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Intertextuality and Dialogic Interaction in Students' Online Text Construction

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Abstract

This study examines the online writing practices of adolescent emergent bilinguals through the mediating lenses of dialogic interaction and intertextuality. Using a multimodal discourse analysis approach, the study traces how three students develop online academic texts through intertextual moves that traverse modal boundaries. The analysis reveals how cross-modal, dialogic interactions allow emergent bilingual students to pool linguistic resources, background knowledge, and writing expertise. Such collaborative interactions ultimately serve to support their academic writing. Findings suggest the importance of developing research methodologies and literacy pedagogies that bridge boundaries across social actors, spaces, modes, and languages.

Keywords

multimodality, emergent bilinguals, intertextuality, dialogism, writing

Two students sit in front of laptops and are engaged in an online writing assignment. On their screens is a writing prompt, which instructs them to analyze historical photographs and then use the photographs as resources to construct an essay. As one student's fingers move feverishly across the keyboard, the other student's fingers

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remain motionless as she stares at the blank screen in front of her. She does not yet know what to write, so she leans over to her classmate and appeals for help. Her classmate obliges by turning his screen to show her what he has written so far. She looks at his screen, and after some clarifying questions, she turns her attention to her computer and begins typing slowly. As she gains confidence, she picks up speed, and text quickly fills the screen.

There are several different ways to characterize this scene of one student providing information to another. In a testing situation, some might call this exchange of information cheating or even plagiarism, particularly if the student reproduces her classmate's text as if it were her own. However, many literacy scholars would argue that such an exchange forms a natural part of the writing process (Baker, Rozendal, & Whitenack, 2000; Burns, 2001). In this scenario, the students are engaged in a complex meaning-making process, in which they collaborate to assemble and negotiate the meaning of multiple texts across spoken, gestural, and written modes. In the digital landscape, the writing process becomes doubly multimodal as students draw on nonverbal and verbal modes of communication in order to weave together textual information, including a variety of written, spoken, and visual multimedia resources.

In this study, I examine the online writing practices of three emergent bilingual students from the lenses of dialogic interaction and multimodal intertextuality. In doing so, this study contributes to a body of research dedicated to uncovering the diverse multimodal literacy practices of immigrant youth (Domingo, 2012; Ito et al., 2010), while also responding to calls for examining alternative spaces that support emergent bilingual students' academic literacy development through the use of technology (Kleifgen & Kinzer, 2009; Parker, 2008).

Review of Literature

Intercalations of student–student interactions during online writing tasks need not be seen as "off task" or disruptive to the learning context, rather they can be powerful sources for academic learning. In this study, I argue that for emergent bilingual learners, who are educated in English-only environments, collaborative interactions allow access to a greater pool of community texts that support their academic writing. Two key concepts that inform this interactional and collaborative approach to writing are *dialogism* and *intertextuality*. Both concepts share a common provenance in the work of Russian scholars Mikhail Bakhtin and Valentin Vološinov.

Intertextuality as Dialogic Interaction

As the most prominent member of the Bakhtin Circle and as its presiding figure, Bakhtin is often credited with coining the term "intertextuality". However, neither Bakhtin nor any other members of the circle used this term in their own writing. Rather it was literary scholar Julia Kristeva who devised the concept based on the combined works of Barthes, Bakhtin, and Vološinov (Bazerman, 2004; Kristeva, 2002). Kristeva (2002) recalled

developing the term, "At that time, I contributed by replacing Bakhtin's idea of several voices inside an utterance with the notion of several texts within a text" (p. 8). In describing the dialogic nature of the utterance, Bakhtin first described language as deeply linked to the context in which it is produced. Language, Bakhtin argued, does not exist in an autonomous or neutral state. Language only exists in use. In order to produce language, an interlocutor must appropriate it from a previous context and adapt it according to his or her "own semantic and expressive intention" (Bakhtin, 1981, p. 293). Language, thus, even at the level of the utterance, is always dialogic in nature.

