Film Annotation for the L2 Classroom:

A Tech-Mediated Model for Intercultural Learning

by

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ABSTRACT

With the fast pace of globalization and the rise of encounters in digital spaces, CALL scholars have become increasingly interested in how digital tools mediate intercultural encounters. However, despite their evident success in connecting students from around the world, current online intercultural exchanges continue to present problems such a promotion of positive experiences over deep intercultural learning and lack of real-life value (O' Dowd, 2018). In addition, digitally-mediated intercultural learning research is based on the same theoretical approaches to learning that guide CALL research (Firth & Wagner, 1997; Lafford, 2017). Although such frameworks are successful in allowing researchers to conceive of digital tools as mediators for human interaction, they have yet to embrace the potential of digital artifacts themselves as intercultural interlocutors. Aiming to address this gap in the research, this investigation used Atkinson's (2010, 2014) sociocognitive approach to language learning to understand the role that digital tools have in intercultural learning. Also integrating Dervin's (2011) liquid approach to interculturality—which focuses on understanding intercultural learning as a co-constructed process—the research questions that guided this investigation asked: (a) does film annotation mediate intercultural learning? and, (b) in what ways does film annotation mediate intercultural learning? In answering these questions, the study looked at the intercultural learning process of five advanced learners of Spanish, as they interacted with annotated film clips, and engaged in peer discussion around the themes of colonialism and coloniality presented in the film clips. Data were collected through pre and post-tests, video recordings of peer discussions, and screen recordings of participants' interaction with the annotated film clips. Findings showed that film

annotation allowed participants to notice, retrieve and take notes on important cultural information, which they later incorporated in discussion with peers. Based on this evidence, and aligned with the aforementioned theoretical frameworks, this investigation poses that intercultural learning is a fluid, iterative process. The study also suggests that digital artifacts—as well as human interlocutors—play an important role in enabling learning processes, therefore, the role of such artifacts should be studied more in depth.

DEDICATION

To my partner in all that is good and bad—Edward.
Looking forward to understanding the importance of fresh produce.

And to my dad, for bringing me to Arizona in the first place,
and all that came with it.

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CHAPTER 1

INTRODUCTION

The nature of language learning differs from other types of learning usually found in educational settings given its strong focus on the development of skills, and the importance it places on quality input of the second language, which is necessary for language acquisition. With the democratization of digital technologies, the fast pace of globalization, and the rise of encounters in digital spaces, language teachers and students have entered a new era in which language learning now rarely occurs without the mediation or assistance of digital tools. In consequence, many scholars in second language acquisition have turned their focus toward computer-assisted language learning. Studies in this field range from descriptive or critical reviews of language-learning technology software to the design of virtual and augmented reality worlds where learners can practice their linguistic and pragmatic skills. Since the 2000s, scholars have particularly placed a strong focus on how to use digital tools to facilitate collaboration between learners, thus promoting peer interaction in blended, hybrid, and online spaces.

Taking cue from CALL pedagogical models, intercultural competence scholars have become increasingly enticed by the affordances of technologies that facilitate collaboration, and have devoted significant efforts to exploring intercultural pedagogies in digital worlds. In this context, studies on intercultural virtual exchanges such as *telecollaboration* and *teletandem*—which focus on intercultural encounter between students from different parts of the world through communication technologies—are widely researched (Thorne, 2010). However, these investigations are not without problems. Studies focusing on intercultural virtual exchanges tend to present issues

including the insistence in promoting positive experiences over deep intercultural learning, and a lack of real-life value (O'Dowd, 2018). In addition, guided by the cognitivist and sociocultural learning frameworks that have long dominated second language acquisition (Firth & Wagner, 1997; Lafford, 2009, 2017), digitally-mediated intercultural learning research continues to draw from frameworks that do not explicitly address the role that human-computer interaction plays in developing human cognition as related to intercultural development. Therefore, while there is a large body of research that explains interactions between humans via digital tools—written and video chats, wikis, multiplayer gaming, collaborative writing, among others—the potential for human-computer interactions developing intercultural learning has gone largely unaddressed.

To address this gap, the present investigation looks at how learners construct their own intercultural learning during interaction with digital tools. The current study focuses on a digital artifact designed specifically for this study, film annotation, which consists of the addition of text appearing in screen overlays that inscribes subtitled films within a cultural context.

Following Atkinson's (2010, 2014) sociocognitive approach, and Dervin's liquid approach to interculturality (2011), this study examines two main research questions:

1. Does the inclusion of annotation in film affect intercultural learning?

2. In what ways does the inclusion of annotation in film affect intercultural learning?

In doing so, advanced learners of Spanish were observed as they interacted with annotated film clips and engaged in peer discussions to develop cultural self-awareness and deep cultural knowledge. Data were collected on the behavior of each participant

through pre- and post-tests, video recordings of peer discussions, and screen recordings of participants' interaction with four annotated film clips. The clips were extracted from the film "Even the Rain" (Gordon & Bollaín, 2010), which follows a group of Spanish filmmakers as they visit Bolivia to produce a movie on the colonization of South America. While there, local issues with the privatization of water begin to highlight similarities in historical and present-day colonial practices that affect Bolivian natives. The film was chosen for its overt address of cultural topics, which were made more noticeable via annotations. To arrive at the goal of evaluating whether film annotation could develop intercultural learning, evidence of learning outcomes—such as cultural self-awareness and deep cultural knowledge—was analyzed and corroborated across the various data sources to ensure reliability of the observed outcomes.

The dissertation explains the theoretical foundation for this study, the design of the data collection and analysis process, and the study's results and conclusions, following a traditional sequence of chapters. To begin, a review of the literature explains issues that current learning frameworks have in explaining human-computer interaction, and proposes the use of Atkinson's (2010, 2014) sociocognitive approach to study computer-assisted language learning. The review continues by presenting Dervin's (2011) approach to liquid interculturality as a critical alternative to understanding intercultural competence development. Finally, an overview of cultural translation studies provides the background for the development of annotated film as an intercultural learning pedagogical solution.

The third chapter of this study explains in detail the microgenetic method used to collect data for this study, as well as the research design, and data collection procedures.

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A thorough explanation of how data were gathered and analyzed for this study appears at the beginning of chapter four, which tackles results. These results are presented in the form of case studies, following five participants from an experimental group that received the full pedagogical intervention, including pre and post-tests, watching the annotated clips, and engaging in peer discussions. Through images reflecting peer-to-peer interaction, participant-computer interaction, notes, and charts that illustrate the learning process, I explain how each participant co-constructed their own intercultural learning along with digital tools and with their human peers. The study concludes by offering insights into whether intercultural learning outcomes were in fact mediated by the annotated film clips, and how this digital tool was able to enable cognitive processes for participants in this study. Implications of the results include suggestions to scholars, teachers, and digital practitioners, on how to better understand intercultural learning, the role of digital tools in enabling cognition, and how the tools developed for the classroom, i.e. film annotation, can transfer positively to the real-world to affect positive change.

CHAPTER 2

REVIEW OF LITERATURE

The following review of literature is divided into three major sections. The first two sections review important theoretical frameworks in learning, as well as intercultural learning. A third section reviews the use of film to teach intercultural learning, and also presents the theoretical works underlying the use of film annotation for intercultural learning. I begin by addressing current learning frameworks used in second language acquisition and computer-assisted language learning (Firth & Wagner, 1997; Lafford, 2007, 2009). Drawing from a need for a more integrative approach to learning that merges the study of internal mental processes, and learning in context, I propose using Atkinson's (2010, 2014) sociocognitive framework as an ideal approach for the computer-assisted language learning research. I argue this idea based on the importance that this framework ascribes to *distributed cognition,* and its relevance of tools as cognition-enabling entities. The chapter continues by reviewing the history of intercultural competence development theories (Bennett, 1996, 2004; Byram, 1997; Deardorff, 2006), and arrives at Dervin's (2011) liquid approach to interculturality. This approach builds on the idea of studying intercultural learning as a process, and presents critiques and solutions to current intercultural learning research. The section concludes with a brief review of digitally-mediated intercultural practices today and their challenges, in order to further contextualize the importance of this study.

Next, the review delves more specifically into the digital artifact which is at the center of this study, film annotation. In doing so, I review the use of film in the second language classroom, and explain the need to contextualize foreign-language films—and,

in particular, subtitled foreign-language films—within a broader cultural context that facilitates learning opportunities. To conclude this section and the chapter as a whole, I explain the process through which I created the cultural film annotations that constitute one of the key instructional materials for this study's pedagogical intervention.

Towards a Sociocognitive Approach to Technology-mediated Language Learning

Researchers in second language acquisition (SLA) have long debated the nature of human cognition, and how it affects second language learning (L2L). On one hand, and largely dominating the field of SLA, is the cognitive approach or *cognitivism*, an approach that focuses on the brain as the unit for cognitive analysis. On the other hand, sociocultural theory holds that human cognition is mediated by cultural artifacts. Within each of these perspectives, the role of tools slightly differs: for cognitivism, the locus of cognition is the human mind, and tools are auxiliary to learning; for sociocultural theory, tools—and also cultural artifacts—are an essential part of learning, as they mediate cognition. This dichotomy has led scholars in SLA to advocate for the integration of such approaches in a theoretical framework in which our understanding of human cognition coexists with our understanding of the role that tools and cultural artifacts play in learning. Below, I explain SLA's debate over theoretical frameworks and its search for an integrative method. Following this I explain in more detail some essential concepts stemming from this debate. I conclude by proposing the use of one integrative perspective—Atkinson's (2010, 2014) sociocognitive approach to language learning—in the study of computer-assisted language learning, given the approach's increased interest in the role of tools as cognition-enabling entities.

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Integrating Cognitivist and Sociocultural Perspectives

For decades, the cognitive approach has largely dominated second language acquisition (SLA) research. The cognitive approach to cognition is often traced back to a dualist conception of mind-body, which was first proposed by Descartes (1596-1650). Atkinson (2014) defines *cognitivism* as follows:

The term cognitivism is typically used to denote the doctrine that: (1) the mind/brain is, for all intents and purposes, the necessary and sufficient locus of human thought and learning; and (2) such thought and learning is a form of information processing (p. 3)

Cartesian thought proposed the mind/brain as a sufficient source of cognition, meaning that the human brain was the locus of thought and language. Such learning, evidently, happened within an environment. However, in cognitivism, this environment is merely contextual, i.e., it is a container for human action, and although it is closely linked to human cognition, it is not essential for it.

Concerning language learning, Chomsky (1957) embraced the cognitivist view in his response to behaviorism, in which he challenged Skinner's ideas on learning as a stimulus-response phenomenon. In his address, Chomsky further developed the idea of mind/brain as an abstract construct when he proposed the distinction between language competence and language performance. For decades, this perspective dominated the field of SLA, which based a large part of its initial research on Chomsky's ideal native speaker, and on the notion of an ideal linguistic competence.

Two decades later, contrasting Chomsky's (1957) cognitive approach to SLA, Vygotsky's (1978) *sociocultural theory* addressed learning in a different way. Placing a

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significant focus on the activity of *mediation*, sociocultural theory explains that all learning is mediated by cultural artifacts. Such artifacts can be psychological—language, signs, symbols—or they can be physical—shovels, hammers, computers, mobile devices. For Vygotsky, learning took place during mediation, a process in which learners create and use cultural artifacts to enable their own learning, and to interact with the environment. Sociocultural theory placed more emphasis than cognitivism on learning as a contextualized human activity, and although it proposed that cultural artifacts were part of the learning process, it deemed them auxiliary and not essential. What was important about sociocultural theory, was that it highlighted that learning took place in an environment with which learners interacted.

With the former of these perspectives—cognitivism—largely dominating the field of SLA for decades, toward the end of the twentieth century, scholars saw the need to study language in more integrative ways. This meant that new frameworks would need to complement the cognitivist understanding of how the human mind works, with a social understanding of the human mind and its learning processes. As Firth & Wagner's explained in their prominent 1997 article, the call was for scholars to conduct research that showed "a significantly enhanced awareness of the contextual and interactional dimensions of language use" (Firth & Wagner, 1997, p. 286). Among the implications of this contextualized, interactional study of language learning, would be that the cognitive focus on "language learning as the transmission of linguistic elements from one mind to the other needed to be complemented by a model of co-construction in which meaning was negotiated and co-created by the interlocutors themselves (Lafford, 2007, p. 735).

Partly as a response to Firth & Wagner's (1997) seminal article, and partly as a research perspective that had been developing independently from the authors' proposal (Block 1996; Lantolf, 1996; Swain & Deters, 1997; van Lier, 1994), scholars in SLA increasingly began to advocate for integrative approaches to language acquisition and learning that would rescue the essential role of context and interaction in language learning and use. Among these frameworks, it is worth highlighting van Lier (1994, 2004), Mondada & Pekarek Doehler (2004) and, finally, Atkinson (2010, 2014). Each of them proposing an integrative perspective to SLA—an ecological approach to language learning, a focus on interaction as the locus for learning, and a sociocognitive approach to language learning, respectively—these three frameworks effectively addressed the need to understand language learning as a contextualized activity. However, only one of them—Atkinson's (2010, 2014) sociocognitive approach to language learning— understands learning from a *distributed cognition* perspective, in which cognition/learning is enabled by cognition-enabling entities. In the next section, I define and explain this approach, which is the foundation for this study's conception of learning, including the idea of distributed cognition, and defining basic concepts.

The Sociocognitive Approach

Drawing from the proposition that learning and cognition occurs in human interaction within an environment, Atkinson (2010, 2014) proposed an integrative approach to SLA that included the language and theoretical perspectives of extended and embodied cognition. Merging the concepts of extended cognition, which he explains "conceptualizes mind/brain as inextricably tied to the external environment," and embodied cognition, which "views cognitive activity as grounded in bodily states and

action" (p. 599), Atkinson described the sociocognitive approach to second language acquisition in three basic principles: (a) the inseparability principle, (b) the learning-is-adaptive principle, and (b) the alignment principle.

The *inseparability principle* states the interconnectedness of mind, body, and world in the process of cognition development and language acquisition; the *learning-is-adaptive principle* explains that human survival is based on adaptiveness to complex and unpredictable environments. Finally, the *alignment principle* poses that humans have natural capacities for interaction, whether with the environment, with objects, or with other humans (p. 606).

Based on these tenets, Atkinson (2010) poses that the study of learning should always be the study of learning in context because learning and cognition are always and everywhere contextualized and situated activities. Thus, to include context in the study of learning requires understanding the role of cultural artifacts or tools that humans draw into the cognitive process. These cultural artifacts or tools are similar to Vygotsky's (1978) cultural artifacts in that they form part of the system that enables human cognition. However, for Atkinson's approach, they are called cognition-enabling entities. Such entities, which, like artifacts, might be tangible or intangible, and are part of a *distributed cognition* system. Following Hutchins (1995), Thorne and Hellerman (2017) explain such distribution as follows:

> The term 'distribution' is meant to highlight the idea that thinking and doing involve the body and coordination between human as well as non-human artifacts and environments. In this sense, neither the brain nor the individual are the

exclusive loci of cognition; rather, the focus is on understanding the organization of systems, or "cognition in the wild." (p.722)

For the purposes of this study, cognition-enabling—which are similar to cultural artifacts entities and tools—may be human mediators, such as classmates or peers, and digital artifacts, such as film annotation.

Computer-Assisted Language Learning and the Sociocognitive Framework

Although intercultural learning has not yet fully embraced the sociocognitive approach to language learning, Atkinson's (2010, 2014) framework—along with similar studies in embodied and situated cognition—has served as the foundation for computer-assisted language learning research, particularly on the topic of augmented reality (AR) for second language learning. Most notably, in a study on mobile augmented reality and hyper-contextualization, Thorne & Hellerman (2017) built upon Atkinson's framework, proposing the following:

Digital tools and situated human experience form unified ecologies with agency distributed throughout the system. The possibility of distributed agency does not necessarily imply symmetry between humans and artifacts (...), but it does suggest that catalysts for action can shift from brains to bodies and to a range of physical and virtual media in the flow of activity. This position contests the dichotomization of artifacts, context, and humans as distinctly independent from one another. Rather, artifacts, context, and humans together create particular morphologies of action. (p. 729)

Distributed agency, a crucial construct of the sociocognitive approach, also appears in Thorne, Fischer & Lu (2012), whose study focused on multiplayer online

games as a digital artifact in order to identify the elements of the game's the expansive semiotic ecology. The heuristic study allowed the researchers to identify and characterize the many contextual components of the game—or its expansive semiotic ecology—and to assess the resources and limitations that the game offered as a context for second language learning. Also based on the idea of distributed agency, Thorne, Hellerman, Jones & Lester (2015) analyzed how small groups used digital technology—i.e. a mobile phone device—in movement through physical environments while playing an AR quest-type game. More, specifically, they collected data regarding orientation to device, talk-in-interaction, and participant mobility.

A third related study, although not directly linked to distributed agency, was Zheng, Wagner, Young & Brewer (2009), who focused on interaction in virtual quests. Specifically, they looked at how interaction in virtual quests provided resources for English language acquisition. In doing so, they analyzed avatar-embodied collaboration—i.e., the use of avatars to represent learners' bodies—as an affordance of the virtual quest. The study's findings showed that the game in question facilitated intercultural awareness development, and co-construction of linguistic and cultural knowledge (Gánem-Gutiérrez, 2014). Although as mentioned, this study was not directly linked to distributed agency or to Atkinson's (2010, 2014) approach, it is a crucial example of how non-human artifacts, in particular digital artifacts, can mediate intercultural learning.

Among the most relevant contributions of the aforementioned studies are that (a) they have synthesized large bodies of research on distributed, extended, and embodied cognition and how it can relate to SLA; (b) they have begun to explore research

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methodologies for incorporating digital artifacts as a relevant non-human agent in second language research, and finally; and (c) they have sparked researchers' curiosity about how specific digital affordances enable cognition. However, none of the described studies intentionally sought out to explore how digital artifacts can mediate the development of intercultural competence nor have they reflected on intercultural competence itself as a cognitive process that is developed between interlocutors, whether these interlocutors are human or non-human. Moreover, because all of these studies naturally focused on how digital artifacts facilitated human encounters with human others, the question remains of whether digital artifacts themselves can mediate intercultural learning.

As technology is incorporated more regularly into language classrooms, and language learners and non-language learners increasingly make use of digital tools in the wild to navigate today's globalized world, it becomes necessary to investigate the actual and possible roles of non-human digital mediators in the development of intercultural learning. Naturally, the first step toward answering these questions is looking at how digital artifacts can mediate intercultural learning in structured learning environments. For this reason, it is the aim of this study to answer whether film annotation can mediate intercultural learning, and in what ways, within the technology-mediated language classroom. The hope is for the results of this investigation to inform research on the role of technology in mediating intercultural learning, in addition to being a means of communication between learners located across the globe.

Evidently, to better understand how technology can mediate intercultural learning, it is not only necessary to provide a sound theoretical framework for learning that highlights the role of technology—such as the sociocognitive framework. It is also

crucial to align general theories of learning with frameworks for the study of intercultural

competence development. To this end, the next section revises the history of intercultural

competence, the theoretical perspectives that have guided researchers' understanding of

it, and a more recent perspective—Dervin's (2011) liquid interculturality approach—that

highlights the role of interaction for intercultural learning.

A Technology-Mediated Approach to Interculturality

In our contemporary globalized world, a large part of intercultural interactions

takes place in *affinity spaces*, which Gee defines as spaces for interaction in which

cultures come together based on a shared, strong interest or engagement in a common

activity (2004). In the past, such spaces were physical in nature and thus largely limited

by geographical boundaries. However, with the development of technology, a vast

number of affinity spaces now also exist in their digital iterations where myriad

interactions take place on a daily basis, among users from a wide variety of regional

origins and cultural backgrounds. Because of this, present-day intercultural interactions

are largely taking place in digital environments that are unstructured for learning (e.g.,

video streaming, massive online multiplayer games, texting friends, social media). These

unstructured contexts—also known as *the digital wild* (Thorne, Sauro & Smith, 2015)—

fall outside the comfort zone of teachers who have a robust body of CALL research

supporting the acquisition of linguistic competence through digital tools, but fewer

options when it comes to supporting digital intercultural learning.

Some of the most common digital intercultural learning experiences come in the

form of online intercultural exchanges such as teletandem or telecollaboration (O' Dowd,

2007; Thorne, 2010), which involve dyadic or group pairings of individuals with different

home cultures. Taking cue from Bennett's developmental model of intercultural sensitivity (1986), Byram's *savoirs* (1997), and Deardorff's process model of IC (2006), these pedagogical practices capitalize on learners' cultural backgrounds, and promote digital exchanges as the main source of intercultural learning. Such exchanges have allowed language classroom instructors to extend cultural learning beyond the physical walls of the language classroom, as well as beyond factual cultural knowledge printed in textbooks. However, the theoretical frameworks that influence these pedagogical practices are not native to digital learning. This means that, similar to CALL pedagogies focused on the development of linguistic competence, teachers are largely working with theoretical models that do not explicitly address the transformative potential of digital tools. In consequence, existing online intercultural exchanges inadvertently fall into the trap of replicating real-life intercultural interactions, and limiting their exploration of intercultural interactions that could only exist in digital environments. For this reason, it is important to revise intercultural competence theoretical frameworks in light of learning theories that embrace digital tools, such as the sociocognitive approach. Such an examination might shed light on new ways to transform intercultural learning through the digital affordances of new technologies.

To address this issue, this section begins by reviewing existing intercultural competence development models including Bennett (1996, 2014), Byram (1997) and Deardorff (2006), in light of a sociocognitive approach to learning. In particular, I focus on whether existing IC models allow for the integration of digital artifacts as interlocutors that can enable intercultural learning. I continue by describing several challenges in existing online intercultural exchanges (OIEs), as well as the gaps and remaining

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questions at the intersection of intercultural learning and computer-assisted language learning.

Intercultural Competence Development: A Review

Until now, scholars have proposed three models that have expanded our understanding of intercultural competence, as well as its dimensions and processes. In this brief overview, I look at the three main frameworks used to study intercultural competence development—Bennett (1986), Byram (1997), Deardorff (2006) —their general contributions, as well as limitations regarding a sociocognitive approach as understood by Atkinson (2010, 2014). Following these models, I present Dervin's (2011) liquid approach to interculturality, which understands intercultural interaction as a co-constructed process in which interlocutors construct their cultural sense of self while in interaction with a cultural other. To conclude, I propose that Dervin's approach is ideal for the study of technology-mediated intercultural learning, specifically in the case of human-computer interaction, in which the learner and the digital artifact both modify each other's cultural self.

Developmental Model of Intercultural Sensitivity. Organized as a continuum of sensitivity stages toward cultural difference, Bennett (1986) developed the Developmental Model of Intercultural Sensitivity (DMIS). The continuum provided a model for one-way, permanent developmental movement, including six substages categorized under a predominant position or inclination towards cultural difference—*ethnocentrism* or *ethnorelativism.* Bennett's six stages (Figure 1) include:

1. Ethnocentrism

    a.   Denial of difference

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   b. Defense against difference

   c. Minimization of difference

 2. Ethnorelativism

   d. Acceptance of difference

   e. Adaptation to difference

   f. Integration of difference
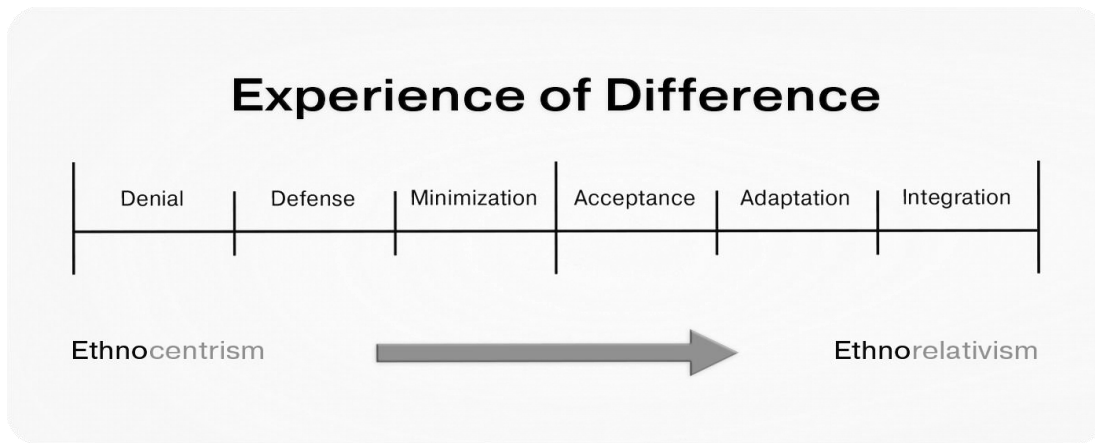
Figure 1. Bennett's (2014) developmental model of intercultural sensitivity

   According to Bennett (2014), the pedagogical value of the model lies in that it identifies the stages at which an individual is experiencing cultural difference. This allows teachers to predict how learners will behave in intercultural situations, and gives educators a foundation to design pedagogical interventions that may lead students toward ethnorelativism. Because Bennett's continuum understands development as a one-way movement, it presupposes learning as an additive process. For example, following Bennett's model, an intercultural learner would only accept difference if they have first gone through the stages of denial, defense, and minimization. In addition, according to Bennett (2014), the difference in DSIM stage of an interlocutor does not affect the predominant position of the intercultural learner. This means that an individual learners'

travel through the continuum is the same regardless of the cultural complexity of their interlocutor.

Approaching the DISM from a sociocognitive perspective, Bennett's model presents a number of issues. First and most importantly, because the DSIM focuses on describing the internal mental states of intercultural learners, it aligns with a cognitivist approach to learning, in which it is difficult to define what role cultural artifacts and context play in learners' development. This does not mean that the DSIM is necessarily flawed in its description of mental states. On the contrary, the DSIM provides an interesting and solid framework for the assessment of intercultural outcomes, as it efficiently describes individuals' behavior at each stage of the continuum. However, these descriptions alone are not sufficient to explain the processes through which learners arrive at those stages, or the role that interlocutors play in the learning process. A revision of this model in light of sociocognitive theory would need to explicitly address how artifacts and context enable the co-construction of intercultural learning, and how affect learners' movement through the continuum.

A second issue with the DSIM is its foundation on the idea of additive learning, which contradicts the notion of learning as emergence (van Lier, 2004). Following the sociocognitive approach, learning is an adaptive, continuous process that emerges in interaction between the individual, artifacts, and the environment (Atkinson, 2010, 2014). Such adaptation and continuity imply that learning is a dynamic process that takes place continuously through interaction, and does not happen solely as a one-way process.

A third and final issue with Bennett's model is that it ascribes a fixed 'culture' to both learner and interlocutor and does not explicitly account for the individual

complexities and dynamic transformation of each interlocutor during interaction. The model does not overtly explain what would happen if, for example, an intercultural learner at an advanced stage engaged with an interlocutor whose attitudes or behaviors threatened or challenged the learner.

Dimensions of Intercultural Competence: Byram's *savoirs*. Byram (1997) defined intercultural competence as the ability to "see and manage relationships" between the self and its "cultural beliefs, behaviors and meanings, as expressed in a foreign language, and those of [the self's] interlocutors, expressed in the same language—or even a combination of languages—which may be the interlocutor's native language, or not" (p. 12). For Byram, intercultural competence was composed of five *savoirs* or dimensions (Figure 2):

- *savoir* or knowledge of the self and others, as well as knowledge of societal and individual interaction
- s*avoir comprendre* or interpretation and relation skills
- *savoir s'engage*r or political education and critical cultural self-awareness
- *savoir apprendre/faire* or discovery and interactive skills
- *savoir être* or attitudes relativizing the self and valuing others.

Figure 2. Byram's (1997) *savoirs* and dimensions of intercultural competence

Widely accepted today as the components of intercultural competence, these five

dimensions inform a large body of scholarly work. However, on their own, the *savoirs* do

not actually describe a process for IC development or intercultural learning. Similar to

Bennett's model (1986), the five *savoirs* merely describe the possible outcomes of the

intercultural learner, but do not overtly focus on the process through which learners arrive

at these outcomes. Therefore, just as the DSIM, Byram's framework does not directly

address how the dynamic and changing nature of interlocutors can affect intercultural

learning outcomes. To address this important gap, Deardorff (2006) developed a process

model for intercultural competence, which explains how interaction allows individuals to

move along the *savoirs*.

Process Model of Intercultural Competence. Expanding on Byram's work

(1997), Deardorff (2006, 2009) viewed intercultural competence as a process in which

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knowledge, skills, and attitudes "lead to visible behavior and communication that are both effective and appropriate in intercultural interactions" (Deardorff, 2009, p. 28). She described intercultural competence as existing in three realms—affective, cognitive and behavioral—which she called attitudes, knowledge/comprehension, and skills, and included specific attributes for each competence (Table 1). Deardorff represented these process and attributes through a schematic diagram (Figure 3) that illustrated a lifelong developmental process. According to this process, attitudes inform knowledge and comprehension, which in turn affect behavioral outcomes that appear in interaction. These interactions then return to shape the individual's attitudes, restarting the cycle.
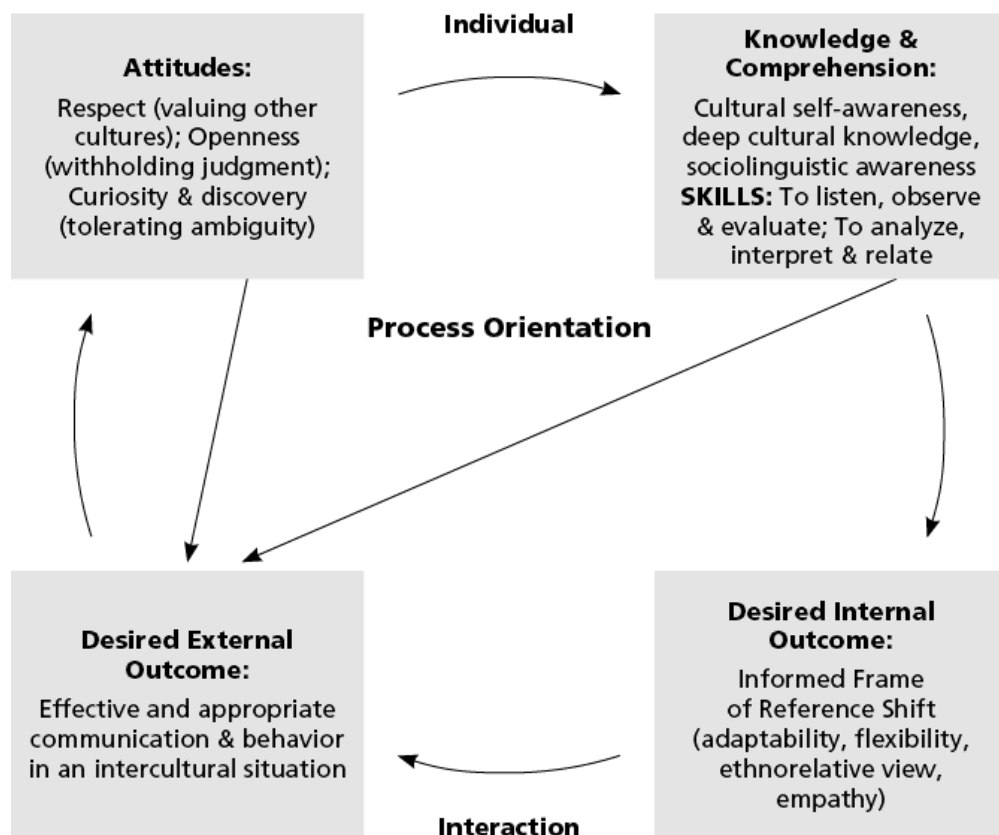
Figure 3. Deardorff's (2006) process model of intercultural competence. The diagram explains intercultural competence development as an iterative process.

Deardorff's process model was a significant contribution toward the gaps in both Bennett's and Byram's frameworks because it described how each realm interacted with the other, shaping intercultural competence development. Another significant addition of Deardorff's work was the notion of IC as a lifelong learning process, with potential for setbacks and regression in development. Despite the model's advances in describing intercultural learning process over intercultural competence outcomes, and its effort to include social context in the learning process, Deardorff's process model continued to share with its predecessors an emphasis on the internal mental state of intercultural learners. In addition, the model also assumed a natural correspondence between the individual's internal skills and knowledge and their external behaviors. This relationship was problematic for Dervin (2011), who considered that behaviors do not necessarily mirror internal skills and knowledge, but instead individuals are able to *perform* IC through actions that may not agree with their internal world.

Table 1

Foundational Attributes of Intercultural Competence. Adapted from Blair (2016).

Attitudes (affective)	Knowledge/ Comprehension (cognitive)	Skills (behavioral)
Respect: valuing other cultures	Cultural self-awareness	Listening, observing, evaluating: Using patience and perseverance
Openness: withholding judgement	Deep cultural knowledge	Analyzing, interpreting, relating: comparatively and historically
Curiosity: interest in seeking out cultural interactions	Sociolinguistic awareness	Empathy: view of world from other's perspectives

Discovery: tolerating ambiguity	Grasp of global issues	Critical thinking

Liquid approach to interculturality. Articulating a central challenge to the models that explain intercultural competence development, Dervin (2011) proposed a liquid approach to interculturality. Aligned with critiques of cognitive learning, Dervin's liquid interculturality approach understands intercultural learning as a co-constructed, reiterative process in which interlocutors build their cultural sense of self while in interaction with cultural others. The approach proposes a focus on *understanding the process* of interculturality as co-constructed, a significant departure from previous models that used intercultural outcomes to explain intercultural competence.

Among the many elements Dervin takes issue with in previous IC learning models are: (a) the use of the term 'culture' to essentialize learners and hide their individual complexities, (b) the assumption that behaviors and discourse are direct representations of underlying intercultural attitudes and knowledge, and (c) the idea that culture *causes* behavior. For Dervin, underlying the *idea* of culture are *real* co-constructed interactions between complex individuals who position themselves in various ways to achieve different outcomes. In this way, individuals *perform* culture during interaction. This performance, Dervin argues, might or might not be in direct agreement with individuals' internalized intercultural attitudes and knowledge.

To address these problems with intercultural competence research, Dervin proposed various solutions, including: (a) drifting away from the use of 'culture' as a fixed explanation for behaviors and attitudes, (b) questioning the direct relationship between discourse and underlying metal processes, and (c) using 'culture' as an

analytical notion to *understand* behavior, instead of as an *explanation* for individuals'
behavior.

Taking cue from Holliday (2004), Dervin's liquid interculturality approach
conceptualized ethnic, cultural, and linguistic identity as "the image [individuals] wish to
project at a particular time rather than as evidence of an essentialist [national] culture'"
(p. 12). Understanding that interlocutors' interculturality is constantly in flux during
interaction, liquid interculturality moved away from fixed descriptions of individuals'
intercultural competence outcomes. Instead, it looked at the interaction process through
which learners construct their cultural sense of self, explaining that it is during this
process that individuals use the idea of culture as an analytical notion to understand
themselves.

As for the research implications of liquid interculturality, Dervin (2011)
suggested a need to focus on methods that seek to understand intercultural interactions
rather than explain them, and that analyze discourse and behavior beyond their face
value. This could take place through methods such as discourse analysis, and by paying
attention to discursive elements that could corroborate or contradict the evidence.

Dervin's proposition that interlocutors construct interculturality during each
interaction is specifically relevant to the present study for two reasons. First, liquid
interculturality aligns with the sociocognitive idea that learning is a co-constructed
process, distributed among various entities, including individuals, artifacts, and the
environment. This makes the approach an ideal framework to reflect on how digital
artifacts become part of intercultural interactions, actively co-constructing interculturality
along with individuals. Second, because liquid interculturality seeks to understand rather

than explain intercultural interactions, it promotes heuristic research methods that seek to explore rather than explain intercultural learning outcomes, such as the present study.

Since liquid interculturality focuses on interactions between human interlocutors who continuously modify and affect each other's' learning process, the approach does not directly address how digital artifacts could also interact with learners to co-create interculturality. On first impression, it would seem that digital artifacts, as static entities, would not be able to engage in intercultural co-construction along with human individuals. However, this change when looking at digital artifacts through the lens of cultures-of-use (Thorne, 2016). According to Thorne, digital tools carry interactional and relational associations, genre expectations, register, and preferred uses, also referred to as cultures-of-use. The cultural associations of digital tools arise during human-computer interaction, when individuals bring their cultural knowledge, attitudes and behavior to their interaction with the tool, and when they use culture as a notion to understand the affordances of tools. At the same time, digital artifacts also bring their cultural essence to their interaction with humans. In this way, both humans and digital artifacts affect and modify each other, making it possible to co-construct interculturality between human and non-human digital entities.

Challenges in Online Intercultural Exchanges

In the context of fast-paced globalization and progress of digital technologies, the demand for CALL scholars to develop pedagogical interventions that capitalize on the affordances of digital environments has increased. Among these interventions, those that focus on intercultural learning fall under the umbrella term 'online intercultural exchanges'—henceforth OIEs— (O'Dowd, 2007), and mainly include three types of

digital intercultural learning: *telecollaboration, tandem learning* and *internet-mediated intercultural foreign language education* (Thorne, 2010):

- Telecollaboration refers to the international interinstitutional pairing of classes who engage each other to develop cultural-artifact-based reflections (Warschauer, 1996; Belz, 2003; Kinginger, 2004; Thorne, 2010).

