influenced by problematic historical narratives provided through historical games. This aligns with Kingsepp’s study, which shows that students get a shallow understanding of the historical context from historical games. Moreover, games might encourage students to play the role of the evil side. For example, students might play the role of the Nazi’s and empathize with them.

Dr. Grant (she/her): “she's [referring to her daughter when she plays video games] not always going to play the role of the good guy on there, she likes to sit in on those Games, and you know being the evil invaders sometimes.”

In other words, educators had concerns that some students would like to play evil roles, and this might be dangerous for young students who can easily sympathize with malicious historical characters. Games tend to display history in the black and white dichotomy of good versus evil, and avoid dealing with the consequences of racial ideologies, which simplifies the complexities inherent in difficult history. This leaves out the grey zones many people lived in which contained difficult choices and moments. Educators also did not like the idea of using social media for learning difficult history, as some international students could be put at risk by using those

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technologies. From all previous technologies educators chose websites as the main technology for the prototype of the TELE.

Dr. Shurts: I was just gonna say I think that allows you to house a lot of different things so that might be the best platform and then you can sort of spin out from there, I don't know if there's a way to attach any sort of virtual experience to a website?

Dr. Brown (she/her): So something that I think I like about websites as a tool is because [...] there's more of an opportunity to pitch it to different types of users, because to me some of the tools that you showed us of the examples [...] So I think that a website that can include, for example, like it sounds like the Marcelo APP could maybe, be a good example [...] or that interactive map website, because I think something that pops up is like actual primary source documents, as well as kind of the narration that makes it easy to dive in, and so I would see myself using more [of that in the classroom.]

Accessibility and ease of use for educators and students, as well as a website’s ability to host other technologies, informed their choice. This aligns with Brown’s research that shows websites can play a significant role in education because they can host many technologies such as virtual galleries, including 3D interactivity. Websites also can include multimedia such as videos and images. The educators’ choice was built on the practical use of the technology in the classroom. They focused on using technology as a part of the educational process, not as a solution on its own. The final prototype for the website included hosting many technologies such as AI technology for the Chatbot and AR Exhibit technology.

3. a. 3. What is The Best Pedagogical Framework to Apply the TELE in The Classroom?

In the literature review chapter, I built an instructional design for the critical historical empathy framework for flipped classrooms (page 67), showing the knowledge structure. This framework was necessary because it worked as the skeleton for the development of the

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prototype. Then in the preparation of Design Cycle One, I organized this framework to divide the learning process into two weeks (Appendix A, Design Cycle One - Instructional Design for Critical Historical Empathy). The faculty would focus on Vichy control the first week, and students would investigate types of control and propaganda from this period. During the second week, the educators will use the lens of resistance to analyze different types of resistance in Lucie Aubrac's story and propaganda from the resistance.

The structure of the framework plays a role in the development of knowledge and acquiring historical empathy. I designed this framework included a linear approach similar to Shemilt's framework that incorporates stages. My framework had two stages: control followed by resistance. In the control week, students should learn about the Vichy state National Revolution and its practice across different branches. For instance, how the National Revolution controlled media, education, and forced new police against the Milice resisters. On the other hand, students should also learn about the different types of resistance, such as how communists, Lucie and her husband resist, and Maquis resist. In this case, the framework included a structure to allow students to develop cognitive understandings of the historical context, investigate a problem, and challenged by a question to create cognitive dissonance or a dilemma. Exposing students to a dilemma should be used wisely to motivate them to think about their prior knowledge.

Nevertheless, the educators offered several critiques to the initial framework. I made some modifications according to their critiques and others I had to keep because it aligns with research. One of the things I did not change was minimizing social interaction. Educators are

used to social constructivism, which emphasizes social learning. The reason is that social learning is valuable when emphasizing new knowledge but when the students are exposed to difficult topics they fear to talk in front of each other which cause more resist to the learning experience if they are forced to do that. Moreover, some students may cause problems by asking offended questions because difficult topics trigger stress responses. Lastly, students come to classrooms with the idea that the educators are their experts who should follow without investigating the topic. This contradicts with the purpose of active learning, in which students should learn on their own to develop a deep understanding of the materials. Difficult histories need investigation of beliefs, cultures, and the Self. Therefore, I did not change this across the whole three cycles. I gave time to students to process new knowledge on their own first before moving to social learning.

The second critique concerned applying this framework in two weeks. Educators described that as hard for students to understand the materials and acquire new technological skills simultaneously. Moreover, it requires a large amount of work for both educators and students. Third, the framework required using long lengths of recorded videos to satisfy all of the necessary information. Fourth, educators were against allowing a chatbot to assess historical information in an essay. Educators were also skeptical about the ability of technology to analyze a historical essay and afraid that students who learn on their own would not get the correct

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395 Vygotsky, Mind in Society, 50-150.
399 Aidinopoulou and Sampson, “An Action Research Study from Implementing the Flipped Classroom Model in Primary School History Teaching and Learning,” 237-247; Martelli and Watson, “Project-Based Learning,” 10-16.
information or find reliable sources. They also reiterated their desire to ensure that students used “reliable sources” many times in the Consultation Study and across the design cycles. Depending on documents and primary sources was one of the educators' main concerns to let students build their investigation on accurate information.

I addressed all of these critiques in Design Cycle Two. I changed the timeframe of two weeks in the historical empathy framework (Appendix B, Design Cycle Two - Instructional Design for Critical Historical Empathy); however, I kept the exact structure of starting with control and moving to resistance. I explained to the educators that the framework can be expanded across any time period. For instance, the educators might need more than one week to explain control as well as resistance. Therefore, I divided it into two periods, not weeks. I also explained the importance of allowing students to develop knowledge on their own individually before a social interaction. I also changed the essay so that the AI technology will analyze differently than in Design Cycle One.

Nevertheless, the critiques continued about the workload and the effort needed from both educators and students. The educators seemed more concerned with the overall experience as opposed to the structure of knowledge. Therefore, I found that the structure needs to change. The educators were not comfortable with the linear structure of knowledge. This aligns with Foster’s framework that historical empathy is non-hierarchal and should not be seen as a linear sequence. In addition, starting with control followed by resistance limits understanding how these two concepts are interrelated. For instance, Vichy I built a new structure for Design Cycle

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three shown in Table 3 below. The new design of the framework has four sections: 1) historical contextualization, 2) building connection, 3) DH questions, and 4) enjoyable experience. These sections complete each other to improve students learning. These sections can be scaffolded either vertically, which requires each part to build on the previous step, or horizontally, in a non-hierarchical structure. This would be reminiscent of Foster's quality concept. The educators can develop and choose which sections to use in the classroom depending on the students' previous knowledge.\textsuperscript{401} Although I changed the linear structure, I kept some aspects from Shemilt's framework, such as eliciting prior knowledge to help students think about their misconceptions.\textsuperscript{402} Besides these aspects, I used such as creating cognitive dissonance, investigation, display, and reflection.\textsuperscript{403}

\textsuperscript{401} Foster, “Historical Empathy,” in \textit{The History Curriculum for Teachers}, ed. Christopher Portal (Falmer Press, 1987), 140–90.
\textsuperscript{402} Shemilt, “The Devil’s Locomotive,” 1-18.
### Table 3 Instructional Design for Critical Historical Empathy Pedagogy

#### Design Cycle Three - Instructional Design for Critical Historical Empathy Pedagogy

**Historical Contextualization [knowledge foundation]**

The goal is to allow students to build their knowledge individually through observations and interacting with the materials.

<table>
<thead>
<tr>
<th>Phase of Instruction</th>
<th>Method of Instruction</th>
<th>Purpose of Instruction</th>
</tr>
</thead>
<tbody>
<tr>
<td>Eliciting prior Knowledge</td>
<td>Chatbot</td>
<td>Collect students’ prior knowledge for comparison with new knowledge.</td>
</tr>
<tr>
<td>Perspective taking first-person writing which allow learning through observations.</td>
<td>Think activity</td>
<td>The low-level activity allows students to imagine other categories and how they lived their lives within the same period.</td>
</tr>
<tr>
<td>Historical knowledge</td>
<td>Institutional affect activity</td>
<td>Allow students to think about types of control and resistance.</td>
</tr>
<tr>
<td>Immersion with new Knowledge.</td>
<td>Timeline, highlighter, and Institutional affect activities [low-level first and third-person questions]</td>
<td>Add information and questions that challenge students' previous knowledge and encourage them to investigate themselves while learning through the materials.</td>
</tr>
</tbody>
</table>

**Building Connections [challenging prior knowledge and emphasizing new knowledge]**

The goal is to allow students to build their knowledge individually and through small group interaction.

<table>
<thead>
<tr>
<th>Phase of Instruction</th>
<th>Method of Instruction</th>
<th>Purpose of Instruction</th>
</tr>
</thead>
<tbody>
<tr>
<td>Investigation and learning through social interaction.</td>
<td>Working across themes and summarizing their peers' views</td>
<td>The goal of this low-level activity is to emphasize new knowledge through group interaction.</td>
</tr>
<tr>
<td>Creating cognitive dissonance</td>
<td>Discussion board</td>
<td>Medium level activity in which students answer a question.</td>
</tr>
</tbody>
</table>

**DH Questions [Emphasizing new knowledge and reflection]**
## Design Cycle Three- Instructional Design for Critical Historical Empathy Pedagogy

The goal is to allow students to emphasize their knowledge through deep analysis, display of their work, and whole class reflection.

<table>
<thead>
<tr>
<th>Phase of Instruction</th>
<th>Method of Instruction</th>
<th>Purpose of Instruction</th>
</tr>
</thead>
<tbody>
<tr>
<td>Perspective taking:</td>
<td>Writing with the Chatbot and</td>
<td>This high-level analysis aims to deepen their understanding of a specific area and help students develop their thesis, evidence, and analysis with the chatbot.</td>
</tr>
<tr>
<td></td>
<td>Third-person writing &amp; confronting their prior knowledge.</td>
<td></td>
</tr>
<tr>
<td>Creating cognitive</td>
<td>Writing Section with the Chatbot</td>
<td>Medium level activity in which students answer a question.</td>
</tr>
<tr>
<td>dissonance</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Display</td>
<td>Essays board</td>
<td>The board allows students to display their essays so that others can read it</td>
</tr>
<tr>
<td>Reflection</td>
<td>Discussion board</td>
<td>Allow students to reflect and discuss final essays with their peers.</td>
</tr>
</tbody>
</table>

### Enjoyable Experience [Final project]

The goal is to provide students with an enjoyable experience to increase their empathetic motivates.

<table>
<thead>
<tr>
<th>Phase of Instruction</th>
<th>Method of Instruction</th>
<th>Purpose of Instruction</th>
</tr>
</thead>
<tbody>
<tr>
<td>Build-in technologies</td>
<td>AR Exhibit</td>
<td>In this study, I focused on the AR Exhibit, and the goal is to introduce Lucie Aubrac to the public using visuals and text.</td>
</tr>
<tr>
<td></td>
<td>AR Statue</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Lucie Aubrac Chatbot</td>
<td></td>
</tr>
</tbody>
</table>
The new framework allows educators to use any of its sections depending on the students’ prior knowledge. For example, in classes where students have little information, working in a vertical mode would be better i.e., starting with the historical contextualization section till DH Questions section. Educators can also apply the framework in classes in which students have higher knowledge or more background in the particular historical subject. In this case, if the faculty member spent time on France in World War II in class before introducing this project, they could skip and move horizontally to choose which section aligns with their students to deepen their understanding. The new flexible framework played a significant role in developing the final prototype for the website.

3.a.4. What Design Elements Work for Teaching Lucie Aubrac?

In the Consultation Study, the educators came out with two main themes for teaching Lucie Aubrac: gender and citizenship. Resistance was not a separate theme in the Consultation Study but more in conversation with the other two themes. The educators provided a wide range of activities to teach about Lucie Aubrac.
Table 4 Suggested Activities by The Educators

<table>
<thead>
<tr>
<th>Gender</th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>(1) Group annotation (Perusall[^404]/Hypothes.is[^405]) of her memoir;</td>
<td>(2) discussion about Lyon the X museum in Lyon, France, and the images from its website;</td>
</tr>
<tr>
<td>(3) Graphic organizer: specific actions – on a continuum from transgressive to conforming to gender roles (x-axis) and from “small” to “great” resistance on the y-axis;</td>
<td>(4) Movie poster: imagine various (fictional) filmmakers that have differing views on gender.</td>
</tr>
<tr>
<td>Citizenship</td>
<td></td>
</tr>
<tr>
<td>(1) Brainstorm words for a word cloud exercise: what words come up most often that highlight/signpost good citizenship or Resistance/resistance?</td>
<td></td>
</tr>
</tbody>
</table>
| (2) Mini mock trial of Lucie – how might she defend her actions? How did she view her resistance? How did she understand her role as a citizen of France under occupation? Was her view shared by all French citizens and if not why? How might they have defined their citizenship and their relationship within the community? and how was their experience different from Lucie Aubrac’s? |}

Some of these activities shown above in Table 4 simply copied the structure of other software such as Perusall/Hypothes.is, in particular, in allowing students to annotate the materials. Other design elements like the movie poster lacked any interactive component. Moreover, the mini mock trial required students to defend Lucie Aubrac instead of critically analyzing her actions and empathizing with her according to the historical context. Therefore, I did not use any of these ideas in the development of the prototype.

The educators were open to new ideas that aligned with the technologies they had seen. In Design Cycle one and after my research, I introduced many activities (the timeline, chatbot, Lucie Aubrac Chatbot, AR Statue, and AR exhibit) to implement the same educational goal. Most of the activities I suggested are taken from the real practice in the classroom. One that the

[^404]: Perusall, “Perusall.”
[^405]: dwhly, “Home.”
faculty talked about was the construction of a historical timeline. Dr. Fitch and Dr. Marvin had already used similar activities in their classes.