Bakhtin's name is most commonly associated with this notion of dialogism, but his use of the term was also greatly influenced by his close collaborator, Valentin Vološinov. As a linguist, Vološinov made some of the more detailed contributions to the conceptualization of the dialogic nature of language. In *Marxism and the Philosophy of Language* (1929/1973), Vološinov suggested that any study of language should start from the perspective of interaction:

> In point of fact, *word is a two-sided act*. It is determined equally by *whose* word it is and *for whom* it is meant. As word, it is precisely *the product of the reciprocal relationship between speaker and listener, addresser and addressee*. (Vološinov, 1929/1973, p. 86, emphasis in original)

For Vološinov and his close collaborator Bakhtin, spoken language is created through the appropriation and subsequent transformation of other utterances within a particular social context and, therefore, must be examined within the social interaction it is produced.

Intertextuality builds upon the dialogic nature of language by expanding the study of speech to texts. While Kristeva originally developed the term to apply to the field of literary studies, intertextuality has been broadly applied to a variety of disciplines. In the field of education, intertextuality has been examined as a social phenomenon in which students interact with one another as they refer to and acknowledge texts in order to accomplish a common purpose (Bloome & Egan-Robertson, 1993; Lee, 2006). In their study on intertextuality in a first-grade classroom, Bloome and Egan-Robertson (1993) expanded the concept beyond cross-textual referencing and frame intertextuality as "a social construction, located in the social interactions that people have with each other" (p. 308). In their study, the authors demonstrated how two first-grade students' interactions became embedded in a teacher-led class reading activity. Throughout the activity, the two students engaged in peer talk about their favorite books and in covert play using their hands to represent imaginary objects. The intertextual action here was the contrasting of playful social practices within a school-sanctioned reading activity.

As illustrated in this example, texts are not merely written accounts but can be seen broadly in a Hallidayan sense to include the various materials that are used in the learning context. Other examples of multimodal texts include images, charts, video, audio, websites, and physical objects. Beyond the material, texts can also be considered the product of experience (Bloome & Egan-Robertson, 1993). This broad

definition of text allows researchers to go beyond the immediate context of the classroom to consider narratives of history, community practices, and prior knowledge as texts. If one takes this inclusive view of texts, then one can imagine instances of cross-modal intertextuality, such as, when students shift from reading a text, to talking about the text and then finally to writing about the text.

Intertextuality as a Multimodal Process

In developing a conceptual approach to understanding cross-modal intertextuality, I draw on the work of Iedema (2001, 2003), and his concept of *resemiotization*, which traces text construction across multiple modes and social contexts. Resemiotization, as introduced by Iedema (2001, 2003), refers to the way meaning making shifts from "context to context, from practice to practice, or from one stage of practice to the next" (2003, p. 41). This resemiotization process can be exemplified by tracing the cross-modal construction of a health facility, starting from the initial planning stages. The facility is constructed through several resemiotizing moves: (1) the move from talk to writing as face-to-face meetings in the planning stages transform into a written summary of the building plans, (2) the move from written text to image and design as the written summary is translated into an architectural design of the building, and (3) finally design to construction as the physical facility is built on the basis of the architectural design (Iedema, 2003). Resemiotization prioritizes the changing context of the construction process, and thus the analysis is focused not on the various texts that are produced as consequences but on the dynamics that shape them and gave them meaning. Resemiotization challenges a traditional, Bakhtinian approach to intertextuality, which focuses on finished or finite texts as primary units of analysis. A resemiotization framework shifts the unit of analysis to the mediated actions that produce meaning rather than the texts or modes themselves.

In his writing on multimodality, Kress (2010) also discussed the process by which meaning shifts by way of movement within and between socially specific modes. He identified the movement of meaning between modes as *transduction*, a kind of textual translation. In transduction, translating meaning material from an image to speech requires much more than providing a description of what the image depicts but rather necessitates a "full recasting of what the image means," given the boundaries of the spoken mode (p. 125). Kress noted that recasting the meaning of an image into spoken language requires selecting linguistic labels based on one's interpretation of the visually depicted entities. This notion that different meanings can be "selected" from a single artifact and result in diverse interpretations has enormous implications for how we assess students in schools.