- Tandem learning is a dyadic, dialogic digital pairings between individuals who are each interested in learning their interlocutor's language (Kötter, 2002; O'Rourke, 2005; Thorne, 2010)

- Internet-mediated intercultural foreign language education is the use of the Internet for intercultural dialogue among learners from different linguistic and cultural groups (Belz & Thorne, 2005; Thorne, 2010).

These digital pedagogies have reached significant success in extending the language classroom beyond its development of linguistic competences. They have enabled learners to connect with real-life individuals who have different cultural understandings of themselves, who are frequently located in other regions or countries, and who—by offering new perspectives—allow learners to reflect on their own worldviews and their cultural assumptions of others.

According to O'Dowd (2018) however, at least three relevant problems permeate these digital intercultural interactions. First, current pedagogical practices position students as ambassadors, pushing them to nationalize and generalize culture in troubling ways, an argument that is consistent with Dervin's (2011) critique of the use of the term 'culture' to essentialize learners and hide their individual complexities. Possible solutions to the 'essentialization' of culture would require challenging the native speaker's role as

an ambassador of a culture, particularly in cases where learners may ascribe negative associations to certain languages or nationalities.

Analyzing a large number of telecollaboration studies, O'Dowd (2018) articulated a second problem in online intercultural exchanges, which is that OIEs tend to be superficial. They prompt learners to minimize or accept cultural differences without challenging them, in order to ensure that students leave with positive feelings about their interlocutors. O'Dowd argued that such emphasis on arriving at positive perceptions might detrimentally affect learners' preparedness for the intercultural exchanges that may take place outside structured learning environments, and which may result in negative interactions or ineffective communication.

Finally, a third problem presented by O'Dowd was that, with the exception of some forms of service learning, current digital intercultural pedagogies show no suggestion that criticality and reflection should lead to action in learners' worlds or communities. By neglecting to address the real-life implications of intercultural learning, educators are renouncing their most significant contribution to society, which is to be facilitators of learning that can drive social change. While this does not mean that educators must have a social activist agenda, it does mean that they must prompt students to think critically about how their cultural knowledge, attitudes and skills can serve the global community.

Beyond O'Dowd's (2018) critiques to OIEs, a fourth issue these pedagogies present is the research gap in human-artifact intercultural interaction. As I have mentioned before, OIEs largely draw their theoretical foundation from models such as Bennett's DSIM (1986), Byram's *savoirs* (1997), and Deardorff's process model (2006).

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However, these models are not sufficiently capable of addressing issues such as the non-neutrality of technology and digital artifacts, or the cultures-of-use that digital tools bring to human-computer interaction. For this reason, current studies on OIEs provide ample data on students' visible learning outcomes during intercultural exchanges, but significantly lack analysis of the cultural affordances of digital technologies. The present study addresses this gap in the literature by analyzing the affordances of the digital artifact in question, i.e., film annotation, in relation to intercultural learning. By asking, not only whether film annotation can mediate intercultural learning, but also how, the study provides insights into how digital tools can act as interlocutors for intercultural learning. It also provides a critical approach to a digital artifact—the subtitling apparatus—, which teachers have traditionally used in second language classrooms without critical analysis of its potential cultural affordances. In particular, the following section analyzes in detail the subtitling apparatus, its current restrictions, and potential affordances for intercultural learning.

Using Film Annotation to Mediate Intercultural Learning

Taking cue from Dervin's (2011) liquid interculturality approach, this study focuses on how digital artifacts can mediate intercultural learning. In doing so, the study looks at the intercultural learning, as well as at intercultural learning outcomes. This means that, while an existing map of intercultural learning outcomes guides this study's search for evidence of intercultural learning, it predominantly focuses on the *process* through which participants construct this intercultural learning along with other entities, i.e., film annotation and others (peers). The relevance of this topic stems from the theoretical proposition that learning/cognition is not an activity that takes place only in

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the human mind. Instead, learning/cognition takes place within an environment that provides individuals with infinite cognitive resources. These cognitive resources are cognition-enabling entities that, through their affordances, co-construct learning along with human individuals. Such cognition-enabling entities—also called cultural artifacts in sociocultural theory—take myriad forms; they can be human others, things in the environment, language, or even digital tools. This study specifically looks at how one digital artifact, film annotation, can enable intercultural learning.

To explore this idea, I define film annotation as textual on-screen notes that provide cultural contextualization for the film in question. This textual information is added to the film—in this case, film clips—using video editing software designed to add interactive features to existing videos. Aiming to explain how film annotation can mediate intercultural learning, here I explain several ideas regarding the creation and use of annotation in this study, namely:

- The need to provide cultural contextualization to film through annotation
- How the affordances of film annotation can enable intercultural learning
- How I created the annotations, including deciding on the type of annotations, themes in the film that could contribute to intercultural learning, and how the added notes questioned cultural themes that appear in the film "Even the Rain."

Cultural Contextualization of Film through On-screen Annotation

Scholars (Huczynski & Buchanan, 2004; Kaiser, 2011; Kramsch, 1995) agree that film is a useful tool to teach culture, given that it presents the following affordances for intercultural learning, including: (a) it afford viewers the opportunity to explore the thoughts and interactions of people with distinct backgrounds; (b) it provides the

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necessary distance that viewers need to explore cultural issues; and (c) its detailed narratives allow viewers to empathize with fictional characters, and simulate selves in the real world. For this reason, naturally, scholars and educators have long been interested in using film to teach culture.

The type of studies that explore intercultural learning through film vary. Most notably, they focus on pedagogical guidelines to use film in the second language classroom. For example, Varey (1996) described the use of film segments to discuss foreign and national cultures, including co-cultures and countercultures. Similarly, Roell (2010) compiled a description of films followed by a blueprint for their possible uses to explore issues of racism, intercultural and intergenerational conflict, cultural traditions, and stereotypes, among others. A qualitative study by Tognozzi (2010) looked at how short clips from foreign languages could be included in language and cultural higher-education classrooms. In the same line, Briam (2010) described how the film Outsourced (Jeffcoat, 2006) could help "create an intercultural experience for students, serve as the basis for a case analysis of cross-cultural adjustment" as well as "create powerful metaphorical images to expand classroom discussions to broader issues" (p. 383).

In more recent studies, Hoff (2013) used Byram's *savoirs* (1997) to explore how learners develop intercultural competence while watching the television show The Wire (Simon, 2002). Hoff's account described six stages of ICC development, including incomprehension, focus, provocation, reflection, comprehension, and finally, broadening of perspective. A quasi-experimental intervention by Busse and Krause (2016) used film analysis as a pedagogical tool in the analysis of cultural critical incidents. Finally, Yue

(2019) looked at the intercultural processes students experienced while watching a Disney film that presented cultural issues.

Among the most important contributions from these studies is the heuristic value of their design, along with the insight they provided into learners' internal mental processes in relation to culture. For instance, Varey (1996), Roell (2010), Briam (2010) and Tognozzi (2010) focused on pedagogical intervention designs using film, and provided important guidelines for educators. Meanwhile, other investigations like Hoff (2013) and Yue (2019) looked at intercultural learning as a process, a positive contribution that set the ground for differentiation between intercultural learning processes and outcomes. However, these studies also presented significant limitations. With only a few of these reports (Busse & Krause, 2016; Hoff, 2013; Yue, 2019) being backed by empirical research designs, none of these investigations directed specific attention to the use of film as a digital tool for intercultural learning.

Aiming to fill these gaps in research, the present investigation highlights the role of digital tools, i.e., film annotation, as a mediator for intercultural learning. Although mental processes are a significant part of this investigation, I analyze such processes based on whether digital tools enable them, rather than analyzing them as the main goal of the investigation.

An additional shortcoming of these past studies deserves further attention. Although these studies use foreign-language film in the second language classroom, they provide little information about the role that subtitles played in intercultural learning. This lack of attention is common in studies on film in the second language classroom,

unless the study particularly concerns the use or creation of subtitles. Even so, there are many reasons why this lack of attention is a problematic oversight.

Within the field of literary translation studies, scholars in translation studies (Appiah, 1993; Brisset 1990, 1996; Harvey, 1998; Nornes, 1999; Spivak, 1992) have long taken issue with translations that focus on source to target language equivalence at all costs, i.e., literal or close-to-literal translations. Such translations, scholars argue, come at the expense of providing cultural contextualization for the source text, which is often pulled out of its cultural context and inscribed in a new one. In this new context, the source text, now translated, often needs to present readers with additional information such as an introduction, foreword, footnotes or translator's note, that explain the translation.

A prominent example of scholars' critique to this issue is Appiah's proposal of *thick translation* (1993). According to Appiah, thick translation is "translation that seeks with its annotations and its accompanying glosses to locate the text in a rich cultural and linguistic context (p. 399)." In this definition, he referred to the addition of footnotes, annotations, glosses and other relevant information to literary texts, in particular. For Appiah, the purpose of including such information to translations was to visibilize cultural differences for the sake of the reader. By helping readers face difference in this way, translators could also "challenge themselves and engage in a genuinely informed respect for others" (p. 399).

Although the type of translation Appiah refers to appears mainly in books, lack of cultural contextualization is not a problem exclusive to literature. As a type of audiovisual translation, subtitles have also received the same critique. Referring

specifically to issues in subtitling of foreign-language films, Nornes (1999) rejected what he called a "corrupt" subtitling practice. Such a corrupt practice entailed subtitlers forcing the complex spoken word of the source language into an extremely conservative and restrictive framework, namely, the subtitling apparatus. For Nornes, this practice was problematic because it invisibilized the subtitler, and such invisibilization led to the viewer's misconception that subtitles are a complete rendering of the original or source language. To correct this issue, subtitlers needed to create abusive subtitles, which meant placing the subtitle in areas other than the bottom of the screen, changing font colors, among other techniques. It was Nornes' idea that this process would reveal the subtitling process, thus allowing the viewer to realize that there was more to the source language than fit into the subtitles.

The proposal of film annotation, which I present in this study, draws its form and rationale from both of these authors. From Appiah, film annotation takes the notion of "thickness," repurposing it for foreign-language films. From Nornes, it takes the rationale of using such "thickness" to make visible a process that tends to minimize cultural differences. I propose that, as a continued practice, film annotation has the capacity to complete, contextualize and explore in depth the cultural elements that subtitles often leave unaddressed. To explore this idea in depth, this study's film annotations complement the subtitles and cultural elements presented by four film clips extracted from the Spanish-language film, "Even the Rain" (2010). In the next section, I explain in detail my perspective on how the affordances of film annotation are likely to enable intercultural learning.

Enabling Intercultural Learning through Film Annotation

I originally conceived of film annotation as an addition to subtitled foreign-language films, whether these films were used in the language classroom, or outside structured learning environments. This is because film annotation builds on the already existing affordances of commercial video-streaming platforms, as well as on the affordances that commercially available films already present to learners and viewers but which have certain limitations. To expand on this idea, below I list some of the relevant limitations of subtitles, which I address through film annotation:

- Natural breaks in speech must agree with the timing of the subtitles on screen; therefore, subtitles are often reduced to meet the audiovisual timestamp of a humorous line, or on-screen event

- The speed at which viewers read the subtitles often determines the length of the subtitles themselves

- Subtitles may only take a maximum of two lines, and no more than forty characters

- The switch from spoken to written language means that subtitlers must make significant reductions of the dialogue

These restrictions, noticed by Nornes (1999) and De Linde & Kay (2014) have largely remained the same across time. However, the cause for this continued practice is not necessarily related to the affordances of technology. Current features of digital video-streaming platforms challenge these restrictions to subtitling. For instance, the use of digital formats and interactive platforms allows users to manipulate and customize their user experiences, in ways such as adding subtitles to video on-the-go with subtitle-

generating technology (YouTube, 2019), or customizing user experience to decide color, font, language and availability of subtitles (Hulu, 2019).

Concerning film annotation, the screen overlay feature of video-streaming platforms is particularly relevant. Video-streaming services frequently use screen overlay to present content such as video playback buttons, video scroll bar, production and trivia notes on the film or television show, among other information. Overlays usually appear when users hover over the video interface, or they appear without user interaction directly on the screen but may be closed or disabled by the user at any given moment. This means that, unlike subtitles, textual information that may appear on screen overlays is not subject to the restrictions of subtitles. Instead, screen overlay can appear at any point of the video, adding a second level of information and/or interactivity to the screen. This makes screen overlays an ideal space to present relevant information concerning the video/film, information that may very well consist of film annotations for intercultural learning.

Thus, my idea of film annotation for intercultural learning proposes using these screen overlays to include additional information that would otherwise not appear in subtitles, or that can expand on the cultural framework or context of a film. For example, in the film clip "Speak in Christian" (available in appendix D) Spanish colonizers ask natives from South America to speak in Spanish. The colonizer uses the expression "to speak in Christian," which gives the title to the film clip. By adding cultural annotation to this scene, viewers can access referential historical information that is useful to understand the origin and use of this idiomatic expression.

I propose that adding this type of content to learners' film viewing experiences is likely to promote intercultural learning in the following ways:

a.   Film annotation may provide a referential framework for learners who may not be familiar with the cultural context of the film, or with how cultural practices and perspectives affect language.

b.   Film annotation can provide further information on the source language, expanding on cultural meanings that may have been lost in translation, or in the reduction of language that comes with the subtitling process.

c.   Film annotation may reduce the cognitive load of second-language learners who encounter the foreign film while having the already significant cognitive demand of processing a second language at the same time.

d.   Film annotation may challenge, or contradict learners' prior cultural or linguistic knowledge, thus sparking an interest in discovery and curiosity about other cultures. It is important to note here that, evidently, film annotations may also confirm learners' cultural predictions or prior knowledge. Therefore, it is essential to think critically about the content of annotations, so as to not reinforce potential negative stereotypes.

Having explained these affordances, I continue by describing the process through which I created annotations for four (4) film clips extracted from the Spanish-language film "Even the Rain" (Gordon & Bollaín, 2010). Such annotations constituted the main instructional material for this study.

Creating the Annotations

In order to build a study around annotated film clips, it was important to use clips from a film that provided many opportunities for adding relevant cultural annotations.

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Such annotations needed to address cultural elements in ways that were relevant for intercultural learning. This means that it would not suffice to choose a film that made sporadic jokes or references to culture. Instead, the clips I would extract from this film needed to feature scenes in which the cultural content was essential to understand the story. These types of references are known as extralinguistic culture-bound references. According to Pedersen (2005):

> Extralinguistic Culture-bound Reference (ECR) is defined as reference that is attempted by means of any culture-bound linguistic expression, which refers to an extralinguistic entity or process, and which is assumed to have a discourse referent that is identifiable to a relevant audience as this referent is within the encyclopedic knowledge of this audience (p. 2)

Given that ECRs are bound to wider frames of reference, it was important to determine whether the annotations would focus on highlighting references to historical, social, economic, political, or linguistic practices and perspectives.

Deciding What Annotations to Include

According to existing intercultural competence frameworks (Blair, 2016; Deardorff, 2006), cultural self-awareness and deep cultural knowledge are two of the basic foundational attributes on which learners build their intercultural learning. This is because by acknowledging how cultural forces shape their own selves, learners are able to acknowledge the existence of culture as part of themselves and the world around them. After acknowledging the existence of culture, learners can then begin to recognize and articulate basic facts in the home and target culture's history and society, and potentially compare and contrast their home culture—or even themselves—with the target culture.

Because these attributes are at the foundation of intercultural competence (Byram, 1997; Deardorff, 2006), they were an ideal place to start conducting research on how film annotation could mediate intercultural learning.

With this in mind, the selected film from which I would extract the clips would need to be able to provide specific scenes in which I could highlight relevant basics of the home and target cultures that could potentially lead to intercultural learning. I selected the film "Even the Rain" (Gordon & Bollaín, 2010) due to its salient cultural content, its references to historical processes, and its contrast of historical cultural practices with present-day intercultural relationships. The synopsis below describes the film's plot:

> Filmmaker Sebastian is directing a film about the iconic Christopher Columbus. In his film, Sebastian is determined to overturn the myth of the arrival of Western Civilization in the Americas as a force for good. His film will show the obsession with gold, the taking of slaves, and the terrible violence visited on the natives who fought back. Meanwhile, Sebastian's partner and producer, Costa, is only interested that the film comes in on time and within budget. Despite Sebastian's fury, they will shoot in Bolivia, the cheapest Latin American country with a large indigenous population. While the shoot progresses in and around the city of Cochabamba, civil and political unrest simmer, as the entire water supply of the city is privatized and sold to a British/American multinational.

Synopsis of the film "Even the Rain" (Gordon & Bollaín, 2010)

With its contrast of present-day and historical colonial practices, "Even the Rain" was an ideal film to promote learners' historical knowledge, as well as their comparison and contrast of Latin America and the U.S. as colonized territories. I decided that, in order to highlight these features, the most relevant type of notes to include were those that referred to *historical* and *linguistic* cultural practices, whether they were current or historical.

Cultural Themes in the Film "Even the Rain."

As mentioned in the synopsis, the film focuses on the intercultural relationships built upon the European colonization of South American territory, and how these relationships continue to affect present-day dynamics between Spain and Bolivia. To better understand these intercultural relationships, here I address the concepts of *colonialism* and *coloniality*.

Part of the historical event of European colonization of America, colonialism is "the policy or practice of acquiring full or partial political control over another country, occupying it with settlers, and exploiting it economically" (Rodney, 1972). The film "Even the Rain" (Gordon & Bollaín, 2010) portrays the Spanish-South American iteration of colonialism, in which Spanish economic interest in America's riches resulted in the Spanish occupation of South American territory. During this occupation, Spanish colonizers' interest in accumulating capital involved a necessary self-expansion: in order to satisfy European interest in controlling South American riches, it was necessary to control native populations by imposing European religion (Catholicism), language (Spanish), and epistemologies upon them. The movie depicts these two processes: first, it shows colonialism through the historical representations of Columbus's arrival to America; second, it shows a second concept, *coloniality* (Quijano, 2000), through present-day intercultural relationships between the Spanish filmmakers and the native actors.

What I refer to as *coloniality* is the cultural aftermath of colonialism, in which established historical social relations configured the patterns of domination that exist today (Quijano, 2000). With the expansion and imposition of European culture upon

native populations came the implementation of certain practices and perspectives—some of them more immediately visible than others—which privileged and valued certain people while disenfranchising others. In the case of Spanish colonization of America, coloniality highlighted European values, and overpowered native populations and their culture. At its early stage, coloniality led to the expansion of the cultural values listed above, i.e., Catholicism, Spanish language, in addition to some others including technological changes, reorganization of societies and gender roles, the introduction of new weaponry, among others. In addition, coloniality also led to important epistemological changes in what are now Latin American societies. Most notably, scientific thought was established from Europe during a time in which colonialism was suppressing native epistemologies, and so native religiosity and philosophical thought were largely excluded from knowledge. In this way, for instance, Descartes's mind-body dualistic notion replaced the native concept of body/non-body as co-present, inseparable dimensions of humanness (Quijano, 2000, p. 202). This example is particularly relevant to the present study, given that it is precisely the mind-body dichotomy what the sociocognitive approach to learning (Atkinson, 2010, 2014) challenges.

As I mentioned before, "Even the Rain" highlights historical colonialism and present-day coloniality. The film does this by interspersing scenes showing past colonial practices, with current examples of coloniality. In doing so, the film presents two filmmakers, Sebastián and Costa, who are trying to make a film about Columbus's arrival to the New World. To reduce costs, they choose to produce the film in Bolivia, at the expense of misrepresenting the actual historical events in which Columbus arrived to the island of Guanahaní. While filming in Bolivia, the characters experience first-hand how

new colonial practices affect current intercultural relationships between Bolivians and Spanish/Americans. For instance, native people witness the arrival of Bechtel multinational, an American corporation that privatizes and sells Bolivian water increasing prices for local populations. Similarly, the filmmakers exploit locals by using them as cheap labor for the film, paying them two dollars a day to be extras and prepare the set.

Among the practices highlighted in the film are the economic exploitation of native populations' gold during colonization, corporeal submission through force, imposition of religion, language, ways of living/culture, and epistemologies or ways of knowing. For instance, the theme of economic exploitation appears frequently throughout the film in instances such as when Spanish colonizers are collecting their taxes in gold from the natives, as well as in various scenes when Costa refers to "dos putos dólares" (two fucking dollars) which they are paying Bolivians for their hard work on the film. Examples such as this are common throughout the movie, which made it difficult to narrow down the number of clips with which to work. In the end, I selected four film clips that I believed best represented colonialism/coloniality. Below, I provide the titles for each clip, a description of the cultural themes present in each one, and how I addressed these themes by using annotations.

"Taínos y Quechuas." The first of the four film clips shows the opening sequence for the movie, in which three members from the production team candidly joke about the motives for filming in Bolivia. Costa, the film's producer, points out that filming in Bolivia is allowing them to get their money's worth, which would not have been possible had they filmed in another location. This is a problem for Sebastián, the film's director, who considers it problematic to use Quechuan actors to represent *Taínos*—their physical

features and languages are different, he argues. Costa's reply to Sebastián points out that, had they filmed in English, they would have more financial resources. However, Sebastián defends that because Spanish colonizers spoke Spanish, they had to film in Spanish. Maria, who is documenting the filmmaking process, jokingly points out Sebastián's contradiction: if Spanish needs to be accurately represented, why is this not the case for native populations?

Through Maria's comment, the scene highlights the value that historically hegemonic nations—such as Spain—place on their own culture over the culture of the populations they colonized. In addition, Costa's comment on the use of English language in exchange for financial support illustrates the direct relationship between economic value and predominant languages.

Addressing these themes through annotation. The figures below show three screenshots from the film clips, which display the annotations included to this scene. Here, the annotations address historical facts including the arrival of Columbus to the island of Guanahaní, the *Taínos* that Columbus found, and the *Taínos'* historical location. These three annotations are meant to direct learners' attention toward the discrepancies between the actual historical facts of Columbus's arrival, and the way the filmmakers present these facts in the movie. Hence, by adding these annotations, I anticipate learners might be able to understand Maria's joke, and notice that there is an important distinction between *Taínos* and *Quechuas*. In this way, the historical facts that appear in the annotation can clarify the frame of reference for Maria's joke, while also delivering background knowledge to students on the native populations represented in the film.

Figure 4. Annotation on Columbus's arrival to Guanahaní.

Figure 5. Annotation on Columbus and *Taínos*.

Figure 6. Annotation on *Taínos* and the Bolivian territory.

"Speak in Christian." The scene depicts an example from the time of
Columbus's arrival to America. More specifically, it focuses on how indigenous
populations were forced to pay taxes in gold to Spanish colonizers, or withstand
mutilation as a corporeal punishment, i.e., chopping off their hands. An additional
relevant theme in this scene is the role of language in colonialism/coloniality. Spanish
colonizers imposed the use of Spanish on Amerindian populations, largely through the
practice of religious conversion. This is noticeable in the film when one of the colonizers
addresses a native man, asking him to "speak in Christian," meaning to speak in
Spanish.

Addressing these themes through annotation. The figures below show the
annotations included in this scene. Here, both annotations refer to the idiomatic
expression "speak in Christian," which the Spanish colonizer uses to intimidate the native
man. The purpose of this note, which explains the historical origin of the idiomatic
expression, is to direct learners' attention to the linguistic element, and highlight the role
of religion in the expansion of language across territories. In doing so, the notes refer to
the period in which Jewish, Muslim, and Christian peoples inhabited Spanish territory,
each speaking a different language.
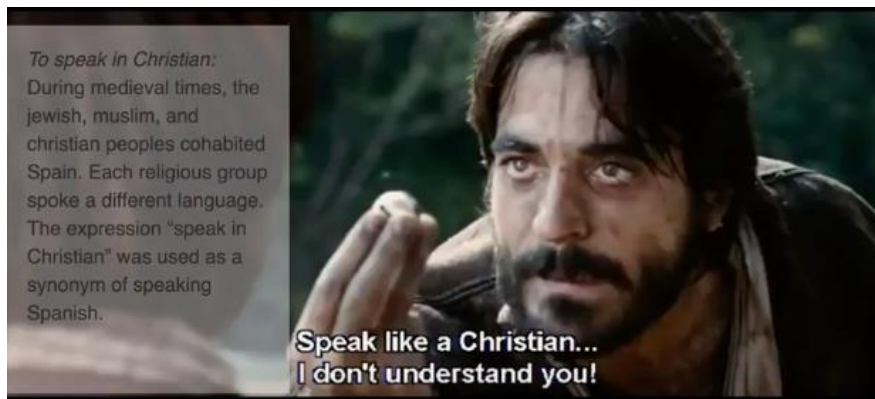
Figure 7. Annotation on the idiom "to speak in Christian."

Figure 8. Second annotation on the idiom "to speak in Christian."

"That's fucking great, man." Language appears again as a central theme of the

film in this scene. Here, Daniel is a Quechuan actor who plays the main role in the film

that Costa and Sebastián are producing. Costa addresses Daniel's role in the protests

against the privatization of water, which are taking place as the producers make the film.

He asks Daniel to step back from the public eye while the film is finished. However,

during their interaction, Costa receives a phone call from what appears to be an English-

speaking investor. Oblivious to Daniel's presence, Costa tells the investor that the movie

will make them a lot of money because it is only costing them two dollars a day.

However, Daniel—who speaks English—has overheard the conversation and confronts

Costa on his hypocrisy.

The theme this interaction examines is the value of English as a language of

power and control over non-English-speaking populations. It seems obvious to Costa that

a native such as Daniel would not speak English, but Daniel directly challenges that

assumption: he does, in fact, speak English, as he spent some time working in the United

States. By speaking English, Daniel immediately positions himself as a challenge to

Costa's stereotypes, and as an individual worthy of Costa's respect. In this way, the film highlights the role of English language as a form of power and control.

   Addressing these themes through annotation. Costa's attitude toward Daniel shows that he is stereotyping Bolivians as "Indians" who are not able to speak English, the language of power and economic control. Learners who see this clip for the first time might think that Costa's behavior is unproblematic, that such a stereotype is justifiable. Conversely, learners might have a more critical approach to the scene and understand how problematic Costa's attitudes and behaviors are. In both cases, the annotations provide the viewer with an opportunity to confirm, challenge, or otherwise explore the stereotype by looking at statistical facts: while only 22% of Spanish citizens speak English as a foreign language, Bolivians are markedly bilingual or plurilingual. Around 45% of Bolivians speak Spanish in addition to a foreign language—most likely, English—with only 10% of Bolivians speaking only a native language. These notes intend to help the viewer explore stereotypes on bilingualism, and how they are related to perceived cultural value, i.e., Bolivians must not speak English because their economy is weak/their values are minority values.

Figure 9. Annotation on Bolivians who speak foreign languages.

Figure 10. Annotation on Spanish citizens who speak foreign languages.

"A terrible decision" The last of the four selected film clips presents a different

take on the relationship between language and power. In the scene, Sebastián is trying to

film native women drowning their children in the river due to fear of colonizers killing

the children first. When Sebastián explains their role to the Quechuan women who will

play the part, they refuse to drown their children. Sebastián explains that they will not

actually drown the children—the director will make a cut, and their babies will be

replaced with dolls. The children will not actually be in the water at all. Even with this

explanation, the women refuse to do it. At this point, Daniel—dressed up as native leader,

Hatuey—uses his language skills to translate and interpret Sebastián's point to the

women, but they still will not comply. When Sebastián argues that the scene is crucial to

the movie, the scene ends with Daniel telling Sebastián that there are more important

things to life than his film.

With these events, this scene addresses two themes: the problem of Sebastián

attempting to profit from a culture that he does not understand, and the use of symbolic

action as language. As mentioned before, the Eurocentric mind-body distinction stands in

high contrast to native epistemologies in which the mind and the body are inseparable

dimensions of humanness (Quijano, 2000). Sebastián is asking the women to do something that contradicts their knowledge about the world. Daniel, despite assuming the mediating role of a translator, defends the women's position in the end.

Addressing these themes through annotation. Here, two annotations highlight three cultural themes. First, Daniel—dressed up as Hatuey—is able to speak Quechua/Aymara in addition to Spanish, and to English, which he speaks in the previous clip. Throughout the scene, Hatuey/Daniel positions himself as a mediator between both parties—native women at the river and the filmmakers—emphasizing how language proficiency affords power, as well as the possibility of intercultural dialogue and understanding. Second, through the use of language, Daniel is able to question the worldviews the filmmakers are imposing over the native women in order to film the scene, i.e., separation of mind-body. The access to culture that language provides for Daniel allows him to defend the position of the native women. Finally, by highlighting that the native language is not available through subtitles, the last annotation alludes to the fact that subtitles are only created for predominant languages because those are the languages that lead to financial profit.
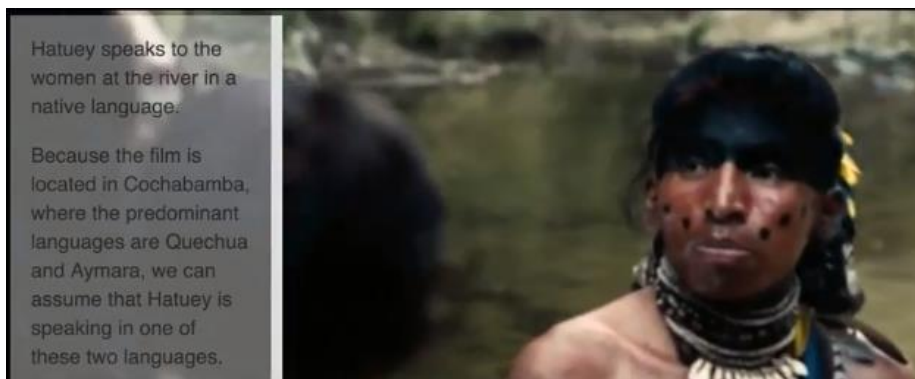
Figure 11. Annotation on Quechua and Aymara.

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Figure 12. Annotation on subtitles provided in the U.S.

CHAPTER 3

METHOD

At the outset of this study, I focused on the question of whether intercultural

competence development can occur as the result of technologically mediated activity.

More specifically, I asked (a) does the inclusion of film annotation in film affect

intercultural learning? and (b) in what ways does the inclusion of annotation in film affect

intercultural learning? The importance of these research questions lies in their capacity

to inform the use of digital technologies for intercultural learning. For instance, that if

digital artifacts can mediate intercultural learning, this would provide evidence

supporting a sociocognitive approach to learning, in which digital artifacts co-construct

interculturality along with human learners. In addition, the answers to these research

questions may also shed light on what cognitive processes take place during intercultural

learning when digital artifacts mediate this learning process. Through this deeper

understanding, scholars may arrive at relevant insights about the type of intercultural

interactions enabled by technology in the absence of human mediators, which in turn

might lead to further reflection on the role of teachers in computer-assisted language

classrooms, and during technology-mediated intercultural learning experiences.

However, as I mentioned in the literature review section concerning intercultural

learning, the theoretical frameworks currently in place for studying intercultural

competence development have long favored research that focuses on assessing and

describing intercultural outcomes, instead of understanding the underlying processes that

shape learners' behaviors, attitudes and knowledge. An example of the prevalence of

outcome-driven research are the various scales and inventories that scholars have

developed for intercultural competence assessment (Fantini, 2009). Among the most relevant of these scales are:

- the Behavioral Assessment Scale for Intercultural Communication (BASIC)

- the Beliefs, Events, and Values Inventory (BEVI)

- the Cross-cultural Adaptability Inventory (CCAI)

- the Cultural Orientations Indicator (COI)

- the Global Mindedness Scale (GMS)

- the IDI or Intercultural Development Inventory

- the Schwartz Value Survey or SVS

While these tools have provided an excellent foundation for intercultural competence assessment, they overemphasize the assessment of intercultural learning outcomes, and provide insufficient guidance for understanding the underlying processes that constitute intercultural learning.

Based on Dervin's (2011) liquid approach to interculturality—which proposes focusing on the co-constructed nature of interculturality, and on the processes through which individuals arrive at interculturality—the current study takes issues with outcome-driven intercultural competence research, as well as with predetermined rubrics that assess where on the intercultural continuum students are. Instead, this study focuses on the process through which learners co-construct interculturality along with digital tools, as well as with other interlocutors. In order to look at this process in detail, the study uses *the microgenetic method*, which allows researchers to witness learning as it occurs in real time through detailed observations of learner behavior. The next section explains the

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microgenetic method, as well as its alignment with a sociocognitive approach to learning. Following the description of this study's method, I present the research design of the study, along with a description of the study's participants and the instruments used for data collection.

The Microgenetic Method

In choosing a research method for the present study, the priority was finding a method that would allow me to identify moments of intercultural learning as it emerged in interaction between humans and digital artifacts. The method would need to reflect the researcher's understanding of how learning and cognition occur, as well as the idea that digital artifacts are essential to the development of higher-order thinking. Incorporating such a method would mean rejecting the notion that learning happens as the result of sequential, additive processes, and instead embracing learning as emergence:

> Emergence happens when relatively simple elements combine together to form a higher-order system. The whole is not only more than the sum of its parts; it is of a different nature than the parts. The new system is on a different scale, and has different meanings and patterns of functioning than the simpler ingredients had from which it emerged. (van Lier, 2004, p. 5)

What van Lier refers to as the combination of "relatively simple elements" is nothing else than the process of *interaction*, in which such diverse elements encounter each other. The combination of these elements, i.e., interaction, can take place between human entities, but also between humans and cultural artifacts, and humans and their environment.

Interaction as the site for emergent learning is relevant to the present study given that it is one of the main tenets of Dervin's (2011) liquid approach to interculturality. For Dervin, interculturality can only exist in dialogue, i.e., during interaction between individuals. Following Hermans (2004), Dervin understands interaction as the "co-construction between interlocutors rather than an act of communication between static sender-receivers." (p. 41). Building on this concept, the present study expands Hermans' notion of interaction by adding the idea that interlocutors—which are cognition-enabling entities—are not only human, but can also be cultural and digital artifacts. The process of interaction takes place when these artifacts engage in dialogue with humans through their affordances.

In the globalized world, intercultural interactions occur naturally and frequently in the digital and non-digital wild. However, for the purposes of this study, it was important to follow a method that could bring myself, as a researcher, closer to intercultural interactions mediated through film annotation. In order to address efficiently the research questions of this study, the method would need to elicit mental activity, while also allowing a controlled observation at the same time.

For this reason, when deciding on the research method for this study, I chose to use the microgenetic method. Taking cue from Vygotsky's (1978) ontogenetic domain, this method attempts to explain learners' capacity "to regulate their own mental activity" (p. 45). In doing so, the method favors the meticulous observation of human-artifact interactions as well as the learning that emerges from those interactions. Ahmadian (2013) describes the microgenetic method as "a specific method for studying change in

abilities, knowledge, and understanding during short time spans, through dense observations, and over a relatively long period of time" (p. 61).

By using the microgenetic method, I would be able to see how learners develop intercultural outcomes when in the presence of a mediating digital artifact, i.e., film annotation, as well as in the absence of the artifact in question.

According to Siegler and Crowley (1991), there are three main properties to the microgenetic method:

(a) Observations span the entire period from the beginning of the change to the time at which it reaches a relatively stable state. (b) The density of observations is high relative to the rate of change of the phenomenon. (c) Observed behavior is subjected to intensive trial-by-trial analysis, with the goal of inferring the processes that give rise to both quantitative and qualitative aspects of change." (p. 606)

In addition, essential to the microgenetic method is the concept of *double stimulation* (Vygotsky, 1978, p. 75) in which two levels of stimulation are necessary to elicit development. In the first level, researchers must stimulate mental activity by presenting the individual with a task beyond their capacity. In the second level, researchers must present an artifact or second stimulus, which can facilitate or help achieve the task. Lantolf & Thorne (2006) explain:

Given the fundamental principle of sociocultural theory that higher mental functions are mediated through the integration of auxiliary means into the thinking process, Vygotsky proposed that to understand and explain human activity it was necessary to observe how children draw available auxiliary means

into the situation and in doing so make these into signs. The procedure followed

in his research was to present children with tasks that were beyond their abilities

and then make available an artifact that could potentially be used by the child to

solve the task. (p. 50)

In using this method, my goal was that learners would incorporate the digital

artifact, i.e., annotated film, into their thought process and discussion with others,

eventually using it as a means to mediate the development of their own intercultural

learning.

Research Design

The goal of this qualitative investigation is to study intercultural learning in a

controlled setting through the microgenetic method. In addition to using the microgenetic

method, which I explained in the previous section, this study also follows an

experimental-developmental approach. According to Lantolf & Thorne (2006), the

experimental-developmental approach differs from traditional experimental research in

second language acquisition in that it does not entail the use of control and experimental

groups matched for characteristics.