**Dr. Fitch:** “I’ve done some things sort of similar actually using the Holocaust Memorial Museum site in which […] students choose some of these personal stories that are really highlight that that museum and then, […] short assignment but sort of construct a timeline of what is the historical context that that led to this trajectory of their life and what are the historical events intervening in their life at each moment.”

**Dr. Marvin:** “I do literally the exact same thing.”

Both ask students to pick a personal story from the Holocaust Museum website and create a timeline for it. This activity is also a simpler format for the organizer and can be easily integrated in a website. It provides the information in chronological order and helps students to understand the development of the historical context. I also draw on research. I started with a timeline in which students participate in building it because this process engages particularly when the topics are hard to grasp. However, the educators preferred to provide the students with the timeline as in Design Cycle Three. Another reason for using a timeline is its capacity to include images, videos, and text. Moreover, it allows the educators to build their assignments on events from the timeline, which drives the students back to the facts.

I added the Chatbot activity based on research. I used the chatbot to lower the students’ anxiety and to help students to find more materials to deepen their knowledge about Lucie’s history. I also designed the Chatbot to have three modules; 1) to enable students to ask about the

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course instructions, to enable students to ask about technical problems, and 3) to elicit the students’ previous knowledge for later comparison because of its ability to answer any questions depending on its artificial intelligence. I enabled students with the tools to build a Lucie Aubrac chatbot to engage with historical information.

I used the AR technology in two ways, the AR Statue, and the AR Exhibit. Both of these were my ideas. The AR Statue activity goal was to build connections across themes. Through this activity, the students should work in small groups and add the result of their work on an AR statue of Lucie Aubrac. While in the AR Exhibit students analyze a topic and upload it to the AR gallery on the web. The educators described building exhibits as an effective activity in the classroom because it allows students to think about what they learned from a public history perspective. Dr. Byrnes noted that she used to ask students to design their own exhibit.

**Dr. Byrnes:** “Okay you’ve looked at a few things now design your own exhibit using like pick a few of these and talk to me about like what’s the narrative that you’re creating like what story can you put together.”

In Design cycle two, I added the word cloud to the building connections activity (AR Statue -Citizenship). The educators saw the effectiveness of this activity in the generated conversation among students about the topic. Nevertheless, the educators found it too time-consuming in class and too work heavy for the students. Therefore, I deleted this activity while working on the final prototype. The educators also wanted to have one main project at the end

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409 Benedetto, Cremonesi, and Parenti, “A Virtual Teaching Assistant for Personalized Learning,” 1-3.
410 Gonda and Chu, “Chatbot as a Learning Resource?” 1-5.
where smaller activities lead to it. Therefore, I moved the AR exhibit, AR statue, and Lucie Aubrac chatbot to be major projects.

In Design Cycle three, I reorganized the activities to have one major project and several sections that led to it: historical contextualization, building connections, and DH questions. These changes are built on research and the feedback from Design Cycle One and Two. I focused on the AR exhibit project because the educators talked about its usefulness in both Design Cycle One and Two. The other two projects, which are Lucie Aubrac Chatbot and AR Statue, can be used in future research. I kept the idea of working across themes and used it in the Building Connections section. I also modified the essay article to have its own section, which is the DH questions section.

For teaching the history of Lucie Aubrac, educators in Design Cycle One and Two voted for the timeline, interacting with the Chatbot and AR Statue activity. The results also show that the educators chose Lucie Aubrac Chatbot, AR exhibit activity, and AR Statue to allow students to practice analyzing perspective while learning Lucie’s history. They encouraged these activities and, in particular, Lucie’s bot for developing empathy among students.412

Therefore, I used these activities to develop the final prototype and present it in Design Cycle Three. From the Design Cycle Three survey, the educators found that the new design of the historical contextualization section would work effectively in presenting the historical

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information if used in the classroom. They also felt it would allow students to practice perspective taking, and initial empathy while learning about Lucie Aubrac.

The new design of building connections led the educators to vote that this activity would be the most enjoyable for the students. This is important as it will increase the empathetic motives\textsuperscript{413} and engagement with difficult history. They also thought that the new section of Building Connections allows students to toggle and work across themes, enhancing Lucie’s curriculum delivery. The educators saw that Difficult History questions could be used for perspective taking because it allows students to understand Lucie’s prior experience and principles in depth by writing an essay from a third-person perspective.

The feedback of the educators shows that the effectiveness of designing activities is linked to the activity structure. In regard to the number of questions per activity and the length, from Design Cycle Two survey, the educators had specific recommendations such as the number of questions the students should answer per activity. For lower-level questions or fact checks, the educators suggested the activity should include between three to five questions. This is because it helps to guide the students' thoughts to think about the topics until they reach a higher assignment. This was applied in the historical contextualization section and the building connections section. For higher-level analysis, the educators said one question is enough to allow the student to dig deeper into the historical information. This was used in the development of the DH questions in the final prototype. The length of the activity also varied. Low-level questions

would be about a paragraph, while longer essays for the DH questions would be one to three pages.

After demonstrating the answers to the sub-questions, I will explain how a project-based TELE can help teach difficult history through a historical empathy approach? The critical historical empathy framework I used in this study has four principles; critical historical contextualization, Institutional affect, perspective taking (includes thematic learning), and transforming affective connection (pages 66-67). I built the final prototype sections in a way that every section consists of these four principles. As a reminder, the final prototype has these sections; Historical Contextualization, Building Connections, DH Questions, and Projects, including AR exhibit. The prototype teaches more than the basic context of life in France in WWII. It provides the overall context but then steps beyond that by showing the difficult moments, motivation, and struggles of Lucie Aubrac, a French resister. The first section students encounter is the Historical Contextualization section. I named it this to refer to the importance of the first aspect in the critical historical empathy framework. Below, I will explain how this section has the potential to achieve the critical historical empathy framework.

**Historical Contextualization.** The Historical Contextualization aspect aims to analyze history critically, allowing students to think more about “how” and “why” the historical event happened besides the cause and circumstances. I used the critical sociocultural approach to help understand history from socio-political, socio-economic, and sociocultural norms. Moreover, students should learn about the power structure. Another goal was to immerse students with

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sources to help them in exploring new knowledge to help in reasoning the historical events and achieve cognitive empathy.\textsuperscript{415} To achieve that, I used a timeline to help students to understand the historical events in order which is useful because students might build their arguments on wrong events, as Dr. Byrnes stated in the Design Cycles. In Figure 89 below, the left side allows students to highlight the historical context's political, economic, and social aspects, giving them the chance to think about the reasons from both sides, Vichy’s state, and the resistance. To allow students to think about power structure and practice within the society, I used highlighters for both types of control and types of resistance.

\textbf{Figure 88 The Highlighters in The Historical Contextualization Section}

As a reminder, the types of control refer to any practice from Vichy’s state to force the National Revolution, for example, the Milice police.\textsuperscript{416} On the other hand, the types of resistance show how resisters act in different ways. Moreover, it includes the degrees of resistance which ranges


\textsuperscript{416} Aubrac, \textit{Outwitting the Gestapo}, 101-139.
between the lower level of resistance and armed resistance. I also used a mouse tooltip to show the meaning of these concepts to students. Endacott and Ellenwood found out that educators need to immerse students with many primary sources and writings to achieve historical empathy. This aligns with what all the educators agreed on in the design cycles. The materials tap and the chatbot immerse students with textbooks, primary sources, and suggestions for new materials to analyze Lucie Aubrac's history deeply. The maps section connects students with related places, which increases their historical contextualization. The final edits for the notes section transferred it to guide the students' thought to think historically about the text they highlighted. All of these tabs contribute to helping students to think critically, reason, and evoke cognitive empathy.

**Institutional affect.** The aim was to reconstruct the atmosphere in which the historical figure lived in. This atmosphere is packed with affect that institutions (state or resistance) are intentionally and systematically organized to include or exclude people. This will help students understand the difficult choices people faced and help them to understand the risks historical actors faced when engaging in civic action. It also plays a role in historical contextualization as it provides the students with knowledge about the types of control and resistance. It also intersects with the transformative affective connection. It includes questions that allow students to imagine Lucie’s experiences under these situations. The affect section's significance is that it is also set up to facilitate students’ understanding and perceptions of resistance by the French community. For example, these propaganda posters show the ideal citizen in the eyes of Vichy’s government.

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This increases the depth of the emotions that influenced the resisters. These posters help students imagine how ordinary people supported Vichy and why others decided to resist. It also makes students understand the resisters' hard choices at that time.

**Perspective taking.** The goals from this aspect were to enable students to understand how the historical figures lived, thought, and acted according to their historical context. The goal also was to analyze people of the past from a thematic lens. To achieve that, I built the prototype to teach history thematically. Enabling students with the highlighters to highlight Lucie Aubrac's narrative and the materials will help the students to understand the differences between in the social life Lucie Aubrac lived and acted. This also aligns with Barton's concept of self of otherness, which refers to the concept that historical figures context, live, and actions are separate from the students to prevent them from living the trauma of the past or engaging emotionally with the historical figure to the limit that hinders their historical thinking.418 The questions, which pop-up when clicking on the plus signs in the Institutional affect, allow students to think about how Lucie Aubrac acted and felt. The usage of first-person to answer these questions will engage students.419

**Transformative affective connection.** The goals of this aspect were to connect students with the lived experiences of the historical figures and to enable the students with the tools to question themselves and their prior knowledge. In addition, it evokes a response from them based on a connection with similar situations. The reason behind that was to transform the affection into civic actions. As a reminder, transformative learning occurs when people start to

question their prior beliefs and knowledge.420 Another goal is to allow students to imagine certain situations because this helps them reflect and increase their analysis of the historical context.421 The Think Section on the right in Figure 80 will enable students to practice seeing things from someone else’s eyes, which Wineburg refers to as “perspective taking.”422 In the prototype, the design element intends to encourage students think about a situation Lucie has gone through and build on it by imagining other categories, lives, beliefs, and principles from a first-person perspective. This allows students to imagine how other people lived their lives and reflect on themselves while processing this imagination. This also helps to clear some misconceptions that might occur to students that all French people acted in the same way as Lucie did.

The second section in the prototype is Building Connections. In this section, the students work in small groups to emphasize their understanding of new knowledge. I will continue on the same pattern describing how this section fulfills the four aspects of the critical historical empathy approach and how this contributes to teaching Lucie Aubrac.

**Historical Contextualization.** Social interaction helps in emphasizing new knowledge. Learning occurs in social interactions. Students make meanings through interaction; therefore, it is important to provide them with means to work in groups.423 The students work together in small groups. Each group summarizes the information from the plus signs questions shown below in figures 90, 91.

The students should summarize their peers' answers to the plus sign questions and organize them into themes. Students learn from their interactions together. In addition, organizing the
summaries into themes will enable them to think critically about how to summarize this information into themes, showing the reasons for their decisions. Students discuss a question from a third-person perspective to analyze the historical context of Lucie Aubrac.

**Institutional affect.** Allowing the students to navigate through different themes on the same image is significant for understanding how the historical context was influenced by Institutional affect. Students will be able to understand the boundaries of inclusion and exclusion created by the Institutional affect. For example, students can view the answers of their peers to the question “What things/people/ideas are associated with the “happy” versus “broken” homes depicted on either side of the “National Revolution” poster, and how do these relate to ideas about gender roles and the family?” from both the gender and the citizenship themes, shown in Figure 90. This will allow them to learn how the poster of the National Revolution excluded some categories in the society and think about the impact on Lucie Aubrac because her husband was a Jew.

**Perspective taking.** Students learn across themes which is a valuable feature. It makes explaining themes easier to educators, as Dr. Brown stated. Using writing in third-person perspective will encourage students to think historically and understand other points of view.

**Transformative affective connection.** Students will practice Self-reflection through analyzing and summarizing their peers' answers. Working in groups and sharing ideas also generate affective connections in which students can relate to each other experiences. Moreover, Enabling the students to reply to each other will allow them to share historical knowledge and to relate history to their own experiences.
The DH Questions section is the third section of the prototype. It represents a higher level of historical analysis than the previous sections. In this section, the students write an essay from a third-person perspective. The students will write the essay to display in an AR exhibit, which is a significant skill to learn to introduce their work in public history. This section contains some aspects of the disciplinary approaches, such as asking students to highlight their thesis, evidence, and analysis. I will explain below how this section also applies the critical historical empathy framework.

**Historical Contextualization.** In this section students write a short essay to answer a question. Students acquire historical knowledge through the materials tab on the left and work with the Chatbot module, which suggests materials. The Chatbot also address prior knowledge through the module “before and after” Figure 67. The module lets students view their previous answers to the questions and think if their answers have changed according to what they have learned. The questions let the students start with a line of fact as Dr. Brown suggested to focus the students’ attention to investigate how and why the historical event took place. This aligns with Epstein and Peck's critical sociocultural approach. The questions also should include a dilemma for students to investigate. The final prototype immerses students with materials. Every question is linked to specific materials. Students also can read their peers' essays and reflect on them.

**Institutional affect.** The questions also include an analysis of the propaganda images and their impact on society. For instance, investigating the symbol of Joan of Arc and investigating

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nationalism and the concept of Frenchness in this question “Vichy state chose to highlight Joan of Arc, consider why they chose her as a symbol? What did that signify?”

**Perspective taking.** This is achieved through writing with the Chatbot, which enables students to find more sources to investigate different points of view. In addition to writing from a third-person perspective, students can explore the topic and understand that situations they are analyzing are separate from the world they live in.