Kress (2010) argued that given the limitations of modes themselves and the selective biases involved in meaning making, assessment should focus on the meaning *made* by students, not the meaning that we expect of them. Yet in the school context, students are expected to interpret classroom texts and assign meanings in particular ways. Such expected interpretations are outlined in curricular standards and are reflected in the choices teachers make about which texts to teach and how to teach them. What would

happen if the two students described in the introduction of this study interpreted the essay prompt and accompanying historical photographs in ways that differed from or even contradicted the "official" or "sanctioned" interpretation as expected by their teacher? Such a difference between produced meaning and the expected meaning is often attributed to a learning error. However, transductions of meanings across modes rely not only on how individuals identify the meaning within the original image but also on the affordances and limitations of the receiving mode (Kress, 2010). Therefore, identifying how students construct meaning within and across multiple modes of representation has important implications for how we understand writing and meaning making in and around online spaces. This study engages this issue through two research questions regarding the social construction of online writing:

- What multimodal resources (including online artifacts) do emergent bilingual students draw upon while constructing written texts?
- What is the role of dialogic interaction (across modes, artifacts, and human actors) during this text construction process?

Context of Study

This study draws on a subset of data collected from the STEPS to Literacy research project, a multiyear writing intervention conducted by researchers at Teachers College, Columbia University and funded by the Institute of Educational Sciences at the U.S. Department of Education (Kleifgen et al., 2014).[1] The primary goal of the STEPS to Literacy intervention is to support the academic writing of emergent bilinguals through the development of an online writing space that incorporates multimedia resources, a guiding heuristic, and home language supports. Currently, emergent bilinguals make up about 10% of the U.S. public school population (National Center for Education Statistics, 2012), and approximately 75% of all emergent bilinguals are Latino (García & Kleifgen, 2010). Therefore, any research that attempts to understand the writing practices and linguistic resources of emergent bilinguals must focus attention to this important population.

This study, in particular, focuses on data collected in the fall of 2011 from an eighth-grade class of Latino emergent bilinguals in a New York City public school. The class participated in the STEPS to Literacy project by studying a unit on the U.S. Civil Rights Movement. During this time, I served the STEPS project as one of two instructors. My responsibilities as an instructor were to lead students in whole-class discussions, provide essential background information on the Civil Rights Movement, and introduce and guide students in the use of the online system. The entire intervention took place over the course of six 1 hour instructional sessions. In the first five instructional sessions, the students examined multimedia artifacts related to the topic of the U.S. Civil Rights. They took notes on these artifacts in preparation for the sixth session in which they were to write lengthier essays in response

to a writing prompt. Within the Civil Rights unit, students had access to an online resource library of 31 multimedia artifacts. These artifacts served as the primary vehicles for presenting content in the instructional unit. The artifacts included historical photographs depicting segregated buses, schools, water fountains and parks, protests in marches and sit-ins. Other multimedia artifacts included written documents, video clips from newsreels, and informational graphics including maps and timelines.

During the note-taking tasks, students interrogated these resources using an instructional heuristic called STEPS+G (Kinzer, 2000). STEPS+G encouraged students to analyze a content area topic or event from multiple perspectives—**S**ocial, **T**echnological, **E**conomic, **P**olitical, **S**cientific and **G**eographic. The heuristic was designed as a resource to stimulate note-taking and encourage students to develop a deeper understanding of the U.S. Civil Rights Movement. How students interpreted and used the STEPS+G heuristic and multimedia artifacts as resources in the social construction of their written texts constitutes the crux of this inquiry.