For this investigation, instead of matching participant traits on particular sets of

variables, I had initially contemplated separating learners into two groups: control (A)

and experimental (B) group, as appears in Table 2. The first group, control group (A),

would complete a pre- and post-test, as well as a pedagogical intervention during which

participants viewed film clips addressing cultural topics. The film clips this group would

watch did not include annotations. The second group, the experimental group (B), would

complete the same type of tests (pre- and post-tests), and participated in the pedagogical

intervention. The difference between the control and experimental groups lay in that the experimental group watched film clips that included cultural annotations on screen, while the control group watched film clips that did not include cultural annotations. During the pedagogical intervention phase, I observed both groups, looking in detail at each participants' interactions with each other, as well as with the digital artifacts.

Table 2

Initial Study Design

Group	Design
A (Control)	O1 → X1 → O2
B (Experimental)	O1 → X2 → O2

Following this design, at the outset of this study, I had contemplated comparing and contrasting both groups for their achievement of intercultural learning outcomes. However, because the focus of this study lies in determining whether film annotation can mediate intercultural learning, and how this process takes place, I focused my observations on how participants in the experimental group (B) interacted with the digital artifact, and with each other. This evidence alone was sufficient to determine whether the digital artifact enabled intercultural learning outcomes, as well as to describe the process through which learning took place.

Operationalization of Variables

Defining the variables is one of the most significant aspects of designing a study. During this process, also known as the *operationalization of variables*, the researcher must delimitate exactly how to define and measure the variables of the study. The goal of

doing this is to clarify specifically how the study understands a variable, and how the study will measure this same variable.

At the heart of this study are the research questions: (a) does the inclusion of annotation in film affect intercultural learning? and (b) in what ways does the inclusion of annotation in film affect student achievement of intercultural learning outcomes? Through these questions, the study focused on observing the relationship between screen annotation on film clips—independent variable—and intercultural learning—dependent variable—both of which I operationalize below.

Intercultural learning (dependent variable). Because scholars have traditionally operationalized intercultural learning as learning outcomes, it was particularly important for this study to distinguish between intercultural learning as a process, and intercultural learning as an outcome. In defining the variable intercultural learning, I use intercultural learning outcomes that appear in Table 3 to determine whether participants demonstrated evidence of learning emergence. This means that I refer to any changes in learners' intercultural knowledge, attitudes, or behaviors, which I corroborated and triangulated across data sources, as intercultural learning outcomes.

In contrast, throughout the study I also refer to intercultural learning as a process. I base this second understanding of intercultural learning on two theoretical premises: first, Atkinson's (2010, 2014) description of learning as a continuously occurring process in which individuals build cognition during interaction with artifacts and the environment; and second, Dervin's (2011) proposition that interculturality is co-constructed during interaction between interlocutors who continuously modify each other's' learning. Throughout this study, I particularly focus on how individuals co-

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construct intercultural learning along with digital artifacts, i.e., film annotation, as well as with their peers.

Table 3

Intercultural Learning Objectives and Outcomes

	Learner objectives	Learner outcome statements
Cultural Awareness	Cultural self-awareness	Articulate insights into one's own cultural rules and biases
	Deep cultural knowledge	Compare and contrast home and target culture
		Acquire basics of target history, politics, and society

Adapted from Deardoff (2009, p. 28), Fantini (2009), American Council on Education (2008)

Film annotation (independent variable). I define the independent variable—film annotation—as textual references or annotations embedded via screen overlay in four film clips from the movie "Even the Rain" (Gordon & Bollaín, 2010). Based on translation theory (Appiah, 1993; Nornes, 1999), I created these annotations with the goal of mediating learners' cultural self-awareness and deep cultural knowledge. I anticipated that, by offering historical, cultural, and linguistic information to support the film clips, participants could engage in the process of co-constructing interculturality, and even show evidence of intercultural learner outcomes (Blair, 2016). To this end, and based on each of the four film clips, I generated pre- and post-test questions whose responses would allow me to elicit learners' insights into their own intercultural learning process.

Table 4

Indicators for Intercultural Learning Outcomes

Intercultural Objectives	Intercultural Learning Outcome	Pre- and post-test questions
Cultural self-awareness	Compare and contrast home and target culture	Are there any historical similarities between the development of the use of various languages in Latin America and the U.S.?
		Are there any historical similarities between the development of the use of various languages in Latin America and the U.S.?
	Articulate insights into one's own cultural rules and biases	What languages, aside from English, are spoken in the U.S.? Who speak these languages?
		What languages, aside from Spanish, are spoken in Latin America? Who speaks these languages?
Deep cultural knowledge	Acquire basics of target history, politics, and society	Why is English the predominant language in the U.S.? Comment on some of the possible historical, political, economic, and cultural causes for this.
		Why do people speak Spanish in Latin America? Comment on some of the possible historical, political, economic, and cultural causes for this.

Participants

This study analyzed the interaction of five participants—Mya, Lia, Amelia, Simon, and Kady—students of a Spanish 412 Advanced Conversation and Composition course at Arizona State University. Spanish 412 courses combine face-to-face instruction with online assignments on a digital platform. The course aims to develop the academic

written and oral proficiency of Spanish-language learners, as well as to strengthen

students' capacity for critical thinking and analysis through the study of literary and

cultural content. More specifically, one of the learning outcomes of this course is for

students to understand and critically analyze literary texts and films from Spanish-

speaking countries.

The participants I recruited from the Spanish 412 course were all native speakers

of English, born in the United States, with ages ranging between 18 and 20 years old. The

group of five participants included four female participants, and one male. Two of these

participants were also native speakers of other languages: Amelia, who spoke Mandarin

as a heritage language, and Kady, a heritage language speaker of Spanish. All participants

received education in Spanish prior to taking the Spanish 412 Advanced Conversation

and Composition course. Their experience with Spanish also included traveling to

Barcelona, Spain during a semester of study abroad (Amelia), and 1-2 years of

elementary and high school/college Spanish courses. Participants also described their

contact with Spanish as occurring during conversations with friends who were native or

fluent speakers of Spanish, classmates, host families during study abroad, strangers who

they could speak Spanish to and, to a lesser extent, service personnel. All participants

were part of the experimental group (B) that I had contemplated at the outset of this

study, hence they all took part in the pedagogical intervention designed for participants to

view *annotated* film clips.

To recruit participants, I visited their Spanish class during week one (1) of the

study. They consented to participate in the study by signing an informed consent

document, approved by the university's Institutional Review Board (IRB) and received

instructions to complete a language contact profile (Freed, Dewey, Segalowitz, & Halter, 2004) on which I base the information described above, and return it to their instructor by the next class.

Instruments

To generate and collect data, this study used the observation technique. Mackey & Gass (2016) define observation as a data-generating method which "involve(s) the researcher immersing herself in a research setting, and systematically observing dimensions of that setting, interactions, relationships, actions, events, and so on, within it" (p. 60). I promoted the observation process through a combination of data sources. In doing so, the observations provided evidence of participants' learning process, which included their attitudes, behaviors, and knowledge, as well as their interaction with technology and with others. Data-generating sources included:

- An individual demographic and linguistic background profile questionnaire (Freed et al., 2004)
- Individual and group audiovisual recordings of a pre-test
- Individual and group audiovisual recordings of a post-test
- Individual and group audiovisual recordings of peer discussions during the pedagogical intervention
- Written individual responses for the pre- and post-test.

Each of these sources aligned with at least one of the study's research questions, as appears in Table 5.

Table 5

Research Questions and Data Sources

Research Questions	Data Source
RQ1: Does the inclusion of annotation in film affect intercultural learning?	- Written responses to pre-test questions - Written responses of film discussion questions - Written responses to post-test questions
RQ2: In what ways does the inclusion of annotation in film affect of intercultural learning?	- Audiovisual recording of pre-test discussions - Audiovisual recording of film discussions - Audiovisual recording of post-test discussions

Data Collection

On February 25, 2019, the Institutional Review Board at Arizona State University determined the exemption of protocol STUDY00009239, according to Federal Regulations 45CFR46 (1) Educational settings, (2) Tests, surveys, interviews, or observation (Appendix F).

The activities of this study replaced one full class session of the Spanish 412 Advanced Conversation and Composition course. Activities included (a) a pre-test in which students answered questions around cultural issues, (b) an annotated film-clip viewing session, (c) a group discussion based on questions centered around film clips that participants watched, and finally, (d) a post-test in which students answered and discussed questions around cultural issues. The pre- and post-test both included a written component, and a peer discussion component. This practice ensured that the researcher

would have access to participants' responses to pre- and post-test questions, even if they did not sufficiently participate in peer discussion.

All discussions between participants took place in the LL68 collaboratory room in the Learning Support Services unit, where participants sat in a group around a *pod*. This pod included a collaborative worktable, chairs, a large screen, and a webcam with audio recording capabilities.

Use of recording software. Recording participants' interaction during the pre-test, pedagogical intervention, and post-test peer discussions, was one of the most challenging parts of this study's design. In order to collect quality data, the researcher would need access to participants' interactions with each other during peer discussion, as well as to participants' interaction with the screen during the pedagogical intervention discussion. In addition, it was also necessary to have screen recordings of participants' individual interactions with the annotated film clips. To ensure the simultaneous collection of data for each of these sources, I used two screen and webcam recording tools: Quicktime, and Screencast-o-matic.

Quicktime software on Mac computers provides users the ability of recording their own screens, as well as the video collected by a webcam in use. For this reason, Quicktime seemed like the ideal software to use—and was in fact used during this study—for recording participants' screens during their interactions with the annotated clips, and participants' peer discussions captured by the pod webcam. However, because Quicktime cannot run both tasks simultaneously, it was problematic to record peer discussions at the pod and record group interactions with the screen at the same time.

This meant that during the pedagogical intervention, there would need to be a second software able to record the groups' interaction with the annotated film clips on screen.

To solve this issue, the researcher ran Screencast-o-Matic at the same time as Quicktime during the pedagogical intervention. In this way, while Quicktime recorded peer discussion on the webcam, Screencast-o-matic recorded the screen participants had in front of them. The goal of recording the screen at this point of the study was to determine whether participants also interacted with the clips as a group, after having interacted with the clips individually.

Procedure

All procedures took place during one class session. This section provides a description of the pre-test, pedagogical intervention (or experimental treatment), and post-test procedure for experimental group (B). As a reminder, the present study focused only on the study of the experimental group (B), which included five participants. This reconceptualization of the study's design aimed to allow a more detailed observation of how participants interacted with each other within the group, and how these interactions became a part of their learning process.

Pre-test procedure. During this procedure, I divided the Spanish 412 section that would receive the experimental treatment into four subgroups. The purpose of this was to promote individual student participation in discussions, which would more likely occur in smaller rather than larger groups. When in smaller groups, interaction can be less stressful for students, and the amount of time to interact per participant increases. At the beginning of the procedure, I provided each student with a set of questions as part of a worksheet. The worksheet's instructions prompted students to respond briefly to the

questions to the best of their knowledge and to write their answers down on paper. The questions in this worksheet (Appendix B) addressed cultural issues related to Spanish, English, and indigenous languages. Students received instructions to record their answers on paper for two reasons. First, this allowed me to have a written register of students' individual answers to the pre-test question, which was important as a data-generating method. Second, answers recorded on paper would provide me with a written record of individual answers before the group discussion could influence student responses.

After providing participants with the worksheet, I instructed participants to engage in a small-group discussion within their groups, based on the questions in the worksheet. For this discussion, I recorded student interaction using Quicktime and a webcam placed at the center of the worktable/pod. I assisted students with staying on-task and with keeping track of time, as well as with understanding the activity when they had any questions. Although I did not actively participate in peer discussions, I was available to students in order to answer procedural questions. The purpose of this availability was to create a comfortable environment for each participant and for the group as a whole, which would lead to students engaging confidently and freely in the discussion. Throughout the discussion, participants were not required to answer questions or to engage in conversations that would affect them detrimentally in any way. At the end of this session, participants turned in their written responses to me.

Pedagogical intervention. As mentioned before, at the outset of this study, I had anticipated comparing and contrasting a control group (A) and experimental group (B) for their achievement of intercultural learning outcomes. However, because the focus of this study lies in determining whether film annotation can mediate intercultural learning,

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and describing the process of co-construction through which this learning occurs, there were sufficient data in the experimental subgroups to analyze how each participant engaged in the learning process. Therefore, this study only presents results on the experimental group's (B) participation in this pedagogical intervention.

During the pedagogical intervention, five participants—Mya, Lia, Amelia, Simon, and Kady—watched four annotated film clips and later discussed the clips following a list of questions that the researcher provided. The goal of having students watch and discuss these annotated film clips was to explore whether interaction with the digital artifact in question could mediate intercultural learning. In addition, looking at participants' direct interactions with the annotated film clips (Figure 13) would provide evidence as to how participants could co-construct interculturality in interaction with the film clips. The specific role of peer discussion after watching the clips was to facilitate participants' elicitation of their cultural insights.

The annotated film clips that participants watched were part of the film "Even the Rain" (Gordon & Bollaín, 2010). I designed and wrote these annotations using H5P, an HTML5-based open platform that allows users to create interactive videos based on previously existing video content. The annotations created in H5P (Appendix D) consisted of historical, cultural, and linguistic information that inscribed the film inside a larger context. The four film clips appear listed below, including their titles and duration. The numbers on the list below refer to the order the clips follow in the film:

1. "*Taínos y Quechuas*" - 5'55''
2. "Speak in Christian" - 37'01''
3. "That's fucking great, man" - 33'52''

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4. "A terrible decision" 44'30''

Following the pre-test, I asked the entire class to move to the LL computer lab, where each student had an individual computer and headphones available for them in order to watch the annotated film clips. At this time, students were given a sheet of paper with a brief synopsis of the film "Even the Rain" (Gordon & Bollaín, 2010), and a list of discussion questions. To guide participants through the intervention, I read the synopsis and questions aloud for students. Next, she instructed students to watch the four film clips, letting them know they could pause, rewind, or fast-forward the clips, as needed. In addition, participants could take notes on their worksheet in order to answer the discussion questions when they returned to their group pods in the collaboratory lab.
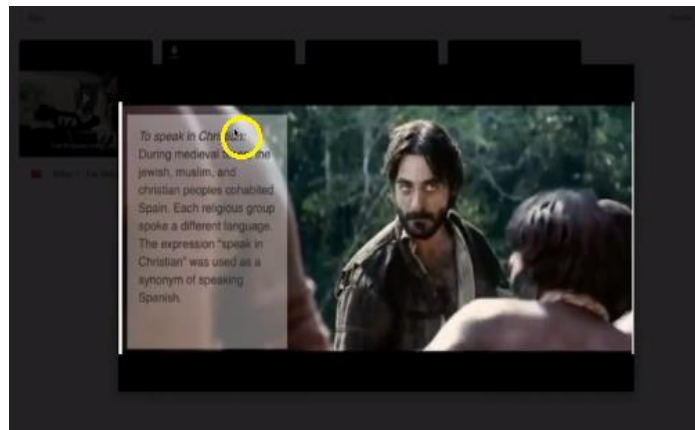
Figure 13. Screen capture of Simon's interaction with annotated film clips, "Speak in Christian."

The film clips (Figure 14) included annotations on the topics of colonization, ethnicity, language and religion, foreign and native languages, and indigenous languages (Appendix D). Students could not look up additional information on the web or other devices. The allotted time for this procedure was 20 minutes. The researcher used

Quicktime to record participants' screen, thus generating observation data on participants' individual interaction with the annotated film clips.

Figure 14. Sample screen annotation. This particular scene and annotations appear in the clip "*Taínos y Quechuas.*"

To continue with the peer-discussion portion of the pedagogical intervention, I instructed participants to return to the collaboratory classroom where they had been before watching the clips. There, students sat in subgroups at each collaboratory table. At that point, the researcher directed students to the list of film discussion questions she had given them while watching the film, prompting participants to engage in peer discussion based on these questions. She pointed students toward the film clip, which were available on the screen for students' viewing and reference.

At this time, Mya, Lia, Amelia, Simon, and Kady came together as a group for peer discussion. The researcher recorded their group interaction using webcam placed at the center of the worktable/pod, and Quicktime software's capability to record webcam video. She also recorded the screen, which showed the film clips, using Screencast-o-matic. As mentioned before, both software ran in tandem given that Quicktime could not

simultaneously run video webcam recording and screen recording. During peer discussion, I assisted students with staying on-task and with keeping track of time, as well as with understanding the activity when they had any questions. Although I did not actively participate in peer discussions, she was available to students in order to answer procedural questions. The purpose of this availability was to create a comfortable environment for each participant and for the group as a whole, which would lead to students engaging confidently and freely in the discussion. Throughout the discussion, participants were not required to answer questions or to engage in conversations that would affect them detrimentally in any way. At the end of this session, participants turned in their written responses to me.

Post-test procedure. For this procedure, I divided the class into the same four sub-groups in which it had been during pre-test procedures and the pedagogical intervention. The justification for this was to promote individual student participation in discussions, following the rationale of reduced stress and increased individual participation time. Each participant received a set of questions on a worksheet, and I instructed them to respond briefly to the questions to the best of their knowledge and to write their answers down. These questions (Appendix B) addressed cultural issues related to Spanish, English, and indigenous languages. They were a similar yet expanded version of the questions in the pre-test procedure. For instance, while pre-test item number one asked participants what languages, aside from English, are spoken in the United States, and who speaks these languages, the first item in the post-test expanded on this same question by prompting participants to elaborate on whether they had learned anything new on this same topic. The purpose of rephrasing and expanding questions during the

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post-test was to give participants the opportunity to elaborate on their previous knowledge, and refer to what they had learned during the pedagogical intervention.

I then instructed participants to engage in small-group discussion within the groups in which they were. The discussions consisted of student responses to the questions. For this data collection phase, a webcam placed at the center of the worktable recorded peer discussions through Quicktime software. As in the pre-test discussion stage of this study, I assisted students with staying on-task and with keeping track of time, as well as with understanding the activity when they had any questions. Once again, although I did not actively participate in peer discussions, I was available to students in order to answer procedural questions. Just as during the pre-test, the purpose of this availability was to create a comfortable environment for each participant and for the group as a whole. During the discussion, participants were not required to answer questions or to engage in conversations that would affect them detrimentally in any way. At the end of this session, participants turned their responses in to the researcher.

Table 6

Sessions and Data Sources for Data Collection Procedures

Session	Data Sources
Day 1. Recruitment and consent form collection. Questionnaire distribution.	- Consent form - Questionnaire
Day 2. Questionnaire collection.	- Questionnaire
Day 3. Pre-test procedure	- Written responses to pre-test questions - Audiovisual recording of pre-test discussions

Pedagogical Intervention (or experimental treatment)	- Written responses of film discussion questions - Audiovisual recording of film discussion - Student notes while watching film
Post-test procedure	- Written responses to post-test questions - Audiovisual recording of post-test discussions

The procedures used during this study follow with effective pedagogical practice in which instructors address one or two learning outcomes through a series of tasks. Traditionally, educators use a variety of activities to give students many opportunities to engage with the content and the tools, as well as to master desired outcomes. In addition to these goals, the procedures used in this study also allowed me to collect data through different sources of data. It was through these diverse data that I was able to corroborate and triangulate evidence for participants' learning, and arrive at insights about how the technology-mediated intercultural task took place. Additionally, by guiding learners' interaction with technology and with their peers, I eased students' transition through the different stages of the study. This type of technology scaffolding is crucial when designing technology-mediated tasks (González-Lloret, 2014), as it reduces the cognitive load participants may experience when interacting with new technologies. In the following chapter concerning this study's results, I explain in detail the interactions that these procedures enabled.

Gathering and Analyzing Qualitative Data

The data for this study consisted of a variety of observations based on pre- and post-tests, video recordings of peer discussions, and screen recordings of participants as they interacted with film annotation. Given the large amount of data sources, Table 7 presents the reader with a visual organization of each data source and the phase of the study to which they correspond. This table includes codes, which I use throughout the remainder of this study to note the specific data source from which the evidence comes.

Table 7

Reference Codes for Data Sources and Observations

Part of study	Reference Code	Data Source	Reference code
Observation 1 (Pre-test)	O1	Written answers to pre-test	O1/W1
		Oral discussion during pre-test	O1/D1
Pedagogical intervention	X	Written answers to discussion questions	X1
		Individual interaction with film clips	X2
			X3
		Oral discussion of film clip questions	
Observation 2 (Post-test)	O2	Written answers to post-test	O2/W2
		Oral discussion during post-test	O2/D2

In analyzing these data, I used the microgenetic method, which involves detailed observations of participants at different moments of the learning process. Discourse analysis also served as a means to analyze and interpret participants' discourse

throughout the study. Here, I explain in detail the process of gathering and analysis of qualitative data for this study, followed by a detailed description of the results addressing the study's research questions.

In order to determine whether and how interculturality can be co-constructed in interaction between humans and human or non-human mediators, it was necessary to study participants' intercultural skills, knowledge and attitudes, and how participants co-constructed them during interaction with peers and artifacts. In order to study this, the pedagogical intervention had participants engaging with the digital artifact, i.e., annotated film, and in peer discussion with their classmates. For the collection of these data, the microgenetic method was an ideal approach given that it allows researchers to study intercultural behavioral and cognitive changes during selected time spans of time. Although the microgenetic method originally looks at learning during long periods, i.e., through longitudinal studies, it also favors researchers' observation of learning in shorter periods, i.e., an hour of class, provided there are multiple opportunities for detailed observation. Such observations must take place during the whole learning process—in this case, during the pedagogical intervention itself—and must gather evidence on the learners' intercultural abilities and knowledge before, during, and after the intervention. Siegler and Crowley (1991) explained that, following the microgenetic method, researchers should take the high-density observations conducted during the entire learning period and examine, triangulate, and corroborate them to determine the underlying processes behind the developmental changes.

This investigation applied the microgenetic method of data analysis described above by using a variety of data-generating observation resources, which show individual

and group learning at every stage of the pedagogical intervention. It also uses the technique of *triangulation* to reveal underlying meanings that might not be immediately visible in participants' performance. Specifically, to answer the research question of whether the inclusion of annotation in film affect student achievement of intercultural learning outcomes, this investigation generated data by gathering individually written answers in three phases: pre-test phase, discussion phase, and post-test phase. At each phase of the study, participants also engaged ingroup discussions stemming from the answers they had provided. These discussions were recorded using webcams placed at the center of each table where the groups sat. To address the second research question, which asks in what ways does the inclusion of annotation in film affect student achievement of intercultural learning outcomes, I observed individual and group interactions with the digital artifact during two moments of the study: first, when participants individually watched the videos and, second, when participants engaged in a group discussion where using the videos as a learning aid was possible.

Gathering Qualitative Data

A recorded challenge of using the microgenetic method is the vast amount of data generated from multiple observations. During this study, I gathered a large amount of data including pre-test, discussion and post-test answers for every participant, individual screen recordings of participants in interaction with the digital artifact, and video observations of participants in discussion with their groups during the three phases of data collection. While most of these data were discursive—oral and written responses and participation during group discussions—I collected visual data, i.e., recordings of human-

computer interaction. Table 8 shows the types of data collected for this study by data type.

Table 8

Data Types

Written data			Visual Data		
Pre-test individual written answers	Discussion individual written answers	Post-test individual written answers	Pre-test discussion recording	Discussion recording Discussion screen-recording	Post-test discussion recording

Making sense of the data required organizing it by participants, as well as by subgroups. It also required corroborating data across data source-types, i.e., video recordings, screen recordings, and written answers. In order to convert these multiple observations into manageable data, I sorted and organized written responses by subgroups. This led to the creation of four subgroups, organized in the following way:

- Experimental Group

    - Red pod

    - Blue pod

    - Green pod

    - Yellow pod

For each of the subgroups, I corroborated that all students had provided answers in three worksheets: the pre-test worksheet, the discussion questions worksheet, and the post-test worksheet. Next, I separated written answers by participants and made sure that the pod groups matched the participants that appeared in the discussion videos.

I then continued to sort and organize the audiovisual material, which had been initially saved into a hard drive under categories titled by subgroups, i.e., by pod color.

Table 9

Data Organization and Categories

Group type	Subgroup (Pod Color)	Pre-test Discussion video	Group discussion video	Post-test discussion video	Group discussion screen recording	Individual screen recordings
(B)	Red	X	X	X	X	X
	Blue	X	X	X	X	X
	Green	X	X	X	X	X
	Yellow	X	X	X	X	X

Each video also had a time stamp and number—one through three—which I used to establish the order of the videos in the learning process. Next, I proceeded to separate these videos by pods. Having separated the data into digital folders organized by subgroups, I finally sorted the individual screen recording videos of each participant while watching the film clips, and included them in their respective subfolders.

Inclusion/Exclusion Criteria. At the outset of this study, I had contemplated comparing and contrasting a control and experimental group for their achievement of intercultural learning outcomes. However, because the focus of this study lies in determining whether film annotation can mediate intercultural learning, and how this process takes place, it was only necessary to observe in detail how participants in the group receiving the pedagogical intervention consisting of annotated film clips (initially

experimental group B) interacted with the digital artifact, and with each other. This evidence alone was sufficient to determine whether the digital artifact enabled intercultural learning outcomes, as well as to describe the process through which learning took place. In this way, through a reconceptualization of the study's design, a more detailed observation of how participants interacted with each other within the group, and how these interactions became a part of their learning process, was possible.

After determining I would only analyze the results for the group that underwent the annotated film pedagogical intervention, I had the task of making sure that the subgroups were viable for analysis. During this process, I found that while a large number of participants were viable for analysis, they had not provided complete evidence, as some of their peers had. While some participants had engaged in peer discussion, and completed their pre- and post-tests, the recordings of their interactions with the annotated clips presented technical issues, most commonly failure in recording or failure in video playback. Other participants had completed all of the study's tasks but had not completed either the consent form, or the language contact profile. The problem with this lack of data was that, in order to analyze participants' interactions with each other, I would need complete data for all participants in a given subgroup. The attrition caused by lack of participant data made this difficult.

To solve the issue, I separated the groups whose participants had provided complete data, from the groups whose participants had not. Upon corroborating that the remaining viable groups also had (a) participated in the video-recorded discussions, and (b) complete screen recordings of their interactions with the annotated film clips, I arrived at one final viable subgroup for analysis. The final group included in the

qualitative analysis was the group sitting at Blue pod B, which included participants Mya, Lia, Amelia, Simon, and Kady. Table 10 shows the categories and titles of the final videos analyzed. The codes in this table include a first letter that marks the color of the pod, and the letter O marking the number that marks the observation phase. The row titled Individual Screen Recordings (Table 10) shows how many participants were in each of these groups.

Table 10

Data Selected for Qualitative Analysis

Group type	Pod Color	Pre-test Discussion video	Group discussion video	Post-test discussion video	Group discussion screen recording	Individual screen recordings
(B)	Blue	BB-O1	BB-O2	BB-O3	BB-Screen	3

Observation. The main data-gathering procedure for this study was observation given its exceptional data-generating qualities. The videos and answers recorded during the three phases of the study made it possible for me to watch the learning process in a detailed manner, as well as to corroborate pre- and post-test results with real-time group interactions.

Mason (1996) defined observations as "methods of generating data which involve the researcher immersing [him or herself] in a research setting, and systematically observing dimensions of that setting, interactions, relationships, actions, events, and so on, within it" (p. 60). As I have explained before, observation is a key feature of the microgenetic method because of the high-density data it allows researchers to collect.

Although observation is a rich data-generating technique, there are important concerns related to its use in qualitative research (Mackey & Gass, 2016). Two relevant problems include, first, (a) although observation provides a vast amount of visible data—behaviors, actions, utterances—it does not allow researchers to determine the motivations or underlying causes for specific visible behaviors; second, (b) the presence of the observer during the research process can affect the data that are collected or the participants' performance in the study. I considered both of these challenges during this study, and addressed them through the techniques of triangulation, and creative use of digital artifacts.

Interpreting observations. The problem of observation as a sufficient source of evidence is similar to the problem of discourse as evidence for intercultural competence development. I described this issue earlier in this study when reviewing concerns with current intercultural competence research. Dervin (2011) explained that behaviors do not necessarily mirror internal cognitive states or capacities. Instead, individuals are able to engage in behaviors or discourse that do not reflect their true internal worlds, thus *performing* IC through actions. To address the problem that this unreliable performance presents to observational research, Dervin proposed going beyond using discourse as evidence for cognitive development or cognitive abilities. He prompted researchers to question the face value of discourse and behavior by paying attention to discursive elements that may corroborate or contradict the evidence.

Taking cue from Dervin (2011), this study sought to go beyond discursive evidence, and questioned the observational data collected by written responses. To reveal possible underlying cognitive processes that could contradict or corroborate the answers

participants jotted down during the pre- and post-test phase, I triangulated evidence among various sources. Mackey & Gass (2016) define the process of *triangulation* as the use of "multiple research techniques and multiple sources of data in order to explore the issues from all feasible perspectives" (p. 233). For this study, I used a common form of triangulation, which involves gathering data through multiple data sources. For each participant, I observed their written answers and then compared them to the same participant's discourse during group interactions, as well as to their interaction with the annotated film clips. In doing so, the goal was to reduce my own bias as a researcher and enhance the validity and accuracy of my qualitative analysis. In addition to using a variety of data sources, I also analyzed participants' behavior through *discourse analysis*, specifically looking at elements such as word choice, use of grammatical voice, interjections, and positive or negative connotations in participants' utterances that could reveal new meanings. I will define and describe the discourse analysis process in the next section regarding data analysis procedures.

 Changes in performance due to observation. A second problem with observational research is that the nature of observation itself can cause changes in the data. Two traditional concerns are the Observer's Paradox (Labov, 1972) which explains that the presence of researchers can affect the behavior of the participants, and the Hawthorne effect (Brown, 1954; Mayo, 1933) in which participants may improve their performance due to the fact that they are participating in a study. However, the likelihood of these problems should not deter researchers from conducting observational research. Instead, researchers can take steps to mitigate the effects of observation.

Because this study included a significant use of various technological tools during different phases, and required participants to move across two classrooms, it was possible that this structure would increase learners' awareness of participating in a study. Therefore, it was important for me to help mitigate the effect this structure could have on participants' behavior or performance. To minimize the threat of participants feeling observed, I designed the study so that my presence in the pedagogical intervention was solely that of a facilitator. I decided I would only clarify instructions and provide students with general guidelines about how to perform the tasks.

The second step I took to decrease the likelihood of participants feeling observed was using the technological tools themselves as observational devices. The study took place in two classrooms: LL68 and LL65. The first classroom is a densely technological lab that includes tables with large screens, webcams and speakers. The second classroom is a computer lab that provides individual PCs for each student. During group discussions, participants were located in LL68. There, I asked students to sit at tables—also called pods—where a webcam placed at the center of the table recorded their conversations. The recording software, Quicktime, ran in the background of the system so participants could forget it was recording. As for the webcam, since it is part of the regular layout of the LL68 classroom, it did not modify the setting in any relevant way.

To record group interactions with the large screens in LL68, Screencast-o-matic recorded the screen itself. This software was ideal to minimize students' feeling of researcher observation, given that the software runs in the system's background while users are recording their screens, i.e., it is not visible to users while it is running. In this way, while students conversed, the software went on recording the screen and the

students, but participants could not see the recording software during their discussions. As for individual interaction with PCs while watching the annotated or non-annotated film clips in LL65, I used Quicktime to record participants' screen. Just as Screencast-o-matic, Quicktime is able to run in the system's background, making itself invisible to participants as they interact with the screen.

The solutions implemented to minimize participant awareness of observation appeared to be effective, as evidenced by the videos of group discussions, which show participants engaging in discussion with each other, never looking or acknowledging the presence of the webcam.

Data Analysis Procedures

This section explores data analysis procedures relevant to the microgenetic method such as data coding and coding categorization. It also defines and describes discourse analysis and how I used DA to reveal underlying meaning in written and recorded discourse.

Coding

Mackey & Gass (2016) define coding as the organization of data "into a manageable, easily understandable and analyzing format" (p. 112). They explain that raw data can come in various forms, among them oral and video-recorded data, written answers, notes on observation schemes, gestures, etc. A frequent type of raw data is oral production or discourse. This type of data usually requires some type of transcription in order to become manageable, although this is not always the case.

In some cases, only the features of interest for the study are transcribed. In other cases, researchers may decide it is sufficient simply to listen to the data and mark

features as present or absent on a coding sheet or schedule. In either of these

cases, interesting examples and exceptions to patterns are usually transcribed for

later use in illustrating trends. (Mackey & Gass, 2016, p. 113)

As mentioned in the previous section, this study collected data of two types: oral

and video recordings of group discussions, and written responses to worksheets. With the

large amount of data generated from these sources, it was not necessary to transcribe

hours of interactions between participants in a setting where noise from other groups

often intervened. Instead, the process of coding became more time-efficient by observing

video-recordings and screen recordings in detail, in corroboration with written answers,

and transcribing only the interesting examples that emerged during this observation.

The process of coding through observation for this study happened in two cycles:

open coding, and focused coding (Dyson & Genishi, 2005). During *open coding*, I

observed the different sources of data as a whole, taking mostly uncategorized notes, and

making sense of the answers participants gave, and of how they interacted with each

other. At this time, I based the observation on very broad categories related to the

learning outcomes of intercultural learning selected from this study, which I described

earlier in the section regarding variable operationalization. I created the initial list of

categories as it appears in Table 11.

Table 11

Initial Categories

Cultural self-awareness
Insights into own cultural rules and biases
e.g.: "that we think we are better than them, smarter than them"

Deep cultural knowledge
Compare and contrast home and target culture
e.g. "we both have lost many natives to colonization"

"*los conquistadores tenía resources. Es el mismo como los EEUU"* (sic)

 [colonizers had resources. It is the same as the US]

"pienso que hay muchísimas similitudes, como el control de los europeos y destrucción de los nativos"

[I think there are many similarities, like the control by the Europeans and the destruction of the natives]

Basics of target history, politics, and society
e.g.: *"cuando los europeos 'descubrieron' el nuevo mundo, crearon las colonias y con sus resources, they controlled the land"*

[when Europeans 'discovered' the new world, they created colonies and, with their resources, they controlled the land]

Upon closer inspection of the responses and conversations that took place around these general categories, it quickly became evident that participants were not using certain words that recurred in the data with the same purposes or perspectives. For instance, while many participants were able to articulate the ways in which populations came together and languages came in contact, they did so in different ways and with different connotations: what one participant called *colonization*, another referred to as *moving into another country*. Seeing these differences, I became concerned that participants had underlying perceptions about what these historical processes meant for different regions of America. However, because they were using similar words, if I wanted to reveal their underlying perceptions, I first had to group all similar word choices, and then seek out the differences in connotations and meanings. With this in mind, I proceeded to categorize common themes by their semantic similarity. That is, I

grouped all statements using words in similar semantic families, also including words that were in close relationship to those semantic categories. For example, under the category of *colonization*, I listed all words referring to colonization and conquest, but I also included *iglesia*, because of how participants referred to the Catholic Church as an agent of colonization. The final list of emergent categories appears in Table 12.

Table 12

Emergent Themes

Emergent Themes for Experimental Group (B)
• Natives/ Native Americans • Education • Respect • Immigrants • Reference to home country • Power • Uncertainty • Origin • Colonization • Equality

Discourse Analysis

Supporting the analysis of codified data, I engaged in discourse analysis of participant interactions—among themselves and with the digital artifact—in order to reveal underlying meanings that may not have been immediately apparent in my first approximation to the data. Traditionally, scholars have understood discourse analysis (DA) as the analysis of written discourse or oral discourse with the goal of revealing the underlying meanings of utterances. However, in his theory for a unified discourse analysis, Gee (2015) advocated for a new type of DA that "studies language, science, and

human action and interaction in the real and in imaginary worlds" (p. 1). He described this type of DA as a "turn-taking form of interaction that humans can have with each other, with the real world, with other worlds, and with video games" (p. 1). I interpret Gee's suggestion of including videogames as interlocutors in discourse analysis as meaning that it is also possible to integrate digital artifacts of various kinds in the DA framework. Therefore, instead of video games, in this study I analyzed the digital artifact in question—film and film annotation—as an interlocutor for humans, in addition to traditional human interlocutors.

To arrive at the multimodal data required for analyzing human-human and human-computer interaction, I reviewed Thorne et al. (2015), who looked at small groups using digital technology as they moved through physical environments. In doing so, the researchers used multimodal transcriptions that included sequential analyses of talk-in-interaction (Goodwin, 1995). My approach was different from that of Thorne et al., as the participants of this study did not move through physical environments, nor did they engage in tasks where a digital device provided instructions or directions for how to interact with the environment.

Instead, to understand how participants engaged with the digital artifact while in conversation with each other, I simultaneously analyzed oral conversations and interactions with the digital artifact, which I transcribed as a turn-taking participant in the conversation. For instance, if a discussion recording showed participants playing the film clips, I would view the discussion recording until the end and, later, I would go back and play the screen recording video to make sure I knew exactly what the participants were looking at when they played the clips. This process allowed me to identify when the

digital artifact entered the conversation, and exactly what the film clip provided for participants in terms of images, annotations, facts, or other information that they could use in their discussion. In addition, by also looking at the visual recordings of group interaction, I was able to observe elements such as the gestures of agreement between participants, and which of the participants interacted directly with the computer. The result of this process appears in Figure 15.