**Transformative affective connections.** The affective connection is created through imagination, display, and reflection. Some of the questions include imagining situations such as “Imagine Lucie had been imprisoned, and Raymond was working to free her: what are three things he might have done differently?” This question allows students to think about a different historical context, reasoning the similarities and differences between the imagined situation and Lucie Aubrac. Imagination helps humans to reflect on themselves and think about their beliefs.426 The Chatbot module “Just chat” is designed for several reasons. One of them is to allow students to think about their emotions and the reasons behind these emotions to make meanings from learning about the Self. It helps them have an affective connection based on reason and emotions to lead to civic action.427 The notes tab, which allows students to think about the text they highlighted, enhances their metacognitive abilities, increasing their emotional connections. That is because they are reasoning what they learned and making meaning of it.428

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427 Dirkx, “Nurturing Soul in Adult Education,” 54-111.
The final section of the prototype is the projects which include the AR exhibit, AR Statue, and Lucie Aubrac Chatbot. In this section, students can view their work on the website through the virtual web in which students can navigate and read the articles or through web augmented reality. The AR exhibit allows their work to come alive and increase their empathetic responses because of the affordances of the AR and its capability to overlay images, videos, and text on real environment.\textsuperscript{429} The two other projects, the AR Statue and Lucie Aubrac Chatbot, can increase the empathetic motives described by Zaki and Weisz because they increase the positive affect i.e., they are enjoyable.\textsuperscript{430} Educators' recommendations also agreed with this research. Future research is needed to implement these projects.

3.b. In what ways do educators think the final prototype will help in teaching difficult history content, such as the Lucie Aubrac scenario, thematically?

As a reminder, I had to focus on the educational goals for the gender theme only because of the limited time of the study and the changes I had to make to the prototype. The educational goals were: 1) how the prototype show what sort of boundaries were created by gender roles in this period; (2) how the prototype teaches about historical agency, empathy, and identities; (3) how the prototype allows students to evaluate how one’s ability to resist and have their resistance recognized is shaped by positionality, including gendered positionality.

To improve Lucie Aubrac's narrative, I used the educators' suggestions in the Consultation Study and the Design Cycles. Some of these suggestions included (1) Excerpts from Aubrac’s, Stapleton and Davies, ”Imagination: The third reality to the virtuality continuum,” 58. Zaki, “Empathy,” 1608-1647; Weisz and Zaki, “Motivated Empathy,” 67-71.
Outwitting the Gestapo;\textsuperscript{431} (2) Clips from the 1997 Lucie Aubrac film;\textsuperscript{432} (3) images from the Lyon Resistance museum; (4) excerpts from Paula Schwartz, \textit{Redefining Resistance: Women’s Activism in Wartime France}; \textsuperscript{433} (5) Propaganda posters (women in the home, on the Homefront, First World War, Vichy, post-war) with translated annotations; (6) excerpts from Paula Schwartz, \textit{Partisanes and Gender Politics in Vichy France}.\textsuperscript{434} I also used the guiding questions for the gender theme, which the educators improved through the design cycles. Below, I explained how the prototype will teach Lucie Aubrac thematically, focusing on the gender theme.

\textbf{How Will the Prototype Show What Sort of Boundaries Were Created by Gender Roles in This Period?}

The educators can use the prototype to teach gender boundaries through two levels. The first level is related to Vichy’s state by showing the values of the National Revolution. I used Vichy posters which the educators provided in Design Cycle Two in the Institutional affect section. For example, the Figure below:

\textsuperscript{431} Aubrac, \textit{Outwitting the Gestapo}, 268.
\textsuperscript{432} “Lucie Aubrac (1997)- IMDb.”
\textsuperscript{433} Schwartz, “Redefining Resistance: Women’s Activism in Wartime France,” 141-153.
\textsuperscript{434} Paula Schwartz, “Partisanes and Gender Politics in Vichy France,” 126–151.
Vichy based his politics on the family and local places. The family connection is built on the Christian faith. The flag is evident because the labor party should embrace patriotism. The plus signs here allow students to investigate these facts and understand the meanings conveyed in this image. The questions also allow students to explore their feelings and analyze it for deep reflection. In the DH Questions section, I added a question about Joan of Arc to help students to understand the gender boundaries under Vichy’s state.
From the answers of Design Cycle Two anonymous survey:

New role models for youth: Joan of Arc, saintly female figure representative of Catholic piety, French national identity, sacrifice, honor, and, conveniently, resistance to the English. Joan is a young woman but the active part of “saving France” is gendered male in these posters. The figures invited to follow in Joan’s footsteps and “revive in our hearts the spirit of Joan, who at 18, saved France” are young men, scouts, and scholars. Young women are not featured. Young women, it is inferred from the other images, can best help restore France by remaining dutiful wives and mothers in the home.

The rationale for using Joan of Arc is to show the new boundaries created by the National Revolution. Women should be good wives to support their young men in their fight for France.

The second level is resistance. According to Schwartz, women were not treated equally inside the resistance. One of the boundaries is that women were not in combat. It was for men only. To improve students’ historical contextualization, I added the excerpt below from her article, *Partisanes and Gender Politics in Vichy France*. This excerpt shows how the situation for women shifted.
According to this quote, women were engaged equally in the resistance at the beginning because of the new dynamics created by this movement. After that, roles shifted. Women filled roles related to their nature as mothers or housewives, such as organizing the demonstrations and preparing food and clothing. They were no longer leaders in the resistance or a compact.

Although Lucie Aubrac participated in an armed action to free her husband, other women did not have the same opportunity. Then I used the Think tab to allow students to think about Lucie’s gender roles and investigate the boundaries inside the resistance.

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I also linked the Think tab with Schwartz materials to help students investigate gender boundaries and build their historical thinking on historical evidence. I added a question that requires students to think about women as leaders of resistance groups, armed groups, or political groups.

**How Will the Prototype Teach About Historical Agency, Empathy, and Identities?**

I focused on historical agency and identity. According to Seixas and Barton, historical agency is essential for students to understand the choices of the historical figure, among other choices and decisions. Students should also be able to relate these choices to the historical context. To understand the choices the resisters had; students should understand the geography of France.

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Resisters had different agencies because of the social context. I used the plus signs on the map to let students think about the social context of Lucie and the resisters and how different it would be if they lived in the occupied zone.

One of the important topics the educators emphasized in Design Cycle Two is collaboration and resistance. I followed the same pattern, which focused on Vichy’s state and the resistance. I added Vichy’s poster to improve the historical contextualization when he asked people to fight with him and trust him with confidence, as shown in the propaganda poster below.
Also, Lucie’s narrative provided the social context which explains how Vichy forced the National Revolution and made it hard for people to choose to resist.

On the resistance level, I explained Lucie’s decision to join the resistance. She was among the first to resist. However, she had the choice not to resist or to be in France at war. I also explained the other decisions she had. I added a quote from her memoir explaining that she had the chance to leave France at the beginning of the war and go to the US on a fellowship. Lucie and Raymond decided to stay and to fight despite the fact that Raymond is a Jew.

In 1941, she was a mom with a little boy when she and her husband started the *Libération-Sud*. I added a quote from Schwartz, *Redefining Resistance: Women’s Activism in Wartime France*, to show the difficulty of being a resister.
Lucie Aubrac

The Aubracs, Lucie and her husband Raymond, were among the first to establish a resistance network. When they settled in, the Aubracs started the Libération-Sud, the first resistance network, following a chance meeting with Jean Cavailles and Emmanuel d’Astier. In 1941, Lucie and Raymond had their child, a boy named Jean-Pierre. She secured a job at the Lycée for girls as a history teacher and Raymond worked as an engineer at the Bron Airport.

Joining the resistance was not only a personal decision but one with implications for family and friends. Since repression against resisters was severe. it is small wonder that many women were reluctant to take risks which could place families or dependents in jeopardy. 1

The Resistance began in small way, symbolic as actions like chalking slogans on walls to get let people know they could resist too.2 The campaign targeted six towns between 27-28 February, 1941. Lucie was responsible of the organization but she did not involve in the action. Resistors used chalk slogans on the walls over Vichy’s posters saying “Collaboration is treachery! Or the French who work for the Germans are traitors. We are keeping a list. They will be punished.”

*Figure 98 History Tab- Redefining Resistance: Women’s Activism in Wartime France*437

This information will help students to understand the reasons behind collaboration and resistance. In the DH Questions section, I added a question to help students understand how hard the resisters’ decisions were because of Vichy’s propaganda machine.

*Figure 99 DH Questions Tab- Notion of "Frenchness"

Understanding how Vichy’s propaganda promoted specific values, such as discouraging resistance and encouraging labor migration, will help students understand the difficulty of resisting.

Concerning identities, one can tackle that from multiple levels. The first level is the national identity. This means how Vichy National Revolution wanted to present the essence for the French. I added in the Institutional affect section in the figure below:

*Figure 100 Institutional affect Tab - Vichy's National Revolution*
In Figure 100 above, the identity of the French people is associated with collaboration and against resisters, Jews, and communists.

The second level of identity is presented in the resistance as an organization. I added de Gaulle speech as an example to let students understand how the difference between Vichy France and de Gaulle France as shown below:

*Charles de Gaulle speech*

According to BBC, the first speech on 18 June 1940 was not recorded, so he repeated the speech and recorded it to be broadcasted on BBC, on 22 June 1940. Below is the translation from BBC website:

> The French government, after having asked for an armistice, now knows the conditions dictated by the enemy. The result of these conditions would be the complete demobilisation of the French land, sea, and air forces, the surrender of our weapons and the total occupation of French territory. The French government would come under German and Italian tutelage.

What role will young men and young women play in the resistance? What new role models does de Gaulle create for them?

I say the higher interests of the country, for this is not a Franco-German war to be decided by a single battle. This is a world war. No one can foresee whether the neutral countries of today will not be at war tomorrow, or whether Germany’s allies will always remain her allies. If the powers of freedom ultimately triumph over those of savagery, what

*Figure 101 Institutional affect Tab - Charles de Gaulle Speech*438

The comparison here is helpful as it will allow students to think about the different definitions of French identity.

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The third level of identity is on a personal level. Lucie Aubrac has two identities: a teacher and a resister. The narrative explains how she navigated through these two identities. I also used the Think tab to allow students to combine historical agency and identity. Students will imagine a new situation and answer a question. I modified a question I used in Design Cycle One (Appendix A, Essay – Analysis -Assignment -Gender, Assignment Questions, 3).

![Think Tab](image)

**Figure 102 Think Tab - Collaboration and Resistance**

I followed Dr. Marvin's suggestion to set Lucie as an anchor for their imagination, and also, I used the results of the survey to limit the scope for lower-level questions. As a result, I asked the students to imagine that they found a letter from Lucie Aubrac and one of Vichy’s collaborators. Each of them explained the choice of being a resister and a collaborator. Then asked the students to write from a first-person perspective one reason for each of them. I also added *France: The Dark Years 1940 – 1944* in the suggested materials because it includes a chapter about collaborators and resistance. The Think tab will help students understand historical agency by explaining the reasons for Lucie and the collaborator. Moreover, they will explore the identity of
a resister and a collaborator and its intersection with the historical context. Using imagination and first-person will help them to analyze the situation critically.

**How Will the Prototype Allow Students to Evaluate How One’s Ability to Resist and Have Their Resistance Recognized Is Shaped by Positionality, Including Gendered Positionality?**

Lucie Aubrac was a white woman, a mom, and a teacher. I used two situations in her life to think about gender positionality and its relationship to resistance. The first is related to Lucie as a teacher. Lucie used her class to teach students to think about the economic situation.

I found a terrific passage reprinted in a 1938 economics journal, encouraging the French to consume more bread and pastry: “Advice to mothers: French pastry, the finest in the world, so attractive and diverse, is a complete food. Made from fine flour, butter, eggs, and milk, it is a pleasant way to feed your children and aid their growth.” This course will be taught on the very same day the authorities are releasing the coupons: KC, which entitles “hard laborers” to five ounces of cold cuts and K8, which provides an extra half-pound of sugar to the three youth categories (J1, J2, J3).

**Figure 103 History Tab - Lucie Aubrac Memoir**

I added this excerpt from her memoir, which shows how she compared the economic situation in 1938 before the war and 1943 under Vichy’s new policies to organize the resources offered in Figure 103 above.

The second situation is in 1943 when she used a fake identity and played the role of a wealthy girl. I selected this event because it combines gender positionality and identity.

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I used two images from the 1997 film starring Carole Bouquet as Aubrac to show the difference between Lucie with her fake identity and her original identity. Then in the Think tab of the same year, I asked the students to highlight the political and social situations and then think about if Lucie Aubrac was from a different race or class would she have the same opportunity to talk to Barbie in the first place?

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440 “Lucie Aubrac (1997) - IMDb.”
I also used the DH Question section to reinforce students' understanding of gender positionality.

The Figure below lets the students imagine a different situation of Raymond trying to rescue Lucie.

This question will help students investigate the social and cultural context Raymond lived in and its connection to his race, class, and gender.
4. Summary

This chapter included the study's two phases: the Consultation Study and the Design Cycles. The Consultation Study included three focus group sessions. At the same time, the Design Cycles had three design cycles and two surveys. The data collected from the Consultation Study and the Design Cycles are used to answer the study questions in the last section of this chapter.
CHAPTER 5: DISCUSSION AND CONCLUSION

This study aimed to design an educational prototype with the collaboration of academic historians to find practical solutions for teaching difficult history. There were four problems discussed in the problem statement in the introduction chapter which are: 1) the need for a TELE that teaches difficult history using historical empathy approach, 2) the need for a technology that helps lower the anxiety and stress caused by difficult history for students to motivate them to explore these topics, 3) the need to address students’ prior knowledge while learning difficult history, and 4) the need to expose students to the daily struggles of female resisters to understand the relationship between the citizens and the state for better democratic practices.