Data Collection and Analysis

The methodology employed in this study requires a close, detailed transcription and analysis of social interactions of three focal students from the fall 2011 cohort: Kenny, Ricki, and Jessika (pseudonyms). In selecting these focal students, I employed a criterion-based approach, which is a useful approach in inductive research (LeCompte & Preissle, 1993). The criteria used for participant selection included attendance in all six instructional sessions, immigration background, and language preferences as indicated by a preintervention survey. The three focal students included Kenny, a U.S.-born Dominican American who preferred writing in English; Ricki, an emergent bilingual born in the Dominican Republic who wrote in both English and Spanish; and Jessika, a newcomer from Honduras with advanced writing proficiency in Spanish and a strong interest in developing her writing in English.

The data sources in this study included video camera recordings of students during the instructional sessions, logs of user actions, screen capture recordings of students' laptop screens and students' online notes. The three focal students were seated along a long table in back of the classroom, and a video camera was set up so that it captured all students within the viewfinder (Figure 1).

In the analysis stage, the video and screen capture recordings were synchronized and transcribed together, using ELAN, a video annotator. This synchronized analysis allowed for the spoken, written, and nonverbal interactions to be transcribed within a context of moment-by-moment unfolding actions. ELAN allows the transcription of videos across a number of different layers called tiers. In this study, students' interactions were transcribed across three different tiers. Each tier focused on a particular mode of communication or feature within the online space. Students' spoken and nonverbal interactions (Tier 1) were transcribed using an adaptation of Jefferson's (1984) conventions for conversation transcription (see Appendix). Students' written texts (Tier 2) were transcribed verbatim as they appeared on screen in the students' notepad.

Figure 1. Focal students seated at table (Lower left: Jessika and Ricki. Upper right: Kenny).

Table 1. ELAN Tiers and Descriptions of Actions.

1 Spoken and gestural communication	All student-produced spoken interaction and nonverbal communication, including gaze and gesture.
2 Written	All student-produced notes in the online notepad.
3 System navigation	All students' online actions, including opening and closing of online artifacts, navigating between different areas of the website, and opening and closing of the notepad.

The final tier included written annotations of students' screen navigation. Table 1 presents descriptions of the types of interactions that were transcribed in each tier.

I employed this transcription methodology across all six instructional sessions, tracing each student's social interaction across spoken and written modes as well as in the online space. With the transcription completed in ELAN, the transcribed tiers were then exported into spreadsheets, which formed the basic structure of the final transcripts. In the final transcripts, the positioning of the modes in columns underscores the layered nature of the actions. The turn sequences of the interactions are organized in individual cells and are read horizontally sequentially (left to right). Thumbnail images from the video and screen recordings are embedded within the cells to give the reader a visual frame for interpreting the students' transcribed actions.

Findings

The findings of the study are presented through a close analysis of two transcripts that exemplify both the variation and the typicality of the collaborative interactions that took place during the STEPS intervention. The transcripts illustrate important nuances regarding how the focal students constructed meaning from a variety of online artifacts and then appropriated and transformed these texts across modal boundaries.

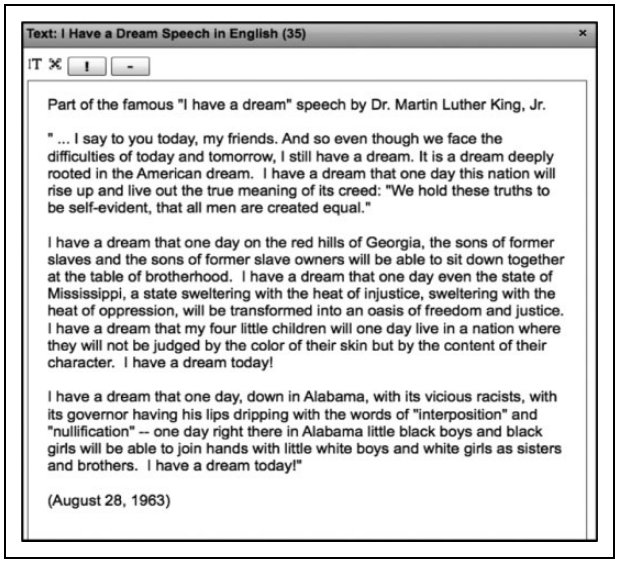


Figure 2. "I Have a Dream" online artifact.