AL: *¿Qué motiva a Sebastián a rodar la película?*
[What motivates Sebastian to film the movie?]

He puesto para ganar dinero porque… amm… como dice en el resumen, Bolivia es un país latinoamericano más pobre...
[I wrote down to make money because… ummm… as the synopsis says, Bolivia is a poorer Latin American country]

AL: *Bueno eh... en el primer clip, ¿cuál es el chiste que María trata de hacer?*
[Well uh… in the first clip, what is the joke Maria tries to make?]

LY: *Una cosa, yo pensé que Sebastián fue la personaje que… la persona que quiere demostrar las tragedias y todo, no para el dinero, yo pensé que fue Daniel que quien… que quiere dinero*
[One thing, I thought that Sebastian was the character that… the person who wants to show the tragedies and all, not for the money, I thought it was Daniel who… who wants money]

SD: [gazes in direction of the first clip on the screen]

AL: *¿Deberíamos mirar el clip?*
[Should we watch the clip?]

ALL: [laugh]

SD: [clicks play button on clip]
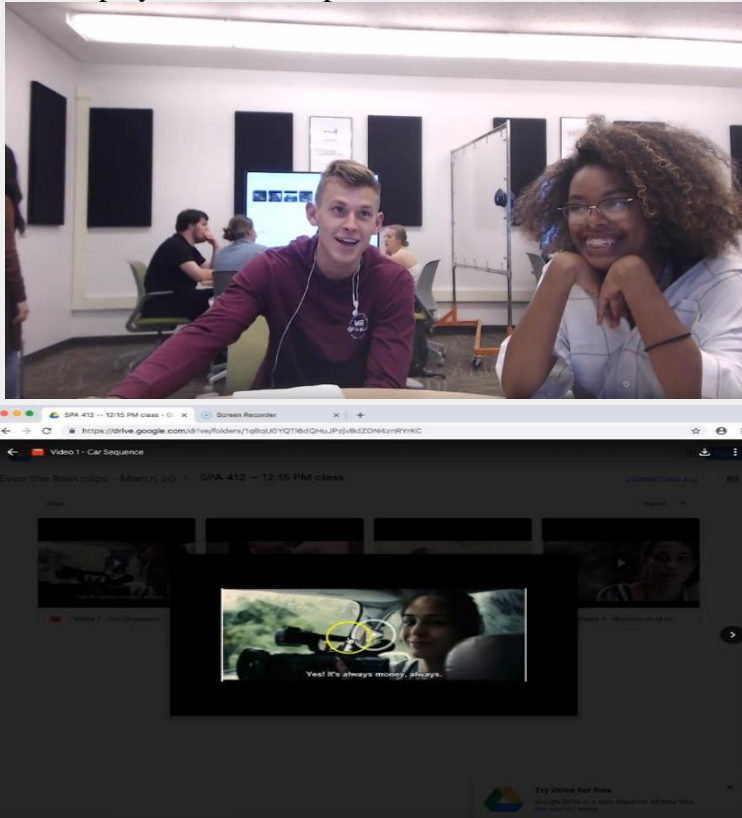
CLIP:

LY: *Yo no sé los nombres pero...*
       [I don't know the names but…]

AL: *Ehh… Sebastián es…el… conducir… Daniel es el… americano…*
       [Uh… Sebastian is the… drive… Daniel is the… American…]

LY: Sí, pero Sebastián es él…
       [Yes, but Sebastian is him…]
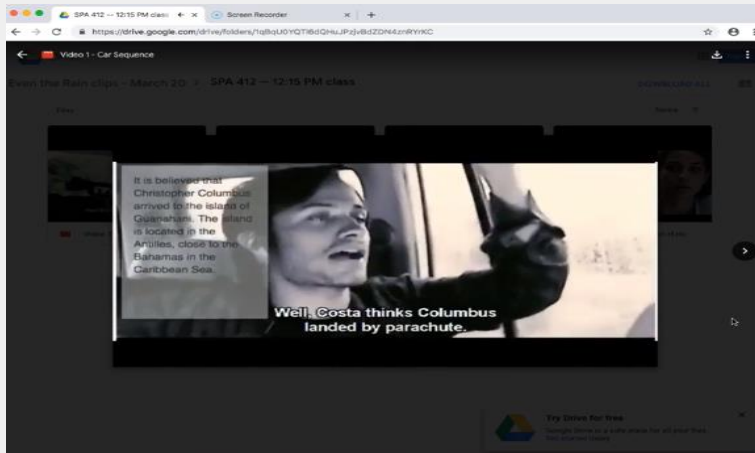
CLIP:

AL: *Oh… Oh Costo… ¿eso es Costo? ¿O Costa?*
      [Oh… Oh Costo… Is that Costo? Or Costa?]

SD: [Nods]

AL: *Costa. Es Costa.*
      [Costa. It's Costa.]
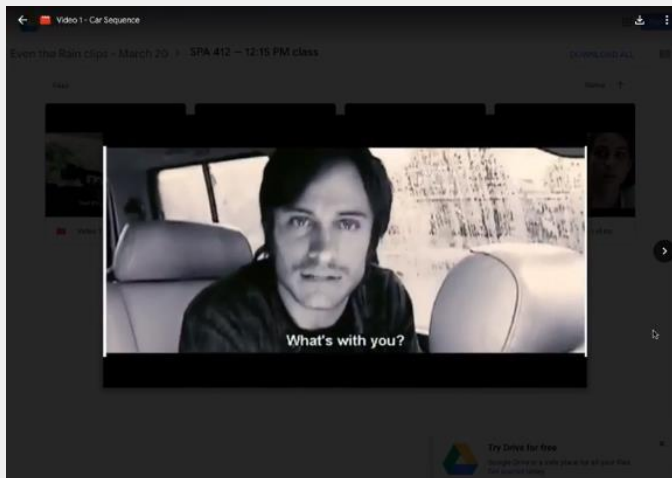
CLIP:

AL: *Eso es Sebastián.*
      [That is Sebastian]

LY: *Sebastián no solo quiere dinero. Quiere contar la historia de los nativos*
      [Sebastian doesn't just want money. He wants to tell the story of the Natives]

ALL: [mumble in agreement]

AL: *Vale.*
       [Okay]

Figure 15. BB-O2 Group discussion video. The figure shows interaction between participants with included BB-screen interaction.

Figure 15 shows an example of the multimodal transcription process used to organize when each interlocutor participated in peer discussions, including when participants used film or film annotations as a part of their discussion, i.e., when they used the film clips as another interlocutor on which they built the answers they were constructing together. This specific figure shows how participants used the film clips to decode the intentions of the filmmakers when arriving to film in Bolivia. There appeared to be uncertainty among the group's participants on who Daniel/Costa/Sebastián were in the film. To clarify this confusion, through conversational and physical cues—such as Simon's staring at the screen—the group decided to play the first film clip. In this clip, Costa and Sebastián were clearly identified. Their names appeared in the English subtitles when each character referred to each other by name. When Sebastián addressed Costa by his name, participants were able to distinguish Sebastián from Costa. In this way, they confirmed whose intention it was to make money off the film, and who wanted to show the story of Columbus's arrival to America.

CHAPTER 4

RESULTS

At the outset of this study I presented two research questions: (1) does the

inclusion of film annotation mediate intercultural learning? and (2) in what ways does the

inclusion of film annotation mediate intercultural learning? As mentioned in this

dissertation's chapter concerning method, I had initially designed a study in which I

compared intercultural learning outcomes for two groups, control group (A) and

experimental group (B). However, because the importance of this dissertation lies on its

focus on the intercultural learning *process* through interaction with digital artifacts, the

control groups' interactions with film clips without annotations were not immediately

relevant to this study. For this reason, I narrowed the present investigation to the

qualitative analysis' results for participants in the experimental group (B). Based on the

initial experimental groups, which consisted of four groups, I analyzed qualitative data

for five participants—Mya, Lia, Amelia, Simon, and Kady—who interacted with four

annotated film clips (Appendix D). This group consisting of five participants was the

only viable group for observation given that they had all provided complete sets of data

(e.g., videos of interaction with clips, pre- and post-test results, participation in peer

discussion, consent forms, and language contact profile). In other groups, some

participants had not provided or completed one or more tasks or documents, therefore I

could not include them in my analysis of peer discussions. Not being able to include one

or more participants from each group in peer discussion would have compromised the

findings analyzed based on peer discussions.

Intercultural Learning: Processes and Outcomes Results

To address the first of the research questions in this section, (1) does the inclusion of annotation in film affect intercultural learning? I begin by giving a general overview comparing participants' responses during the written pre- and post-test phases of the study. To complement these results, I then provide individual summaries describing each student's learning process. Such summaries begin by generally describing participants' responses to pre-test questions, then describing their learning process throughout the study and, finally, I close with a summary of participants' post-test results. Supplementing these individual summaries, I illustrate the relationships between learner, mediational means, and outcomes through the use of dynamic digital charts. To further report these findings, I describe in detail the specific instances in which participants showed evidence of intercultural learning outcomes, corroborating such evidence across data sources. To conclude the chapter, I respond to my second research question, (2) does the inclusion of annotation in film affect intercultural learning? by describing specific instances in which participants used the digital artifact—annotated film clips—as a mediator in their learning process.

Throughout the section, I refer to intercultural learning in different ways. The first way in which I address intercultural learning is from an *outcomes* perspective. This means that, to provide a general assessment of whether participants demonstrated learning, I refer to traditional intercultural competence outcomes, as outlined in Blair's (2016) table of foundational attributes. In particular, I focus on two intercultural learning outcomes—*cultural self-awareness* and *deep cultural knowledge*, as appears in Table 13—which include three more specific learning outcomes: (a) developing insights into

one's own cultural rules and biases, (b) comparing and contrasting home and target culture, and (c) acquiring basics of target history, politics, and society. The second way in which I address intercultural learning—and that which is most relevant to the present study—is from a *process* perspective. This approach highlights participants' interactions with the digital artifact and with their peers as the site where intercultural learning takes place.

Table 13

Indicators for Intercultural Learning

Cultural self-awareness   *Insights into own cultural rules and biases*

Deep cultural knowledge
      Compare and contrast home and target culture
      Basics of target history, politics, and society

Pre and Post-Test Results

The following section provides a summary of the pre-and post-test results from this investigation. The results are paired by themes to facilitate the comparison between participants' initial and end responses.

Comparing the use and spread of languages across the U.S. and Latin America. In the pre-test phase of this study, I asked participants to compare the historical processes for the development of various languages in the U.S. and Latin America. This theme was addressed in the pre-test in order to gauge whether participants had any previous knowledge of historical processes between both regions, or whether they had any knowledge that allowed them to compare language use in both regions. I phrased the

question in such a way that participants could respond with a comparison between the development/use of any languages spoken in the mentioned regions, not only Spanish and English. However, in the post-test, I addressed this theme in a different way through item b), this time asking participants specifically to refer to the historical causes of English/Spanish being widely spoken in the U.S. and Latin America. I prompted them to do this indirectly, when asking them to compare the historical causes for the two predominant languages in the regions. Table 14 shows participants' responses to the pre-test question, along with participants' responses to the post-test item that reviews historical causes for the spread of English and Spanish.

Table 14

Comparing the Use and Spread of Languages Across the U.S. and Latin America

Participant	Pre-test Question (Item e)	Post-Test Questions (Item b)
	Are there any historical similarities between the development of the use of various languages in Latin America and the U.S.?	What are the predominant languages in the U.S. and Latin America? What are some of the historical and cultural causes for this?
Mya	*No sé* [I don't know]	*Englés- Español- idiomas indígenas* (sic) [English, Spanish, native languages]
Lia	*Sí* [Yes]	*Inglés y español. Colonization* [English and Spanish. Colonization]
Amelia	*Pues ambos países tienen mucha inmigración así que hay una mezcla de lenguas. Los ciudadanos traen sus propios idiomas al nuevo país.*	*Inglés y Español. Inglaterra y España han conquistado los países que hablan sus lenguas* [English and Spanish. England and Spain colonized the countries that speak their languages]

	[Well, both countries have a lot of immigration so there is a mix of languages. Citizens bring their own languages to the new country.]	
Simon	*No sé* [I don't know]	*English/Inglés. Spanish/Español. Conquistadores y la iglesia.* [English/Inglés. Spanish/Español. Colonizers and the church.]
Kady	*Sí porque se hablan las dos lenguas en los dos países* [Yes because both languages are spoken in both countries]	*Ingles, español, y portugez* (sic) [English, Spanish, and Portuguese]

Throughout the study, in many of their responses, participants explicitly

addressed *colonization/conquista* as a historical force that shaped language use in both

regions. However, in their responses to a question specifically on the historical

similarities between the U.S. and Latin America and their development of the use of

different languages, participants either did not respond, or focused on the similarities

caused by immigration processes. Here, it is visible that participants had not necessarily

reflected on native languages or non-foreign languages spoken in these regions, which

might have been the cause for not being able to provide answers.

Languages spoken in the U.S. and Latin America. A second topic addressed in

the pre-test is the languages spoken in these two regions and the people who speak these

languages. The results for these questions appear in Table 15.

Table 15

Languages Spoken in the U.S. and Latin America (Pre-test).

Participant	Pre-test Question on US Languages (Item a)	Pre-test Questions on Latin American Languages (Item c)
	What languages, aside from English, are spoken in the U.S.? Who speak these languages?	What languages, aside from Spanish, are spoken in Latin America? Who speaks these languages?
Mya	*Español* - Native american languages - *japonesa - Idian* (sic) [Spanish, Native American languages, Japanese, Indian]	*Portuguese - personas de Brazil* (sic) [Portuguese, people from Brazil]
Lia	*Español, francés, y muchas otras idiomas. Las personas que hablan estas lenguas son inmigrantes, personas nativas de los Estados Unidos, etc.* [Spanish, French, and many other languages. The people who speak these languages are immigrants, natives from the United States, etc.]	*Portugese, otras lenguas nativas de cada país (como Native American lenguas aquí), la gente que habla es--* (sic) [Portuguese, other native languages from each country (like Native American languages here), the people who speak are…]
Amelia	*Español, alemán, francés, china, japón, etc. la gente que sabe cómo hablar estas lenguas las hablan* (sic) [Spanish, German, French, China, Japan, etc. The people who know how to speak these languages speak them.]	*Portueguese, inglés. Es una mexcla de otras idiomas* (sic) [Portuguese, English. It is a mix of other languages]
Simon	*Pienso que en los Estados Unidos hay muchos idiomas. Usualmente, cuando inmigrantes llegan en los Estados Unidos, llegan con sus propios idiomas y viven cerca de sus propias gentes.*	*Portugués, no sé.*

	[I think that in the United States there are many languages. Usually, when immigrants arrive to the United States, they arrive with their own languages and live close to their own people.]	[Portuguese. I don't know.]
Kady	*Se hablan muchos pero la más común aparte de ingles es español* [A lot of languages are spoken, but the most common one aside from English is Spanish]	*Se hablan muchas lenguas como el portugez* (sic) [Many languages are spoken, like Portuguese]

As appears in Table 16, in the pre-test, participants showed some knowledge of languages spoken in the U.S. aside from English (Native American languages), although they mainly focused on foreign languages (Japanese, Chinese, French, German). For Latin America, participants showed very little knowledge of languages other than Spanish (e.g., indigenous languages or foreign languages), and mainly listed Portuguese as another spoken language next to Spanish, without listing who speaks it (Brazilians, for example). Some participants listed English, and only one of them—Lia—listed native languages, and compared this to the U.S. in her response.

These responses are comparable to item a) in the post-test, which addresses the same topics, but includes a question on the possible attitudes that participants might have developed in relation to this topic, as appears in Table 16.

Before watching the film clips, we spoke about what languages aside from English are spoken in the U.S., and what languages aside from Spanish are spoken in Latin America. Did you learn anything new from the film and/or your group discussions that has expanded your knowledge or changed your attitudes in relation to this topic?

Post-test Item a)

In general, the results showed that, where participants had forgotten to address native languages, they now included and referred to native languages both in the U.S. and Latin America as languages spoken in these regions.

Table 16

Languages Spoken in the U.S. and Latin America (Post-test).

Participant	Post-Test Question (Item a)
	Before watching the film clips, we spoke about what languages aside from English are spoken in the U.S., and what languages aside from Spanish are spoken in Latin America. Did you learn anything new from the film and/or your group discussions that has expanded your knowledge or changed your attitudes in relation to this topic?
Mya	*Me dejó más confundida* [It left me more confused]
Lia	*Sí, yo aprendí más sobre cuál lenguas existen en latinoamérica* (sic) [Yes, I learned about which languages exist in Latin America.]
Amelia	*Pues, se me olvidé que existen idiomas nativas o indígenas* (sic) [Well, I forgot that there are native or indigenous languages]
Simon	*Sí, hay muchos nativos quien hablan sus propios idiomas* (sic) [Yes, there are many natives who speak their own languages]
Kady	*Si muchos no les ponen tanta atención ha las lenguas que no son populares* (sic) [Yes, many people don't pay attention to languages that are not popular]

Some interesting findings in these responses appear for Mya, who noted she was confused now. Although there is little information here, Mya expanded on these results during the oral discussion, where she noted that she felt more confused but wanted to

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learn more. She mentioned that the short clips were part of the reason for her confusion.

It is possible to interpret Mya's confusion as a sign that she was breaking up old patterns

of knowledge, and beginning to include new information to her understanding of

languages in the U.S. and Latin America.

This section also showed Amelia's reflection on her own failure to include native

languages in the pre-test, as part of the languages spoken in the U.S. Given that

participants were allowed to choose on which developments to focus, this allowed me to

see how it was important for Amelia to specifically address that she had forgotten to

mention these languages in the pre-test, bringing attention to this matter. Finally, Kady

claimed that many people do not pay attention to languages that are not popular, an idea

which, according to the question, she developed based on the film.

Historical, political, economic and cultural causes. Items b) and d) in the pre-

test addressed the causes for English and Spanish—specifically—being the most spoken

languages in the U.S. and Latin America, respectively. As appears in Table 17, here

participants listed colonization as the main cause for this fact. This is true for both the

pre- and post-test results, with certain differences, as will be explained below.

Table 17

Historical, Political, Economic and Cultural Causes (Pre-test).

Participant	Pre-test Questions (b)	Pre-test Questions (d)
	Why is English the predominant language in the U.S.? Comment on some of the possible historical, political, economic, and cultural causes for this.	Why do people speak Spanish in Latin America? Comment on some of the possible historical, political, economic, and cultural causes for this.

Mya	*Las personas de Inglaterra influyeron English* [People from England influenced English]	*No sé* [I don't know]
Lia	*Porque inglés es la lengua habla por Iglaterra (Britain), de donde son los colonizers* (sic) [Because English is the language spoken by Britain, where colonizers are from]	*Porque los españoles colonized América Latina* [Because the Spanish colonized Latin America]
Amelia	*Porque los primeros "Americanos" vinieron de la Inglaterra, donde hablan inglés* [Because the first "Americans" came from England, where they speak English]	*Pues porque los conquistadores eran de España, donde hablan español* [Well, because colonizers were from Spain, where they speak Spanish]
Simon	*Porque personas llegan aquí de Britain y hablan inglés en Britain* [Because people arrive here from Britain and in Britain they speak English]	*No sé* [I don't know]
Kady	*Porque era la primera lengua* [Because it was the first language]	*Por la historia que ha tenido esos países* [Because of the history of those countries]

The main notable difference between the results for the pre-test regarding English and Spanish is that there was a trend in how participants referred or wrote about historical processes in the U.S. Among the themes that appeared in participants' pre-test answers were *colonization/conquista*, and the idea of *origin* and *original occupants*. Although on first impression, participants' pre-test responses referred neutrally to British occupation

of what is now U.S. territory, upon closer inspection, participants consistently used language that attenuated or invisibilized British violence in American territory e.g.: *influyeron* [influenced], *llegan* [arrive], *de donde son los colonizers* [where colonizers are from], *los primeros "Americanos"* [the first "Americans"]*, la primera lengua* [the first language].

Item e) in the pre-test also addressed the question of historical processes, asking participants to compare the processes that led to various languages being spoken in the U.S. and Latin America. I phrased this question in such a way that participants would feel free to compare the use of Spanish/English in both regions, of foreign languages, or any provide any comparison from which I could gain insight into their ability to compare both regions historically on the theme of language. Participants' responses for item e) mostly correspond thematically to participants' responses to item b) in the post-test, as appears in Table 18. In this case, item b) indirectly prompts participants to write about Spanish and English, as it asks them to address the historical causes for the most spoken languages in the U.S. and Latin America.

Table 18

Historical, Political, Economic and Cultural Causes (Post-test)

Participant	Pre-test Question (Item e)	Post-Test Questions (Item b)
	What languages, aside from English, are spoken in the U.S.? Who speak these languages?	What are the predominant languages in the U.S. and Latin America? What are some of the historical and cultural causes for this?
Mya	*Español* - Native american languages - *japonesa - Idian* (sic)	*Englés- Español- idiomas indígenas* (sic)

	[Spanish, Native American languages, Japanese, Indian]	[English, Spanish, native languages]
Lia	*Español, francés, y muchas otras idiomas. Las personas que hablan estas lenguas son inmigrantes, personas nativas de los Estados Unidos, etc.* [Spanish, French, and many other languages. The people who speak these languages are immigrants, natives from the United States, etc.]	*Inglés y español. Colonization* [English and Spanish. Colonization]
Amelia	*Español, alemán, francés, china, japón, etc. la gente que sabe cómo hablar estas lenguas las hablan* (sic) [Spanish, German, French, China, Japan, etc. The people who know how to speak these languages speak them.]	*Inglés y Español. Inglaterra y España han conquistado los países que hablan sus lenguas* [English and Spanish. England and Spain colonized the countries that speak their languages]
Simon	*Pienso que en los Estados Unidos hay muchos idiomas. Usualmente, cuando inmigrantes llegan en los Estados Unidos, llegan con sus propios idiomas y viven cerca de sus propias gentes.* [I think that in the United States there are many languages. Usually, when immigrants arrive to the United States, they arrive with their own languages and live close to their own people.]	*English/Inglés. Spanish/Español. Conquistadores y la iglesia.* [English/Inglés. Spanish/Español. Colonizers and the church.]
Kady	*Se hablan muchos pero la más común aparte de ingles es español* [A lot of languages are spoken, but the most common one aside from English is Spanish]	*Ingles, español, y portugez* (sic) [English, Spanish, and Portuguese]

The results for the post-test show that participants consistently referred to *colonization/conquista* during the post-test, making this a recurring theme for all participants except for Kady, who here showed no evidence of acquiring additional knowledge, as she listed the same languages (English, Spanish, Portuguese) that she had already referred to in her pre-test results. From these results, it is possible to interpret that the film clip's presentation of historical events had a definitive influence on most participants' understanding of how English and Spanish became the predominant languages in the U.S. and Latin America. It is possible to say then that, the film clips and the processes they represented functioned as interlocutors that mediated participants' learning/acquisition of basics of the target cultures' history, as well as the history of their own culture.

Attitudes toward English, Spanish and native languages. The post-test asked participants to reflect on existing attitudes toward English, Spanish, and native languages, based on what they had seen in the film or learned from the film. Evidently, these attitudes did not need to be their own. Participants' responses to this item—which are not comparable to other items in the pre- or post-test—appear in Table 19.

Table 19

Attitudes toward English, Spanish and Native Languages

Participant	Post-Test Questions (Item c)
	What insights have you gained from the film clips about the status of and attitudes toward English, Spanish, and indigenous languages in the US and Latin America?
Mya	*Es una mezcla - no hay una sola* [It is a mix-- there isn't just one]

Lia	*Yo pienso que las lenguas nativas no son valued igual a inglés y español.*
	[I think that native languages are not valued the same as English or Spanish]
Amelia	*Pues, la población que hablan las lenguas indígenas son pequeña, falta razón para aprenderlas* (sic)
	[Well, the population who speaks native languages are small, and there is not enough reason to learn them]
Simon	*Podemos ver cómo influenciaron la manera en que la gente habla.*
	[We can see how they influenced the way in which they speak]
Kady	*Que todas son importantes*
	[That they are all important]

Some of the participants' responses to this item were insufficient (e.g., Mya, Kady) in order for me to arrive at an analysis or proper analysis of what they meant. For instance, when Mya mentioned that there is a mix, and not just one attitude, she did not specify to what attitudes she was specifically referring. For Kady, who reflected that they (the languages) are all important, I also did not have more information. In hindsight, it would have been useful to ask participants to provide more detailed answers by asking them to use a minimum number of words in their responses. For other participants such as Lia, Amelia, and Simon, there were more complete answers. Lia, for example, mentioned that she saw that native languages are not valued the same as Spanish or English. This led me to believe that she was showing some initial evidence of intercultural learning. However, as I will explain later on, I could not corroborate this learning with other data for Lia. Regarding Simon, although he offered a more complete answer than some of his peers, his response is still confusing. The response seemed to

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imply that attitudes toward certain languages affect how people speak, but he did not provide more details on this reflection.

Arguments presented by the film regarding languages. Item d) in the post-test referred to the arguments that the film "Even the Rain" makes about languages, including English, Spanish, and native languages. Participants responses appear in Table 20.

Table 20

Arguments Presented by the Film Regarding Languages

Participant	Post-Test Questions (Item d)
	What are the arguments the film "Even the Rain" makes about languages such as Spanish and English? What arguments does it make regarding indigenous languages?
Mya	*No debería quitarlas* [They shouldn't take them out]
Lia	*Dice que inglés es una audiencia más popular y tiene más dinero, las lenguas indígenas no tiene importancia* (sic) [It says that English is a more popular audience, with more money, native languages are not important]
Amelia	*Los poderosos siempre van a intentar tener más. Las lenguas indígenas están muriendo* [The powerful will always try to have more. Native languages are dying]
Simon	--
Kady	*La película dice que el inglés es el idioma más valuada* (sic) [The movie says that English is the most valued language]

Responses to this post-test question varied. Although the language for these answers was not similar across responses, some participants, i.e., Lia and Amelia, alluded to how financial interests may have influenced present-day linguistic practices, e.g.: *el*

inglés es una audiencia más popular y tiene más dinero [English is a more popular audience, with more money], *los poderosos siempre van a intentar tener más* [the powerful will always try to have more], *las lenguas indígenas están muriendo* [native languages are dying]. Some interesting findings for this topic are that participants may have inferred meaning from the film that was not exactly presented in the clips. For instance, Amelia mentioned that native languages are dying, a claim that although not illogical, did not appear in the film clips or in the annotations. Another example is Kady's response, in which she said that English is the most valued language. Certainly this idea can be extrapolated from film clips and annotations, such as the clip "That's fucking great, man" in which the interaction between the two characters, Costa and Daniel, highlights the relationship between language (English) and money. However, as I will explain later in this results section—specifically when addressing Kady's learning process—Kady drew this response from her interactions during peer discussion, and not necessarily from the film clips. Finally, Lia's response about how native languages are not important is also not a claim made by the film. In fact, the claim made by the film is that native languages were not historically relevant, but that present-day decolonial practices challenge that view. It is possible that the short length of the clips might have confused Lia's understanding of this theme.

Personal experiences related to the film clips. The last item of the post-test prompts participants to reflect on some personal experiences they might have had in relation to what they have seen in the video. However, as appears in Table 21, participants gave little information in response to this question.

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Table 21

Personal Experiences Related to the Film Clips

Participant	Post-test Question (Item e)
	Have you ever had a similar experience with language as those that appear in the film? What do you think caused this to happen in your case?
Mya	-- --
Lia	*No, porque yo solo hablaba inglés en mucha de mi vida* (sic) [No, because I only spoke English during much of my life]
Amelia	*Yo no.* *Not me.*
Simon	-- --
Kady	*No pero a veces se hace ha propósito* (sic) [No but sometimes it is done intentionally]

It is possible that by asking participants to include a minimum of words for their responses, the results might have been different for this item. However, I also interpreted participants' lack of response to this item to mean that they might not have clearly known specifically to what themes or events in the film they should compare their personal experiences. In any case, the only relevant responses here were Kady's and Lia. Later on in these results, I will explain how Lia's response is consistent with the learning process

or lack thereof that she showed throughout the study. In Kady's case, this is also true, as Kady's lack of elaborate answers and reflection was also consistent throughout the study.

Mapping Intercultural Learning Outcomes through Interaction

When conducting this study, I hypothesized that interaction with [annotated film clips](#) (click to access the link) would lead participants to display evidence for three intercultural learning outcomes: (1) insights into own cultural rules and biases, (2) comparing and contrasting home and target culture, and (3) acquiring basics of target history, politics, and society. Following Dervin's (2011) recommendation to go beyond discursive evidence for intercultural competence, I began my analysis of participants' behavior by asking myself what constituted evidence of intercultural learning and what did not. In the following results, I present evidence for intercultural learning as a corroborated and triangulated co-construction in which participants engaged through their interactions with human and non-human mediators. In addition, I examine instances of participants performing interculturality, in the absence of intercultural learning. In order to help the reader visualize participants' learning process, interactive visual charts are available by clicking on diagrams such as Figure 16.

Interpreting visual charts. The results for each participant include chart visualizations of their data, which are available as interactive charts as well as fixed images. The best way to interpret these charts in is to access their interactive version. This version is available to readers by clicking on each of the still images that appear in the figures of this section, e.g.: Figure 16. When clicking on the image, a live chart opens up, with which users can interact by clicking on each of the focus points or circles that

appear in the floating diagram (see Figure 16). The live charts are also available through

the link listed in each figure's caption. By clicking on each of the circles or source

elements, the chart highlights the connections to that source element. For instance, Figure

1 shows a chart that is highlighting the source element "peer discussion." Gray

connection lines for the elements that do not connect to peer discussion fade into the

background, while the elements that are connected to peer discussion become more

visible through dark grey lines. In Figure 16, peer discussion appears as the mediator for

outcomes such as comparing past and present colonial practices, and cultural ambiguity.

The chart also shows that Mya engaged in peer discussion in order to arrive at these

outcomes. In addition, Mya brings specific knowledge acquired through clips 1 and 3 to

the peer discussion.
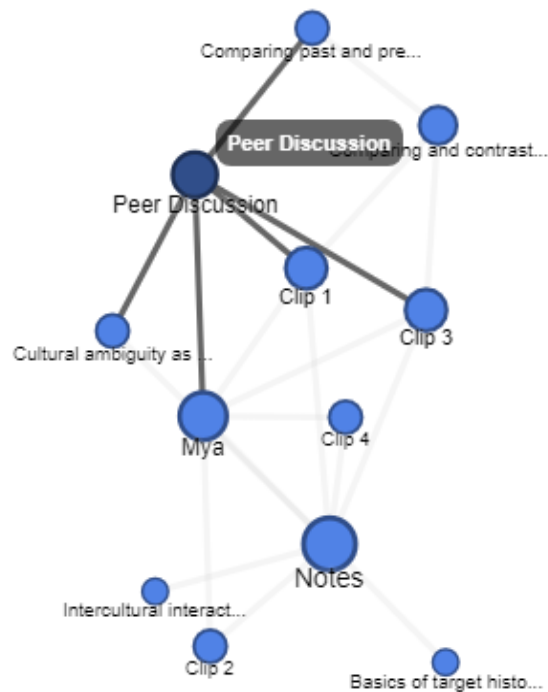
Figure 16. Navigating interactive charts. By clicking on each circle (source element),

users can see the highlighted connections for each source element. Available at

http://links.asu.edu/MyasMap

      Mya. Throughout the study, Mya showed evidence of intercultural learning in

relation to four different intercultural learning outcomes, including (a) viewing cultural

ambiguity as a positive learning experience, (b) welcoming cultural discomfort, (c)

viewing her own interactions as learning opportunities, and (d) comparing and

contrasting home and target culture. The evidence for these outcomes stemmed from

Mya's interaction with human and non-human mediators, including the four film clips,

her own notes on the annotations present in the clips, and conversations with her peers.

Although Mya showed evidence for intercultural learning, she did so through different

processes and during interaction with different mediators.

      When beginning to analyze Mya's data, I saw that, her pre-test responses showed

that she recognized foreign languages and native languages as part of the language

diversity of the U.S. However, when it came to Latin America, she had less knowledge,

pointing out that Portuguese was the one language spoken outside of Spanish. When

prompted about the causes for English and Spanish being predominantly spoken in the

U.S. and Latin America, Mya referred to historical processes but only for the U.S. Here,

she used a language that invisibilized colonization, as she only mentioned "the people

who came from England." Mya did not provide an answer for the historical processes that

led to Spanish being widely spoken in Latin America.

      An interactive visualization of Mya's data available by clicking on Figure 18

shows that Mya's understanding of cultural ambiguity as a positive experience and her

welcoming of cultural discomfort—outcomes (a) and (b) —are connected to the element titled 'peer discussion.' This means that Mya co-constructed her learning toward these outcomes while interacting with her classmates during peer discussions. In this way, we can see that peer discussion functioned as a mediating activity that enabled Mya's learning.

During a different task, i.e., watching annotated film clips, there was initial evidence that Mya was becoming aware of the intercultural learning opportunities— outcome (c)—available to her through interaction with the clips. However, while pausing and interacting with the video was enough to spark my interest as a researcher, the activity did not in itself constitute evidence for intercultural learning. To assess whether Mya was demonstrating evidence of learning, I corroborated Mya's interest in further learning by looking at other data sources such as her note-taking process. Here, I noticed that Mya actively sought to offload the information she was receiving from the clips and annotations onto her worksheet. This gave me an idea that Mya was possibly consistently showing an interest and openness toward intercultural learning. To determine whether these behaviors—video interactions and note-taking—were, in fact, evidence of interest in intercultural learning, it is necessary to look at the rest of data sources and confirm that Mya continued to show a positive attitude toward new learning opportunities.

Thus, I looked at Mya's utterances during peer discussion. There, I noticed further evidence that Mya was, in fact, using the information she collected from the clips and incorporating it into her learning process. An example of this was that Mya was the only member of the group to identify Aymara as a native language in the film. This corresponded with the interest Mya took in languages spoken in Bolivia, visible in her

notes. I took this corroborated evidence as a first sign of basic knowledge of target

history, politics, and society. I later confirmed that Mya was consistently including this

knowledge in her interactions, when I observed Mya sharing this information in peer

discussion.

Mya: *Hay dos, creo…*
[There are two, I think…]
Amelia*:   Hay español y quechua…*
[There is Spanish and Quechua…]
Mya*:   y los idiomas nativos… ¿Anaya?*
[and native languages… Anaya?]

Mya and Amelia during peer discussion (X3)
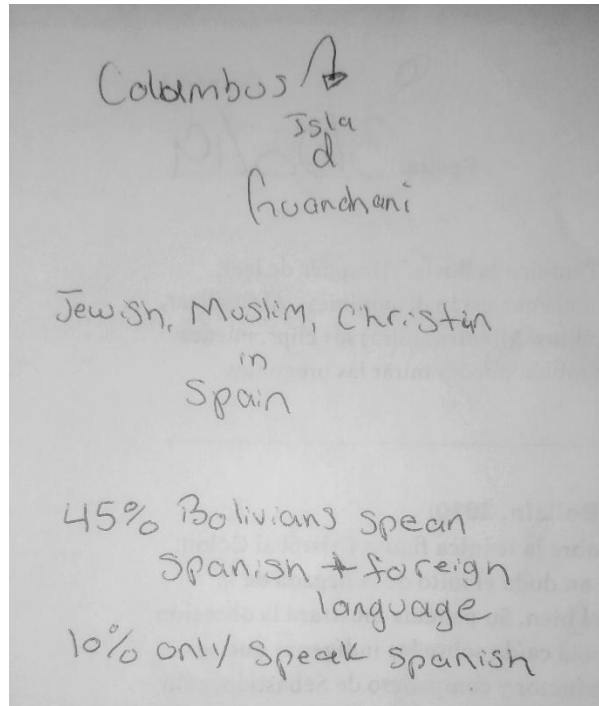
Figure 17. Mya's notes while viewing film clips

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A third and final intercultural learning process—(d) comparing and contrasting home and target cultures—took place for Mya while watching film clips "Taínos y Quechuas" (1) and "That's fucking great, mean" (3) (screen captures of these videos and annotations are available in Appendix D). Drawing from an understanding of how the film's Spanish characters—Sebastian and Costa—profited off Bolivians, Mya was able to compare one character's present-day colonial practices to the acts of violence that took place during the European colonization of South America. The transcription below shows Mya's response to the question of whether there are similarities between the way colonizers treated natives, and the way Costa treats Daniel (this is the sixth of the pedagogical discussion questions available in Appendix B).

Mya*:   Creo que la manera de Costa es como menos-- como-- hard-- porque la manera de los conquistadores es como muy…*   [I think that Costa's way is less-- like-- hard-- because the colonizers' way is like, very…]   Lia*:   Más agreso…*(sic)   [More agreso (sic)]   Mya*:   Sí, sí…*   [Yeah, yeah..].