This chapter discussed the contribution of the “Final Prototype” regarding the problems above. In the “Educational Challenges” section, I discussed the educators’ issues while building the prototype. The output of this study is in two sections: “Generalization of The Prototype,” in which I discuss the application of the prototype on other difficult history topics, and the “Design Recommendations” section, which includes the design principles. I ended this chapter with the “Limitations,” “Future Studies,” and “Summary” sections. I also explained the study’s limitations, provided suggestions for future studies, and summarized this research.

1. Final Prototype

In the following paragraphs, I demonstrated how the final prototype contributes to addressing educational problems.
1.a. TELE For Teaching Difficult History

Learning is about discovery, connecting ideas, and social interaction. Dewey also encouraged designers to build tools to help students’ mental processes and engage them in social interaction because both are useful for constructing knowledge. This section discussed the affordances of technologies in the final prototype to teach difficult history. As a reminder, learning difficult history requires a deep understanding of the historical context, thematic understanding, connection to places, and acknowledging students’ feelings. I dedicated a section below for dealing with students’ anxiety through learning with the final prototype.

The final prototype has four sections: Historical Contextualization, Building Connections, DH Questions, and Projects (AR Exhibit). I started with the Historical Contextualization section, which included the timeline, highlighters, maps, materials, Institutional affect, Think, notes, and the Chatbot. The Historical Contextualization section allows students to understand the context of difficult history. It also minimizes students’ social interaction while allowing them to observe, imitate, and learn to increase digital empathy. Friesem argued that digital empathy is a holistic experience with cognitive and emotional abilities that require students to reflect. Mayer’s

445 Lindsay, *Reconsidering Interpretation of Heritage Sites*, 40-45.
multimedia theory also states that students learn more effectively when the materials include multimedia because it lowers the cognitive load.\textsuperscript{448}

The timeline includes two parts: on the left side the highlighters, and in the middle the history, Institutional affect, maps, and the materials. Timeline affordances allow students to view historical events in chronological order which is useful for determining historical causes. This requires students to understand the development of historical events across time. As Litherland and Forrester stated in their study, engaging students with a timeline helped the students to deal with difficult topics.\textsuperscript{449} It is also organized thematically which allows students to learn in depth and interpret difficult history from different lenses.\textsuperscript{450}

The first design of the timeline was to allow students to be the producer of the content because it is an engaging design element for history.\textsuperscript{451} After the critiques I received about the workload, I changed to a static timeline. However, the challenge here was to make this timeline interactive and engaging. Therefore, I added multimedia to the history tab. For instance, in the history tab, educators can add their own materials such as videos, images, or audio. Multimedia plays a significant role in enhancing the cognitive process according to the learning with multimedia theory.\textsuperscript{452}

Mental tools are important for students because they help them in the cognitive processing of information.\textsuperscript{453} I used the highlighters for identifying the factors of the sociocultural approach in

\begin{footnotes}
\textsuperscript{448} Mayer, "Multimedia Learning," 85–139.
\textsuperscript{449} Litherland and Forrester, "Undergraduates as Co-Producers of a History of Education Timeline," 1-17.
\textsuperscript{450} Rose, \textit{Interpreting Difficult History at Museums and Historic Sites}, 1-69.
\textsuperscript{452} Mayer, “Multimedia Learning,” 85–139.
\textsuperscript{453} Dewey, \textit{Democracy and Education}, 54-111.
\end{footnotes}
the history tab and the materials tab. The structure is the same in both tabs. The affordances of the highlighters and the notes help with memory retention. As mentioned before, readers who highlighted the text were able to recall the information better even with less highlighting.\textsuperscript{454} This is useful because learning difficult history needs students to relate to and think about history from their own backgrounds. Moreover, the structure and the design of the highlighter and the notes forces students to highlight less, which is more effective.\textsuperscript{455} The structure of the highlighter requires students to think about the text and to identify it as one of the categories: political, economic, or social. However, the highlighters can overlap.

\begin{figure}[h]
\centering
\includegraphics[width=\textwidth]{highlighter.png}
\caption{Technology affordances for Historical contextualization}
\end{figure}

The notes section plays a role in guiding the students' thinking as well. The drop-down menu has questions such as “what do you notice in the text?” which allows them to think deeply about the significance of the highlighted text. This would be a new feature to overcome the problem of excessive usage of the highlighters which was mentioned by Dr. Brown and in research as

\textsuperscript{454} Yeari, Oudega, and van den Broek, “The Effect of Highlighting on Processing and Memory of Central and Peripheral Text Information,” 1–19.
\textsuperscript{455} Penn, \textit{The Psychology of Effective Studying}, 2–64.
The complexity of the highlighting process will give the students to the opportunity to think about which text to highlight. To evaluate the effectiveness of this feature, it would be useful to conduct more research on it in the future.

The Institutional affect tab has many affordances for teaching difficult history. This tab includes images, speeches, and videos. Images immerse students with cultural practices and help them to understand the non-verbal experiences of the past. Images are historical evidence which need analysis to reveal the clues and the meaning behind it. Political Speeches are historical narratives which contribute to the inclusion and exclusion of groups. The circulation of these speeches provides insight about how the atmosphere was created. However, there were two concerns about the images, speeches, and videos. First, they should not include violence, so they align with the ethical rule for teaching about the Holocaust and World War II, as well as to minimize empathetic avoidance. Second, these elements lack interactivity. To overcome these concerns, I did not include any violent images. I also used the plus signs over the images to increase the interactivity with these elements. Figure 89 shows an interactive example with propaganda posters. The usage of plus signs over the images, which allows students to enter their answers to the questions, help unpack the meanings of cultural signs. This is useful for teaching difficult history because it helps students identify power structures.

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459 "Guidelines for Teaching About the Holocaust."
461 "Teaching Divided Histories."
Educators wanted maps to be part of the prototype to show the two zones of France in World War II. The maps tab also has the same structure for the plus sign. It allows students to think and analyze the maps and understand the geography of France across time. Another important feature is that all the maps are translated to English. Educators can enter simple translations from French to English as most of the educators read French. However, translation was an issue the educators talked about which requires more future research on how to integrate it into the materials without breaking copyright laws. Educators recommended building 3D AR sites which represent places in France. They wanted students to have the ability to overlay these sites on real environments. Future research would benefit from this idea as it could be an additional feature for the maps. When students click on place it could open an AR portal to view this place. This would increase the affective connection as difficult history is linked to sites.\footnote{Lindsay, \textit{Reconsidering Interpretation of Heritage Sites}, 40-50.}

For instance, building an AR virtual 3D project of Montluc prison where Raymond, Lucie’s husband, was imprisoned would allow students to empathize with Lucie and understand the fear she felt while she was entering the prison with fake personal papers.
The Think tab is another mental process tool which helps encourage imagination. The importance of the tab is to allow students to imagine situations of other people related to the case study. The new structure links the question to the materials as it enhances the learning process as recommended by the educators. It also allows observation and reflection through viewing other peers’ responses for the question.

The Chatbot was built to be a teaching assistant with five modules as shown in figure 57. Educators thought that the Chatbot was a useful tool unless it is used for delivering complex historical information. They also criticized the use of NLP for assignment analysis. Although
NLP is used in research for text analysis\textsuperscript{464} and essay evaluations such as LightSIDE.\textsuperscript{465} Educators were afraid that students would focus on adding sources to their historical analysis without building connections between them just to complete the percentage required by the technology. Therefore, educators preferred not to use the NLP technology to analyze historical essays and leave that to the educators to show the strengths and the weaknesses of the students’ essays.

The Building Connections section includes the ability to work in groups, participate in discussion boards, and review the answers of the Institutional affect. The prototype allows students to work in small groups similar to Canvas which all the educators are familiar with.\textsuperscript{466} The ability to retrieve the stored data from the Institutional affect and display it to the students to summarize it plays a role in confronting themselves on one hand, and on the other hand reinforcing the knowledge they gained. Discussion boards are used to increase engagement and dynamic conversations among students.\textsuperscript{467} This will increase the conversations about the final essays and improve the students’ engagement with difficult history. To organize the conversation among students, as Dr. Megan required, future research should consider adding more features to the discussion board such as text analysis for offensive answers or image analysis to prohibit students from sharing violent images.

The DH Question section allows the students to write within the prototype or to upload a PDF. The notion behind the writing part is to keep students focused on the materials and to be able to work with the Chatbot.

\textsuperscript{465} Mayfield and Rose, “LightSIDE.”
\textsuperscript{467} Levine, “The Online Discussion Board,” 67-74.
Students here highlight the thesis, evidence, and analysis. This is a practical use for the highlighters as described by Dr. Brown. That is because most students do not identify the thesis, evidence, and analysis in their essays. Therefore, the use of the highlighters here is significant to remind them about these elements. The second affordances are the walls which include all the students’ work designed the same as Padlet. Padlet is an online software Dr. Fitch used in her classroom and stated that it engaged her students. This wall allows the students to view all the work and zoom in to read other peers’ essays which increases immersion with difficult history from different perspectives. The discussion board also allows students to analyze and reflect.

“Projects” is the final section, and it includes three projects: AR exhibit, AR statue, and Lucie Aubrac Chatbot. The AR exhibit is the primary focus of this study. The affordances of the AR in the literature show that it engages people with difficult history. The notion of a gallery
itself is engaging to students as the educators mentioned in the design cycles. It engages students because they build a project for public audience. According to the literature AR has two imperative affordances which are presence and agency. This means that students will be able to have a subjective personal experience (presence) while interacting with the gallery in a virtual environment (agency).⁴⁶⁹ This will increase their positive affect and initiate empathetic motives as well.⁴⁷⁰ In addition to that, AR has the ability to enhance the learning of abstract concepts which will help students to learn about Vichy’s propaganda and improve their learning because these posters are based on visual cues.⁴⁷¹ Moreover, AR helps students to connect what they learned in the classroom with their daily lives through learning by doing and working in out classroom environment. This also increase students interest and engagement.⁴⁷² In addition, studies of audio integration that narrates the text of the essays would enhance the experience and make it more empathetic because it increases the imagination.⁴⁷³ Having another option to view the gallery on the website enhances the engagement with difficult history. There is potential in the two other projects which are AR statue and Lucie Aubrac Chatbot. Educators stated that the AR statue is engaging as well in the Design Cycle Two and Design Cycle Three surveys. That is because of the affordances of AR in attracting students’ attention and motivating them to investigate the topics. The Lucie Aubrac Chatbot is also engaging because it allows students to be active producers and interact with the Chatbot.⁴⁷⁴

⁴⁷² Bursztyn et al., “Increasing Undergraduate Interest to Learn Geoscience with GPS-Based Augmented Reality Field Trips on Students’ Own Smartphones,” 1-7; Kamarainen et al., “Using Mobile Location-Based Augmented Reality to Support Outdoor Learning in Undergraduate Ecology and Environmental Science Courses,” 259-276.
⁴⁷³ Stapleton and Davies, “Imagination,” 53-60.
1.b. Addressing Students’ Anxiety

The final prototype of the website has the potential to lower anxiety and increase empathetic motives among the students. The usage of the chatbot in a way that students create their own chatbot builds trust and increases their level of positive affect with the chatbot while learning and drafting their essays in the DH questions section. Positive affect is defined as any target that people find happiness in. Interacting with this leads to increased empathetic motives\(^{475}\) and lower anxiety.\(^{476}\)

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I also designed the chatbot to include a module that is triggered by any stressful emotions students would have. The Just chat module helps students to reason their feelings but also should include a risk module to deal with a student’s feelings if they are under stress because of the topic they are learning. The module mimics natural conversation which lowers anxiety as shown in psychology studies such as the Atena Chatbot which lowered students’ anxiety in COVID-19.\(^\text{477}\)

The educators’ recommendations showed the Institutional affect tab in the Historical Contextualization section and Building Connection section are enjoyable for students and generate positive affect. That is because students interact with the plus signs and think about the signifiers and clues and their relation to the historical context.\(^\text{478}\)


Figure 113 The Institutional affect Tab

Figure 114 Building Connection Section
The AR exhibit encourages students to see their work come to life and share this with their peers. All these features contribute to solving the third problem and encourage educators and students to tackle difficult history topics with more confidence.

Figure 115 The Web Gallery and The AR exhibit

I.c. Addressing Students’ Prior Knowledge

In Shemilt, Ashby and Lee, frameworks addressing prior knowledge was the first step from developing to constructing new knowledge.479 Educators begin by eliciting students’ partial knowledge and then lead them to new knowledge. In Foster’s non-linear knowledge structure, the focus shifted to be on constructing historical information through which students can investigate and explore their own misconceptions individually.480 Educators start by developing a deep understanding of the historical contextualization allowing historical empathy to take place. Barton and Levstik and Endecott and Brooks followed the same example in building the historical contextualization for students, allowing them to understand how people of the past

480 Foster, “Historical Empathy,” 140-190.
lived and acted in a certain way.\footnote{Barton and Levstik, \textit{Teaching History for the Common Good}, 185-267; Endacott and Brooks, \textquotedblright{}An Updated Theoretical and Practical Model for Promoting Historical Empathy\textquotedblright{}, 1-19.} However, both frameworks depend on the educators to address the students’ prior knowledge.