These transcripts best illustrate the two main themes that emerged from the data analysis: the construction of texts through dialogic interaction and construction of text through multimodal resemiotization.

Constructing Texts Through Dialogic Interaction

The first transcript comes from the fifth instructional session and highlights the interactions between focal student, Kenny, and a STEPS technology specialist (herein tech specialist). The tech specialist's primary role on the STEPS research team is to provide technological support by setting up cameras and computers, but in the interaction detailed here, Kenny calls on her to provide some guidance on how to apply the political lens of the STEPS+G heuristic to Dr. Martin Luther King, Jr.'s "I Have a Dream" speech (Figure 2). In doing so, Kenny references a handout, which includes a list of questions associated with the political aspects of the "I Have a Dream" speech. These questions include:

- Who had power?
- What laws and decision did the government make about segregation?

The exchange between Kenny and the tech specialist does not take the form of a unidirectional transmission of knowledge, but rather takes on a dialogic form, as they co-construct an interpretation across spoken, written, and gestural modes and index a number of textual artifacts, including on-screen notes, the handout of the STEPS+G heuristic questions, and historical images.

The transcript (Excerpt 1.1) begins with Kenny seated in front of his laptop. The web-based version of the "I Have a Dream" speech is open on his screen, and to his right on the table is the handout with the STEPS+G guiding analytical questions (herein STEPS+G handout). The interaction commences when Kenny seeks help from the tech specialist in analyzing the speech. When the tech specialist approaches, Kenny solicits her help in applying the question from the STEPS+G handout. He points to the handout and reads directly from the text (Line 17), "Um. This says- what laws and decisions did the government make about the segregation. Right?" In this turn, Kenny first prefaces his question by indexing the language from the STEPS+G handout. This appropriation of the text helps him establish a common frame of reference with the tech specialist. When the tech specialist affirms this, Kenny continues by pointing to the speech and asking if he can include part of it in his note (in Line 19) "Um. I can write that 'One day right there in Alabama little boys and girls will be'-?"

In his second turn, Kenny quotes part of the text of from the "I Have a Dream" speech, and in doing so proposes a possible answer to the question posed in the handout. By appropriating the language of the speech within his turn, Kenny demonstrates his familiarity with the academic convention of looking for evidence within the body of a source text. However, the information that he cites from the "I Have a Dream" speech is not relevant to the question regarding the laws and decisions made by the government. The tech assistant attends to this issue in her turn, by clarifying the meaning of the quoted text from the speech. She states (Lines 20, 22), "So that's- that's what Martin Luther King wanted. Right? / That was the- that was the dream. Right?" By stressing the words "wanted" and "dream," the tech specialist indicates the unrealized nature of Martin Luther King's desire for integration in contrast to the laws and decisions realized by the government. Kenny responds minimally, "Oh" (Line 21) but does not begin writing. This prompts the tech specialist to renew her explanation (Line 22) with little success.

Perhaps part of the difficulty that both Kenny and the tech specialist have in answering the question as it is presented in the STEPS+G handout (What are the laws and decisions?) is that this particular excerpt of the "I Have a Dream" speech does not explicitly reference any laws or decisions made by the government. There is only one oblique reference to the governor of Alabama and his efforts to nullify the Supreme Court's decision in *Brown v. Board of Education* to desegregate schools. The meaning of this reference is lost on Kenny who is new to this content, and thus it is up to the tech specialist to provide this essential historical content and background knowledge.