Transcription of Mya and Lia in conversation during peer discussion (X3).
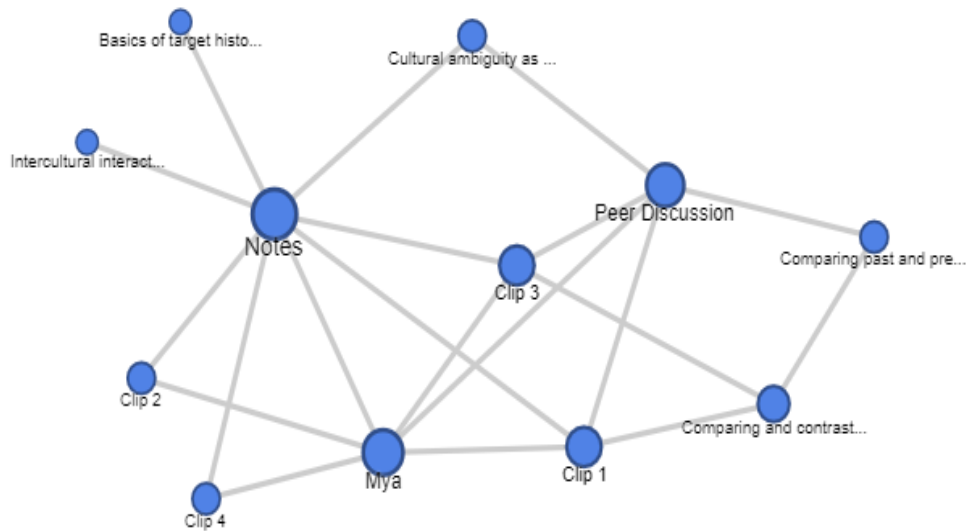
Figure 18. Still Image representation of Mya's learning process, revealing deep cultural knowledge, discovery, and curiosity. Available at http://links.asu.edu/MyasMap

Through this learning process, Mya arrived at her responses to the post-test questions, in which she expressed feeling confused about the new knowledge she might have acquired, but expressed an interest in learning more. She also now recognized that there are a variety of attitudes towards Spanish, English, and native languages, both in the U.S. and in Latin America, although she did not specify what these diverse attitudes were. When prompted about the historical causes for the spread of English/Spanish in their respective regions, Mya did not refer to any historical, political or otherwise cultural processes. These results are somewhat consistent with Mya's learning process and her performance throughout the study, in which she showed evidence of intercultural learning by demonstrating curiosity and openness, but not necessarily by providing a thorough understanding of the historical facts that led to English and Spanish being spoken in the U.S. and Latin America. It was unclear to me how, without engaging with historical

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content on colonization, Mya was able to arrive at a comparison of Costa and the violent acts of Spanish colonizers that appeared in the film clips. This suggested that, perhaps basic knowledge is not a prerequisite for comparisons/contrasts between home and target culture. It is possible that the comparison might happen at an earlier stage, and later lead to the acquisition of knowledge.

     Simon. Simon's cognitive activity throughout the study seemed mostly an individual process, as there were very few instances of him interacting with peers or outward expressions of interculturality. Nevertheless, Simon's learning appeared as a complex process, one in which he drew from different artifacts—film clips, notes, peers—to engage in the intercultural learning process, and exhibit intercultural learning outcomes.

     Beginning with his interactions with the film clips and his note-taking process, I could see that Simon noticed the presence of the Church during South American colonization. This was apparent to me through Simon's note "*católico,*" which he took while viewing the film clips. Evidently, this note alone did not constitute evidence of an intercultural learning outcome. Instead, it was part of Simon's learning process. The note, however, did become part of Simon's evidence for intercultural learning outcomes, when I noticed that he had not included any comment on religion during his pre-test, but did include this knowledge in his post-test.

¿Cuáles son las lenguas predominantes en Estados Unidos y América Latina? ¿Cuáles son algunas de las causas históricas y culturales de este hecho?

English/Inglés. Spanish/Español. Conquistadores y la iglesia

[What are the predominant languages in the United States and Latin America? What are some of the historical and cultural causes of this?

English/Inglés. Spanish/Español. Colonizers and the Church.]

Text from Simon's post-test responses (O2/W2).

A similar process took place while Simon viewed clips "Taínos y Quechuas" (1) and "That's fucking great, man" (3), during which he took a one-word note—"*Quechua*". Shortly after viewing the clips, Simon's noticing of the native language showed up during peer discussion, when he communicated to his classmates his curiosity about predominant vs. non-predominant languages:

Es interesante pensar que esos idiomas que no sabemos saben inglés o español pero no es lo mismo con nosotros sabiendo sus idiomas
[It is interesting to think that those languages that we don't know, know English or Spanish but it is not the same with us knowing their languages]

Transcription of Simon during peer discussion (X3).

Here, Simon used basic knowledge about the languages spoken in the target culture—acquired through his interaction with the digital artifact—to express a comparison of cultural habits. During this assertion, Simon did not make any value judgments on the information he was sharing; instead, he merely expressed that he found it interesting. According to Blair (2016), such non-judgmental expressions constitute evidence for a disinterested comparison of cultural habits.

I also interpreted the same expression as Simon's perception of intercultural interaction as a learning opportunity. By expressing his reflection during peer discussion, Simon shared a blooming interest in learning more about the comparison to which he referred. Such agreement can mean that, with his statement, Simon joined Mya in co-constructing a positive attitude toward the discovery of other cultures.

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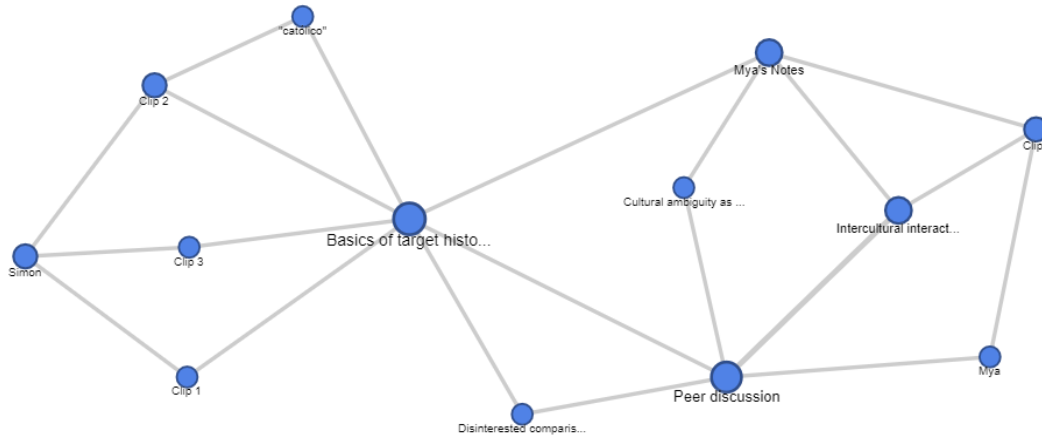
Figure 19. Still Image representation of Simon's learning process showing curiosity and respect. Available at http://links.asu.edu/SimonsMap

Lia. Contrary to Simon, Lia participated actively in peer discussions. Nevertheless, the collected data showed few significant interactions between Lia and the digital artifact, or between Lia and her peers. Although Lia took notes while watching the clips—including notes on Quechua and Christianity—the notes did not align with her various interactions during peer discussion. In fact, Lia's notes only became visible to me in her written responses, i.e., she did not verbalize her knowledge or reflections during her communication with classmates.

This observation led me to wonder what the nature was of Lia's participation in the peer discussion. If she was not showing evidence of intercultural learning, of what was she showing evidence? Upon closer inspection, I noticed a striking theme across Lia's interventions: they were all brought about either by another participants' answers or by viewing the film clips during the peer discussion. All of Lia's reflections were prompted by others who first offered their own, or when the group referred back to the

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clips. For example, during peer discussion of the pedagogical intervention Lia

constructed her perceptions on native languages by responding to Mya's intervention:

Mya: *Creo que no era el más respected. Creo que es una pena porque es el idioma indígena*

[I think it wasn't the most respected. I think it is a shame because it is the native language]

Lia: *No es la lengua más yo no sé en español pero…* valued…

[It is not the language most… I don't know in Spanish but… valued...
Kady: *valuada* (sic)

Lia: No es la lengua más *valuada* para la gente que habla una lengua más predominante

[It is not the most valued language by people who speak a more predominant language]

Mya, Kady, and Lia during peer discussion (X3)

Lia, then, was not drawing from her own knowledge. Instead, I saw she had

offloaded the information she received from the clips onto the worksheets where she

wrote her answers. She did not use these notes as the base for her interactions with peers.

Instead, she had chosen the clips and her peers' answers as the foundation for her own

participation. Although Lia's strategy allowed her to perform interculturality in

interaction with her peers, during the triangulation process, her interactions did not show

evidence of her own intercultural learning *outcomes*. However, it is not safe to assume

that Lia's interactions were simply a performance either: the important question

regarding Lia's interactions is whether her performance of interculturality could also

potentially constitute evidence of an intercultural learning *process*.
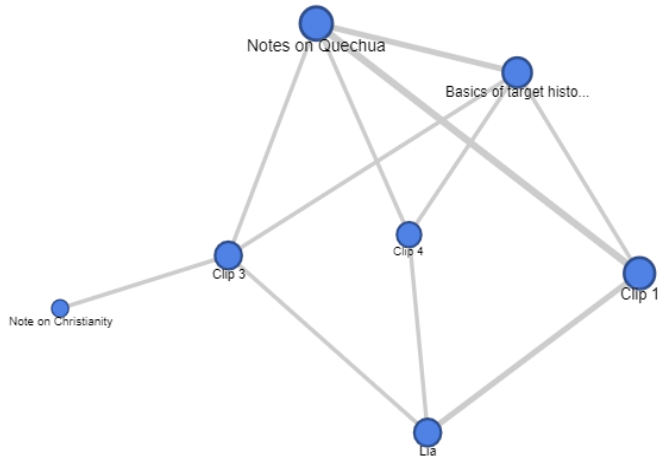
Figure 20. Still Image representation of Lia's learning process. Includes note-taking activity leading to expressing acquisition of basics of target history, politics, and society. Available at http://links.asu.edu/LiasMap

Amelia. Similar to Lia, Amelia's performance as visible across data sources revealed limited evidence for intercultural learning outcomes. In Amelia's case, this outcome was the acquisition of basics of target history, politics, and society.

I arrived at this result by looking, first, at Amelia's pretest answers in which she referred to European colonizers of the U.S. as "the first 'Americans' who came from England," contrasting them with what she called "colonizers [of Latin America] who were from Spain."

	Why is English the predominant language in the U.S.? Comment on some of the possible historical, political, economic, and cultural causes for this.	What are the predominant languages in the U.S. and Latin America? What are some of the historical and cultural causes for this?
Amelia	*Porque los primeros "Americanos" vinieron de la Inglaterra, donde hablan inglés*	*Inglés y Español. Inglaterra y España han conquistado los países que hablan sus lenguas*

	[Because the first "Americans" came from England, where they speak English]	[English and Spanish. England and Spain colonized the countries that speak their languages]

Amelia's responses for the pre- and post-test (O1/W1 and O2/W2)

It was not immediately clear to me why Amelia had used different language for similar historical processes. Attempting to understand the evidence, I searched for further data that could possibly support, dismiss, or explain Amelia's choice. I found at least two interesting events: first, that Amelia had rewatched the second clip, "Speak in Christian," immediately upon first viewing—coincidentally the most violent clip of all four. She had also rewatched the first and third clips, *Taínos y Quechuas* and "That's fucking great, man" respectively—which show present-day practices of colonialism—but not clip four. Second, I noticed that while watching the clips, Amelia took notes including the words *ganar dinero* [to make money] and *aprovecharse* [to take advantage] to describe how the Spanish characters in the film were relating to Bolivians.
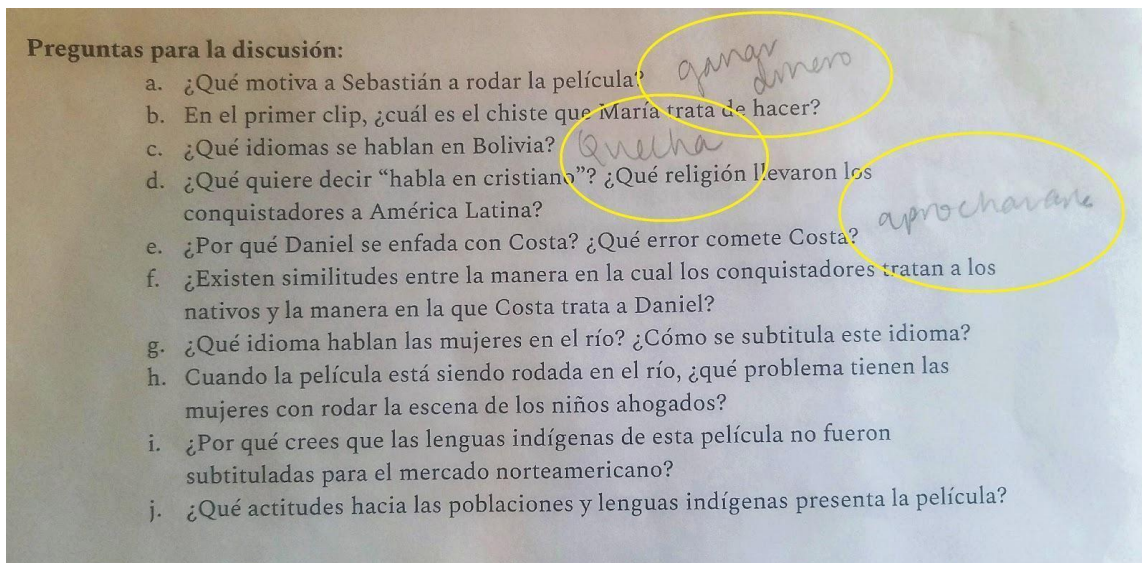
Figure 21. Amelia's notes during the pedagogical intervention.

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With this evidence in hand, Amelia's post-test use of the word "conquistadores" (colonizers) to describe U.S. historical processes had a possible explanation: by watching the film clips and taking notes on power imbalance, Amelia had arrived at a comparison between her home culture and the target culture. An interactive manipulation of Figure 22—available by clicking on the image—shows how Amelia's note-taking developed into evidence of an intercultural learning outcome. It also shows that although Amelia took notes on other themes in the film clips—such as the use of Quechua—those notes did not become evidence for other intercultural learning outcomes.

Further discursive evidence for Amelia, i.e., her comment on how "the powerful will always try to have more," indicated a developing articulation of similarities between past and present-day colonial practices. However, this was the only instance of such articulation, and there were no other data supporting this learning outcome. Upon checking whether Amelia's assertion could have come from a previous interaction with her peers, this was also not the case.
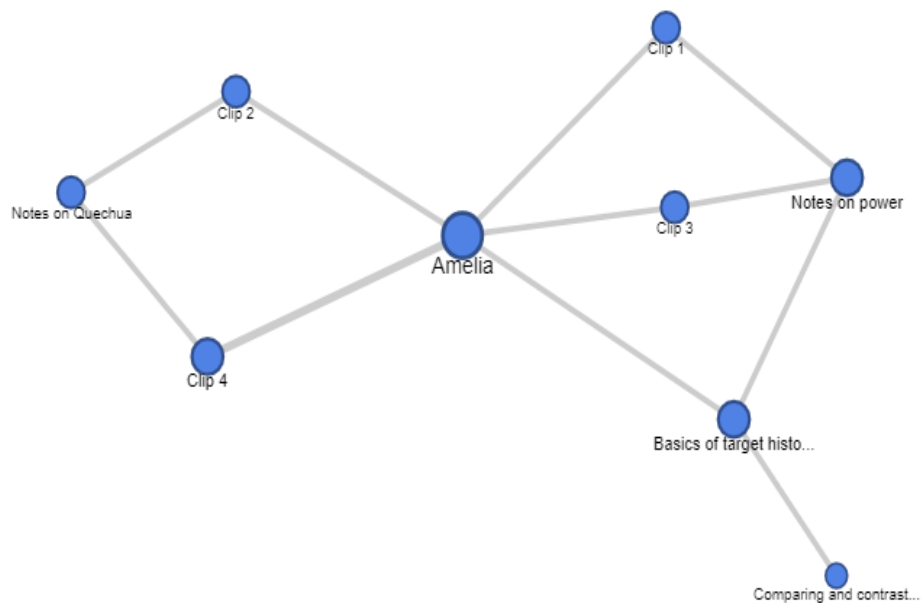
Figure 22. Still Image of Amelia's use of notes to arrive at comparisons. Here, her notes help see how she arrives at a comparison between home and target culture. Available at http://links.asu.edu/AmeliasMap

As a final note on Amelia's evidence for intercultural learning, it is possibly relevant to highlight Amelia's cultural background. Out of the five participants, Amelia is a heritage speaker of Mandarin, and was brought up with parents who spoke the language to her, and continue to speak the language with her. It is possible that Amelia's ethnicity plays a role in the discourse she uses in her responses. For instance, when she refers to European colonizers of what is today the U.S. territory, she refers to them as "the first 'Americans.'"

Porque los primeros "Americanos" vinieron de la Inglaterra, donde hablan inglés [Because the first "Americans" came from England, where they speak English]

Amelia's written response during the pre-test (O1/W1)

This description possibly denotes Amelia distancing herself from those colonizers, or even a value judgment on what constitutes being an American. Such positions would not be surprising given Amelia's heritage. Unfortunately, because the study did not allow participants to reflect on their interactions retrospectively, it is impossible to know whether Amelia's heritage in fact affected her choice of words.

Kady. The discursive and observational data for Kady showed a lack of significant interaction with both the annotated film clips and with her peers. Not only was her involvement in peer discussion almost non-existent, her note-taking process was completely absent from the observations. In addition, Kady's viewing of the four film

clips was uneventful, showing her watching each clip only once, without pausing, replaying, or otherwise manipulating the clips.

Regarding evidence for learning outcomes, Kady's responses to the pre- and post-tests showed a basic, incomplete knowledge of the basics of home and target culture. For example, in her pre-test, Kady did not initially list any languages other than Spanish spoken in the U.S. nor did she include native languages in her response later on. When asked about languages in Latin America other than Spanish, she only responded "Portuguese" —an answer which she recycled for her post-test responses. Kady's responses throughout the study lacked depth and reference to interlocutors to the point that the only subtle evidence of intercultural knowledge Kady showed appeared in the form of a pre-test written answer. In response to the last item in the post-test, Kady noted that English and Spanish are spoken in both regions (presumably Latin America and the U.S.). Because this comparison did not appear anywhere else in the data, and did not change or evolve in any way, Kady's response to the post-test item is hardly evidence for comparing and contrasting the home and target culture as a form of deep cultural knowledge. Confirming a lack of depth in Kady's responses, when asked about the causes that may have influenced the spread of English and Spanish in the studied regions, Kady simply replied that it was "due to the history of those countries," without further explanation or reference to the history of those countries.

In conclusion, by looking at Figure 23, it is evident that Kady's only evidence of comparison did not stem from her interactions with peers or with the film clips, and that, despite many opportunities for interaction, she did not display an interest in or any evidence of intercultural learning. Whether Kady was not interested in the class, or other

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personal or contextual situations influenced her performance, the data does not provide

this information. In future studies, the lack of data regarding Kady's performance could

be solved by including exit interviews for participants, or retrospective think-aloud

protocols that provide insight into what participants were experiencing during specific

moments of the study.
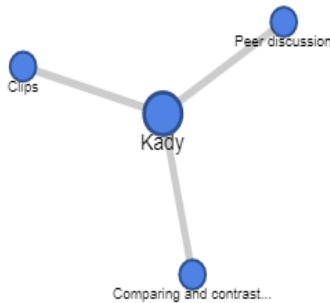
Figure 23. Still Image representation of Kady's limited interactions. Available at

http://links.asu.edu/KadysMap

Summary of Intercultural Learning Outcomes

To continue reporting the findings of this study, below I summarize the discursive

and multimodal evidence for intercultural learning exhibited by participants during

interaction with their peers and with technology. I organize these results in three separate

categories that align with the intercultural learning outcomes described in the

methodology of this study, i.e., cultural self-awareness, and deep cultural knowledge.

Cultural self-awareness. When looking for instances of cultural self-awareness

in participants, I initially limited my search to participants' articulation of insights into

one's cultural rules and biases. In doing so, I searched for language that would evidence a

sense of self as shaped by a cultural context, whether this language was present in the

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pre- or post-test phase of the study, during the discussions, or in participants' written answers. However, during my observation of the different instances of participants' discourse, it was quickly clear that participants did not always directly refer to themselves as shaped by a cultural context. In addition, in the few instances in which participants reflected on their own cognitive processes, perceptions, and behaviors, they did not exhibit a sense of awareness about why they had arrived at these answers or behaviors.

Despite a lack of direct evidence for cultural self-awareness, there were various instances in which participants did refer to themselves indirectly. These instances revealed some sort of personal knowledge and cultural attitudes, which were imbued in the way students articulated their answers. Three notable examples for how participants referred to themselves as cultural subjects appear below. Each example shows a different way of approaching cultural self-awareness.

Amelia*: Sí, me olvidé que-- porque no están en la prensa así que me olvidé*
[Yes, I forgot that-- because they are not in the press so I forgot]
Mya*: He puesto que sí he aprendido algo nuevo pero al mismo tiempo me dejó más confundida porque eran clips cortitas-- cortitos-- Pero ahora tengo ganas de aprender más, así que creo que está bien*
[I wrote that yes, I learned something new but at the same time I am more confused because they were short clips-- But now I want to learn more, so I think it's alright]
Simon:*Es interesante pensar que esos idiomas que no sabemos saben inglés o español pero no es lo mismo con nosotros sabiendo sus idiomas*
[It is interesting to think that those languages that we don't know, know English or Spanish but it is not the same with us knowing their languages]

Transcription of Lia, Mya, and Simon during peer discussion (O2/D2).

Each of the three examples above show a different way of approaching cultural self-awareness. Quick to justify her lack of knowledge, Amelia reflected that she did not

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remember the native languages because they are absent in her context. Conversely, Mya embraces her own confusion, transforming it into a curiosity and interest in discovering other cultures. A seed of self-awareness appears for Simon when he includes himself in a group of English speakers who know very little about less-commonly taught languages. In the sections below, I analyze each participants' discursive evidence in more detail.

Amelia. When Amelia realized she had forgotten to include native languages in her summary of the languages spoken in the U.S. during the pre-test, she justified it as not being her fault. On first impression, this behavior is not necessarily consistent with Amelia's academic performance throughout the study, which involved offloading significant amounts of knowledge onto her worksheets, a high proficiency in Spanish, and a willingness to participate in peer discussion. Through these behaviors, Amelia had positioned herself as an engaged learner and a compliant student. She had completed all the tasks doing more than the bare minimum, and even led the discussions with her peers. Why then would Amelia justify her lack of knowledge? There are two possible explanations.

First, it is possible that precisely because Amelia's performance as a student stood out, she might have felt a need to justify her lack of knowledge. This effort to save face in front of her peers would generate the opposite outcome, and instead make Amelia appear as unable to being proven wrong. According to Blair (2016), a disposition to being proven wrong is a foundational attribute of the intercultural learning outcome of *openness.* Thus, it is positive evidence for intercultural learning. Following this logic, had Amelia shown evidence of critical self-awareness—for instance, by admitting her neglect or by explaining how she came to remember the native languages—she would have

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demonstrated evidence of openness. However, by failing to do so, Amelia's attempt to position herself as a competent intercultural speaker deprived her of the opportunity to question other possible causes why she might have forgotten to include native languages in her answer. In short, Amelia's fast solution to a perceived problem might have taken away her opportunity to continue learning.

However, the opposite interpretation of Amelia's behavior is also possible. Positioning herself as an engaged student, Amelia's justification of the press influencing her forgetfulness might be more than a justification. Amelia's comment could potentially be an accurate representation of how she understands her cultural environment: as an environment that is capable—through a deliberate or non-deliberate neglect of native languages—of influencing its members.

> *Amelia: Sí, me olvidé que… porque no están en la prensa así que me olvidé*
>
> Amelia: [Yes, I forgot that-- because they are not in the press so I forgot]

Transcription of Lia during peer discussion (O2/D2)

Mya. An opposite solution to Amelia's was taken by Mya, who realized her own unawareness about many of the topics covered in the film clips, but revealed that although she felt confused, she now wanted to learn more.

> *He puesto que sí he aprendido algo nuevo, pero al mismo tiempo me dejó más confundida porque eran clips cortitas-- cortitos-- Pero ahora tengo ganas de aprender más, así que creo que está bien*
>
> [I wrote that yes, I learned something new but at the same time I am more confused because they were short clips-- But now I want to learn more, so I think it's alright]

Transcription of Mya during peer discussion (O2/D2)

Facing her lack of knowledge on the cultural themes appearing in the clips, Mya chose instead to construct her interculturality by highlighting her interest in acquiring new experiences and knowledge. In this way, what Mya lacked in the realm of factual knowledge, she made up by viewing her own intercultural interactions with the film clips as a learning opportunity. According to Blair (2016) this behavior can be evidence of foundational attributes such as curiosity and discovery, which are affective attitudes that signal participant engagement in intercultural interaction. If we follow Deardorff's (2016) process of intercultural learning, the attitudes of curiosity—an interest in seeking out cultural interactions—and discovery—tolerating ambiguity and suspending judgment— would be a prerequisite for intercultural knowledge.

I also noted Mya's curiosity and urge to discover more about other cultures when observing her insistence on wanting to watch the complete film despite her confusion. In tandem with her various notes during her individual interaction with the clips (Figures 24 and 25), Mya's interest in watching the movie despite feeling confused signaled that she was open to cultural ambiguity as a positive learning experience, and that she welcomed cultural discomfort. The transcription below lists all discursive evidence from Mya that corroborates her positive attitude toward learning.

Mya: *He puesto que sí he aprendido algo nuevo pero al mismo tiempo me dejó más confundida porque eran clips cortitas-- cortitos-- Pero ahora tengo ganas de aprender más, así que creo que está bien*   [I wrote that yes, I learned something new but at the same time I am more confused because they were short clips-- But now I want to learn more, so I think it's alright]
Mya: What's the movie called?   Amelia: "*También la lluvia*"   Lia: *También*, which is like "oh, there's also rain…"   Amelia: Instead of like… even…

Lia: Maybe I took it the wrong way then Amelia: It says "Even the rain" on here Mya: Oh... "Even the rain"]
Mya: *Parece como una buena película. Quiero verla.* [It seems like a good movie. I want to watch it.]

Summary of Mya's interventions during peer discussions.
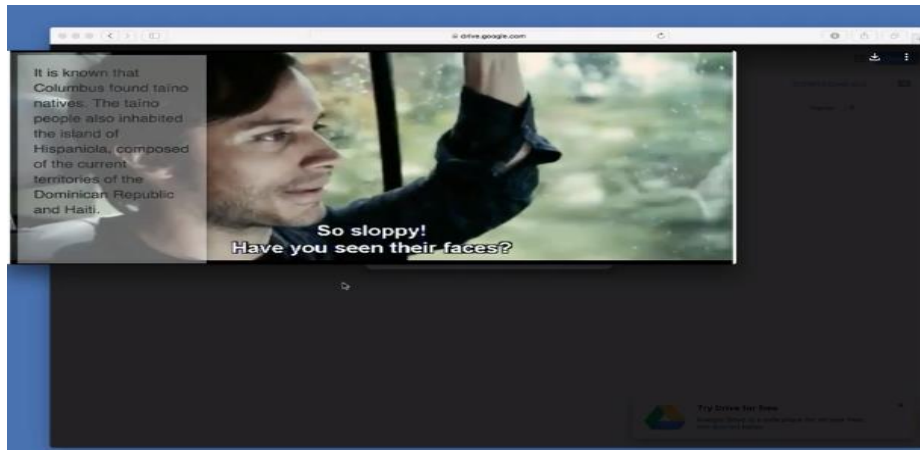
Figure 24. Screen-capture of Mya pausing a film clip. The figure shows the clips "Taínos

y Quechuas," as Mya interacted with it to take notes on Columbus's arrival.
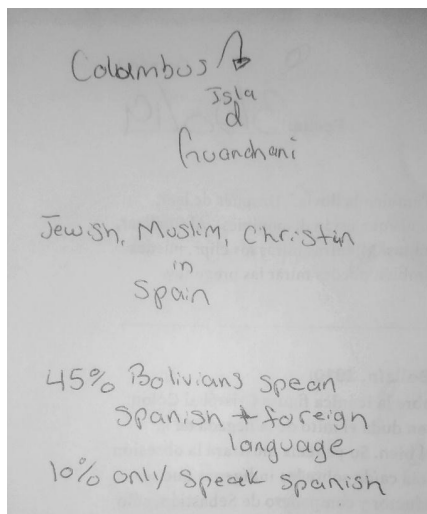
Figure 25. Mya's notes while viewing film clips

Finally, through my own observations of Mya's behavior while watching the film clips, as well as through my corroboration of these observations with Mya's notes—I confirmed she was evidencing intercultural curiosity and an "interest in asking complex questions about other cultures" (Blair, 2016, p. 117).

During the pedagogical intervention, Mya's behavior was different from that of the rest of her peers. Instead of taking quick notes that would help her answer the questions in X1, Mya took notes about historical facts: she noted that Columbus arrived to the island of Guanahaní, that three religions—Jewish, Muslim, and Christian—cohabited Spain, and that 45% of Bolivians spoke Spanish and a foreign language while only 10% of Bolivians spoke only Spanish.

Researcher's observation notes for Mya during the pedagogical intervention

Simon. Out of the three examples of cultural self-awareness provided at the beginning of this section, Simon's participation was the only one that evidenced cultural self-awareness, which he performed by means of comparison:

Simon: Es interesante pensar que esos idiomas que no sabemos saben inglés o español pero no es lo mismo con nosotros sabiendo sus idiomas

[It is interesting to think that those languages that we don't know, know English or Spanish but it is not the same with us knowing their languages]

Transcription of Simon during peer discussion (O2/D2)

In this example, I could see Simon taking ownership of his lack of proficiency and awareness of other languages, and revealing that which he found interesting: an imbalanced relationship between predominant and non-predominant languages. While speakers of other languages do know English and/or Spanish—Simon reflected— speakers of these same predominant languages are not knowledgeable about less common languages. With this reflection, Simon evidenced what Blair (2016) referred to as "a disinterested comparison of cultural habits." This behavior falls under the category of *respect* in Blair's table of foundational individual attributes. To corroborate that Simon

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was in fact showing intercultural learning, I considered Simon's use of contrastive

language, i.e., *no es lo mismo* [it is not the same], which also showed him comparing and

contrasting his home culture with the target culture. According to Blair (2016),

comparisons and contrasts can be indicators of deep cultural knowledge.

It appears that by noticing new cultural information, Simon began to show

evidence of acquiring the basics of target history, politics, and society. Then, building on

this knowledge, he was able to make relevant comparisons that positively contributed to

peer discussion.

Deep cultural knowledge. When designing this study, I selected two indicators

of deep cultural knowledge that would count as evidence for this foundational individual

attribute: (a) acquiring basics of host history, politics and society, and (b) comparing and

contrasting home and target cultures. I selected these indicators based on their

hypothetical likelihood to appear in participants' responses, given that the annotations

present in the film clips were—in their majority—about cultural, historical, and social

facts. Because of the content of the annotations, I was not surprised when, while

observing participants' responses and interactions, evidence for deep cultural knowledge

appeared consistently across the data. Such evidence appeared both in the form of

expressions showcasing basic knowledge of the target culture's history, politics, and

society, as well as comparison and contrast of the home and target culture. Below I

describe examples for each of these intercultural learning outcomes.

Basics of target history, politics, and society. As part of the analysis on

participants' demonstration of deep cultural knowledge, Table 22 lists the relevant basics

acquired by participants throughout the study. Because most participants demonstrated an

acquisition of similar themes, I do not provide a detailed description of these results per participant. Instead, I list the most common basic knowledge outcomes, align them with the participants who achieved them, and point out the data sources that were relevant in revealing these outcomes.

Table 22

Summary of Participants' Acquisition of Basics of Target History, Politics, and Society

Basics of target history, politics, and society	Example	Corroboration of learning across data Sources
Native languages spoken in the U.S.	*Amelia: Sí, me olvidé que… porque no están en la prensa así que me olvidé* Amelia: [Yes, I forgot… because they are not in the press so I forgot] (O2/D2)	Interaction with film clips, notes, pre- and post-test answers
	Simon: Sí, hay muchos nativos que hablan sus propios idiomas Simon: [Yes, there are many natives who speak their own languages] (O2/W2)	Interaction with film clips, notes, post-test answers
Native languages spoken in Bolivia (i.e., Quechua and Aymara)	*Mya: Hay dos, creo...* *Amelia: Hay español y quechua...* *Mya: y los idiomas nativos…* *¿Anaya?* Mya: [There are two, I think… Amelia: There is Spanish and Quechua… Mya: and native languages… Anaya?] (X3)	Interaction with film clips, notes, peer discussion

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Historical causes for the spread of Spanish across Latin America	*Simon: Podemos ver cómo influenciaron la manera en que la gente habla* Simon: [We can see how they influenced the way in which people speak] (X3)	Interaction with film clips, post-test results
	Amelia: Pues porque los conquistadores eran de España, donde hablan español Amelia: [Well, because colonizers were from Spain, where they speak Spanish] (O2/W2)	Pre- and post-test answers
Historical causes for the spread of English across the U.S.	*Amelia: Inglés y español. Inglaterra y España han conquistado los países que hablan sus lenguas* Amelia: [English and Spanish. England and Spain conquered the countries that speak their languages] (O2/W2)	Interaction with film clips, notes, post-test written answers
Role of religion in colonization	*Simon: English/Inglés. Spanish/Español. Conquistadores y la iglesia* Simon: [English/Inglés. Spanish/Español. Colonizers and the church] (O2/W2)	Interaction with film clips, notes, post-test answers

Comparing and contrasting home and target culture. Comparison and contrast of the home and target cultures took shape in the form of direct comparisons, where

participants used explicit language to specify similarities and differences between cultures, regions, and their historical processes. Among the themes for which participants found similarities and differences were colonization, immigration, and attitudes and facts regarding native languages. The most relevant outcomes were exhibited by Simon, Mya, and Amelia.

Amelia. When Amelia responded to the pre-test, she initially traced the history of English language in the U.S. to the arrival of 'the first Americans who came from England.' The words Amelia used to describe the process of colonization were striking, especially because during the same phase of the study, she traced the presence of Spanish in Latin America back to the 'colonizers who were from Spain.'

Porque los primeros "Americanos" vinieron de la Inglaterra, donde hablan inglés

[Because the first "Americans" came from England, where they speak English]

Text from Amelia's post-test responses (O2/W2)

Pues, porque los conquistadores eran de España, donde hablan español.

[Well, because the colonizers came from Spain, where they speak Spanish]

Text from Amelia's post-test responses (O2/W2)

Although the historical descriptions are accurate, there is an evident contrast in the use of language for each region. At first sight, it appears that Amelia is distinguishing between the historical processes of both regions by describing English arrival to America in a positive light. Conversely, when describing the history of Spanish language, she uses the term "conquistadores," introducing the element of colonization, which, by default, implies violence.

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To the following pre-test question specifically asking about similarities between both regions, Amelia responds that immigration is something they have in common. She explains that the mix of languages takes place because citizens bring their own languages. It was surprising to me that she chose not to highlight similarities in historical processes, even though she was aware of such similarities.

As I continued to observe Amelia's data, it became quickly evident that she always referred to Latin America in the same way she spoke about native languages: in terms of power and violence. For example, during the post-test, Amelia writes openly about the negative attitudes she perceived toward native languages:

Pues, la población que hablan las lenguas indígenas son pequeñas. Falta razón para aprenderlas.

[Well, the population that speaks native languages are very small. There is no reason to learn them [the languages]

Los poderosos siempre van a intentar tener más. Las lenguas indígenas están muriendo.

[The powerful will always try to have more. Native languages are dying].

Text from Amelia's post-test responses (O2/W2)

Evidently, Amelia is familiar with the colonization of native territories, as well as with problems with the maintenance of less-commonly taught languages. However, it is not until the post-test when she identifies the U.S. as also having gone through colonization. In her response to what the cultural and historical facts were that made Spanish and English predominant languages, she replied:

Inglés y español. Inglaterra y España han conquistado los países que hablan sus lenguas.

> [English and Spanish. England and Spain conquered the countries that speak their languages.]

Text from Amelia's post-test responses (O2/W2)

This is Amelia's first and only response alluding to colonization in U.S. history. It occurred to me that Amelia must have experienced some type of learning during the intervention that led to her now comparing the forces that shaped both regions' use of language. With this in mind, I reviewed her comments on the pedagogical intervention worksheet, as well as her interaction with the video. Although brief, Amelia's notes were revealing:
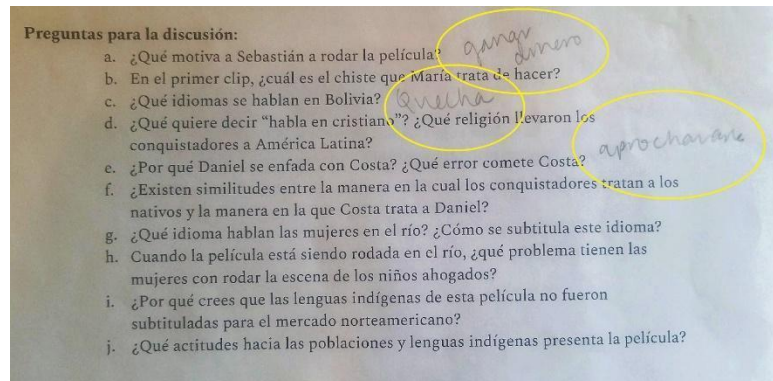
Figure 26. Amelia's notes during the pedagogical intervention.