The final prototype address students’ prior knowledge in two ways. The first method is through the organization of knowledge construction. The historical contextualization is built with two concepts in mind: learning constructed individually\footnote{Jonassen, \textit{Designing Constructivist Learning Environments}, 215--239.} and learning through questioning the Self.\footnote{Dirkx, \textit{Nurturing Soul in Adult Education}, 79--88.} The students get exposed to the historical narrative of Lucie Aubrac and work through the design elements with no social interaction with their peers.

The final prototype address students’ prior knowledge in two ways. The first method is through the organization of knowledge construction. The historical contextualization is built with two concepts in mind: learning constructed individually\footnote{Jonassen, \textit{Designing Constructivist Learning Environments}, 215--239.} and learning through questioning the Self.\footnote{Dirkx, \textit{Nurturing Soul in Adult Education}, 79--88.} The students get exposed to the historical narrative of Lucie Aubrac and work through the design elements with no social interaction with their peers.

![Figure 116 Think Tab Allow Observation and Minimum Interaction with Peers](image-url)

Students can observe their peers’ answers in the Think tab, but they cannot reply to limit resistance to new knowledge. Observation opens the door for Self-questioning because it lets...
students think and imagine other situations their peers mentioned. Mezirow explained that the way people make meaning from the world is through observing those around them. Perspective transformation is the process in which people become aware of how and why their beliefs constrain the world around them.\textsuperscript{484}

Then, students gradually interact with other students in the Building Connections section.

![](image)

\textit{Figure 117 Building Connections - Working in Small Groups}

According to social constructivists, culture provides students with the tools that help in the cognitive process and make meaning from the world.\textsuperscript{485} Educators should provide students with tools to enhance their cognitive learning to help them in construct meaning from what they learned. It also helps them in selecting and transforming their beliefs.\textsuperscript{486} Social learning emphasizes new knowledge and encourages students to make meanings out of the learning process.\textsuperscript{487} Figure 98 shows how the students can easily join groups and work together. In figure 99, the students should summarize their peers’ views. This process also allows them to address their prior knowledge.

\textsuperscript{486} Dewey, \textit{Democracy and Education}, 54-111.
Then in the DH question they enter a higher level of analysis on their own by expanding on their newfound knowledge. In this level they analyze a topic by providing their evidence and analysis using the materials tab and the Chatbot module which suggest materials to them.

![Figure 119 Connecting Students with Materials](image1)

![Figure 120 Class Discussion for Enforcement of New Knowledge](image2)
Through a whole class discussion students interact with their peers and emphasize their understanding by listening to the larger group. This structure addresses prior knowledge from individual and social perspectives, giving students time to reflect and think about their misconceptions.

The second method is the use of the chatbot to help students address their prior knowledge.

Figure 121 Chatbot Before and After Module

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Figure 122 Chatbot Ask Students to Question Their Selves

Every time students answer a question from the chatbot in the historical contextualization section, the chatbot saves the answers and asks them later as they advance in their learning process (whether in the end of the historical contextualization section or while answering the DH question) if their knowledge has changed or not. This helps them to view their development and be confronted to think about their prior knowledge and feelings.489

1.d. Lucie Aubrac: The Struggle Between Resisters and The State

The prototype exposes the students to Lucie Aubrac, a French resister in WWII who breaks stereotypes of male historical figures. Gildea mentions that more work should focus on women’s experience in resistance movements because there are very few materials on them.490

490 Gildea, Fighters in the Shadows, 1-27.
also expressed the need to expose people to the daily life of people of the past to understand the way they thought, lived, acted, and were motivated.\textsuperscript{491}

The educators also appreciated the exploration of history from a personal lens because it helps students to understand collaboration and resistance in France from both gender and citizenship themes. The quote below is taken from Design Cycle Three anonymous survey.

\begin{quote}
I like the effort to connect with a particular historical figure (or collection of experiences) to see the work of collaboration and resistance through a personal lens and the use of image analysis to deepen understanding of the context/experience of the time. The two lenses of gender and citizenship are useful ones for this particular topic too and help students focus their ideas more effectively in their analysis of a big topic.
\end{quote}

Thematic learning is crucial because it is difficult to explain why people collaborated with the Vichy state, why people chose not to fight back, and why resisters carried guns. These are complex topics which need to be tackled from multiple perspectives to comprehend the historical context.

To allow students to imagine the historical context, I divided the left side vertically to Vichy France and resistance. Each of these main categories has political, economic, and social highlighters. Then I added types of control in Vichy’s state and types of resistance in the resistance. I enabled a mouse over tooltip which includes a definition for types of control and resistance. This structure is important as it allows students to easily navigate through Vichy’s state and Lucie Aubrac. It also demonstrates the relationship between the state and the citizens. For instance, economic information about Vichy’s state shows that Vichy adopted capitalism and imperialism while the economy in the resistance shows that Lucie worked for a long time with

\textsuperscript{491} Lindsay, \textit{Reconsidering Interpretation of Heritage Sites}, 1-10.
Allowing students to highlight these pieces of information will help them to understand the relationship between Vichy state and Lucie.

Another example is in politics. While Vichy state allowed men to practice their full democratic rights, women were not able to vote until after the war. However, some women in the resistance felt equal as they participated in many of the activities. This will allow students to think about the different gender boundaries and how the state defined these boundaries.

Navigating through state general political, economic, and social factors to private political, economic, and social aspects will allow students to reflect on themselves and think about the causes and consequences of the policies. I also enabled the students with a tooltip that defines control as the enforcement of the National Revolution values in any department of the state. I did

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the same for types of resistance. I explained that resistance can be manifested in many ways for example women who hid resisters. This kind of resistance is described as small R or lower risk resistance. While other women carried guns and participated in army resistance. The notion here is to identity these types and understand gender boundaries. Most of the women did not do like Lucie Aubrac, on the contrary, their participation was limited to the organization work which aligns with their natural housewives positions. This definition is taken from Dr. Brown’s big R and small R activity and Dr. Shurt’s two-sided spectrum.

Figure 124 Lucie Aubrac Historical Narrative in 1940

In the Institutional affect, I enabled the students with two tabs Vichy and the resistance. The aim from the Institutional affect is to conceptualize the atmosphere packed by emotions in France during World War II. The students can easily navigate to view Vichy’s propaganda posters and Charles de Gaulle’s speech. They will consider the impact of these two on the French people. It is imperative to let students think critically about the media but also remind students
that the tools in the past are not like modern technologies. The radio is different from what we have today. Students can understand how the state packaged certain values to the public and understand the power of the state media machine. This would help students to understand collaboration and resistance and reflect on their own lives.

Figure 125 Institutional affect Shows Vichy and The Resistance

Places play a significant role in determining citizenship. The map section is important to visualize the place where Lucie Aubrac lived. It is also important when analyzing other categories such as foreign refugees. The Vichy state revoked many citizenships of foreign refugees who lived in France.

The map also lets students understand the risk under occupation and the differences between the occupied and non-occupied zones. 1940 Lucie crossed to the occupied area to free her husband. Visualizing that on the map will enhance the students’ understanding of the difference between the zones under the Nazis and the Vichy state and to compare between them.496

2. Educational Challenges

One of the challenges for design was accessibility. As Dr. Heintzman mentioned, not all students have access to new technologies.

**Heintzman:** I mean you just need a certain acuity of vision so like accessibility is massive. […] and it’s part of what makes universal design so difficult and teaching with technology actually almost always makes that harder as we introduce new things. […] the way I have handled this when teaching with technology is actually to embrace near total pedagogical anarchy, which are opt out assignments for students with accessibility needs where they can design something else.

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I kept that in mind while designing and used a simple format of AR. Web AR is accessible through the web by a link and accessible through the students’ phones. Most new phones now can run AR. However, technology divide is a crucial issue in the educational system and needs to be addressed on a higher level.

The materials tab is a challenge. The educators liked that the Chatbot recommends materials to students; however, protecting copyright is essential. Suggestions for this problem would be connecting the prototype with the university library or building a database that connects all the materials recommended from French historians who work in different universities. Students could buy these books and integrate it in the prototype.

The flipped classroom is another challenge. Universities need to provide more training for educators on the importance of flipped classrooms and how to integrate them in their courses. Universities must also train educators on technology usage to break the barriers in using technology in classroom.

3. Generalization of The Prototype

In the Consultation Study, the educators mentioned the following topics as examples for difficult histories: the Holocaust, the history of slavery, genocides, social injustice, trauma, violence, racism or oppression, and anything related to the Middle East, Islam, Palestine, or Israel. By using this website and the historical empathy framework, educators can address these topics with more confidence. For instance, the historical contextualization section can show the development of the history of slavery across time, the types of control exercised over them and their resistance, the propaganda which was used against them and their fight to obtain freedom.
This is also possible with political conflicts such as the Middle East problem and the struggle between Israel and Palestine. The critical historical empathy framework can show the development of the problem in the Historical Contextualization section from multiple perspectives. Moreover, the Building Connections section allows students to work together and understand the problem through thematic analysis. For instance, in the previous example students could work together to learn about the conflict from a religious, citizenship, and/or resistance perspective.

The usage of critical historical empathy can open a door for more inclusivity and tolerance in religion because it is based on transformative learning in which students question themselves and their beliefs. To achieve empathy, students would need to think about the” other” when making decisions. For instance, the historical contextualization section can show the development of a religion, the types of control imposed from the state or the religious institution, the types of resistance used to an enforced religion, and the propaganda against a religion. The building connections section can increase understanding among different themes and foster collaboration in small groups to emphasize new knowledge. This section would help students to empathize with others through historical analysis. Imagine students from diverse backgrounds working collaboratively on a gender theme to understand the implications of Islam on a society, or to understand the meaning of citizenship analyzing media propaganda after 9/11.

The DH questions section also allows students to specialize in and analyze a specific part of the topic. They can then discuss it with the whole class to develop their understanding and

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open their minds through critiques from other students. Through this process, students will
develop a deep understanding of the historical topic and have balanced empathy with the topic
they learned. The AR exhibit also plays a role in preparing their topic to a wider audience which
forces them to understand how others feel and how to present their knowledge while considering
a diverse public audience. The AR exhibit is designed to have visuals and texts which can be
simply applied to any of the previous topics. Imagine a gallery that shows the history of slavery,
or the history of a political conflict, or an art gallery about a religion’s history. The ability to
adapt this framework to assorted topics is endless, promising, encouraging, and practical.

4. Design Recommendations

The knowledge gained from design-based research takes the form of design principles. The
aim is to provide designers with guidelines that they can use for developing similar educational
technologies. The output is in the form of design heuristics which also includes knowledge
processes. The following design principles are simulated from working with educators to build
the prototype to teach difficult history using critical historical empathy framework.

1- **Use Timeline and Thematic learning:** Immerse students in the historical context using
both a historical timeline and thematic learning. This will enhance their understanding of
the historical events from different perspectives.

2- **Use Critical Sociocultural Approach:** enable students with tools to think critically
about the political, economic, and sociocultural norms for better understanding of the
historical context from a critical sociocultural approach. Provide ways for students to
understand the meaning of these terms.

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498 Linn, Davis, and Bell, *Internet Environments for Science Education*, 73-89.
3- **Help Students to Analyze Types of Control and Resistance:** allow students to investigate the types of control and types of resistance to understand the social pressure the historical figures lived under and the choices they had. This will increase the students’ affective connections and perspective taking.

4- **Use Institutional Affect and Transformative Affective Connection:** Enable students with methods to investigate Institutional affect such as images, speeches, and videos. Allow them to analyze the Institutional affect according to the historical context from one hand, and from the other, to analyze their beliefs and feelings about it. This will help in reconceptualizing the historical atmosphere and also addressing their prior knowledge. Provide design techniques for students to imagine different situations than the historical figure which will enhance their critical thinking and emotional connections.

5- **Improve Metacognition by Providing Reliable Sources to Students:** allow methods for metacognition in which students can think about the materials they read and write about in the Notes tab. Tie between the questions and the materials to immerse students with the historical contextualization.

6- **Lower Anxiety Using Chatbot:** use a chatbot or a similar technology for lowering anxiety while working on difficult topics. Use questions that allow students to imagine situations and connect them with materials. These questions enhance the students’ understanding of the Self as well because imagination opens the door for Self-exploration which helps in addressing prior knowledge. Elicit prior knowledge and let students think about it again after their learning experience or while they are working on a deep analysis.
7- **Organize the Construction of Knowledge:** start with allowing students to learn on their own and through observations before engaging into groups to lower student resistance. Then move to smaller groups allowing students to discuss what they have learned within their groups. Enable students to investigate a problem which may include a dilemma (to create cognitive dissonance) or imagine historical situations to help students analyze the historical context. Add guiding rules for online discussions to minimize offensive replies between students. Finally, allow students to display and discuss their work with the whole class for new knowledge enforcement.

8- **Increase Empathic Motives:** Engage students with a final project which is enjoyable to increase their empathic motivation to learn difficult history. The use of AR was recommended by the educators.

9- **Enhance Students Learning Through Visual and Virtual Technologies:** Improve students’ visualization of places through the usage of maps and guide them to analyze maps and places historically. Engage students with 3D AR projects which are designed to show places in Europe. Doing so will increase students’ affective connection.

10- **Use First and Third-person Writing:** Allow students to write from first and third-person in different parts of the educational tool to balance between their emotional engagement with the historical figure.
5. Limitations

The first phase of the study was intended to start in Fall 2020, but because of COVID-19 it was difficult to find participants at that time. Most of the educators were transitioning to online education with many new responsibilities. Therefore, the study was delayed until the Spring. The time dedicated for each design cycle was extremely limited I depended on research and my ten years of experience in the design and development of websites to get the prototype done in a timely fashion. The limited sample of educators was also due to the limited time of the study. Although we had many volunteers in the Spring, the limited time, and the small amount of money we received as an award, did not allow us to meet the requirements of a representative sample. In terms of history education, the educators were not familiar with the practice of historical empathy and the application of sociocultural approach in classrooms which limited the study.