The tech specialist provides this contextual framing a few minutes later when she summarizes the beliefs of the governor of Alabama and how they contrast with the beliefs of Dr. Martin Luther King Jr. (Transcript 1.2; Line 38). As the tech specialist concludes her explanation, Kenny appears confused and redirects their talk back to the text of the STEPS+G heuristic handout (line 39). Kenny is concerned with answering the question as it appears on the handout. By pointing to the question on the handout and employing a polar question, "So that was the uh- the decision?" (Line 39), Kenny attempts to elicit a simple yes/no answer, which would allow him to complete the task at hand.

In her response (Line 40), the tech specialist first provides an affirmation "Yeah" and then an expansion, noting that what they are discussing falls under the political component of the STEPS+G questions. The expansions rather than clarifying the answer seem to produce more confusion. Kenny pauses briefly before repeating the question from the handout twice more (Lines 42 and 44). Each time he couples his question with a gesture, pointing at the STEPS+G handout. This gesture serves to emphasize his desire to answer the question as it is printed on the handout.

In Line 47, the tech specialist switches tactics and moves their shared attention away from the STEPGS+G handout. She appeals to what Kenny has learned in the previous sessions, "'member you learned that like the schools were segregated, you learned about the water fountains, all of that? Those are all of the laws (.) that the government makes." In producing this turn, the tech specialist shifts their analytical focus away from the content of the speech and the handout question and instead brings to the foreground a new text—images that the class had studied in previous instructional sessions. She appeals to their shared experience in previous instructional sessions, during which they examined images of segregated schools and water fountains. Kenny responds positively by nodding to this newly referenced text, and their interaction comes to a close as Kenny begins drafting his note. By the end of this interaction, Kenny's note, while not lengthy, does accomplish the task of directly answering the questions provided in the STEPS+G handout (see Figure 3).

This close examination of the social interaction between Kenny and the tech specialist reveals the dialogic nature of academic literacy activities in classrooms. While the tech specialist has considerably more background knowledge about the speech than Kenny, we do not see a direct exchange of knowledge between them. Rather, what we see is a complex negotiation of meaning and a mutually constructed interpretation of the "I Have a Dream" speech through the analytical lens of other texts (the STEPS+G handout and previous experience examining images of segregation). Kenny's insistence on answering the questions from the handout guides their interaction with the text of the speech, and while they both have trouble identifying answers to these questions from the content of the speech, they do not abandon the task, nor do they challenge the questions. Instead, they develop a number of intertextual strategies to facilitate their analysis, including appropriating the language of the questions on the handout and citing excerpts of Martin Luther King, Jr.'s speech.

However, even as they employ these intertextual strategies, the speech does not submit easily to interpretation. These initial intertextual strategies fail primarily because the speech, devoid of historical context, does not lend itself to answering the questions as they are posed on the STEPS+G handout. It is only when the tech specialist introduces a new text, the narrative of segregation as told through the images and photographs the students had examined in previous lessons that Kenny is able to draft a note. This new textual reference, developed from their shared learning experience, thus provides an entry into understanding and framing the speech, which had until then remained resistant to any form of appropriation.

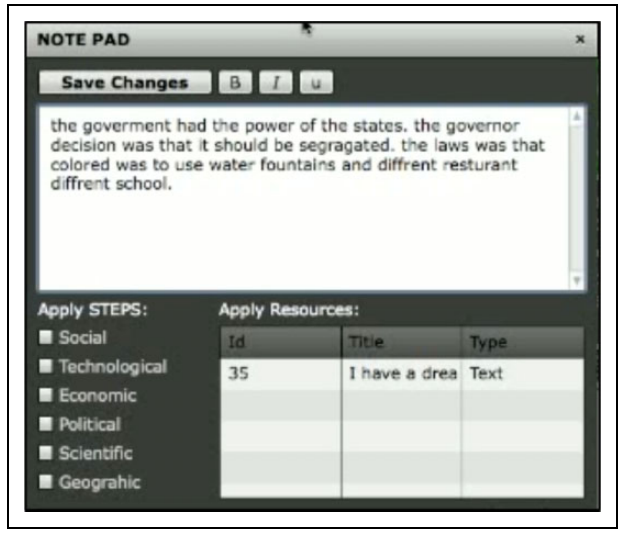


Figure 3. Kenny's note on the "I Have a Dream" online artifact.