Her first note referred to Sebastian's motives for filming the movie, while the third note referred to the reasons why Daniel became angry at Costa. Amelia's noticing of negative attitudes towards indigenous populations on behalf of the films' characters could have possibly been what prompted her to see her own country in a different light, i.e., as a colonized territory.

To corroborate this finding, I watched Amelia's interaction with the film clips. There, I saw that although she viewed the first three clips twice, she only immediately rewatched film clip 2. This was also the only film clip she paused to read the annotations.

Unsurprisingly, it was this film clip that displayed the only historical representation of colonization and also the most violent form of colonialism, i.e., the threat of amputation to natives who did not speak Spanish and did not pay their taxes in gold. Having corroborated the evidence across data sources, I concluded that the elements of violence in the film clips had sparked Amelia's interest, leading to her only notable development—recognizing what today is United States territory as a historically colonized land.

Mya. During peer discussion of the film clips, Mya expressed a comparison unlike other comparisons or contrasts indicated by her peers. Following Amelia's lead, the group responded to the question of whether there were any similarities between how colonizers treated the natives, and how Costa treated Daniel. Mya's response (Example 6) was the first and only instance throughout the study in which any participant explicitly compared the Spanish filmmakers to Spanish colonizers:

Mya*: Creo que la manera de Costa es como menos-- como-- hard-- porque la manera de los conquistadores es como muy…*
[I think that Costa's way is less-- like-- hard-- because the colonizers' way is like, very…]
Lia*: Más agreso…*(sic)
[More agreso (sic)]
Mya*: Sí, sí…*
[Yeah, yeah...].

Transcription of Mya and Lia in conversation during peer discussion (X3).

By describing Costa as less "hard" than colonizers, Mya revealed an understanding of the violence that both colonizers and Costa exerted over natives and

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Bolivians. However, because there were no other instances of Mya or her peers showing comparable insights, and because she only paused each video to take note of historical facts, I could not trace this insight to any other moment of learning. It appears then that Mya's complex comparison of past and present forms of colonialism was enabled throughout various interactive moments: first, her interaction with the digital artifact; next, the mediation of her own cognitive processes through note-taking; and finally, interaction with other participants through peer discussion.

      Simon. Described in the previous section, Simon's self-reflection about those who speak predominant vs. non-predominant languages also shows a relevant contrast between host and target culture. Below, I recall Simon's intervention when prompted about new perspectives he might have acquired after watching the film clip:

> *Simon: Es interesante pensar que esos idiomas que no sabemos saben inglés o español, pero no es lo mismo con nosotros sabiendo sus idiomas*
>
> [It is interesting to think that those languages that we don't know, know English or Spanish but it is not the same with us knowing their languages]

Transcription of Simon during peer discussion (O2/D2)

      In this utterance, Simon uses indicators of contrast, i.e. *no es lo mismo* [It is not the same], to reflect on his own culture. He groups English and Spanish speakers as members of a predominant language-speaking community and contrasts these speakers with those of less-commonly taught languages, i.e., native languages. With this expression, Simon joins Mya as the only participants to evidence an "interest in asking complex questions about other cultures" (Blair, 2016, p. 117).

      Additional findings. After analyzing the aforementioned initial instances of cultural self-awareness, I became aware of at least two other means of expression that

participants were using to show evidence of cultural self-awareness. Because I had

limited my search to the articulation of insights into one's own cultural rules and biases, I

had previously not identified other outcomes present in the corpus. On closer inspection

of the corpus, the two means of expression that I found participants used were (i)

articulation of cultural forces within one's upbringing, and (ii) articulation of how

experience shapes one's worldview. I saw both means of expression as possible evidence

for cultural self-awareness learning outcomes, but was cautious about checking for

corroborating instances of cultural self-awareness.

Table 23

Summary of Discursive Evidence for Intercultural Learning Outcomes

Learning Outcome	Evidence
Articulation of cultural forces within one's upbringing	*Lia: muy triste… yo pienso... porque es una cosa de la cultura, es muy importante. Es muy raro que las escuelas no quieren... like... enseñar la gente a las lenguas nativas…* [Very sad… I think… because it is a culture thing, it is very important. It is very strange that the schools do not want to… like… teach people native languages]
Articulation of how experience shapes one's worldview	*Kady: dijo en el último video que el inglés iba a pagar más, si la película fuera en inglés… eh... y he escuchado que libros o películas que pagan más si están en inglés a que si son en español o en otra lengua…* [In the last video they said that English would pay more, if the movie was in English… uh… and I have heard that books or movies that pay more if they are in English instead of Spanish or another language] *Amelia: He oído un debate y también tienen un lengua indígena pero los sobrinos y las sobrinas no quieren aprender*

	[I heard a debate and they also have a native language but the nephews and nieces don't want to learn]

Table 23 shows examples for both these learning outcomes. However, these were the only instances of this type, for which reason I did not consider them fully developed outcomes in the sense of corroborated evidence. Instead, I considered these examples as blossoming indicators of cultural self-awareness. In Table 23, I present an instance of articulation of cultural forces within one's upbringing as presented in Lia's discourse. In this example, she acknowledged the lack of interest that schools show in teaching native languages, which she thinks is a sad fact. A second example refers to the articulation of how experience shapes one's worldview and presents Kady and Amelia in conversation during peer discussion. Here, both participants refer to experiences they had or background knowledge that shaped their insights into how certain languages can be perceived.

Articulation of cultural forces within one's upbringing. An example of this learning outcome took place when Lia delved deeper into possible explanations for the differences between predominant and non-predominant languages, which she explained as a consequence of schools' lack of interest in teaching native languages.

I noted however that, despite her social awareness, Lia did not actually relate these forces to her own upbringing. This made me doubtful about whether to categorize this piece of evidence as cultural self-awareness. However, what Amelia did successfully display with this comment was a comparison between the host and target culture—an insight that Mya quickly picked up on and followed with her own information about the teaching of less-commonly taught languages in Spain.

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Articulation of how experience shapes one's worldview. Immediately after

Mya's intervention regarding schools in Spain, Kady and Amelia contributed to the

discussion by introducing their own experiences:

Kady: Dijo en el último video que el inglés iba a pagar más, si la película fuera en inglés y he escuchado que libros o películas que pagan más si están en inglés a que si son en español o en otra lengua.

[In the last video they said that English would pay more, if the movie was in English… uh… and I have heard that books or movies that pay more if they are in English instead of Spanish or another language]

Amelia: He oído un debate y también tienen un lengua indígena pero los sobrinos y las sobrinas no quieren aprender

[I heard a debate and they also have a native language but the nephews and nieces don't want to learn]

Transcription of Kady and Amelia in conversation during peer discussion (O2/D2)

Interaction with Film Annotation as a Mediator for Intercultural Learning

Until now, I have described this study's findings on intercultural learning by

providing only a tangential description on the role that technology played in each

participants' performance of interculturality or their intercultural learning. In order to

provide more direct evidence that responds to the question *How can film annotation*

mediate intercultural learning? In this section I use multimodal transcriptions to present

the results for participant-digital artifact interactions. For better comprehension, I

organize the results by the categories (i) individual human-digital artifact interaction, and

(ii) group human-digital artifact interaction. The individual results showcase how

participants engaged with the film clips during their individual viewing of the annotated

clips, while group results provide transcripts of peer discussion that included interactions

with the annotated film clips.

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Individual interactions with annotated film clips. At the beginning of this chapter, I used interactive charts to map participants' individual intercultural learning outcomes and performance. Using similar maps, below I illustrate and explain participants' interactions with the annotated film clips, how these interactions led to the use of other mediators, i.e., peers and notes, and the final intercultural learning outcomes that came about as a result.

Mya. From Mya's corpus, composed of her answers to written questions, interactions with clips, notes, and peer discussions, I was able to track Mya's scaffolding of her own intercultural learning. To begin, Mya watched the four clips, which she examined for relevant information. Next, Mya interacted with the digital artifact by way of pausing the clips in order to take notes on facts and information shown in the annotations. Through this process, Mya showed that she views her own intercultural interactions as a learning opportunity, and that she was interested in acquiring the basics of the target cultures' history, politics, and society. While it would appear at first sight that this was an individual cognitive process, Mya could not have arrived at these learning outcomes without interacting with the digital artifact.

In this way, I understand Mya's interaction with the annotated clips as a co-construction of intercultural learning by using the affordances of artifacts in her environment. While interacting with the clips, Mya also offloaded information she saw in the annotated clips onto her worksheet, which she then took back into the first room where peer discussions were held. Finally, during pedagogical intervention and post-test peer discussions, Mya used the knowledge acquired from her notes—which at the same time were based on the annotated clips—to construct her learning along with her peers.

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Figure 27. Map of Mya's interaction with the annotated film clips. In the figure, mediational tools are yellow, contrasting with intercultural learning outcomes, in blue. Available at http://links.asu.edu/MyasMap
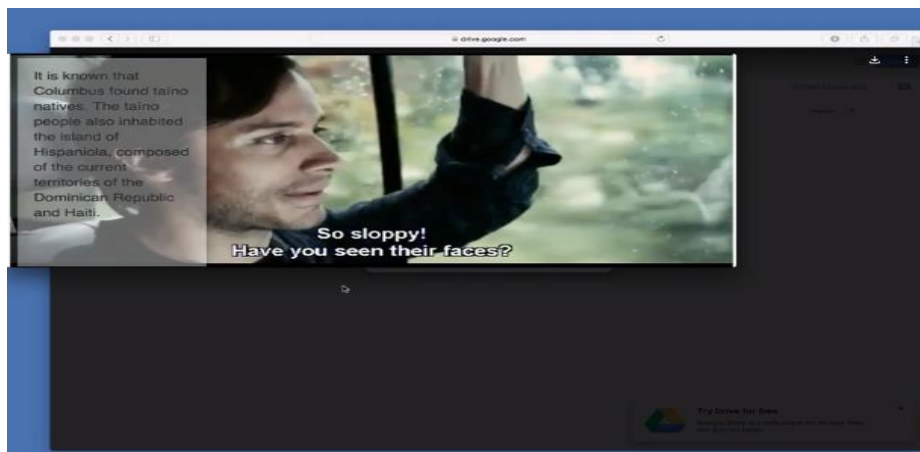
Figure 28. Screen capture of Mya's interaction with "*Taínos y Quechuas,*" the first of four annotated film clips.
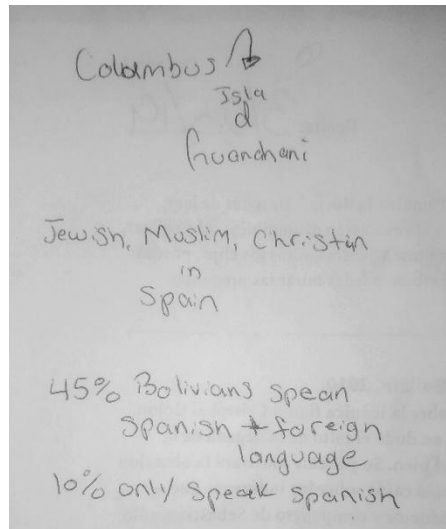
Figure 29. Mya's notes during the pedagogical intervention.

Further evidence of Amelia's interaction with the annotated film clips appeared when I observed the recordings of peer discussions. For instance, Figure 30 shows Amelia in conversation with her classmates. Although she was not directly interacting with the video at that moment, she directly referred to the annotated film clips as the source of her confusion, a confusion that she accepted and welcomed as a learning opportunity.

Figure 30. Still image of Mya's participation in peer discussion, during which she welcomes ambiguity about her intercultural interactions.

Yet more evidence of Mya's interaction with the clips appeared when Mya agreed with Amelia about the colonizers' more "aggressive" actions in comparison to Costa's "less hard" ways. Again, although Mya stated her perceptions while not directly interacting with the film, she referred back to the character, Costa, to arrive at her comparison between past and present colonial practices.

Figure 31. Still image of Mya articulating her comparison of past and present colonial practices during peer discussion.

To conclude, Figure 32 shows how Mya offloaded the knowledge she acquired from the annotated film clips onto her notes, which she later used to answer the question of what languages are spoken in Bolivia. In doing so, Mya chose to rely on her notes instead of the clip in order to access the information needed for answering the questions on the worksheets.

Figure 32. Mya reads her notes on native languages.

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Simon. Pre-test results for Simon showed some knowledge on the languages spoken in the U.S., and on the historical causes for English being the predominant language of the country. More specifically, Simon acknowledge that people speak various languages spoken in the U.S., specifically immigrants who arrive to the country and live among their own people, speaking their own languages. He also explained that English is the predominant language in the U.S. because of the arrival of the British, who spoke English, to the territory. Regarding the languages spoken in Latin America other than Spanish, Simon only recognized Portuguese, and did not know of any others. He did not have answers for the remaining questions of the pre-test. By looking at Simon's responses, I could see he was aware of language diversity in relation to immigration in the U.S., as well as to the spread of English due to colonization, even though he did not use those specific words to refer to that historical process. These results showed certain changes during the pre-test, which I will address after explaining Simon's learning process during the intervention.

As I have mentioned before, Simon's verbal interactions with his peers were not frequent throughout the study. However, this did not mean that Simon was not constructing his own learning through other means. Because Simon showed little evidence of spoken verbal communication, I had to rely on his non-verbal interactions— with the clips, with his notes—to gather evidence of his learning process. By doing this, I was able to track Simon's learning from viewing the annotated film clips, to taking notes, and then using the new information to reveal a complex learning process (Figure 33).
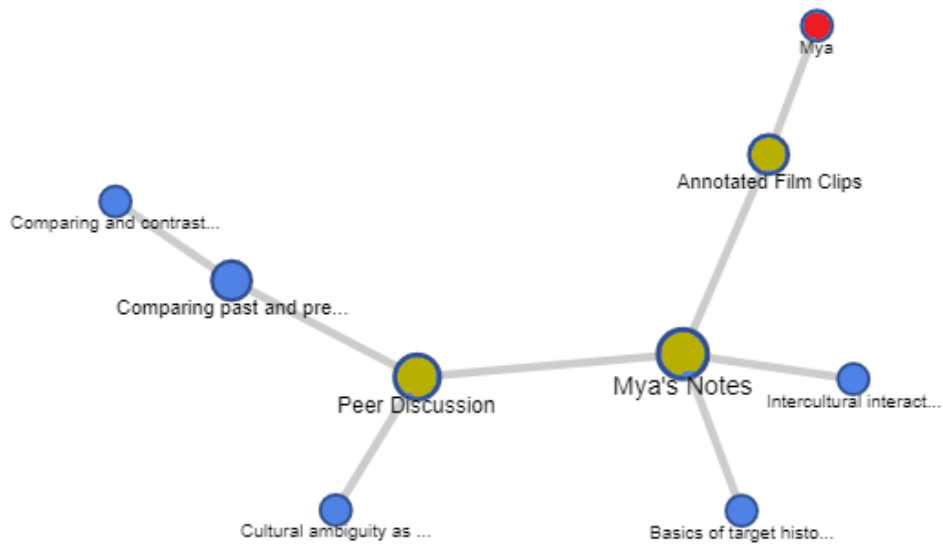
146
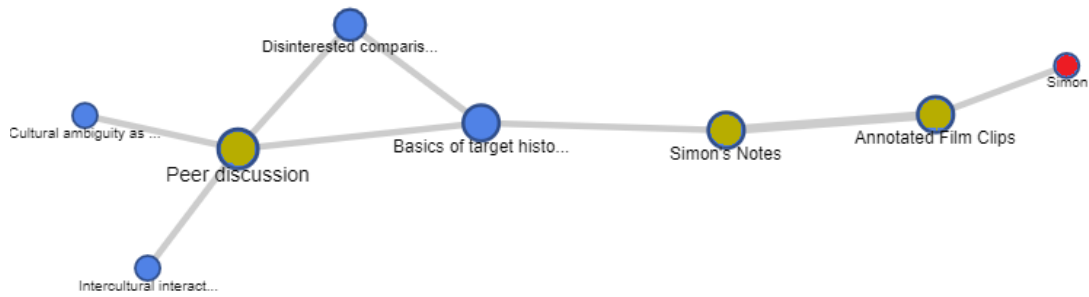
Figure 33. Map of Simon's interaction with the annotated film clips. In the figure, mediational tools are yellow, contrasting with intercultural learning outcomes, in blue. Available at http://links.asu.edu/SimonsMap

Similar to Mya, Simon manipulated the annotated film clips and chose to offload small pieces of factual knowledge onto his worksheet. By looking at Simon's notes— including the words "*católico*" and "Quechua" —I could see that the themes relevant to him were native languages and religion. I could also notice that, not only were these themes relevant to Simon, they were also new to him. I confirmed this when noticing that the theme of religion did not appear in his pre-test results but did, however, appear in his post-test results.

Figure 34. Screen capture of Simon's interaction with annotations on Quechua.

Figure 35. Screen capture of Simon's interaction with annotated film clips. Here, Simon watches the clip from which he draws his note "*católico*"

With the evidence of Simon's notes, his pre-test and post-test results in hand, it was clear that, regardless of Simon's low verbal participation in peer discussion (Figure 36), he had indeed displayed evidence of achieving intercultural learning outcomes. He had arrived at these outcomes through a process of self-reflection mediated by the cultural content of the film clips.

Figure 36. Still image of Simon's participation in peer discussion. Here, Simon manifests self-awareness and compares himself to speakers of less-commonly taught languages

More specifically, Simon's post-test showed further evidence of acquisition of native languages in the U.S. Because the videos do not address native languages in the U.S., Simon's response had to have come from his peer discussions, and from an extrapolation of native languages in Latin America to the U.S. context. When referring to the predominant languages in the U.S. and Latin America, Simon mentioned English and Spanish. Now in the post-test phase of the study, he also included information on how colonizers and the church were some of the historical causes for this fact. Because Simon only wrote *conquistadores* [conquistadores] and *la iglesia*, [the Church] it is unclear whether he referred to these two elements causing the spread of Spanish and English, or whether he only connected the Church to the spread of Spanish, for instance. In any case, Simon's use of the term *conquistadores* [colonizers] showed recognition of the violent historical processes in the U.S., which he had not acknowledged during the pre-test. The element of the church was also new to Simon's responses and, as mentioned, consistent with his notes.

Lia. In her pre-test results, Lia recognized the presence of many languages in the U.S., including Spanish, English, French "and many other languages." She described them as spoken by immigrants as well as by natives to the U.S. When talking about the historical causes for English being the predominant language, Lia mentioned British colonizers, who spoke English. Regarding non-Spanish languages spoken in Latin America, she mentioned Portuguese, as many of her peers did. However, she was the only one to add here the native languages of each country, and to compare them to the native languages of the U.S. In this way, although native languages are not part of her answer about languages spoken in the U.S., I could see she was familiar with this fact.

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Finally, Lia pointed out that she did see differences between the U.S. and Latin America in terms of the development of the use of various languages. She also described the historical causes for Spanish in Latin America as the result of a colonization process. Out of all the participants, Lia was one of those who provided more thorough and accurate answers during her pre-tests.

During the pedagogical intervention, Lia viewed the four film clips, replaying the first clip (Figure 37) and pausing the second clip in order to take a note on Christianity (Figure 38). She also took multiple notes on her worksheet, among which only one of these notes aligned in theme to Lia's participation in peer discussions, or to her responses in the post-test.

Figure 37. Screen capture showing Lia's interaction with the clips to rewatch "*Taínos y Quechuas*."

Figure 38. Screen capture of Lia's interaction with "Speak in Christian." The image shows Lia pausing the video to read the annotation.

Lia's note on the name of the language spoken in Bolivia—which she jots down as "*Quechua?*" and later as "*Quechua y otra lengua*" —is the only evidence that Lia's interactions with the annotated film might have led to an acquisition of basics of the target culture (Figure 39). Another possible explanation for this is that Lia already had some cultural knowledge of Quechua before watching the videos—which is possible considering both her pre-test shows her noting native languages as part of the language variety of Latin America and the U.S.

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Figure 39. Map of Lia's interaction with the annotated film clips. The image shows possible associated outcomes. In the figure, mediational tools are yellow, contrasting with intercultural learning outcomes, in blue. Available at http://links.asu.edu/LiasMap

Throughout the study, there was no substantial evidence for Lia's intercultural outcomes. By this I mean that I could not corroborate her responses and interactions across data sources because they were not consistent. For instance, despite her note-taking, Lia did not express to her peers or write down in her post-test anything indicating her knowledge about Quechua. In addition, although her pre-test demonstrated she had some knowledge about language natives in the studied regions, she did not express any of her own reflections on the state of these languages, not before or after viewing the clips (during peer discussion or the post-test). When sorting this evidence, it was unclear to me what Lia had actually done during the study, if she had not engaged in consistently building on her knowledge, but had participated actively in peer discussions.

> There does not seem to be any alignment between what Lia writes down and what she answers in the post-test.

Researcher's observation notes during triangulation of results across data sources

A closer inspection of Lia's discourse revealed that Lia was using her peers as a source for offloading knowledge. By this I mean that she was not using her background knowledge, notes, or film clip viewing experience to interact with her peers. Instead, Lia was using peer discussions to express things she might have already known, or to repeat and elaborate on her peers' responses. While this was not evidence for intercultural learning in the ways in which I had predicted, it was certainly evidence for some kind of co-construction of interculturality involving performative skills and efficient use of her interlocutors as resources.

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I confirmed that Lia had not used the task in question to develop her learning when I saw her post-test results: she mentioned she learned more about what languages are spoken in Latin America but did not refer to them by name; She wrote about English and Spanish being spoken broadly in Latin America and the U.S. due to colonization, an answer that she had already provided in her pre-test. Lia also expressed that she believed native languages are not valued like English and Spanish are—an argument built on Mya's intervention, as seen below—, and she argued that the movie claims English (speakers) to be a more popular audience, with more money, and that native languages are not important. This last response specifically is not present in the film at all, except for the idea that English-speaking films generate more income. When prompted to respond about whether she had ever had similar experiences to those of the film, Lia responded she had not because she only spoke English for most of her life. Although this may be true for her, there are many ways in which English speakers can have experiences similar to those portrayed in the clips—if they are in the position of Costa or Sebastián, for instance—thus, her argument is not consistent with the clips' content.

Amelia. Amelia began the study with knowledge on the many foreign languages spoken in the U.S., which she listed as Spanish, German, French, Chinese, Japanese, etc. She explained that the people who know how to speak these languages are the ones who speak them, a self-evident claim. When asked about why English was the predominant language in the U.S., Amelia mentioned that the first "Americans" came from England, and they spoke English. She alluded to similar historical processes being responsible for Spanish as the predominant language of Latin America, although here she used the word *conquistadores* [colonizers] where for English she had not. Regarding the languages

other than Spanish spoken in Latin America, Amelia said they were Portuguese and English, a mix of other languages. Comparing both regions, Amelia explained that they both present significant immigration and that citizens from other countries bring their own languages to the new region.

Unlike for Simon who did not present any elements of mixed ethnicity or heritage in his language contact profile, it is possible that Amelia's focus on immigration had something to do with her cultural background. The daughter of Asian parents, it is clear that Amelia's family came to the U.S. from another country, regardless of how many generations this might be from her own. Amelia's language contact profile also showed that she speaks English as her first language (with Mandarin as her heritage language), which might have determined her answer about the first "Americans" who spoke English. However, because I had no further information on Amelia's insight, I could not determine exactly what she meant by that statement.

During the pedagogical intervention, Amelia replayed the film clips "*Taínos y Quechuas*" and "That's fucking great, man" (Figure 40). She also paused the second clip, "Speak in Christian" (Figure 41).

Figure 40. Screen capture of Amelia's interaction with the annotated film clips. The image shows Amelia replaying "*Taínos y Quechuas*," the first of four clips.

Figure 41. Screen capture of Amelia's interaction with "Speak in Christian," the third of the four annotated film clips. The image shows Amelia clicking on the video player's scroll bar.

Following a linear, scaffolded path, Amelia benefited from the information on the annotated film clips, and offloaded the knowledge obtained from them onto her notes. Her notes evidenced a special focus on the theme of power as it appeared in the film clips—coloniality/colonialism—(Figure 42), a theme that she also noted in her post-test answers.
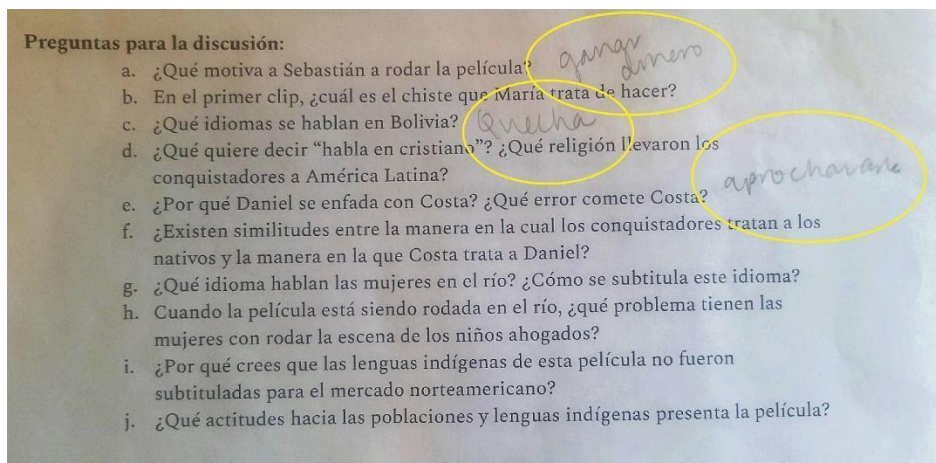
Figure 42. Amelia's notes during the pedagogical intervention. Three pencil-written notes read "*ganar dinero*," "*Quechua*" and "*aprovecharse.*"

Building on her interaction with the clips as well as on her notes, Amelia seemed to have learned about the languages spoken in Bolivia. In addition, she arrived at a more interesting development, which was her reflection on the U.S. as a colonized territory. I explained before how in her pre-test, Amelia had indicated that the first "Americans" who came from England to the U.S. spoke English. She also noted that a similar process took place in Latin America, although here she used the words *conquistadores* [colonizers] who she indicated were from Spain. The distinction Amelia made between these two similar historical processes seemed like a coincidence until, in her post-test answers, she shifted her language to explain that England and Spain—both—had colonized the territories that now spoke their predominant languages. With evidence of Amelia's notes on power, and her repeated playing of the annotated clips involving past and present-day colonial practices (film clips 1-3), it appeared that Amelia had reflected on the U.S. as also being shaped by the process of colonization (Figure 43). If nothing else, it is possible to say that Amelia had first used quotation marks for "Americans" to

hint at a second meaning, but that in her post-test answers, she was satisfied with providing a more informative response. Finally, there was no evidence in the corpus to determine whether or not she was eventually able to explicitly compare and contrast colonial and neocolonial practices.
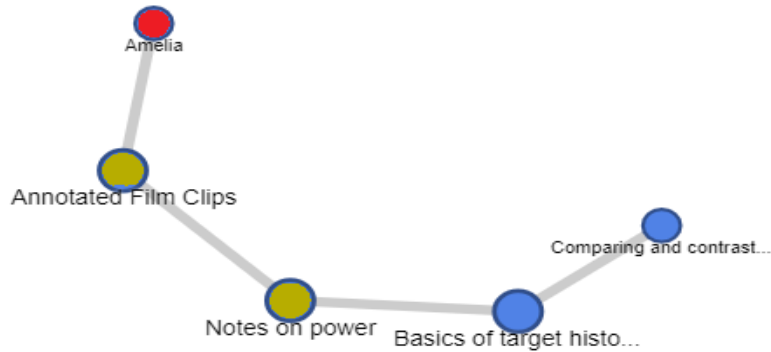
Figure 43. Map of Amelia's interaction with the annotated film clips. As in previous figures, mediational tools are yellow, contrasting with intercultural learning outcomes, in blue. Available at http://links.asu.edu/AmeliasMap

What I could confirm about Amelia's learning was that she was able to reflect on having forgotten to mention native languages in her pre-test, a reflection that she made during her post-test. Additionally, Amelia reiterated her knowledge of English and Spanish coming from colonization processes, and this time she used the word colonization to refer to U.S. processes as well. Amelia showed a certain dismissal of native populations when she responded that native populations are small, and so there is no reason for people to learn their languages. This statement, while part of her perception, is not necessarily true, and widely depends on the population to which she is referring. For instance, in Bolivia, natives constitute a significant part of the country's population. Finally, Amelia

commented that the movie claims the powerful will always have more, and that indigenous languages are dying. While the first part of this response clearly refers to the power relationships she noticed while watching the clips, the second part of the statement did not appear in the clips or in discussion with peers. Therefore, this was Amelia's perception completely, and not necessarily an argument made by the movie, as she claimed.

Kady. Kady's pre-test answers showed an ambiguous description of languages and historical processes in Latin America and the U.S. For instance, she mentioned that Spanish was the most commonly spoken language in the U.S. aside from English but did not note any other languages. She recognized Portuguese as another language spoken in Latin America aside from Spanish, but nothing more. When prompted about the historical causes for English being the predominant language in the U.S., she claimed English was the first language, a statement that is historically inaccurate. There was no further evidence that she had any knowledge on colonization in Latin America either, because her answer stated that Spanish is widely spoken "because of the history of those countries," an ambiguous response. Finally, she mentioned there are similarities between the U.S. and Latin America regarding the use of various languages "because both countries speak both languages," a response that does not specify language, and that is incorrect in her description of both regions as countries.

Along with few interventions during peer discussion, as well as with a lack of evidence for intercultural learning outcomes, Kady's interactions with the annotated film clips were uneventful. She viewed the clips in order, 1-4, from beginning to end, without pausing, rewinding or otherwise manipulating the video. She did not take any notes while

viewing the clips, nor did she reference them during peer discussions. Figure 44 shows

Kady's process, which is unlike that of her peers.
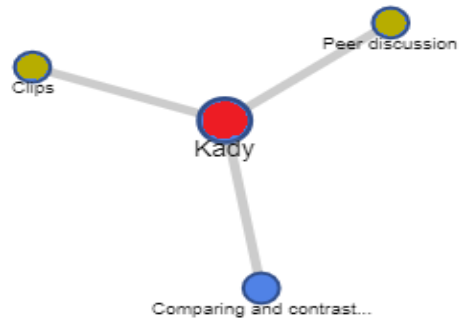
Figure 44. Map of Kady's interaction with the annotated film clips. Available at

http://links.asu.edu/KadysMap

While other participants used resources recursively, meaning they built on

different resources and used them repeatedly as needed, Kady showed no interaction

among tools. She did not offload cognition from the annotation onto her sheets, and she

did not show any evidence in her post-test of knowledge obtained through discussions or

the clips. For instance, in her post-test results, Kady said that many people do not pay

attention to languages other than English and Spanish because they are not popular. She

arrives to the conclusion that all languages are important, without further insight, and

claims the movie presents English as the most valued language. Her responses are unclear

and lack transparency into her insights. While this issue could be addressed in future

studies that conduct interviews to prompt more thorough answers, or that ask participants

to write down a minimum of words in their tests, the present study did not show

significant evidence of Kady's learning process, or her intercultural learning outcomes.

Group interactions with annotated film clips. During the pedagogical intervention and post-test phase of this study, I let participants know that the film clips were available to them on the pod's large screen, and that they could refer back to them as needed. I had predicted that in answering the questions—particularly the pedagogical intervention questions—participants would be inclined to play and interact with the videos in order to retrieve necessary information, or to provide clarification. However, because I had given participants worksheets including a list of questions on which to take notes, all members of the group—with the exception of Kady—used this resource to offload the information they believed would be relevant to complete the class activity. This use of available resources led to participants needing to refer back to the film on very limited occasions. The figures in this section show the moments when, as a group, participants actively used the film clips to support their learning.

The first relevant moment of interaction between the group and the film clips took place while participants were discussing the questions on the pedagogical intervention worksheet). When Amelia noted that Sebastian's motives for filming the movie were financial, Lia interrupted the discussion asking for clarification on who Sebastian was, given that she believed Sebastian's intentions were positive. While Lia explained her confusion, Simon gazed at the screen, a cue that Amelia picked up and expressed by asking the group whether they should watch the clips. At that point, Simon who took control of the mouse and clicked on the first film clip. While watching the clip, the group paid attention to the characters' words to attempt deciphering each character's names. Finally, when Sebastian addressed Costa, they group arrived at an agreement about the

characters and their intentions in making the film. Figure 45 offers a multimodal

transcription of the groups' conversation.

Amelia: *¿Qué motiva a Sebastián a rodar la película?*

    [What motivates Sebastian to film the movie?]

    He puesto para ganar dinero porque… amm… como dice en el resumen, Bolivia es un país latinoamericano más pobre...

    [I wrote down to make money because… ummm… as the synopsis says, Bolivia is a poorer Latin American country]

Amelia: *Bueno eh... en el primer clip, ¿cuál es el chiste que María trata de hacer?*

    [Well uh… in the first clip, what is the joke Maria tries to make?]

Lia: *Una cosa, yo pensé que Sebastián fue la personaje que… la persona que quiere demostrar las tragedias y todo, no para el dinero, yo pensé que fue Daniel que quien… que quiere dinero*

    [One thing, I thought that Sebastian was the character that…The person who wants to show the tragedies and all, not for the money, I thought it was Daniel who… who wants money]

Simon: [gazes in direction of the first clip on the screen]

Amelia: *¿Deberíamos mirar el clip?*

    [Should we watch the clip?]

ALL: [laugh]

Simon: [clicks play button on clip]

161
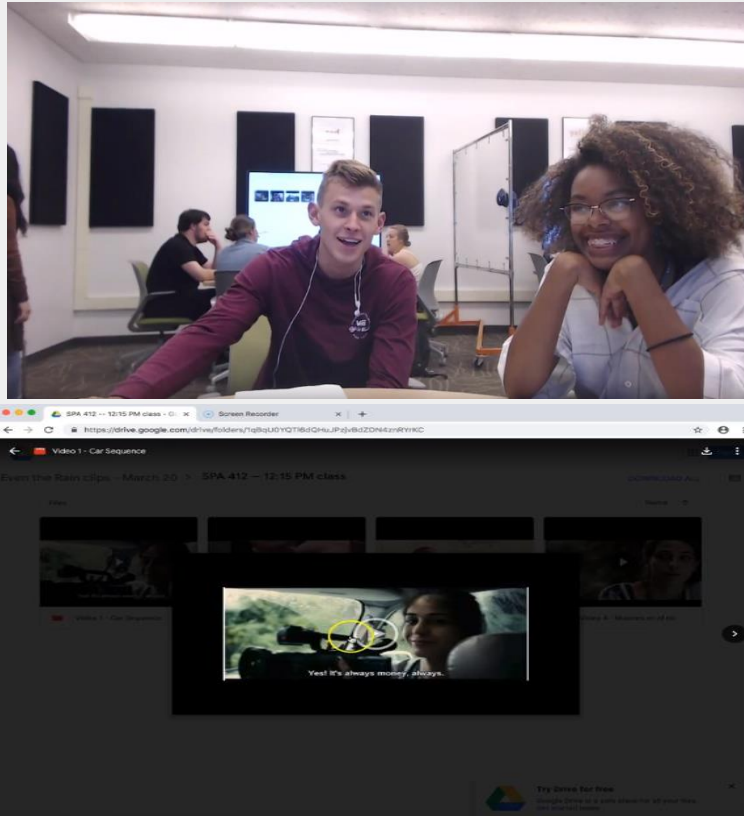
CLIP:

Lia: *Yo no sé los nombres, pero...*

    [I don't know the names but…]

Amelia: *Ehh… Sebastián es…el… conducir… Daniel es el… americano…*

      [Uh… Sebastian is the… drive… Daniel is the… American…]

Lia: *Sí, pero Sebastián es él…*

    [Yes, but Sebastian is him…]

CLIP:

Amelia: *Oh… Oh Costo… ¿eso es Costo? ¿O Costa?*

      [Oh… Oh Costo… Is that Costo? Or Costa?]