6. Future Studies

The first recommendation for future research is for academic historians to explore new methods for using historical empathy in their curriculum and benefit from the final framework for structuring the students’ knowledge. The prototype opens the door for more research on the usage of the prototype in classrooms. More studies are needed to apply the critical historical empathy framework and its instructional pedagogy to investigate how students will empathize with historical figures. There is a need to expand the research to include the resistance theme. Focus groups with educators who are specialized in resistance study will enhance the depth of the information needed for understanding the structure of the French resistance groups. The critical historical empathy framework also needs more research. Interviewing Dr. John Dirkx and
other scholars who incorporate transformative learning in the educational process would be extremely useful to improve the psychological aspect of the prototype.

In terms of design and development, I used my experience in interface design. Therefore, more research is needed to investigate user experience and usability issues. I would also encourage doing focus groups with students to get their perspective on the design of the prototype and how the structure of the prototype will encourage them to learn difficult history.

Studies are needed to investigate the development of the prototype technologies according to what is available in the market. The chatbot and the AR exhibit need more psychological research to investigate their impact on the students when used as a part of the prototype and whether they encourage empathetic motivation for students or not. The development of the Chatbot needs more research on how to combine different models of NLP. For example, the “Suggest materials” module in the chatbot is different from “Just Chat” module in the structure. Doing focus groups with psychiatrists would be helpful to determine the exercises needed to improve students' cognitive behavior when any stressful feelings from the students trigger the Chatbot. Exploring how the “Before and After” module would help students reflect on their new learning and connect it with their understanding of the world. Another useful study should investigate what strategies the Chatbot would use to help students address their prior knowledge, beliefs, and emotions.

Developing the prototype and testing it on students is another field of research open for educators concerned about testing the learning and the emotional response when students interact with the final project. An interesting study would be to compare the impact of the multimedia prototype on the students’ empathy to a control group who used the other media materials. It will
also be helpful to examine the technology affordance regarding evoking empathy. For example, the impact of the highlighters on helping the students to think about the text or the impact of the Think tab on increasing the historical contextualization. Educators in this study liked the Building connection section and felt it simplifies the navigation between different themes. It would be exciting to investigate the impact of the Building Connection section in the classroom. The AR section has a web gallery in which the students can overlay the exhibit on any environment. Conducting focus groups with AR developers and higher education positions could enhance the experience. For instance, comparing a web AR experience to a location-based AR in the university is needed. Location-based AR can be another option if the university has a place where the students can explore their exhibit. The DH Questions section also needs more research and focus groups with a more significant number of educators.

More research is also needed on the development and application of Lucie Aubrac’s chatbot and statue and whether these projects will engage students in learning through historical empathy. There is also a need for more research on the classroom dynamics under learning through the historical empathy approach. Another technical research should include methods for translating materials from French to English. There are many of these out in the market used by big corporations such as Google and Amazon which need more research on how to utilize these technologies to better help history education. These kinds of research should also consider copyright laws and ways to overcome these issues. Other fields interested in civic actions, communication analysis, and political history might benefit from the prototype because it allows them to investigate history and communicative processes to develop a sense of civic action among students. Future research should also expand this study of design-based research to
incorporate a bigger sample of educators, students, and educational institutions to discuss the challenges of teaching difficult topics with higher positions to be able to implement the results.

7. Summary

Difficult history is challenging to teach in particular for WWII topics. It is packed with emotions which cause anxiety to both educators and students. There is a need for new and innovative tools that help educators feel confident while teaching and not censor these topics while also acknowledging students’ feelings. TELEs were used for educational purposes for centuries. The purpose of the current study was to design a prototype for TELE to teach difficult history using the case of Lucie Aubrac via the historical empathy approach in a project-based flipped classroom. During the study, the study moved to blended learning instead of flipped classrooms. Educators from various universities participated in this study.

This study had two main questions: How can a project-based flipped classroom TELE help learn difficult history through the historical empathy approach? This evolved into: How can a project-based TELE help learn difficult history through the historical empathy approach? There are four –sub-questions included: 1) What are the challenges of teaching difficult history in the classroom? 2) What technology works most effectively for developing TELE? 3) What design elements work for teaching Lucie Aubrac? 4) What is the best pedagogical framework to apply to use in the classroom? The second question is: In what ways do educators think the final prototype will help in teaching difficult history content, such as the Lucie Aubrac scenario, thematically?

Academic historians participated in two phases of the study: the Consultation Study and Design Cycles. Through these two phases, we managed to answer these questions. The
Consultation Study included three sessions. The first session goal was to answer the sub-question: What are the challenges of teaching difficult history in the classroom? The results indicated that students’ prior knowledge and anxiety are barriers to learning difficult topics. Feelings triggered from difficult histories can lead to a high stress in the classroom.

The second session’s aim was to answer the question: 2) What technology works most effectively for developing TELE? I wanted to determine which technology is suitable for teaching difficult topics in the classroom. The session included a presentation about various technologies and their usage in history education and in addressing controversial topics. Subsequently, there was a discussion about the affordances and constraints of each technology for difficult topics education. There was a consensus among the educators to use a website because of its ability to host many other technologies and because it is accessible and familiar for both faculty and students.

The third session’s purpose was to answer the question: what design elements work for teaching Lucie Aubrac? In this session the educators developed lesson plans for Lucie Aubrac. The educators participated in small group discussions to choose which themes can be used for teaching Lucie Aubrac, what questions should be used for measuring student learning, what activities they use or suggest for teaching difficult history, and what academic sources should be incorporated for enhancing Lucie Aubrac’s narrative. The results indicated the choice of two themes, gender, and citizenship, for teaching Lucie Aubrac. These two themes should encourage the conversation about resistance, showing types of control practiced by Vichy’s state and various levels of resistance. The educators also provided a wide range of scholarly work to add to Lucie Aubrac’s narrative. After the Consultation Study and every design cycle, I linked
research with practice showing the connection between them and the historical narrative of Lucie Aubrac, pedagogy and framework development, and the technology design of the prototype. I also collected the objectives questions in the lesson plans and used them as educational goals for teaching Lucie Aubrac. These educational goals are the basis for the second question.

The second phase of the study included three design cycles. Before each design cycle, I conducted more research and linked it with the data collected from the educators which includes practical application in classroom. In Design Cycle One, I introduced the critical historical empathy framework and the first design of the prototype which was based on the gender theme lesson plan. The design elements in the prototype included a timeline, text analysis, AR statue, Lucie Aubrac Chatbot, and AR exhibit. There were many concerns about the workload and the structure of the design elements.

In Design Cycle Two, I showed the educators the modified prototype and framework which I built on the citizenship lesson plan. The feedback required many changes in the framework and the design elements because of the workload and the structure of the design elements. For the limited time of the study, I decided to limit the focus to be on the gender theme lesson plan and the final project to be the AR exhibit.

I buildta high-fidelity prototype for Design Cycle Three which included the content inside it. I modified the structure of the critical historical empathy pedagogy framework. The final prototype had four sections: Historical Contextualization, Building Connections, DH Questions, and Projects (AR exhibit, AR statue, Lucie Aubrac Chatbot). The educators found the final design to be innovative for teaching difficult history and allowing students to synthesize and collaborate. The educators provided some final modifications of the prototype which I applied.
After the Design Cycles, I traced the modifications of the critical historical empathy pedagogy framework and answered the question: 4) What is the best pedagogical framework to apply to use in the classroom? I then answered the two main questions. The answer to the first question included a demonstration of how the final prototype sections apply the critical historical empathy framework in every section of the prototype. The answer to the second question included the educational goals and how they are applied in the prototype.
Lesson Plan Template (9 questions)

By

Please, write your First and Last Name

1- Brainstorm question: What themes can be used to teach Lucie Aubrac?

   Please choose 3 – 5 themes

2- Discuss with your partner the themes below and pick one of them to be the central theme for this lesson plan. (Examples for themes: Nazi concentration camps, citizenship, resistance, gender, family, etc.)

   3- What is the essential question for this theme?

   4- Would you think students will need guiding questions? If so, what are they? You may add up to 5 guiding questions

   5- What are the learning objectives? Please add 1-2 learning objectives

   6- What are the materials your group thinks will help students to get a deep understanding of your theme? Please add 3-5 materials at least. You can use the internet to find the sources.

   7- What are the activities you would use to engage students and help them to learn about your theme? Please consider the technology that engages students. Please, suggest at least one activity.

   8- Write two open-ended questions to assess the learning experience of your theme.

   9- Write 1- 3 contemporary issues connected to this theme, and how would you suggest linking these issues to the activity?
Design Cycle One - Instructional Design for Critical Historical Empathy in Classroom

Table 5 Design Cycle One: Instructional Design for Critical Historical Empathy

<table>
<thead>
<tr>
<th>Before Class</th>
<th>Phase of Instruction</th>
<th>Method of Instruction</th>
<th>Purpose of Instruction</th>
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</thead>
<tbody>
<tr>
<td>Week 1</td>
<td>Eliciting Prior Knowledge</td>
<td>Chatbot Discussion</td>
<td>1-Using the guiding questions to gather information about students’ previous knowledge and misconceptions about the topic. 2-Finding the source of the previous knowledge and the percentage of correct information.</td>
</tr>
<tr>
<td></td>
<td>Lecture Week 1- France between the two wars and under the occupation</td>
<td>Online Video</td>
<td>1-Students learn about the historical events that led to the fall of France. 2-Students learn about France’s internal political, social, and economic situation before and after the fall of France.</td>
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</table>
### Design Cycle One - Instructional Design for Critical Historical Empathy in Classroom

<table>
<thead>
<tr>
<th>In class</th>
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</table>
| Lecture Summary Week 1 | Face-to-Face with the Educator | 1- Summary of the Lecture highlighting important points.  
2- Answering questions collected from students about the lecture.  
3- Introducing activity 1 |
| Activity 1 (First-Person Narratives) (Personalization of Decision) | Online Timeline | 1- Students learn about the impact of control on people of the past from first-person perspectives that demonstrate different types of control  
2- Students investigate methods of using control and the link between affect and control  
3- Students learn about the boundaries control imposed over people of the past. Perhaps a goal re: chronology, to make good use of the timeline itself? |
| Timeline Activity-Gender | | |

| After Class | Writing Narrative- Chatbot Help | 1- Students investigate a historical paradox from a third-person perspective. I suggested a paradox of collaboration vs resistance in which students investigate the beliefs, values, and motivations of both sides.  
2- Students investigate the consequences of |
Design Cycle One - Instructional Design for Critical Historical Empathy in Classroom

the choice of collaboration or resistance by comparing either two people or two movements.

Week 2 Goals:

- Social interaction between students groups
- Increase level of engagement through new technologies such as AR
- Allow display and reflection

Understanding Resistance and Its Impact on the Authority and the French Society

<table>
<thead>
<tr>
<th>Phase of Instruction</th>
<th>Method of Instruction</th>
<th>Purpose of Instruction</th>
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<tbody>
<tr>
<td><strong>Before Class</strong></td>
<td></td>
<td></td>
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<tr>
<td>Lecture Week 2-</td>
<td>Online Video</td>
<td>1-Students will learn about Lucie Aubrac and French resistance in World War II. 2- The lecture should cover main concepts about gender, citizenship, and resistance.</td>
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<tr>
<td>Introduction to difficult new knowledge</td>
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<tr>
<td>Investigation Phase 2</td>
<td>Developing the visuals and narrative for AR exhibit by answering guided questions.</td>
<td>1-Students will investigate how Lucie Aubrac responded to control according to their theme (gender, citizenship, or resistance). 2- Students should try to understand the feelings, beliefs, and values Lucie Aubrac had and how they changed over time. 3- Students should think about what choices Lucie Aubrac made and the reasons for those decisions.</td>
</tr>
<tr>
<td>(Contextual Immersion through investigation activities)</td>
<td></td>
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<tr>
<td>Lucie Aubrac Chatbot-</td>
<td></td>
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<tr>
<td>Gender</td>
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<tr>
<td><strong>Design Cycle One - Instructional Design for Critical Historical Empathy in Classroom</strong></td>
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<tr>
<td><strong>In class</strong></td>
<td><strong>After Class</strong></td>
<td></td>
</tr>
<tr>
<td>Lecture Summary Week 2</td>
<td>Display and Reflection – Meta cognitive (Compare between first and third-person narrative)</td>
<td></td>
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<tr>
<td>Face-to-face with the educator</td>
<td>Online Chatbot AR exhibit</td>
<td></td>
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<tr>
<td><strong>Activity 2 (first-person narrative)</strong></td>
<td>Essay - Analysis for AR exhibit - Gender</td>
<td></td>
</tr>
<tr>
<td>Personalization of decision</td>
<td><strong>Guidelines for collaboration and resistance. Guided questions will be provided</strong></td>
<td></td>
</tr>
<tr>
<td>AR Statue - Gender</td>
<td><strong>1-Students from different themes come together to analyze Lucie Aubrac’s actions from the different perspectives they learned. For example: each group should have a student who focused on gender teamed up with two other students from the citizenship and resistance themes.</strong></td>
<td></td>
</tr>
<tr>
<td><strong>1-Summary of the Lecture highlighting important points.</strong></td>
<td><strong>2-Students should combine their work together in one narrative telling the story of Lucie Aubrac at a specific time.</strong></td>
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<tr>
<td><em>Students should also consider other historical sources that accuse the Aubracs of collaboration with Barbie and investigate their authenticity.</em></td>
<td><strong>2-Students will also comment on their peers’ reflections.</strong></td>
<td></td>
</tr>
<tr>
<td><strong>1-Answering questions collected from students about the lecture.</strong></td>
<td><strong>1-Students will complete the narrative adding a reflection paragraph.</strong></td>
<td></td>
</tr>
<tr>
<td><strong>3-Introducing activity 2</strong></td>
<td><strong>2-Students will also comment on their peers’ reflections.</strong></td>
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</table>
**Timeline Activity-Gender**

The French suffered massive casualties during World War I. 1.3 million men died, and almost one million soldiers survived with mental and physical disabilities. The nation mourned the loss of a substantial portion of its adult male population. France became a nation of widows and orphans. France faced many challenges on multiple levels: economic, political, and social. By the mid 1920s, France enjoyed economic growth due to immigration policies, industrial production, foreign trade, technological advancements, and modernization. In the 1930s, the Great Depression spurred social and political change, including the reforms of the Popular Front.