Constructing Texts Through Multimodal Resemiotization

The next transcript illustrates the multimodal nature of text construction between two learners, Ricki and Jessika, during the second instructional session. In the excerpt, Jessika calls on Ricki for assistance in taking notes on a historical photograph. In this activity, the students are instructed to select an image of their own choosing and take a note in response to the prompt: "How did segregation laws enforce inequality and discrimination in the United States?" While they are to write individual notes, the students are encouraged to collaborate with peers and seek help from instructors when needed. The transcript centers on the interaction between Jessika (referred to as J in the transcript) and Ricki (referred to as R in the transcript) and their collaborative interpretation of the segregated park sign (see Figure 4).

In this first transcript excerpt (2.1), Jessika begins her note on the park notice with "White people only (Negros and Mexican) out." It takes her approximately 3 minutes to compose this short text as she types slowly, using her index finger to pick at individual keys. She pauses several times to reread what she has typed before adding more text. The first sentence of her text serves to summarize the original park sign's intended message. Following this first descriptive line of text, Jessika begins the next sentence with "[i] think," signaling a move from summarizing the park sign's message to constructing her own interpretation of it.

In constructing her interpretative stance, she pauses after typing "[i] think," and turns to Ricki, seated to her left and asks, *¿Qué es lo que hay que escribir?* (Line 4). Jessika appears to seek clarification of the instructor's directions by asking "What is it we're supposed to write?" Yet, in his next turn (line 5), Ricki does not treat the

Figure 4. "Segregated Park" online artifact.

question as a request for clarification by summarizing the prompt or the teacher's instructions. Instead he responds rather abruptly, "They be racist." If looked at solely within the context of their spoken interaction, Ricki's utterance would appear to be a non-sequitur, as it does not respond to Jessika's question about what they are *supposed* to write. However when examined within the context of Jessika's onscreen writing, Ricki's turn is shown to be a valid response. A close look at the thumbnail image of the students in Line 2 reveals that, when he produces this line, Ricki's gaze is fixed on note, "White people only(Negros and Mexican) out. I think". Ricki's utterance "they be racist" is a specific suggestion on how Jessika should complete the sentence displayed on her screen—"i think [they be racist]." Indeed Jessika indicates her satisfaction with this response by beginning to type Ricki's suggestion into her written note (line 6). The entirety of this last action is omitted from the excerpt as it takes half a minute for Jessika and Ricki to fully incorporate the text into the note. During this time, Jessika and Ricki share the keyboard, carefully picking the right keys as they negotiate the spelling of the word "racist" by sounding it out. This interaction between the two students demonstrates an example of cross-modal intertextuality as Jessika appropriates Ricki's spoken utterance and transducts it into written text. As a result, her note reflects the intertextual merging of two different source texts, the written text of the online artifact (the park notice) as well as the spoken utterance of her classmate.

In the second transcript excerpt, which occurs few minutes later, Jessika continues to refine her note and reads it aloud to Ricki (Line 43): "I think that the white people not like the people of Mez-Mexico and negros because the-*ellos piensan*," Jessica terminates her turn with the phrase *ellos piensan* (they think) and a continuing intonation, which signal to Ricki that her written note remains unfinished. Ricki responds to her turn (Line 44) by picking up her last English utterance "because" and recasting it in Spanish (porque). He repeats this word softly to himself several times, which