Simon: [Nods]

Amelia: *Costa. Es Costa.*

      [Costa. It's Costa.]
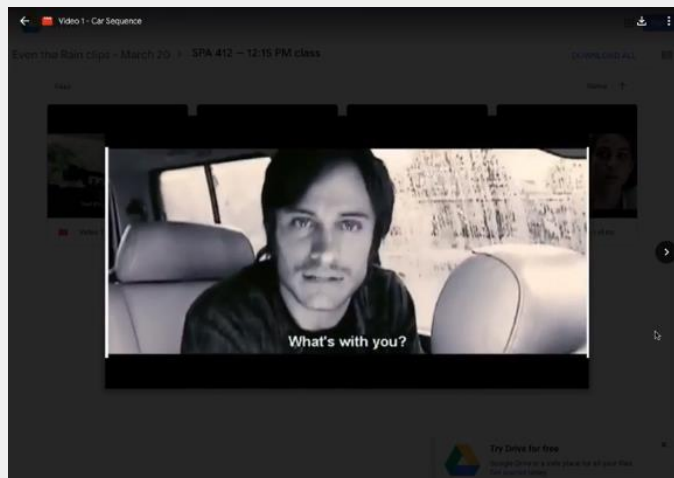
CLIP:

Amelia: *Eso es Sebastián.*

      [That is Sebastian]

Lia: *Sebastián no solo quiere dinero. Quiere contar la historia de los nativos*

      [Sebastian doesn't just want money. He wants to tell the story of the natives]

Figure 45. Multimodal transcription of participants in interaction with film clips.

Other moments of interaction between the group as a whole and the annotated

film clips include participants clarifying who Daniel is (Figure 46) and participants

confirming the title of the film as they leave the classroom, in an attempt to decipher the

meaning of the Spanish words in the film's title (Figure 47).

Lia:	*Yo no sé quién es Daniel*
	[I don't know who Daniel is]
Mya:	*Es él en la última, ¿no?*
	[That's him in the last one, isn't it?]

Amelia:	*Es él, es él…*
	[It's him, it's him…]
Mya:	*Ahhhh...*

Figure 46. Multimodal transcription of group interacting with clip regarding Daniel

Mya:	What's the movie called?
Amelia:	"*También la lluvia*" [Even the rain]
Lia:	*También,* which is like "oh, there's also rain…"
Amelia:	Instead of like… even…
Lia:	Maybe I took it the wrong way then
Amelia (off camera):	It says "Even the rain" on here

Mya: Oh... "Even the rain"

Figure 47. Multimodal transcription of Mya, Amelia and Lia during peer discussion

(O2/D2) (originally in English).

CHAPTER 5

DISCUSSION, IMPLICATIONS, AND CONCLUSIONS

The past chapter presented the results on the research questions guiding this study. I have presented these results of this study in a variety of complementary ways that are most relevant to making sense of how the evidence—triangulated across data sources—provided answers to the research questions: (a) does the inclusion of film annotation mediate intercultural learning, and (b) in what ways does the inclusion of film annotation mediate intercultural learning? In presenting these results, I summarized participants' responses to the language contact profile questionnaire, their pre- and post-test written responses. Then, I provided a description of each participants' learning process based on their interaction with the instructional materials of this study. Until this point, I have shown how although participants interactions with the annotated film clips varied in nature—with learners at times making direct references to the clips, or indirectly drawing their post-test responses from the notes they took while watching the clips—throughout the study, all participants showed some evidence of having used film annotation as a resource in their intercultural learning process. I have also, thus far, made the distinction between what constituted evidence of intercultural learning *outcomes*, and evidence of the intercultural learning *process*. However, it is important to restate these differences in order to frame this discussion.

Based on Dervin's (2011) liquid approach to interculturality, in this study I have distinguished outcomes from process. The rationale behind this is to distinguish intercultural learning outcomes—which may be problematically understood as fixed, stable, or permanent outcomes—from the intercultural learning process—in which

outcomes are only a temporary and incomplete snapshot of a learners' co-construction of interculturality along with their interlocutors. Following Dervin (2011), this distinction also seeks to challenge the evidence value of learners' discourse and behavior, arguing that these demonstrable behaviors do not necessarily correspond with learners' internal processes. Moreover, even if such behaviors represented internal mental states, they would only represent an individual in their current interaction with an interlocutor. Such an interaction would also be incomplete evidence for intercultural competence—as a fixed construct—because each new interaction allows the learner to co-construct their interculturality. Therefore, while this study does use the construct of intercultural learning outcomes, it does so in very distinct ways from that which appears in the literature.

The intercultural learning outcomes observed in this study are three, and their description is based on Blair's (2016) foundational attributes map of intercultural learning. The three outcomes are: (a) developing insights into one's own cultural rules and biases, (b) comparing and contrasting home and target culture, and (c) acquiring basics of target history, politics, and society. I refer to the term *outcomes* whenever learners provide evidence that aligns with Blair's description of these attributes, and the evidence appears corroborated across different data sources, whether peer discussion, individual screen recordings while watching annotated film clips, notes, or written responses. In my analysis, what constituted evidence was different for each outcome. For instance, when searching for evidence of cultural self-awareness, I looked at participants' consistent use of language in which they acknowledged themselves as intercultural individuals. This language could include references to their context, environment,

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upbringing, personal experiences, among others. Conversely, two types of behaviors/discourses constituted evidence for deep cultural knowledge. Regarding the acquisition of basics of target culture, the evidence consisted of participants consistently expressing across data sources a reiterated knowledge of factual information about the target culture. For instance, to assess that there was evidence of a participants' knowledge about the colonization of Latin America (e.g., where Columbus arrived, what populations he found, what language Spanish colonizers brought to America), I needed to see the participant interact with annotations on this information and later incorporate it into peer discussions, or write about this information in their pre-test and later confirm their knowledge during the pre-test, or any combination of the same factual knowledge appearing across data sources. Similarly, to recognize evidence of comparing and contrasting home and target culture, I would need to see participants making explicit comparisons/contrasts across data sources. This could occur within one same data source (e.g., during one answer to the post-test question) or if participants referred to their own previous answers in order to express comparison/contrast.

Such intercultural learning outcomes were distinct from intercultural learning processes. When referring to the latter, I am addressing the interactional process through which learners arrive at the outcomes explained above. In this way, I used intercultural learning outcomes as the point of departure for my observation and analysis of the learning process. If participants showed evidence of ICL outcomes, I would delve into their learning process to observe where these outcomes appeared. In this way, I revealed moments of emergent learning, and noticed what artifacts or cognition-enabling entities interacted with the learner at that moment.

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When looking at the intercultural learning *outcomes* for which learners showed evidence, there was a visible trend that showed that participants acquired basics of the target culture's history, politics, and society. In the following discussion, I explore the reasons for this evidence. In addition, I also discuss the intercultural learning *process* which the design of this study revealed. To contextualize these findings, I inscribe them within the theoretical frameworks discussed at the beginning of this investigation, Atkinson's (2010, 2014) sociocognitive framework, and Dervin's (2011) liquid approach to interculturality. Following the discussion, I conclude the chapter by offering a reflection on the limitations of this study, potential routes for future research, and recommendations for scholars and educational technology practitioners as they continue to develop an understanding of how digital artifacts mediate human learning.

Discussion

The goal of this study was to answer whether film annotation can mediate intercultural learning and, if so, how this happens. The questions emerged from a critical look at the two leading theoretical frameworks scholars use as a foundation for computer-assisted language learning research—cognitivism and sociocultural theory—and an interest in using an integrative framework, the sociocognitive approach to language learning, to understand how digital artifacts can mediate intercultural learning. In addition, I also used Dervin's (2011) approach to liquid interculturality as a framework to understand intercultural learning as a co-constructed process, which takes place during interaction with human and non-human entities. This idea aligns with the sociocognitive premise of distributed cognition, in which cognitive agency is distributed—albeit asymmetrically—across human and non-human entities. Following Thorne &

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Hellerman's (2017) interpretation of this premise, I understand a digital artifact, i.e., film annotation, as an interlocutor for the co-construction of learning and, in this case, intercultural learning. The relevance of doing so lies in the need for CALL research to follow a theoretical approach that promotes the transformational use of technology for intercultural learning, while understanding the capacities and limitations of the digital artifacts that are involved, and reflecting on areas for teacher training and development.

In addition to suggesting the proliferation of sociocognitive-based research in CALL, I have also explained that, because language learning exists within a cultural environment, it is not sufficient to study language learning only under this lens. We must also inquire about how Atkinson's (2010, 2014) approach can inform studies on intercultural learning as a necessary skill set for today's world. A sociocognitive approach to digitally-mediated intercultural learning must necessarily include a critical look into the role that interlocutors—human and non-human—play in intercultural learning. In this regard, scholars might take interest in a liquid approach to intercultural learning (Dervin, 2011) in order to look beyond discourse and performativity as evidence for intercultural competence outcomes.

Attempting to model the integration of these two theoretical frameworks—the sociocognitive approach to cognition, and the liquid approach to intercultural learning—I understood film annotation as a digital artifact and cognition-enabling entity, one with which participants could engage in human-computer intercultural interactions. Findings for this study showed that participants engaging in human-computer interaction with the digital artifacts used the annotations as one of various resources during the intercultural learning process. However, this process was not enabled solely by film annotation. Other

resources such as note-taking/notes, peer discussion, personal experiences, and even background knowledge, also contributed to the intercultural learning process. Because this study focuses on the role of the digital artifact, below I focus on understanding the role of film annotation through the lens of this study's theoretical framework.

Findings for this study showed that film annotation enabled intercultural learning. More specifically, the annotated film clips provided participants with basic factual information on the target culture, which learners used (a) to develop their factual knowledge about the target culture, (b) as the foundation for comparison/contrast of target and home culture, (c) as a contextual referent to engage in further insight about the self, and more generally, and (d) as an initial resource, which, paired with note-taking and peer discussions, provided iterative opportunities for co-constructing intercultural learning. By looking at these findings, it is evident that film annotation alone did not trigger intercultural learning outcomes. Rather, as Atkinson (2010, 2014) asserted, the digital artifact was part of a larger learning ecosystem (van Lier, 2004) that enabled learning by providing learners opportunities to align or interact with it. This finding is also consistent with Dervin's (2011) idea of interculturality as a co-constructed process: humans are not just able to develop intercultural competence, instead they interact with various interlocutors—in this case, human and non-human—and engage in a reiterative, fluid process. Such is the intercultural learning process.

Evidently, this evidence does not only support intercultural learning, but also provides opportunities to reflect on learning in general. It is not possible that intercultural learning is fluid, yet learning in general leads to static competences, knowledge, or skills.

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Hence, Atkinson's and Dervin's assertions likely speak not only to language and intercultural learning, but to learning on a broader scale.

In addition to enabling an intercultural learning process which led me to observe evidence for intercultural learning outcomes, film annotation also provided participants with opportunities for learning which they viewed as positive as they were able to respond to discussion questions, and allowed them to welcome cultural discomfort. Again, these outcomes—for which there was corroborated evidence across data sources—were not the result of single interactions between the learner and the annotations; they were product of a reiterative, recursive learning process in which participants drew knowledge and resources from one or more cognition-enabling entities.

To explain in more detail these findings, the following section answers more directly the question: "Does film annotation mediate intercultural learning?" by summarizing the specific intercultural learning outcomes participants demonstrated throughout the study, as well as specific instances of evidence for these outcomes. Next, to address *how* film annotation mediated intercultural learning, I explain how the digital artifacts facilitated, mediated or otherwise helped participants mediate their own intercultural learning. To conclude, I explain the pedagogical implications of this study, as well as provide suggestions and future directions for CALL research, pedagogy, and practice based on this study's findings.

Does film annotation mediate intercultural learning?

I constructed the first research question of this study based on the concept of *mediation*, which is the capacity humans have to create and use symbols as tools that act upon their own psychological activity (Van Patten & Williams, 2015). I consider the term

mediation as compatible with the notion of *enabling* present in Atkinson's (2010, 2014) sociocognitive approach. Therefore, this section uses both *mediating* and *enabling* to describe the activation of psychological activity by way of the affordances of digital artifacts.

Taking cues from Dervin (2011), I suggested earlier that visible behaviors in individuals are not necessarily reflections of their internal worlds. This means that intercultural competence, as an observable behavior, can be interpreted in different possible ways. As Dervin suggests, on the one hand, discursive and behavioral evidence can be evidence of performed interculturality, meaning that individuals are not actually engaging in the co-construction of interculturality but instead are playing a role in order to satisfy social needs. Evidently, one could argue that this performance also entails a comprehensive knowledge of cultural frameworks, as well as the capacity to co-construct interculturality, regardless of whether this co-construction is based on good intentions. On the other hand, it is also possible that discursive/behavioral evidence is a reflection of internal skills and knowledge. However, even in this case, such reflection is only temporary, as internal mental states will continuously change with each new interaction with interlocutors.

In this way, intercultural skills and knowledge are not a finished product of acquired capability, but instead are dynamic and fluid capacities that allow the individual to construct interculturality along with their human or non-human interlocutors at any given moment, and within a given context. However, when following this interpretation of what intercultural competence is, it becomes problematic to define components of intercultural learning such as deep cultural knowledge, and cultural self-awareness as

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outcomes. If intercultural competence *per se* does not exist as a finished product, but is instead only a fluid, reiterative composite of knowledge and skills, then what are intercultural learning outcomes? Do they exist? and, if so, how do we assess them? It is not a question of ability but of ethics.

If individuals are constantly co-constructing their interculturality along with their interlocutors then, the forms of intercultural learning that we know—the various learning outcomes that make up the totality of this competence—may change at any given time, and with any given interlocutor. For this reason, intercultural learning outcomes cannot be outcomes in the sense of definitive results or a permanent assessment of an individual's capacities. Instead, they are outcomes in the sense of a temporary snapshot resulting from a given interaction, within a specific context, among particular interlocutors.

With this nuance in mind, I describe below the two general intercultural learning outcomes examined in this investigation, and whether they were mediated—or enabled— by film annotation during this study, and how this occurred. At this point, the reader should keep in mind the distinction in what constitutes evidence for each outcome, which I explained at the outset of this chapter.

Cultural self-awareness. Among the various components of cultural self-awareness, this study examined individuals' awareness/recognition of their own cultural rules and biases. In searching for evidence that participants had achieved this outcome, I looked for language that would evidence a sense of self as shaped by a cultural context. I anticipated that finding such language would be my first observation of cultural self-awareness, which I would later corroborate across other moments of discourse and

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behaviors. However, it was quickly apparent to me that participants were not using a self-reflective or self-descriptive language in relation to cultural self-awareness. Instead, participants had indirect forms of reflecting on their insights without revealing their perceived cultural rules and biases. Lia, Mya, and Simon displayed three relevant examples of cultural self-awareness in this sense in their post-test.

Amelia:	*Sí, me olvidé que-- porque no están en la prensa así que me olvidé* [Yes, I forgot that-- because they are not in the press so I forgot]
Mya:	*He puesto que sí he aprendido algo nuevo pero al mismo tiempo me dejó más confundida porque eran clips cortitas-- cortitos-- Pero ahora tengo ganas de aprender más, así que creo que está bien* [I wrote that yes, I learned something new but at the same time I am more confused because they were short clips-- But now I want to learn more, so I think it's alright]
Simon:	*Es interesante pensar que esos idiomas que no sabemos saben inglés o español pero no es lo mismo con nosotros sabiendo sus idiomas* [It is interesting to think that those languages that we don't know, know English or Spanish but it is not the same with us knowing their languages]

Transcription of Lia, Mya, and Simon during peer discussion (O2/D2).

Amelia's observable behavior throughout the study was that of an engaged student. During the pre- and post-tests, she thoroughly provided answers to every question, and frequently participated in group discussions either by leading the conversation and reading each question out loud, or by actively responding to her peers' interventions. From the pre-test, I gathered that Amelia had some knowledge of historical facts regarding colonization, as she could trace English language back to British settlers. However, her idea of English being the language of the first "Americans" was inaccurate, as the first Americans on the North American continent were Native Americans, later

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Spaniards, and then English. Amelia's pre-test knowledge of the diverse languages

spoken in the U.S. and Latin America was also mostly accurate

Porque los primeros "Americanos" vinieron de la Inglaterra, donde hablan inglés

[Because the first "Americans" came from England, where they speak English]

Amelia's written pre-test responses (O1/W1)

However, during this same phase of the study, Amelia omitted native languages

from her list of languages spoken in the U.S. besides English, as well as from the list of

languages spoken in Latin America besides Spanish.

Español, alemán, francés, china, japón, etc. la gente que sabe cómo hablar estas lenguas las hablan (sic)

[Spanish, German, French, China, Japan, etc. The people who know how to speak these languages speak them.]

Amelia's written pre-test responses (O1/W1)

It was not until after viewing the film clips and engaging in discussion with her

peers for a second time, that Amelia became aware that she had not included native

languages in her pre-test. At this point, without access to her pre-test, Amelia efficiently

took inventory of her previous knowledge as compared to the new information she had

just learned. She successfully managed to include the new information in her

conversation with her classmates, as well as in her post-test results.

Pues, se me olvidé que existen idiomas nativas o indígenas (sic)

[Well, I forgot that there are native or indigenous languages]

Amelia's written responses to the post-test (O2/W2).

This process shows how Amelia used different entities in this interaction: she remembered her responses from the pre-test, compared it with information newly acquired through the annotated film clips, and included this information in discussion with her peers, who had also noted native languages in their post-test response to the language spoken in Latin America.

Interestingly, the way in which Amelia chose to express this reflection did not necessarily reveal evidence of intercultural learning. By explaining to her peers that she had forgotten to include native languages because they were not in the press, Amelia failed to admit responsibility for her own omission. She shifted the responsibility towards "the press," an environmental feature that she purported was responsible for reminding her of the existence of native languages in the country. By shifting the responsibility, Amelia both acknowledged her awareness of contextual elements that affect her learning, and at the same time, disengaged from actual self-awareness about how her own cultural rules and biases resulted in the omission. I analyze this behavior using Blair's (2016) foundational attribute of *openness*, for which revealing a disposition to being proven wrong is an indicator. As the knowledgeable and engaged student that Amelia made herself out to be throughout the study, she used her knowledge about how context affects learning to justify her responses. In this way, Amelia resisted being proven wrong and, therefore, did not show evidence of having acquired the attribute of openness.

In sharp contrast with Amelia, Mya positively demonstrated an awareness of her own unawareness. From looking at Mya's discourse as well as her behavior while taking notes and watching the clips, it appeared that Mya was interested and curious about the topics presented by the film, but felt that she was unprepared to understand them due to

her lack of in-depth knowledge of those themes. This became clear when Mya expressed that, although she learned something new, she was left more confused and now wanted to learn more. This expression, in itself, does not constitute cultural self-awareness. However, according to Blair's (2016) description of intercultural outcomes, Mya's positive disposition toward cultural ambiguity, and to intercultural interactions as learning opportunities—i.e., interaction with host and target cultures via the film—is a first step toward potential cultural self-awareness in which she understands curiosity and discovery as positive experiences.

Finally, Simon was the only participant to explicitly address his own cultural bias, albeit implicitly. By including himself within a perceived cultural group—speakers of English and Spanish—Simon expressed that he found interesting the contrast between natives who also spoke majority languages, and speakers of majority languages—such as himself—who had no knowledge of these native languages.

> *Es interesante pensar que esos idiomas que no sabemos saben inglés o español pero no es lo mismo con nosotros sabiendo sus idiomas*
>
> [It is interesting to think that those languages that we don't know, know English or Spanish but it is not the same with us knowing their languages]

Transcription of Simon during peer discussion (X3).

This expression of interest is consistent with viewing intercultural interaction as a learning opportunity (Blair, 2016), which I corroborated by Simon's notes on colonization and the Church. The fact that he only jotted down a couple of notes, and that those few notes corresponded to the differences in answers between his pre- and post-test, led me to infer he had noticed these cultural elements, and chose to include them in his knowledge.

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Concluding with Simon, findings for cultural self-awareness show that while participants did exhibit evidence of first steps toward cultural self-awareness, they did not specifically manifest any insight into their own cultural rules and biases. Surely enough, the annotated film enabled cognitive processes. However, whether these were higher-order thinking skills—i.e., knowledge, comprehension, application, analysis, synthesis, evaluation—is debatable, at best.

Deep cultural knowledge. I assessed deep cultural knowledge by the presence of two main indicators: participants' ability to compare and contrast their home and target culture, and the acquisition of basics of target history, politics, and society. For example, I expected participants in this study who showed evidence of these outcomes to verbalize comparisons between the U.S. and Latin America in regards to the history of their colonization. In this way, they would be comparing and contrasting both cultures, while also displaying knowledge about basic historical facts. Findings for this outcome revealed participants' reference to basics of history, politics, and society regarding various topics, including:

a.   Acquiring new information about languages spoken in the U.S. and Latin America, including Quechua and Aymara

b.   Recognizing U.S. colonization as a historical process of the host culture

c.   Articulating historical causes for the spread of Spanish across Latin America

d.   Articulating historical causes for the spread of English across the U.S.

e.   Noticing the role of religion in colonial practices

Examples for the articulation of this new knowledge were, by far, the most frequent data in relation to the studied intercultural learning outcomes. With the

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exception of Kady—whose attainment of knowledge could not be traced back to the use of a digital tool or to her interaction with peers during this study—all participants demonstrated an engagement with these basics on at least two levels. First, participants engaged with the digital artifact, taking thorough notes on historical facts that they went on to include in their peer discussions and in their post-test responses. Second, for some participants, including Mya, Simon, and Amelia, the articulation of basics of the target or host culture was a significant step toward the construction of a second intercultural learning outcome.

Participating in peer discussions significantly less than his peers, Simon's engagement with the digital tool—interactions with clips and annotations, and note-taking while viewing the clips—as well as his pre- and post-test results were the main source of evidence for his acquisition of new information. Based on at least two of the film clips, Simon took an interest in the use of Quechua in the film, as well as in the role of religion in colonization and the spread of Spanish across Latin America. Later, during peer discussion, Simon used this basic knowledge to express his own contrastive insight regarding the inverse relationship between speakers of English and Spanish—such as himself—and speakers of native languages. In this way, Simon had used interaction with the annotated film clips as a first step on which to build later interactions. Indirectly, Simon was drawing from his initial interaction with the clips in order to achieve possibly more complex and varied learning outcomes.

For Mya and Amelia, acquiring basics of host and target culture came in the form of learning about historical practices such as chopping natives' hands off for not paying their taxes in gold or speaking Spanish, present-day practices of invisibilizing non-

English-speaking cultures, or assumptions about cultural groups based on their use of language. For both participants, their knowledge functioned as the foundation on which they would later build a co-constructed insight. In conversation during peer discussion, Mya and Amelia agreed that there were similarities between the character of Costa and the colonizers: while colonizers' were more aggressive in their oppression of natives, Costa's form of discrimination toward Daniel was "less hard." The idea was co-constructed between both participants, who completed each other's sentences during the discussion section.

Mya: *Creo que la manera de Costa es como menos-- como-- hard-- porque la manera de los conquistadores es como muy…*

[I think that Costa's way is less-- like-- hard-- because the colonizers' way is like, very…]

Lia: *Más agreso…*(sic)

[More agreso (sic)]

Mya: *Sí, sí…*

[Yeah, yeah...].

Transcription of Mya and Lia in conversation during peer discussion (X3).

Based on this interaction, I could trace Mya and Amelia's comparison back to the individual knowledge they each co-constructed along with the digital artifact. Mia and Amelia had both taken the basic knowledge of the two types of colonial practice, and they had repurposed it in conversation. In doing so, they showed initial evidence for a new intercultural learning outcome: comparing and contrasting past and present-day colonial practices.

In sum, results for Mya, Amelia, and Simon show that film annotations via screen overlay enabled intercultural learning outcomes in participants by providing a first platform for intercultural interaction. Film annotations also worked as a mediational means for participants to develop new knowledge: faced with the intercultural encounter, participants used annotations to make sense of what was happening on-screen. Moreover, they used the annotations to make sense of intercultural interactions represented in the film (e.g., Costa's offense to Daniel, colonizer's aggressions toward *Taínos*), inscribe them within a cultural context, and later construct more complex insights. Conversely, the results for Lia show that, while it is possible for film annotation to enable intercultural learning, it is also possible for the same interactions—with the annotated film, and also later with peers—to become a means by which individuals can enact or perform intercultural learning.

Although there seems to be initial evidence that film annotation can enable intercultural learning, the results are not conclusive. Future research will need to trace participants' development across longer periods, as well as similar or more data sources. Two specific data sources that would be efficient in collecting relevant data are eye-tracking, interviews, and retrospective think-aloud protocols. Through eye-tracking, participants' gaze at the screen as they read the annotations or follow the characters in the film could provide more detailed information about the elements they noticed, the frequency and length of noticing. Retrospective think-aloud protocols would likely effectively allow participants to reflect on their own use of the digital artifact, as they watch their own interactions with the tool.

Despite these limitations, the findings of this study provide initial evidence to suggest that digital tools do play a role in cognitive processing. Film annotations specifically can provide learners with learning opportunities, basic knowledge about host and target culture, and can potentially activate comparisons between the self and others, and between different culturally-defined communities.

Regarding the development of intercultural outcomes, these study's findings—i.e., Lia's performance or the misalignment between her notes and her test results—reveal that initial discursive evidence from only one source is not representative of a learners' capacities. This is consistent with Dervin's (2011) critique of current intercultural competence studies that take discursive evidence and behavior at face value, and use them as the only evidence for assessment. By corroborating discourse across different data sources, I could see that the evidence that was present in traditional means of classroom assessment—such as peer discussion and written answers—was insufficient and inexact when triangulated with other samples from the same learner. This leads me to believe that, when looking at the results of any given intercultural learning assessment, it is likely that the observed discourse and/or behavior will not provide a representative sample of the student's capacities. The sample will also fail to show how the learner used elements in their environment or other mediational means to co-construct the evidence we are assessing. It is not until the results are studied within a context, and corroborated across multiple data sources and learning moments, that we can obtain a representative sample of an individual's achievement of intercultural learning outcomes. In addition, even when we can obtain this sample, the data might not be predictive of how participants will interact in a different setting, with different interlocutors who have

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different capabilities and knowledge. Following Atkinson (2010, 2014), we can confirm that the study of learning should always be the study of learning in context, given that learning and cognition are always and everywhere contextualized and situated activities.

In what ways does film annotation mediate intercultural learning?

Having seen initial evidence that film annotation can potentially enable intercultural learning, it is important to inspect exactly how this can occur. The ways in which film annotation as a digital artifact can enable intercultural learning, which I will explain below, are informed by the data collected by this study, as examined under the light of the sociocognitive approach, and a liquid approach to intercultural learning.

By being an active agent within the cognition continuum. The sociocognitive approach to language learning—which in this study I have applied toward intercultural learning—explains that mind, body and world are inseparable and interconnected when it comes to the development of cognition. This inseparability also means that cognition is distributed across various sources, including but not limited to the human mind, even if this distribution is not symmetric (Thorne, 2017). Adding film annotation to film clips in order to mediate intercultural learning provides learners with an environmental source that they will use depending on their goals and needs, and on the affordances provided by the annotations. Participants in this study included film annotation into their cognitive continuum when they used the clips and the annotations as references for the knowledge and skills they developed along with their peers.

By presenting learning opportunities to the viewer. Not only can film annotation be an active cognitive agent, it can also be a source of factual knowledge for learners. Because films are full of historical, cultural, political, linguistic, and social

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references that are not immediately available to the viewer, film annotation provides an opportunity for learning that would not be available by just watching a film. The type of information included in film annotations will largely determine the type of learning opportunity presented to the viewer. For example, in this study, annotations mostly presented historical and linguistic facts. I designed the annotations in this way, so that I could trace whether the annotations would mediate or contribute to the development of deep cultural knowledge, which they did. Including annotations on the characters' perspectives or their cultural background could possibly lead to increased evidence of participants' cultural self-awareness. Further research can examine, for instance, whether watching the entire film "Even the Rain" (Gordon & Bollaín, 2010) with annotations about Costa's intercultural journey could possibly lead learners to develop insights about their own journeys.

By aiding noticing of cultural references. The film annotations used in this study were static, non-interactive text snippets added to the screen via overlay during relevant moments of the film clips. When choosing to add these annotations without participants having to interact with the screen to make them appear, I eliminated the element of volition to ensure participants noticed the text on screen and inferred their relevance to the study. However, the degree to which elements added to screen overlay can be interactive is easily manipulatable, which means that designers, teachers and researchers can modify this feature depending on what they want learners to notice and when.

By presenting information upon which to build intercultural learning outcomes. As I mentioned earlier in this discussion, the most frequent data in the corpus

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evidenced participants' articulation of historical and linguistic facts. This information or new knowledge was the foundation on which more complex learning outcomes were built, including comparing and contrasting home and target culture, comparing and contrasting past and present-day colonial practices, and viewing one's own intercultural interactions as a learning opportunity.

By allowing learners to offload cognition. Cognitive offloading refers to the actions that individuals take in order to reduce the cognitive demands of a task. With the exception of Kady, throughout the study, participants reduced their cognitive demand by taking information from the film clips and transferring it onto their notes. At other moments, participants reduced their cognitive load by clarifying meaning necessary for their peer discussion by playing the film clips and pointing to characters (as opposed to going through the mental exercise of reviewing the narrative), or simply referring to scenes or characters in the movies to exemplify or illustrate their arguments. In an ideal scenario, participants would have offloaded their cognitive load as a result of the annotations, i.e., during peer discussion, they would have played the clips many times in order to access information. This would have provided solid evidence of how they offloaded cognition onto the notes, or onto the video as they engaged in peer discussion. However, due to the design of the study, this was not possible as participants received clear instructions to make use of their worksheet to take notes if needed. Future research can look at whether not having access to the worksheet might lead to more interaction with the annotations during peer discussion. In addition, future studies may examine whether continuous engagement with film annotation can effectively train learners to offload their cognitive load by using the tool, i.e., to train participants to look for

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annotations in order to reduce the cognitive load of deciphering contextual cultural references.

By providing a safe space to encounter cultural ambiguity. Based on Mya's account of her experience, watching the annotated film clips was a confusing experience that led to an increased interest in learning. In this study, interaction with film annotations took place as an individual task. This allowed participants such as Mya to watch and rewatch the clips, pausing the clips when necessary to read the annotations. In this way, Mya was able to encounter the cultural references in a safe space, free of anxiety during the subsequent peer discussion, for example. This safe individual and iterative experience likely favored Mya's positive feelings about the confusion she felt toward the film clips and its themes. While this study did not gather evidence to determine Mya's exact feelings of anxiety or safety while watching the clips, it is possible to use her willingness to come back to the film as evidence of a positive disposition toward cultural ambiguity.

By modeling an analysis of characters through the lens of culture. Participants' interpretation of Costa's aggressiveness in contrast to that of Spanish colonizers stemmed from their observations of his behavior in the annotated film clips. Evidence from Simon, Amelia, Lia and Mya indicates that all four participants either watched film clips involving Costa twice, or paused the clips to potentially read the annotations present in these scenes. During peer discussion, the same participants watched the first clip again in order to understand the motives of Costa and Sebastian for making the film, and also referred back to the clips when comparing Costa to the Spanish colonizers. In both cases, the offline quality of film-viewing through digital means allowed the learners to arrive at their own conclusions about the character.

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Limitations

Because of the exploratory nature of this investigation, I sought to look at a small pool of participants who interacted with a digital artifact (film annotation), and who completed the pedagogical intervention. I was interested in looking at how these participants would interact with film annotations as well as with each other, and at the learning processes that these interactions enabled. This design offered significant and rich data on participants' learning process, but presented areas in which additional data sources could have provided more opportunities for analysis. Below I list the limitations of this study and suggest significant avenues of opportunity for further research.

To begin, this investigation used the microgenetic method approach in its research design. Originally conceived for longitudinal studies, the microgenetic method can also be used to look at learners' development and cognitive process during short periods of time, such as those that occurred in this study. The use of this method allowed me to observe participants' intercultural learning process during the limited period of 1-2 hours of class time. However, the investigation of how digital artifacts mediate learning could certainly benefit from more extended observations. In particular, longitudinal studies that observe in detail technology-mediated intercultural learning processes might provide further insight into whether learning outcomes are sustainable over time. These studies might choose to focus on fewer individuals during more extended periods, thus potentially allowing researchers to observe the learner in interaction with a variety of digital technologies and artifacts.

Amount of data. On certain occasions, the amount of written text in participants' responses to the pre and post-tests was insufficient to arrive at the students' insights or

full reflections on a specific topic. Certainly, this issue relates to Dervin's (2011) assertion that discourse and behavior are often insufficient or non-reflective of learners' internal mental states, and therefore do not constitute full evidence for intercultural learning outcomes. While some of the incomplete answers that participants gave could be corroborated with other discourse/behavior throughout the study, others could not. To address this, future studies might give participants more specific instructions on the amount of text that is acceptable for pre or post-test answers. This may also be useful for participants' note-taking process, to make sure that participants are making use of all the resources provided to them.

Another solution for incomplete data is to conduct follow-up interviews with participants that can lead researchers to elicit more details on specific responses or moments in the pedagogical intervention. Interviews with instructors could also help in determining whether participants' behaviors—such as Kady's low participation in peer discussion—are consistent with student participation during regular class time.

Other types of non-comprehensive data in this study concern attention/noticing of the film annotation, and the amount of data captured by the webcam recording students. More innovative uses of technology can solve this issue. For instance, including data-generating tasks such as eye-tracking participants' gaze at the screen as they read the annotations or follow characters in the film can provide further insight into what elements of the annotation/film participants were focusing on while they took notes. Another possible task is retrospective think-aloud protocols, which would likely effectively allow participants to reflect on their own use of the digital artifact, their learning process, and

their interactions with others. Finally, additional video recording devices could solve the issue of only a few of the group's participants appearing on screen.

Background information. An additional limitation of this study was the lack of insight into how participants' life experiences, contact with Spanish, or other environmental elements influenced their responses and behavior. Although all participants completed a language contact profile, the information provided there was insufficient or could not always be corroborated with participants' statements. For instance, just by looking at the current data, it is impossible to determine whether Amelia's engaged academic performance during the study was related to cultural rules and biases toward academic environments. Because cultural association can affect the intercultural learning process—e.g., cultural rules regarding academic environments can pass as interest/curiosity in other cultures—it is important to have access to more detailed descriptions of participants' backgrounds. As with incomplete pre- and post-test responses, follow-up interviews could elicit this background information.

Role of guided peer discussion. One of the most relevant limitations of this study was that it did not provide sufficient data to determine whether the questions created for the pedagogical intervention had a differential effect in participants' intercultural learning process or outcomes. To address this, future studies might look at between-groups analyses of participants' learning process, in addition to within-group analyses. In this case, a control/experimental group difference in treatment could present a pedagogical intervention with film annotation and discussion questions, and an intervention with film annotation but without discussion questions and/or note taking.

In the same line, the present study does not clearly differentiate to what extent the discussion questions enabled intercultural learning in comparison to the annotations. The question remains then whether participants' analyses would have been possible had I not given them questions to guide peer discussion. Again, a control/experimental group design could address this issue.

Finally, although the present study focuses on highlighting the role of film annotation, it does so while still including non-digitally born pedagogical practices such as a guided peer discussion. To determine whether film annotation can be used as a stand-alone resource in the wild, further research should address the specific affordances of peer discussion and how they can be replicated in digital contexts or with digital tools, or how other features added to film and film annotation can enable the same processes as did the peer discussion.

Future Research

Given that film annotation can mediate intercultural learning processes, and potentially lead to sustainable intercultural learning outcomes, it is essential to ask how the present study can lead to future research.

Primarily, the evidence provided in this study on how human learners can co-construct intercultural learning along with digital artifacts should open scholars to the idea of studying intercultural learning as a process, through qualitative methods. Future studies in this area might look deeper into the specific cognitive processes enabled during human-computer interaction, which may lead to intercultural learning. Additionally, future studies should focus on how lessons from the sociocognitive approach can influence computer-assisted language learning. For instance, scholars may ask whether it

would be beneficial to revise existing CALL pedagogical frameworks in order to recognize and highlight the role that tools and the environment play in human cognition. In order to do this, it might be necessary to advocate for a more intentional research shift toward the topic of intercultural learning in the digital wild. Finally, a crucial albeit more complex endeavor for CALL scholars who focus on intercultural learning is the development of a pedagogical framework that not only integrates intercultural tasks and technology use, but that also generates real-life outcomes based on intercultural learning tasks.

Pedagogical Implications

Having established that film annotation as a digital artifact can mediate intercultural learning, it is necessary to focus on the implications this observation may have for computer-assisted language learning and intercultural learning.

Regarding Intercultural Learning Itself

The most important realization of this study is that, during interaction with the digital tool, learners can begin to attain the basics of host and target culture history, politics, and society, when the annotations address this particular outcome. Based on this basic knowledge, learners can then continue to build their skills and knowledge either through self-reflection or via interaction with others. It is worth highlighting that, during this investigation, the type of intercultural outcomes that film annotation mediated was contingent on the nature of the film annotation itself. For instance, Mya's notes on Quechua and Aymara as native languages in Latin America appeared as corroborated evidence throughout her data, which I interpreted as acquisition of basics of the target culture's history, politics, and society. Mya's notes and her further acquisition were based

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on the annotations, which included key information on the languages spoken in Bolivia. Without the annotations, perhaps Mya would have arrived at the notion that Quechua is spoken in Bolivia, given that this information is presented in the first film clip itself, outside of the annotations. However, it would have been impossible for Mya to take notes, and at her further acquisition of knowledge on Aymara—which she mistakenly refers to as "Anaya" during peer discussion but writes down in her notes as "Aymara" — as a language spoken in Bolivia, because this key information does not appear in the film outside of the annotations I included.