As Mary Louise Roberts has argued, three images of women dominated the French society during the interwar era: the modern woman, the mother, and the single woman. The single woman resulted from many factors, chief among them demographic shifts due to the war. The ideal single woman fell between the two other archetypes: the independent, sexually free modern woman and a traditional bourgeois mother whose mission was to give life. As historian Miranda Pollard reminds us, traditionalists in French society worried about change. They feared that the “French people were not having babies, were abandoning traditional family values, were flouting authority—whether in the shape of fathers, government, employers, or the Church.” The loss of an entire generation of men, various political changes, and the implementation of modernization and Tolerization brought change to women's lives while also placing the idea of women as the focal point of social and political anxieties. As a result, some reforms had a concrete, positive effect on women’s lives: women had more opportunities in education, gained access to

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previously male-dominated jobs, took part in new social services, and campaigned for voting rights. Nevertheless, traditional ideas about women’s roles remained dominant.

**Activity Questions:**

Choose one image or map and link with one of these categories (Housewives, single women, teachers, women in politics, woman refugee), then answer the following questions below using first-person perspective:

1. In a short paragraph (3-5 sentences), describe France's political and economic situation. (Historical contextualization) Give a sense of expectation, if you can, in the final version, for all these activities. Like this example or give that info at the start of each.

2. How was social life influenced by political and economic status? (Historical contextualization)

3. Based on what you learned from reading about Mary Louise Roberts' argument about images of women in the French society and the primary sources we have for our class, how did gender roles shift from WWI to WWII? (Perspective recognition)

4. What were the challenges the above categories faced before and after the defeat of France? (Perspective recognition)

5. What were the beliefs of the category you picked? (Perspective recognition)

6. How different is the life of your chosen category from what you previously knew or expected? (Connection between previous knowledge and new investigated knowledge)
Have you been through any similar situations that are related to what you wrote about the past? If not, imagine that the same person is living today. What issues in the present they would see as similar to what experienced? (Personalization.)

**Essay-Analysis-Assignment- Gender**

The French defeat had a devastating impact on society. During the invasion, “six million civilians, terrorized by German bombing raids, fled as best they could.”\(^{500}\) The defeat helped Pétain, the hero of the World War I Battle of Verdun, and other traditionalists amass power. They moved the government to Vichy, France, in the unoccupied southern zone. On June 16, 1940, the armistice divided France into two zones: the unoccupied zone under Vichy’s government and the German-occupied zone. Vichy’s goal from collaboration with the Germans was to alleviate the economic conditions in France and set the foundation for government reforms.

De Gaulle opposed the armistice and left for Britain, where he addressed the French people in the first of many BBC broadcasts on June 18, 1940. Vichy’s National Revolution “was traditionalist, pro-Catholic, and tried to reverse the modernism on French society.”\(^{501}\) Vichy called for new values, so instead of the French republican values of *liberty, equality, fraternity*, Vichy proposed *work, family, fatherland*. Vichy’s regime used discriminatory laws targeting Jews and Jewish refugees, media censorship and new family values, propaganda, and control over the educational system.

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**Assignment Questions**

French people were frustrated with the war. Many collaborated with Vichy, while others resisted Vichy’s National Revolution.

As a historian who explores collaboration and resistance, write an essay from a third-person perspective explaining the beliefs and rationale for both sides. Investigate the consequences of collaboration or resistance on French individuals and answer the questions below in your essay. Use the chatbot assistant for guidelines and sources.

1- What was Vichy’s National Revolution? Explain one of Vichy’s political policies (e.g., discrimination laws), media usage (e.g., propaganda), or economic policies (e.g., *service du travail obligatoire* the Required Work Service in Germany) and discuss its impact on the French society. Consider gender constraints. (Historical contextualization)

2- In his book *France: The Dark Years, 1940-1944*, Jackson argued that Vichy’s regime tried to reconstruct society’s moral and social hygiene. Based on what you have read for this course, explain the impact of Vichy’s regime on women and young French. (Historical contextualization)

3- Imagine that you have found two letters, one from a collaborator and one from a resister. Describe what was said in both letters from their perspectives. Search for one collaborator and one resister. Then explain their beliefs, morals, motivations, goals, success or failure, and consequences from a first-person perspective. Then expand your focus and discuss both letters from the perspective of a historian in 2021. Describe how the historical context played a role in shaping their beliefs, morals, motivations, goals,
success or failure, and consequences. (Historical contextualization & Perspective recognition)

4- Imagine you found a letter from a (Jewish refugee/immigrant) whose parents were taken by the French to a concentration camp. This person has a family of four, and the letter had his/her decision about this situation. What did he/she decide to do: collaborate with the Nazi to save his/her parents or join the resistance with the risk of sacrificing himself/herself or his/her family if he/she got caught? And why? Analyze this letter and, as a historian, discuss available choices and consequences.

5- What role might gender play in the previous situation? And what boundaries can be created by gender?

**Lucie Aubrac Chatbot-Gender**

In this activity, you will build a Chatbot for Lucie Aubrac. The Chatbot's goal is to reply to students’ questions about her life and the resistance in France in WWII. First, you will select a question from below. Then your bot friend will ask you some sub-questions to think about while you write your answer. You could use primary and secondary sources to support your answer. The Lucie Aubrac bot language is formal and academic. Use the Lucie Aubrac summary/film/book as your guide as well.

**Activity Questions:**

1- What specific gender norms limited Lucie Aubrac?
2- What were Lucie Aubrac beliefs and worldviews?
3- How did she present herself?
4- What specific gender norms were useful to her?

5- What were Lucie Aubrac’s objectives and motivations?

6- How can we read gender as a category of analysis in historical narratives?

7- Lucie Aubrac played several roles, including a mother, wife, teacher, and militant resister. How might gender roles have changed over time?

8- What roles did she fulfill, and how did they complement each other or complicate each other?

**AR Statue - Gender**

With your group, discuss the questions below using what you have learned from your theme. Every group member should introduce the theme (e.g., gender, citizenship, resistance) by highlighting important concepts and events related to this theme. Then discuss the questions below and write about them. You will use the results of this activity in the next assignment.

**Activity Questions**

1- Imagine Lucie had been imprisoned and Raymond was working to free her: what are three things he might have done differently?

2- How does Aubrac use and subvert gender norms?

3- How has learning about the story of Lucie Aubrac changed the way you imagine Resistance figures?

4- To what extent can individuals choose their own story, and to what extent is that story shaped by historical circumstances?

5- How did Lucie navigate gender norms during and after the war, and how did those norms change over time?
6- How are ideas of resistance and collaboration “gendered” in the story of Lucie Aubrac?

7- What specific actions will you put on a continuum from transgressive to conforming to gender roles (x-axis) and from “small” to “great” resistance on the y-axis?

**Essay-Analysis for AR Exhibit – Gender**

For this assignment, you will write a historical narrative about Lucie Aubrac's story from your previous work in activity 1, assignment 1, and activity 2. Lucie’s narrative should connect with a present issue. The assignment must show your work in AR Statue-Gender activity and your understanding of your peers' themes. After finishing the narrative, click publish to see your group work in AR. Please post comments on at least one other group and explain what they could expand on and why that would be useful?

**Assignment Questions**

1- How does Lucie’s life connect with our life in the present?

2- Choose one event in Lucie’s story and talk about the similarities and differences from the present
APPENDIX B
DESIGN CYCLE TWO GUIDE
Design Cycle Two- Instructional Design for Critical Historical Empathy in Classroom

Table 6 Design Cycle Two: Instructional Design for Critical Historical Empathy in Classroom

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<td><strong>Goals</strong></td>
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</tbody>
</table>
|   · Minimize the stress of building technology by pre-made projects  
   · Minimize social interaction between educators-students and students-students.  
   · Minimize the anxiety level of learning through flipped classrooms by providing assistance and quick feedback.  
   · Enable students to learn and work individually at this level  
   · Increase the students' understanding of control in France under the occupation.  
   · Thematic learning such as gender, citizenship, and resistance.  
   · Engage students with familiar technologies such as digital maps, posters, art, and archives |
<p>| <strong>Understanding Control and Its Impact on the French Society</strong> |</p>
<table>
<thead>
<tr>
<th>Phase of Instruction</th>
<th>Method of Instruction</th>
<th>Purpose of Instruction</th>
</tr>
</thead>
</table>
| Before Class         | Eliciting Prior Knowledge | Chatbot Discussion     | 1-Using the guiding questions to gather information about students’ previous knowledge and misconceptions about the topic.  
                      | Lectures on France between the two wars and under the occupation | Online Video            | 2-Finding the source of the previous knowledge and the percentage of correct information. |
|                      |                       |                        | 1-Students learn about the historical events that led to the fall of France.  
                      |                       |                        | 2-Students know about France’s internal political, social, and economic situation before and after the fall of France. |
## Design Cycle Two: Instructional Design for Critical Historical Empathy in Classroom

<table>
<thead>
<tr>
<th>In class</th>
<th>Activity 1 (First-Person Narratives) (Personalization of Decision) Timeline Activity - Citizenship</th>
<th>Online Timeline</th>
<th>1- Students learn about the impact of control on people of the past from first-person perspectives that demonstrate different types of control. 2- Students investigate methods of using control and the link between Institutional affect and control. 3- Students learn about the boundaries control imposed over people of the past. Perhaps a goal re: chronology, to make good use of the timeline itself?</th>
</tr>
</thead>
<tbody>
<tr>
<td>Lectures Summary</td>
<td>Face-to-Face with the Educator</td>
<td>1- Summary of the Lecture highlighting important points. 2- Answering questions collected from students about the lecture. 3- Introducing activity 1</td>
<td></td>
</tr>
<tr>
<td>After Class</td>
<td>Creating Cognitive Dissonance (Confrontation of Historical paradox) (Third-Person Narratives) Essay - Analysis - Assignment - citizenship</td>
<td>Writing Narrative - Chatbot Help</td>
<td>1- Students investigate a historical paradox from a third-person perspective. I suggested a dilemma of collaboration versus resistance in which students investigate both sides' beliefs, values, and motivations. 2- Students investigate the consequences of the choice of collaboration or resistance by comparing either two people or two movements.</td>
</tr>
</tbody>
</table>
Design Cycle Two - Instructional Design for Critical Historical Empathy in Classroom

Week 2 Goals:

- Social interaction between student groups
- Increase level of engagement through new technologies such as AR
- Allow display and reflection

Understanding Resistance and Its Impact on the Authority and the French Society

<table>
<thead>
<tr>
<th>Phase of Instruction</th>
<th>Method of Instruction</th>
<th>Purpose of Instruction</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Before Class</strong></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>
| Introduction to difficult new knowledge | Online Video | 1- Students will learn about Lucie Aubrac and French resistance in World War II.  
2- The lecture should cover main concepts about gender, citizenship, and resistance. |
| Investigation Phase 2 (Contextual Immersion through investigation activities) | Developing the visuals and narrative for AR exhibit by answering guided questions. | 1- Students will investigate how Lucie Aubrac responded to control according to their theme (gender, citizenship, or resistance).  
2- Students should try to understand the feelings, beliefs, and values Lucie Aubrac had and how they changed over time.  
3- Students should think about what choices Lucie Aubrac made and the reasons for those decisions.  
4- Students should also consider other historical sources that accuse the Aubracs of collaboration with Barbie and investigate their authenticity. |
| Lucie Aubrac Chatbot - Citizenship | | |
| Lecture Summary | Face-to-face with the educator | 1- Summary of the Lecture highlighting important points. |
## Design Cycle Two - Instructional Design for Critical Historical Empathy in Classroom

<table>
<thead>
<tr>
<th>In class</th>
<th>After Class</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Activity 2</strong> (first-person narrative)</td>
<td><strong>Display and Reflection</strong> – Metacognitive (Compare between first and third-person narrative)</td>
</tr>
<tr>
<td>Personalization of decision</td>
<td>Essay - Analysis for AR exhibit - Citizenship</td>
</tr>
<tr>
<td>AR Statue - Citizenship</td>
<td>Online Chatbot AR exhibit</td>
</tr>
</tbody>
</table>

**Social group activity**

**Guidelines for collaboration and resistance?**

I used the guided questions from the lesson plan.

1. Students from different themes come together to analyze Lucie Aubrac's actions from the different perspectives they learned. For example: each group should have a student who focused on gender teamed up with two other students from the citizenship and resistance themes.
2. Students should combine their work together in one narrative telling the story of Lucie Aubrac at a specific time.

2. Answering questions collected from students about the lecture.
3. Introducing activity 2

1. Students will complete the narrative adding a reflection paragraph.
2. Students will also comment on their peers' reflections.
Timeline Activity-Citizenship

The French suffered massive casualties during World War I. 1.3 million men died, and almost one million soldiers survived with mental and physical disabilities.502 The nation mourned the loss of a substantial portion of its adult male population, and France became a nation of widows and orphans. France faced many challenges on multiple levels: economic, political, and social. By the mid of 1920s, France enjoyed economic growth due to several reasons such as immigration policies, industrial production, foreign trade, technological advancement, and modernization.503 In the 1930s, the Great Depression spurred social and political change, including the reforms of the Popular Front.504

Citizens of France in the period between 1939-1944 suffered from political, economic, and social changes. In 1949, a great sociologist T.H. Marshall introduced social citizenship in his essay *Citizenship and Social Class*.505 He historically analyzes citizenship and divides it into three parts: civil, political, and social. Civil citizenship concerns individual freedoms such as freedom of speech, property rights, and the right to justice. Political citizenship includes voting and office representation, while social citizenship is shaped as a result of the relationship between the market and state. He emphasized social citizenship because it enables citizens with the right of economic welfare and security to share full social heritage and civilized society standards. The institutions associated with social citizenship are the education system and social

services such as public health and housing services. Recent scholars such as Hinck add legal-judicial citizenship are based on legal residence and requires citizens to fulfill certain obligations such as paying taxes. He also explains political citizenship as “political engagement,” which refers to what the state requires citizens to do to be active “good citizens,” such as voting, representation, gathering information, and mobilization for a cause.\textsuperscript{506}

\textit{Activity Questions}

From a first-person perspective, choose one of these categories: Frenchmen, internal foreigners, Jews, refugees, immigrants, women, resisters, communists, or Maquis. Then select either a map or an image and a topic from the following list that is connected to your category: The Required Work Service law, Naturalization law, Anti-Jewish laws, Political participation laws such as voting, or Tax laws.

Using Hinck’s definition for legal-judicial citizenship and political citizenship, make connections between your chosen category, the selected image or map, and the topic. Explain aggregation across time regarding the formulation of laws or the political changes and how these changes impacted your category.

You can use the following questions as guidelines, or you can focus your work on one of these questions:

1- What were Vichy’s new legal laws and political changes? (Historical contextualization)

2- How did new legal laws and political changes influence social life? (Historical contextualization)

3- How did economic status play a role in the formulation of laws?

4- According to Hinck’s definition of political citizenship, how would you describe the political engagement for one of these groups (women/Jews/Immigrants/communists/resisters) in the French society and the challenges they faced as citizens from WWI to WWII? (Perspective recognition)

5- What were the challenges the above categories faced before and after the defeat of France? (Perspective recognition)

6- What were their legal or political beliefs? (Perspective recognition)

7- How different is the life of your chosen category from what you previously knew or expected? (The connection between previous knowledge and new investigated knowledge)

8- Explain similar situations that happened to you? Or imagine that the same person is living today. What issues in the present would they see similar to what they have been through in the past? (personalization).

**Essay-Analysis-Assignment- Citizenship**

The French defeat had a devastating impact on society. During the invasion, “six million civilians, terrorized by German bombing raids, fled as best they could.”\(^\text{507}\) The defeat helped Pétain, the hero of the World War I Battle of Verdun, and other traditionalists amass power. They moved the government to Vichy, France, in the unoccupied southern zone. On June 16, 1940, the armistice divided France into two zones: an unoccupied zone under Vichy’s

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government and an occupied zone under the Germans.\textsuperscript{508} Vichy’s goal from the collaboration with the Germans was to alleviate the conditions in France and set the ground for government reforms.

De Gaulle opposed the armistice and left for Britain, where he addressed the French people in the first of many BBC broadcasts on June 18, 1940.\textsuperscript{509} Vichy’s National Revolution “was traditionalist, pro-Catholic, and trying to reverse the modernism on French society.” Vichy called for new values so instead of the French republican values of \textit{liberty, equality, fraternity}, Vichy proposed \textit{work, family, fatherland}. Vichy’s regime used discriminatory laws targeting Jews and Jewish refugees, media censorship and new family values propaganda, and control over the educational system.

Citizens practiced different types of citizenship. As introduced before, there are legal-judicial citizenship, political citizenship, and social citizenship. Nevertheless, citizenship is more complex and fluid. Therefore, Hinck discussed a vital type of citizenship called affective citizenship. It is defined as “feelings of belonging and togetherness.” It can have various representations such as the feeling of pride through listening to national anthems, loyalty when voting for a specific party, and commitment to a government. These feelings can also play a role in distancing citizens from their nation if they feel pain, ashamed or neglected. Kantrowitz calls it “a citizenship of the heart.”\textsuperscript{510} These types of citizenships can function separately but also, they can be connected and appear in the same situation.

\textsuperscript{508} Christoffer and Christofferson, \textit{France During World War II}, 35-38.
**Assignment Questions**

French people were frustrated with the war. Many collaborated with Vichy, while others resisted Vichy’s National Revolution. As a historian who explores collaboration and resistance, write an essay from a third-person perspective explaining the beliefs and rationale for both sides. Investigate the types of citizenships represented in collaboration or resistance and the legal consequences on French individuals. Do not limit yourself to the types mentioned above. They are provided as a guide to understand the complexity of citizenship. Answer ONE of the questions below in your essay and use the chatbot assistant for guidelines and sources.

1- What was Vichy’s National Revolution? Explain one of Vichy’s political policies (e.g., discrimination laws) or media usage (e.g., propaganda) or economic policies (e.g., *service du travail obligatoire* the Required Work Service in Germany). Discuss its impact on one of the following categories (Frenchmen, Jews, Refugee, Immigrants, Women, Resisters, Communists, Maquis, Artists), making connections between different types of citizenships. (Historical contextualization)

2- In Julian Jackson’s book *France: The Dark Years, 1940-1944*, he explained how Vichy’s regime tried to reconstruct society's moral and social Hygiene. Explain the impact of Vichy’s government on the practice of citizenship. (Historical contextualization)

3- Imagine that you have found two letters, one from a collaborator and one from a resister. Describe what was said in both letters from their perspectives. Search for one collaborator and one resister. Then, explain their beliefs, morals, citizenship, success

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or failure, and consequences from a first-person perspective. Then zoom out and discuss both letters from a historian's perspective in 2021, describing how the historical context played a role in shaping their citizenship. (Historical contextualization & Perspective recognition)

4- Imagine you found a letter from a (Jewish refugee/immigrant) whose parents were taken by the French to a concentration camp. This person has a family of four, and the letter had his/her decision about this situation. What did he/she decided to: collaborate with the Nazis to save his/her parents or join the resistance with the risk of sacrificing himself/herself or his/her family if he got caught? And why?

5- What role might legal and political citizenship play in the previous situation? And what boundaries can be created by them?

**Lucie Aubrac Chatbot-Citizenship**

In this activity, you will build a Chatbot for Lucie Aubrac. The Chatbot's goal is to reply to students' questions about her life and the resistance in France in WWII. First, you will select a question from below. Then your Chatbot friend will ask you some sub-questions to think about while you write your answer. You can use primary and secondary sources to support your answer. The Lucie Aubrac bot language is formal and academic.

**Activity Questions**

1- What type of citizenship limited Lucie Aubrac?

2- What were Lucie Aubrac’s beliefs, and how did they impact her citizenship?

3- How was Lucie politically engaged?

4- What types of citizenship did she engage with and practice?
5- How might Lucie Aubrac defend her actions?

6- How can we read citizenship as a category of analysis in historical narratives?

7- Through Marshall’s social citizenship lens, describe the relationship between social and public policy and their impact on Lucie’s life.

8- Did all Frenchmen share her views? If not? Why?

9- Who defines “good citizenship”? Was Lucie a “good citizen” according to their definition?

10- How does gender affect how people perceive their role as citizens?

11- What types of citizenship did she fulfill, and did they complement each other or complicate each other?

**AR Statue - Citizenship**

In this activity you will build a Word Cloud with your group similar to the image below and write a short paragraph about the reasons for choosing these words.

With your group, discuss the questions below through what you have learned from your themes. Every group member should start with an introduction to the theme (e.g., gender, citizenship), highlighting important concepts and events related to this theme. Then discuss the
questions below and build your word cloud. Consider that bigger words in the word cloud means that they are significant in Lucie’s life while smaller words are less important. After that write a short paragraph or use bullet points to describe the reasons for choosing these words. You will use this word cloud in the next assignment.

Group questions 1
1- Explain how Lucie Aubrac responded to one of Vichy’s political policies (e.g., discrimination laws) or media usage (e.g., propaganda), or economic policies (e.g., service du travail obligatoire the Required Work Service in Germany). Discuss its impact on French society keeping in mind gender and citizenship constraints.
2- Imagine Lucie had been imprisoned and Raymond was working to free her: what are three things he might have done differently considering gender and citizenship?
3- How does Aubrac use and subvert gender and citizenship norms?

Group questions 2
1- In Julian Jackson's book France: The Dark Years, 1940-1944, he explained how Vichy’s regime tried to reconstruct society's moral and social Hygiene. Explain the impact of Vichy’s regime on Lucie's practice of citizenship.
2- How has learning about the story of Lucie Aubrac changed the way you imagine Resistance figures?
3- How does gender affect how Lucie perceived her role as a citizen?

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512 Elie Poulard, A French Slave in Nazi, 30-151.
**Group questions 3**

1- Imagine that you have found two letters, one from Barbie’s lawyer and one from the Aubracs. In the first letter, the lawyer accused the Aubracs of collaboration with the Nazis when Raymond was arrested on March 15, 1943. In the second letter, the Aubracs defend themselves. Describe what was said in both letters from their perspectives. Explain historical dates and events, reasons for collaboration or not, and historians’ views on the issue. Consider gender and citizenship in your response.

2- To what extent can individuals choose their own story, and to what extent is it shaped by historical circumstances?

3- Discuss the relationship between the Aubracs as citizens and their community? And the state? Consider gender as a factor.

**Group Questions 4**

1- How are ideas of resistance and collaboration “gendered” in the story of Lucie Aubrac?

2- Lucie Aubrac played several roles including a mother, wife, teacher, and militant resister. How might gender and citizenship roles have changed over time?

3- Vichy’s National revolution controlled the education system. How did Lucie Aubrac deal with the educational restrictions as a teacher and as a resister? How did gender play a role as an educator?

**Group Questions 5**

1- How did Lucie navigate gender norms during and after the war, and how did those norms change over time?
2- Identify what specific actions you will put on a continuum from transgressive to conforming to gender roles (x-axis) and from “small” to “great” resistance on the y-axis.

3- The Aubrac’s had dual identities. How did they feel about that from their perspectives?

**Essay-Analysis for AR exhibit – Citizenship**

For this assignment, we will write a historical narrative about Lucie Aubrac’s story from your previous work in Timeline Activity-Citizenship, Essay-Analysis-Assignment-Citizenship, and AR Statue-Citizenship. Lucie’s narrative should connect with a present issue. The assignment must show your work in AR Statue-Citizenship activity and your understanding of your peers’ themes. After finishing the narrative, click publish to see your group work in AR. Please post comments on at least one other group and explain what you think they can add and why you think so.

**Assignment Questions**

1- How does Lucie’s life connect with our life in the present?

2- Choose one event in Lucie’s story and talk about the similarities and differences from the present.
APPENDIX C
IRB APPROVAL
NOT HUMAN RESEARCH DETERMINATION

September 9, 2020

Dear Sahar Eissa:

On 9/9/2020, the IRB reviewed the following protocol:

<table>
<thead>
<tr>
<th>Type of Review:</th>
<th>Initial Study</th>
</tr>
</thead>
<tbody>
<tr>
<td>Title of Study:</td>
<td>Design-Based Research Case Study of Lucie Aubrac and the French Resistance: Multimedia Flipped Learning Approach For Difficult History Learning and Historical Empathy</td>
</tr>
<tr>
<td>Investigator:</td>
<td>Sahar Eissa</td>
</tr>
<tr>
<td>IRB ID:</td>
<td>STUDY00001972</td>
</tr>
<tr>
<td>Funding:</td>
<td>None</td>
</tr>
<tr>
<td>Grant ID:</td>
<td>None</td>
</tr>
</tbody>
</table>
| Documents Reviewed: | • HRP-251- FORM - Faculty Advisor Scientific-Scholarly Review fillable form-Final.pdf, Category: Faculty Research Approval;  
                     • ConsultationFocusGroupQuestions.docx, Category: Interview / Focus Questions;  
                     • Learning and Empathy Questions.doc, Category: Survey / Questionnaire;  
                     • Summary_Lucie_Aubrac_and_analysis.docx, Category: Other; |

The IRB determined that the proposed activity is not research involving human subjects as defined by DHHS and FDA regulations.

IRB review and approval by this organization is not required. This determination applies only to the activities described in the IRB submission and does not apply should any changes be made. If changes are made and there are questions about whether these activities are research involving human in which the organization is engaged, please submit a new request to the IRB for a determination. You can create a modification by clicking Create Modification / CR within the study.

Due to current COVID-19 restrictions, in-person research is not permitted to begin unless you are able to follow the COVID-19 Human Subject

**Figure 127 IRB Approval**
Research (HSR) Standard Safety Plan with permission from your Dean of Research or submitted your Study-Specific Safety Plan and received IRB and EH&S approval. Be sure to monitor correspondence from the Office of Research, as they will communicate when restrictions are lifted, and all in-person research can resume.

If you have any questions, please contact the UCF IRB at 407-823-2901 or irb@ucf.edu. Please include your project title and IRB number in all correspondence with this office.

Sincerely,

Kamille Birkbeck
Designated Reviewer

Figure 128 IRB Approval
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