Such noticing of information and further acquisition are directly related to the nature of the annotations I included in the film clips: all of the annotations refer to facts and information on the target culture. In Mya's case, her acquisition of these knowledge about the two native languages spoken in Bolivia would not have been possible without the annotations that mentioned these languages. Thus, it is possible to conclude that different types of content in annotations may potentially lead to different intercultural learning outcomes, as well as to the performance of interculturality as opposed to actual learning.

Another relevant implication of understanding intercultural learning as a process, as this study has done following Dervin (2011), is that the notion of process vs. outcomes challenges the types of tasks assessments currently in place for intercultural competence. Such assessments, which I described in the method of this study, tend to focus on metrics and on the placement of learners on scales and continuums based on evidence that, as Dervin poses, might be insufficient or not representative of students' learning processes. Based on this study's outcomes, educators might choose to create and implement action-

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driven assessments. For instance, instead of observing students in interaction with others, or assessing their answers to tests, educators might assess intercultural learning through a student's engagement in digital tasks and activities that create real world change (see O'Dowd's [2018] critique on telecollaboration). Educators might then use scales and rubrics to assess performance, e.g., the extent to which a student completed a task, whether they integrated formal elements such as cultural analysis, among others.

As a brief and non-exhaustive list of examples of such activities, I recommend, naturally, learners creating annotations for film clips or videos that can be posted on the Internet. Other activities or tasks may include:

- Developing and implementing social media hashtags to raise awareness on cultural themes and topics

- Writing op-eds to address cultural issues

- Researching linguistic/cultures-of-use of digital platforms

- Designing or analyzing web-based or digitally-based cultural movements (e.g., memes, viral videos)

- Conducting critical analysis on how digital algorithms, database tags, and keywords for search engines promote ideologies that directly affect certain cultures, races, and genders.

With activities such as these, learners can engage in intercultural learning while also engaging with technology in transformative ways.

Regarding Digital Tools as Mediators for Cognition

The design and findings of this study, which presents the use of a digital artifact in tandem with non-digital teaching strategies—such as guided peer discussion—for

intercultural learning, make it possible for educators and researchers to inquire about instructor's roles in technology-mediated language classrooms. For instance, after seeing that film annotation and peer discussion enabled intercultural learning processes among students, instructors that are less inclined to the use of technology might ask what other learning processes might take place when an instructor is guiding the discussion. However, language classrooms today favor the use of technology, larger numbers of students, individualized instruction, and online teaching all at once. For this reason, it is more relevant to ask whether and how film annotation can be expanded or paired with other technologies in order to facilitate the affordances provided by peer discussion.

Other studies could focus on what it would require to transition learning tools such as film annotation to the digital wild. For instance, if peer discussion is a crucial element in intercultural learning, then certainly film annotation might need to include peer-discussion-like affordances that provide learners with contrasting or complementary insights, as peer discussion would. Perhaps another solution would be to add guiding questions for reflection along with contextual references to the annotations, so learners outside the classroom can obtain the types of inquiries their instructor or peers would provide in structured learning environments. While such studies would provide greater insight into the areas for growth in technology-mediated intercultural learning, it would be most relevant to pair these studies with recommendations on how educators can better equip themselves to use and design these technologies in order to support their students' learning.

An additional question for the future is whether learners can learn to ascribe a culture-of-use to digital tools such as film annotation, in order to include them in their

repertoire of strategies for intercultural learning. Conducting such research can lead to informed predictions on learners' adaptability to technology, and whether this adaptability can exist and grow outside of the classroom environment. As the number of blended, digital, and even fully online language classrooms continues to rise, it is wise to inquire what educators and practitioners can do to promote learner autonomy in tech-dominated settings.

Regarding the Use of Film Annotation for Intercultural Learning

The most relevant implications of film annotation affect educational technologists, digital tool designers, and other relevant technology specialists. This study provides evidence that complementing film subtitles with culturally rich annotations can enable knowledge of basics of target and host culture, and that this basic knowledge may aid in the development of more sophisticated intercultural learning outcomes. Based on this evidence, a strategic integration of digital video platforms, interactive screen overlays, and informed intercultural knowledge can potentially become a powerful educational tool in the form of film annotation. The ubiquitous nature of streaming platforms may function as an ideal means to deliver high-level intercultural learning content to viewers in ways that are already natural to their daily lives.

Regardless of whether scholars, educators or industry developers embrace film annotation for intercultural learning, it is important to issue a word of warning. Because annotations are a form of written discourse, they can present ideological or rhetorical claims about the cultures they examine. For instance, despite the fact that this study presented students with annotations on historical and linguistic facts as objectively as possible, the selection of the film, film clips, and specific information included was a

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subject decision on the researcher's part. The aim of the created annotations was to help participants analyze and interpret past and present-day colonial practices that appeared in the film. In this way, while the annotations appear to be factual details, their existence alone already constitutes a rhetorical claim: that neocolonial linguistic practices exist in present-day Latin America and that these practices may not be immediately visible to viewers when appear in film. Thus, viewers must be on the lookout for the cultural and ideological forces embedded in something as apparently harmless as a foreign film.

Additionally, the specific moments at which annotations appear in the film, as well as the nature of the annotations' color, shape, form, duration, etc. can themselves constitute ideological decisions. For this reason, when annotating film to contextualize the cultural content of films, those who create annotations must be critical and mindful of how they are using the affordances of the digital platform, and whether their practice could possibly perpetuate harmful stereotypes or other damaging perspectives or positions.

Conclusions

Based on a sociocognitive approach to learning (Atkinson, 2010, 2014), as well as on a liquid approach to interculturality (Dervin, 2011), this investigation asked whether digital artifacts, i.e., annotated film clips, could mediate intercultural learning, and if so, how this occurred. At the outset of this study, I anticipated that through interaction with the annotated film clips, participants would be able to engage in a process of co-construction of interculturality. This meant that through a detailed observation of the different mediational means with which participants interacted—annotated film clips, peers—during different stages of the study, it would be possible to observe intercultural

learning as a process. By analyzing the intercultural behaviors, discourse, and attitudes of five participants—Mya, Lia, Amelia, Simon, and Kady—who interacted with annotated film clips, I was able to reveal evidence for how learners construct their intercultural learning along with cognition enabling entities in the environment, including digital tools and human others. In this way, as suggested by Atkinson (2010, 2014), I observed that intercultural learning—as any other type of learning—is not a process exclusive of the human mind, but instead is an activity that involves different cognitive agents.

The specific findings of this study showed that interaction with annotated film clips that contained information regarding basics of host and target culture history, politics, and society led to positive intercultural attitudes in participants, including curiosity and discovery (Blair, 2016). Specifically, interaction with the annotated film clips led to an interest in seeking out cultural interactions, tolerating ambiguity, and suspending judgment, all outcomes that evidence intercultural learning according to Blair's (2016) mapping of intercultural outcomes following Deardorff (2006). Based on these attitudes, participants further developed their intercultural knowledge acquisition. A discussion of these results revealed that film annotation was able to mediate intercultural learning in several ways, including:

a. By being an active agent within the cognition continuum

b. By presenting learning opportunities to the viewer

c. By aiding noticing of cultural references

d. By presenting information upon which to build intercultural learning outcomes.

e. By allowing learners to offload cognition

f. By providing a safe space to encounter cultural ambiguity

g.   By modeling an analysis of characters through the lens of culture

The importance of this investigation's results also lies in their presentation of initial evidence to support how scholars can use the two theoretical frameworks on which the study is based—Atkinson's (2010, 2014) sociocognitive approach to learning, and Dervin's (2011) liquid approach to interculturality—to understand and design pedagogical solutions for digitally-mediated intercultural learning. Moreover, the results of this study provide insights into how intercultural learning may already be taking place in the digital wild, where learners are frequently and inadvertently participating in intercultural encounters without any kind of scaffolding or pedagogical support. It is a question for CALL and intercultural learning scholars whether they will continue to place a substantial focus on efforts to replicate digital intercultural encounters within the limited context of the language classroom, or whether they will move with the times. If choosing the latter, future studies should aim to develop innovative research and pedagogical solutions to improve the value and transcendence of the intercultural encounters that take place in the digital wild.

REFERENCES

Ahmadian, M. (2013). The use of microgenetic method in SLA research. *Applied Research on English Language, 2*(1), 61-67.

Appiah, K. A. (1993/2012) Thick translation. In L. Venuti (Ed.), *The translation studies reader* (2nd ed.) (pp. 389-401). New York: Routledge.

Atkinson, D. (2010). Extended, embodied cognition and second language acquisition. *Applied Linguistics, 31*(5), 599-622.

Atkinson, D. (2014). Language learning in mind-body-world: A sociocognitive approach to second language acquisition. *Language Teaching, 47*(4), 467-483.

Belz, J. A. (2003) Linguistic perspectives on the development of intercultural competence in telecollaboration. *Language Learning & Technology, 7*(2), 68—99.

Belz, J. A., & Thorne, S. (Eds.) (2006*) Internet-mediated intercultural foreign language education.* Boston: Thomson Heinle.

Bennett, M. (1986). A developmental approach to training for intercultural sensitivity. *International Journal of Intercultural Relations, 10*(2), 179-196.

Bennett, M. (2013/2014). *Basic concepts of intercultural communication: Paradigms, principles, & practices.* Boston: Intercultural Press.

Gordon, J. (Producer), & Bollaín, I. (Director). (2010). Even the rain [Motion Picture]. Spain: Morena Films.

Blair, S. (2016). Mapping intercultural competence: Aligning goals, outcomes, evidence, rubrics, and assessment. In D. Deardoff & L. Arasaratnam-Smith. (Eds.) *Intercultural competence in higher education* (pp. 110-23). New York, NY: Routledge.

Block, D. (1996). "Not so fast!" Some thoughts on theory culling, relativism, accepted findings and the heart and soul of SLA. *Applied Linguistics, 17*, 65—83.

Briam, C. (2010). Outsourced: Using a comedy film to teach intercultural communication. *Business Communication Quarterly, 73*(4), 383—398.

Brisset, A. (1990//2004). The search for a native language: Translation and cultural identity. In L. Venuti (Ed.), *The translation studies reader* (2nd ed.) (pp. 337 368). New York: Routledge.

Brown, J. A. C. (1954). *The social psychology of industry.* Middlesex, UK: Penguin.

Busse, V., & Krause, U.M. (2016). Instructional methods and languages in class: A comparison of two teaching approaches and two teaching languages in the field of intercultural learning. *Learning and Instruction, 42,* 83-94.

Byram, M. (1997). *Teaching and assessing intercultural communicative competence.* Clevedon: Multilingual Matters.

Deardoff, D. (2006). *Identification and assessment of intercultural competence as a student outcome of internationalization. Journal of Studies in Intercultural Education, 10*(3), 241-66.

Deardorff, D. (Ed.) (2009) *The Sage handbook of intercultural competence.* Thousand Oaks, CA: Sage.

De Linde, Z., & Kay, N. (2014). *The semiotics of subtitling.* New York: Routledge.

Dyson, A. H., & Genishi, C. (2005). *On the case: Approaches to language and literacy research.* New York: Teachers College Press

Dervin, F. (2011). A plea for change in research on intercultural discourses: A 'liquid' approach to the study of the acculturation of Chinese students. *Journal of Multicultural Discourses, 6*(1), 37-52.

Fantini, A. (2009). Assessing intercultural competence: issues and tools. In D. K. Deardorff (Ed.), *The SAGE Handbook of Intercultural Competence* (pp. 456-476). Thousand Oaks, CA: Sage.

Firth, A., & Wagner, J. (2007). Second/foreign language learning as a social accomplishment: Elaborations on a reconceptualized SLA. *Modern Language Journal, 91*, 798—817.

Gánem-Gutiérrez, G. A. (2014). The third dimension: A sociocultural theory approach to the design and evaluation of 3D virtual worlds tasks. In M. González-Lloret & L. Ortega (Eds.) *Technology-mediated TBLT. Researching Technology and Tasks.* (pp. 213-238). Amsterdam: John Benjamins Publishing Co.

Gee, J. P. (2004) Affinity spaces: How young people live and learn online and out of school. *Kappan*, *99*(6), 8-13

Goodwin, C. J. (1995), Sentence construction within interaction. In U. Quastoff (Ed.) *Aspects of oral communication* (pp. 198—219). New York: De Gruyter Mouton.

Harvey, K. (1998). Translating camp talk: Gay identities and cultural transfer. In L. Venuti (Ed.), *The translation studies reader* (2nd ed.) (pp. 402-422). New York:

Routledge.

Hermans, H. J. M. (2004) Introduction: The dialogical self in a global and digital age. *Identity 4*(4), 297-320.

Hoff, H. E. (2013). 'Self' and 'other' in meaningful interaction: Using fiction to develop intercultural competence in the English classroom. *Tidsskriftet FoU i praksis*, *7*(2), 27—50.

Holliday, A., Hyde, M., & Kullman, J. (2004) *Intercultural communication.* London: Routledge.

Huczynski, A., & Buchanan, D. (2004) Theory from fiction: A narrative process perspective of the pedagogical uses of feature film. *Journal of Management Education, 28*(6), 707-726.

Kaiser, M. (2011). New approaches to exploiting film in the foreign language classroom. *L2 Journal, 3*(2) 232-249.

Kinginger, C. (2004). Communicative foreign language teaching through telecollaboration. In K. van Esch & O. St. John (Eds.), *New insights into foreign language learning and teaching* (pp. 101—113). Frankfurt am Main: Peter Lang.

Kötter, M. (2002) *Tandem learning on the internet: Learner interactions in online virtual environments*. Frankfurt: Peter Lang.

Kramsch, C. (1995). The cultural component of language teaching. *Language, Culture and Curriculum, 8,*(2) 83-92.

Labov, W. (1972). *Language in the inner city: Studies in the Black English Vernacular.* Philadelphia: University of Pennsylvania Press.

Lafford, B. (2007). Second language acquisition reconceptualized? The impact of Firth and Wagner (1997). In B. Lafford (Ed.), *Second language acquisition reconceptualized? The impact of Firth and Wagner (1997). Modern Language Journal, 91*(s1), 735—756.

Lafford, B. (2009). Toward an ecological CALL: Update to Garrett (1991). *The Modern Language Journal 93,* 673-96.

Lantolf, J. P. (1996). SLA theory building: Letting all the flowers bloom. *Language Learning, 46*(4), 713—749.

Lantolf, J., & Thorne, S. (2006). *Sociocultural theory and the genesis of second language development.* New York: Oxford.

Mackey, A. & Gass, S. (2016) *Second language research: Methodology and design.* New York: Taylor and Francis.

Mason, J. (1996). *Qualitative researching.* London: Sage.

Mayo, E. (1933). *The human problems of an industrial civilization.* New York: MacMillan.

Mondada, L., & Pekarek Doehler, S. (2004). Second language acquisition as situated practice: Task accomplishment in the French second language classroom. *Modern Language Journal*, 88, 501—518.

Nornes, A. (1999/2004) For an abusive subtitling. In L. Venuti (Ed.), *The translation studies reader* (2nd ed.) (pp. 447-69). New York: Routledge.

O'Dowd, R. (2018, January) Moving from intercultural contact to intercultural learning in virtual exchange. Keynote address at the *Sixth International Conference on the Development and Assessment of Intercultural Competence,* Arizona, United States.

O'Dowd, R. (Ed.) (2007). *Online intercultural exchange: An introduction for foreign language teachers.* Clevedon: Multilingual Matters.

O'Rourke, B. (2005) Form focused interaction in online tandem learning. *CALICO Journal, 22*(3), 433—466.

Quijano, A. (2000). Coloniality of power and eurocentrism in Latin America. *International Sociology, 15*(2), 215—232.

Rodney, W. (1972). *How Europe underdeveloped Africa*. Baltimore: Black Classic Press.

Roell, C. (2010). Intercultural training with films. *English Teaching Forum, 2*, 2-15

Siegler, R. S., & Crowley, K. (1991). The microgenetic method: A direct means for studying cognitive development. *American Psychologist*, *46,* 606—620.

Spivak, G C. (1992/2004). The Politics of Translation. In L. Venuti (Ed.), *The translation studies reader* (2nd ed.) (pp. 369-388). New York: Routledge.

Swain, M. and Deters, P. (2007). "New" mainstream SLA theory: Expanded and enriched. *The Modern Language Journal, 91*(s1), 820 -836.

Simon, D. (2002). The target—commentary track. *The Wire*, Season 1, Episode 1. HBO. [DVD]

Thorne, S. L. (2010). The 'intercultural turn' and language learning in the crucible of new media. In F. Helm & S. Guth (Eds.), *Telecollaboration 2.0 for language and intercultural learning* (pp. 139-164). Bern: Peter Lang.

Thorne, S. L. (2016). Cultures-of-use and morphologies of communicative action. *Language Learning & Technology, 20*(2), 185-191.

Thorne, S., Fischer, I., Lu, Xiaofei. (2012). The semiotic ecology and linguistic complexity of an online game world. *ReCALL, 24,* 279-301.

Thorne, S. L., & Hellermann, J. (2017). Mobile Augmented Reality: Hyper Contextualization and Situated Language Usage Events. *Proceedings of the XVIII International CALL Conference: CALL in Context*, 721-730.

Thorne, S., Hellerman, J., Jones, A., & Lester, D. (2015). Interactional practices and artifact orientation in mobile augmented reality game play. *Psychology Journal, 13*(2-3), 259 - 286.

Thorne, S., Sauro, S., & Smith, B. (2015). Technologies, identities, and expressive activity. *Annual Review of Applied Linguistics, 35*, 215-233.

van Lier, L. (1994). Forks and hope: Pursuing under-standing in different ways. *Applied Linguistics*, *15*, 328—347.

van Lier, L. (2004). *The ecology and semiotics of language learning: A sociocultural perspective.* New York: Kluwer.

Tognozzi, E. (2010). Teaching and evaluating language and culture through film. *Italica 87*(1), 69-91.

VanPatten, B. & Williams, J. (2015) *Theories in second language acquisition. An introduction.* New York: Taylor and Francis.

Varey, K. (1996) *"What exactly do you mean by 'culture'?" Using films in the intercultural communication classroom.* Paper presented at the annual meeting of the International Communication Association, Chicago, IL.

Vygotsky, L. S. (1978). *Mind in society.* Cambridge, MA: Harvard University Press.

Warschauer, M. (1996) Comparing face-to-face and electronic discussion in the second language classroom. *CALICO Journal, 13*(2), 7—26.

Yue, J. (2019). Use of foreign films in cultivating intercultural communicative competence in ELT—A case study. *Theory and Practice in Language Studies, 9*(2), 198-203.

Zheng, D., Young, M., Brewer, R., & Wagner, M. (2009). Attitude and self-efficacy change: English language learning in virtual worlds. *CALICO Journal, 27*(1),205-231.

APPENDIX A

LANGUAGE CONTACT PROFILE

Name: _____

Part 1: Background Information

1. Gender: Male / Female
2. Age: ___
3. Country of birth: _____
4. What is your native language? 1) English 2) Spanish 3) Other _____
5. What language(s) do you speak at home? 1) English 2) Spanish 3) Other _____
5a. If more than one, with whom do you speak each of these languages? _____
6. In what language(s) did you receive the majority of your *precollege* education?
   1) English   2) Other _____
6a. If more than one, please give the approximate number of years for each language. _____
7. Have you ever been to a Spanish-speaking region *for the purpose of studying Spanish*?
   Circle one: Yes / No
7a. If yes, when? _____   7b. Where? _____
7c. For how long? ___1 semester or less ___2 semesters ___more than 2 semesters
8. Other than the experience mentioned in Question 7, have you ever lived in a situation where
   you were exposed to a language other than your native language (e.g., by living in a multilin-
   gual community; visiting a community for purposes of study abroad or work; exposure through
   family members, etc.)?   Circle one: Yes / No

If Yes, please give details below. If more than three, list others on back of this page.

	Experience 1	Experience 2	Experience 3
Country/region			
Language			
Purpose			
From when to when			

9. In the boxes below, rate your language ability in each of the languages that you know. Use the following ratings: 0) Poor, 1) Good, 2) Very good, 3) Native/nativelike.

How many years (if any) have you *studied* this language in a *formal school* setting?

Language	Listening	Speaking	Reading	Writing	Number of years of study
English					
Spanish					
Other					

10. Have you studied Spanish in school in the past at each of the levels listed below? If yes, for how long?
    a) Elementary school: _No _Yes: _less than 1 year _1–2 years _more than 2 years
    b) Junior high (middle) school: _No _Yes: _less than 1 year _1–2 years _more than 2 years
    c) Senior high school: _No _Yes: _less than 1 year _1–2 years _more than 2 years
    d) University/college: _No _Yes: _less than 1 year _1–2 years _more than 2 years
    e) Other (Please specify) _____:
                                    _No _Yes: _less than 1 year _1–2 years _more than 2 years
11. What year are you in school? (circle one):
    Freshman   Sophomore   Junior   Senior   Graduate student   Other
12. What is your major?

Part 2: All of the Questions That Follow Refer to Your Use of Spanish, Not Your Native Language, Unless the Question Says Otherwise

13. On average, how often did you *communicate* with native or fluent speakers of Spanish *in Spanish* in the year prior to the start of this semester?
        0) never   1) a few times a year   2) monthly   3) weekly   4) daily
14. Use this scale provided to rate the following statements.
        0) never   1) a few times a year   2) monthly   3) weekly   4) daily
    Prior to this semester, I tried to speak Spanish to:
    ___ a. my instructor outside of class
    ___ b. friends who are native or fluent speakers of Spanish
    ___ c. classmates
    ___ d. strangers whom I thought could speak Spanish
    ___ e. a host family, if living in a Spanish-speaking area
    ___ f. service personnel (e.g., bank clerk, cashier)
15. For each of the items below, choose the response that corresponds to the amount of time you estimate you spent on average doing each activity *in Spanish* prior to this semester.
    a. watching Spanish language television
        0) never   1) a few times a year   2) monthly   3) weekly   4) daily
    b. reading Spanish language newspapers
        0) never   1) a few times a year   2) monthly   3) weekly   4) daily
    c. reading novels in Spanish
        0) never   1) a few times a year   2) monthly   3) weekly   4) daily
    d. listening to songs in Spanish
        0) never   1) a few times a year   2) monthly   3) weekly   4) daily

    e. reading Spanish language magazines
        0) never   1) a few times a year   2) monthly   3) weekly   4) daily
    f. watching movies or videos in Spanish
        0) never   1) a few times a year   2) monthly   3) weekly   4) daily
16. List any other activities that you commonly did using Spanish prior to this semester.
17. Please list all the Spanish courses you are taking this semester. This includes Spanish language courses as well as content area courses taught in the Spanish language.

Course name   Course number   Brief description
_____   _____   _____
_____   _____   _____
_____   _____   _____
_____   _____   _____
_____   _____   _____

APPENDIX B

DATA COLLECTION INSTRUMENTS

PRE-TEST WORKSHEET

Name:_____   **Date:** _____

Instructions:
Before watching the clips from "También la lluvia" (Bollaín, 2010), answer individually the following questions. Then, discuss the questions with your group, following the teacher's instructions.

Responde:

a) ¿Qué idiomas, aparte del inglés, se hablan en los Estados Unidos? ¿Quiénes hablan estas lenguas?

b) ¿Por qué es el inglés la lengua predominante en Estados Unidos? Comenta sobre algunas de las posibles causas históricas, políticas, económicas, y culturales de este hecho.

c) Aparte del español, ¿qué idiomas se hablan en América Latina? ¿Quién habla estos idiomas?

d) ¿Por qué se habla español en América Latina? Comenta sobre algunas de las posibles causas históricas, políticas, económicas, y culturales de este hecho.

e) ¿Existen similitudes históricas entre América Latina y Estados Unidos en cuanto al desarrollo del uso de varias lenguas?

Seudónimo:_____   **Fecha:**
_____

Instrucciones:
A continuación, vamos a leer la sinopsis de la película "También la lluvia." Después de
leer, vamos a mirar individualmente los cuatro clips de la película que están
disponibles. Al finalizar, regresaremos a nuestros grupos para responder las preguntas.
Mientras miras los clips, puedes pausar, adelantar, o rebobinar el video si lo necesitas.
También puedes mirar las preguntas debajo y tomar notas si lo deseas.

"También la lluvia" (Icíar Bollaín, 2010)
El cineasta Sebastián está dirigiendo una película sobre la icónica figura Cristóbal Colón.
Sebastián está decidido a que su película ponga en duda el mito de la llegada de la
civilización occidental a América como una fuerza del bien. Su película mostrará la
obsesión con el oro, la toma de esclavos, y la terrible violencia caída sobre los indígenas
que se resistieron a la conquista. Mientras tanto, Costa, productor y compañero de
Sebastián, sólo está interesado en terminar la película a tiempo y con un muy bajo
presupuesto. A pesar de la rabia de Sebastián, filman la película en Bolivia, el país
latinoamericano más barato con una gran población indígena. Mientras ruedan la película
en la ciudad de Cochabamba y sus alrededores, los conflictos políticos y civiles empiezan
a estallar cuando toda la provisión de agua de la ciudad es privatizada y vendida a una
multinacional británico/americana.

Preguntas para la discusión:
a) ¿Qué motiva a Sebastián a rodar la película?
b) En el primer clip, ¿cuál es el chiste que María trata de hacer?
c) ¿Qué idiomas se hablan en Bolivia?
d) ¿Qué quiere decir "habla en cristiano"? ¿Qué religión llevaron los conquistadores
   a América Latina?
e) ¿Por qué Daniel se enfada con Costa? ¿Qué error comete Costa?
f) ¿Existen similitudes entre la manera en la cual los conquistadores tratan a los
   nativos y la manera en la que Costa trata a Daniel?
g) ¿Qué idioma hablan las mujeres en el río? ¿Cómo se subtitula este idioma?
h) Cuando la película está siendo rodada en el río, ¿qué problema tienen las mujeres
   con rodar la escena de los niños ahogados?
i) ¿Por qué crees que las lenguas indígenas de esta película no fueron subtituladas
   para el mercado norteamericano?
j) ¿Qué actitudes hacia las poblaciones y lenguas indígenas presenta la película?

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Seudónimo:_____

Fecha:
_____

Instrucciones:
Luego de ver los clips de la película "También la lluvia" (Bollaín, 2010), responde las siguientes preguntas individualmente. Luego, discute tus respuestas con tu grupo, siguiendo las instrucciones de la investigadora. Si es necesario, puedes usar los videos para elaborar tus respuestas (puedes mirar los clips de nuevo, pausar, rebobinar, o adelantar los clips, o hacer referencia a los clips en tu discusión de las respuestas).

Responde:

a) Antes de ver los videos, hablamos sobre los idiomas aparte del inglés y el español que se hablan en Estados Unidos y América Latina. ¿Has aprendido algo nuevo sobre este tema al ver los videos o en la discusión en clase que haya expandido o cambiado tus actitudes con respecto a este tema?

b) ¿Cuáles son las lenguas predominantes en Estados Unidos y América Latina? ¿Cuáles son algunas de las causas históricas y culturales de este hecho?

c) Luego de ver los clips, ¿qué percepciones has desarrollado sobre el estado de, y las actitudes hacia el inglés, español, y las lenguas indígenas, en Estados Unidos y América Latina?

d) ¿Qué argumento hace la película "También la lluvia" sobre idiomas como el español y el inglés? ¿Qué argumentos hace sobre las lenguas indígenas?

e) ¿Alguna vez has tenido una experiencia con la lengua similar a los eventos que ocurren en los videos? ¿Qué crees que causó que esto ocurriera en tu caso?

APPENDIX C

LESSON PLAN AND PROCEDURES

LESSON PLAN AND PROCEDURES

1. Materials: Even the Rain (Bollaín, 2010)
      1.1 Scenes:

         a.   Car sequence: "Taínos and quechuas" - 5 '55"
         b.   Gold taxes: "Speak in Christian" - 37' 01"
         c.   Costa/Daniel: "That's fucking great, man" - 33' 52"
         d.   Women at the river: "A terrible decision" 44' 30"

2. Topic: Practices of linguistic colonialism

3. Learning outcomes:

Awareness	Learner objectives	Learner outcome statements
	Cultural self-awareness	Articulate insights into one's own cultural rules and biases
	Deep cultural knowledge	Compare and contrast home and target culture Acquire basics of host history, politics, and society

Adapted from Deardoff (2009, p. 28); Fantini (2009); American Council on Education (2008).

4. Activity Sequence.

4.1. Pre-Test (20 to 30 minutes)

a) Each student will receive a set of questions on paper. They will be instructed to briefly respond to the questions to the best of their knowledge, and to write their answers down. These questions address cultural issues related to Spanish, English, and indigenous languages. After responding to these questions on paper, students will be directed to discuss their answers with their small group.

b) What languages, aside from English, are spoken in the U.S.? Who speak these languages?

c) Why is English the predominant language in the U.S.? Comment on some of the possible historical, political, economic, and cultural causes for this.

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d) What languages, aside from Spanish, are spoken in Latin America? Who speaks these languages?

e) Why do people speak Spanish in Latin America? Comment on some of the possible historical, political, economic, and cultural causes for this.

f) Are there any historical similarities between the development of the use of various languages in Latin America and the U.S.?

4.2 Intervention
4.2.1. Film clip viewing—Annotation Script by Scene (15 to 20 minutes)

Car sequence: "Taínos y quechuas" - 5'55''
- It is believed that Christopher Columbus arrived to the island of Guanahani. The island is located in the Antilles, close to the Bahamas in the Caribbean Sea.
- It is known that Columbus found *taíno* natives. The *taíno* people also inhabited the island of Hispaniola, composed of the current territories of the Dominican Republic and Haiti.
- Historically, the *taíno* population has never inhabited the region of Bolivia.

Gold taxes: "Speak in Christian" - 37'01''
- To speak in Christian: During medieval times, the jewish, muslim, and christian peoples cohabited Spain. Each religious group spoke a different language. The expression "speak in Christian" was used as a synonym of speaking Spanish.
- The meaning of the phrase has evolved in time. According to the Spanish Royal Academy, today this expression means "to speak in easily comprehensible terms, or in a language that everyone understands."

Costa/Daniel: "That's fucking great, man" - 33'52''
- Around 45% of Bolivians speak Spanish in addition to a foreign language. Only 10% of the Bolivian population speaks an indigenous language only.
- By 2012, the percentage of Spanish citizens who spoke English as a foreign language was only 22%.

Women at the river: "A terrible decision" 44'30''
- Hatuey speaks to the women at the river in an indigenous language. Because the film is located in the region of Cochabamba, where the predominant languages are quechua and aymara, we can assume that Hatuey is speaking in one of these two languages.
- The version of this film distributed within the U.S. does not offer subtitles for the dialogues that occur in indigenous languages. The only two subtitled languages in this film are Spanish and English.

4.2.2. Film Discussion—Guiding Questions (20 to 30 minutes)

Before watching the film clips individually, students will receive a brief synopsis of the film "Even the Rain" (Bollaín, 2010), along with a set of questions. The doctoral candidate will read the synopsis and questions along with the students, and encourage them to take notes if they need to while watching the film clips.

After students have finished watching the film clips, and upon returning to the LL68 collaboratory and sitting in subgroups, students will be instructed to individually briefly respond to the film discussion questions below to the best of their knowledge, and to write their answers down. After responding to these questions on paper, students will be directed to discuss their answers in their subgroups.

Synopsis: "Even the Rain" (Bollaín, 2010)

Filmmaker Sebastian is directing a film about the iconic Christopher Columbus. In his film, Sebastian is determined to overturn the myth of the arrival of Western Civilization in the Americas as a force for good. His film will show the obsession with gold, the taking of slaves, and the terrible violence visited on the natives who fought back. Meanwhile, Sebastian's partner and producer, Costa, is only interested that the film comes in on time and within budget. Despite Sebastian's fury, they will shoot in Bolivia, the cheapest Latin American country with a large indigenous population. While the shoot progresses in and around the city of Cochabamba, civil and political unrest simmer, as the entire water supply of the city is privatized and sold to a British/American multinational.

Questions for the film discussion:

1. What motivates Sebastian to film the movie?
2. In the first film clip, what is the joke that Maria's trying to make?
3. What languages do Bolivians speak?
4. What does "speak in Christian" mean? What was the religion that the Spanish conquistadors took to Latin America?
5. Why does Daniel become angry at Costa? What is Costa's mistake?
6. Are there any similarities between the way the conquistadors treat the natives and the way Costa treats Daniel?
7. What language do the women speak at the river? How is this language subtitled?
8. When the movie is being shot at the river, what is the problem the women are having with filming the drowning scene?
9. What is a possible reason why the indigenous languages are not subtitled for the U.S. market?
10. What attitudes toward indigenous peoples and their language does this film present?

4.3 Post-Test (20 to 30 minutes)

Each student will receive a set of questions on paper. They will be instructed to briefly respond to the questions to the best of their knowledge, and to write their answers down. These questions address cultural issues related to Spanish, English, and indigenous languages. After responding to these questions on paper, students will be directed to discuss their answers with their small group.

a) Before watching the film clips, we spoke about what languages aside from English are spoken in the U.S., and what languages aside from Spanish are spoken in Latin America. Did you learn anything new from the film and/or your group discussions that has expanded your knowledge or changed your attitudes in relation to this topic?

b) What are the predominant languages in the U.S. and Latin America? What are some of the historical and cultural causes for this?

c) What insights have you gained from the film clips about the status of and attitudes toward English, Spanish, and indigenous languages in the US and Latin America?

d) Have you ever had a similar experience with language as those that appear in the film? What do you think caused this to happen in your case?

APPENDIX D

ANNOTATED FILM CLIPS

1. Car sequence: "Taínos y quechuas" - 5'55''

It is believed that Christopher Columbus arrived to the island of Guanahani. The island is located in the Antilles, close to the Bahamas in the Caribbean Sea.

It is known that Columbus found taíno natives. The taíno people also inhabited the island of Hispaniola, composed of the current territories of the Dominican Republic and Haiti.

-They're Quechua.
-So?

Historically, the *taíno* population has never inhabited the region of Bolivia.

Look, they're indians, that's what you wanted?

2. Gold taxes: "Speak in Christian" - 37'01''

To speak in Christian:
During medieval times, the jewish, muslim, and christian peoples cohabited Spain. Each religious group spoke a different language. The expression "speak in Christian" was used as a synonym of speaking Spanish.

Speak like a Christian...
I don't understand you!

The meaning of the phrase has evolved in time. Today this expression means "to speak in easily comprehensible terms, or in a language that everyone understands."

Next.

3. Costa/Daniel: "That's fucking great, man" - 33'52''

Around 45% of Bolivians speak Spanish in addition to a foreign language. Only 10% of the Bolivian population speaks only a native language.

By 2012, the percentage of Spanish citizens who spoke English as a foreign language was only 22%.

4. Women at the river: "A terrible decision" 44'30''

Hatuey speaks to the women at the river in a native language.

Because the film is located in Cochabamba, where the predominant languages are Quechua and Aymara, we can assume that Hatuey is speaking in one of these two languages.

In the U.S., the film does not offer subtitles for the dialogues that occur in native languages. The only subtitled languages in this film are Spanish and English.

APPENDIX E

MAPS OF PARTICIPANS' INTERCULTURAL LEARNING

Map of Mya's Intercultural Learning
Map of Mya's Interactions with Film Annotation

Map of Simon's Intercultural Learning
Map of Simon's Interactions with Film Annotation

Map of Lia's Intercultural Learning
Map of Lia's Interactions with Film Annotation

Map of Amelia's Intercultural Learning
Map of Amelia's Interactions with Film Annotation

Map of Kady's Intercultural Learning
Map of Kady's Interactions with Film Annotation (same as Map's of Kady's Intercultural Learning)

APPENDIX F

IRB PROTOCOL EXEMPTION

ASU Knowledge Enterprise Development

EXEMPTION GRANTED

Barbara Lafford
CISA: Language and Cultures
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Dear Barbara Lafford:

On 2/25/2019 the ASU IRB reviewed the following protocol:

Type of Review:	Initial Study
Title:	Film Annotation for the L2 Classroom: A Technoly-Mediated Model for Intercultural Learning
Investigator:	Barbara Lafford
IRB ID:	STUDY00009239
Funding:	None
Grant Title:	None
Grant ID:	None
Documents Reviewed:	• 2_25 - 11132018 Ocando.Consent form.pdf, Category: Consent Form; • Language Contact Profile, Category: Measures (Survey questions/Interview questions /interview guides/focus group questions); • Materials (English), Category: Measures (Survey questions/Interview questions /interview guides/focus group questions); • 2_25 Recruitment form.pdf, Category: Recruitment Materials; • Translation certificate, Category: Translations; • Materiales (Espanol), Category: Translations; • 2_22 Form-Social-Behavioral-Protocol 2 25 19.pdf, Category: IRB Protocol;

The IRB determined that the protocol is considered exempt pursuant to Federal Regulations 45CFR46 (1) Educational settings, (2) Tests, surveys, interviews, or observation on 2/25/2019.