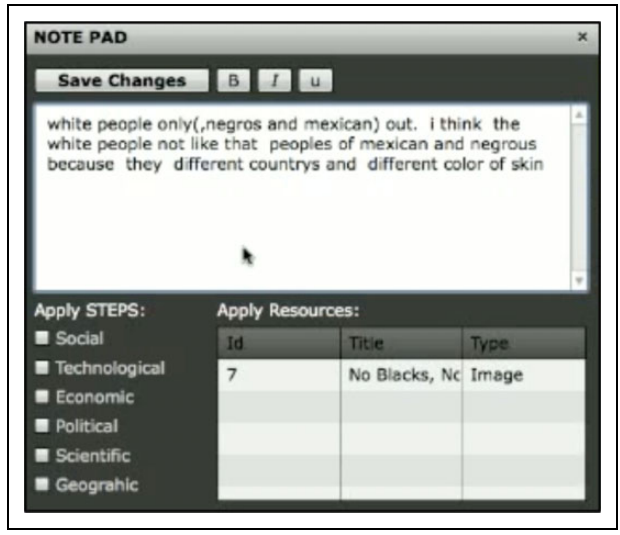


Figure 5. Jessika's note on the "Segregated Park" online artifact.

simultaneously helps him maintain speaker status and demonstrate that he is attending to her trouble spot. After a slight pause, he offers his response (Line 46) *Porque ellos son diferentes razas?* [Because they are different races]. Ricki produces this turn with an upward intonation contour, providing an opportunity for Jessika to either accept or reject his suggestion. When Jessika does not respond, Ricki signals approval for his own suggestion (Line 47) by nodding, thereby encouraging Jessika to incorporate his suggestion into her note. Over the course of several minutes, Jessika rephrases Rick's suggestion in her own words. In her final version of the note, Jessika replaces the word *race*, with "different color of skin" and employs the phrase "different countries" to signal some of the differences between the racial prejudices toward Mexican and Black Americans (see Figure 5).

When examined through the lens of dialogic interaction, Jessika's note reflects a complex process of incorporating a variety of intertextual and resemiotizing moves. The first line of her text, "White people only(Negros and Mexican) out," serves as the first instance of intertextuality. In this line, Jessika appropriates the language of the park sign to construct a summary of its intended message. In doing so, she establishes the contextual frame for the rest of her note. This first intertextual move does not incur a modal shift as Jessika draws upon the written language of the sign into her own written text.

A second intertextual move occurs in Transcript Excerpt 2.2 after she solicits help from Ricki and incorporates his suggestion into her note. This intertextual move is the first to cross modal boundaries as Jessika transforms Ricki's spoken utterance "they be racist" into written discourse. It is a resemiotizing move that requires assigning letters to sound combinations, and Jessika approaches spelling the word "racist" by

sounding it out. By drawing upon spoken, written, and even gestural (key strokes) resources, Jessika is able to transform the spoken utterance into a written text. The transformations of this utterance reflect what Bakhtin calls the process of making language "one's own" (1981, p. 293). This process of appropriating language is not an easy one as Bakhtin notes, "many words stubbornly resist, others remain alien, sound foreign in the mouth of the one who appropriated them and who now speaks them ... (1981, p. 294). Jessika addresses this challenge by successfully by substituting unfamiliar or unwieldy words like "race" and "racist" with other words and phrases she already knows, like "color" and "countries". By assembling, appropriating and then transforming meaning from across different texts and modalities, Jessika is able to create a new knowledge artifact (a note) that suits her own semantic and expressive needs.

Discussion

Vološinov noted that every sign "is a construct between socially organized persons in the process of their interaction" (1929/1973, p. 21). The role of social interaction in sign making is clearly evident in these two transcripts. In the first transcript, Kenny and the tech specialist juxtaposed and constructed meaning from three different textual resources in order to accomplish the task: the text of Dr. Martin Luther King, Jr.'s speech, the STEPS+G handout, and prior knowledge gained from viewing images of segregated public spaces. In the second transcript, Jessika appropriated and transformed Ricki's *spoken* utterances as well as the *written* text from the park notice *image* in order to construct her written interpretation. While spoken language is the primary mode through which most of this interaction takes place, other communicative modes such as gesture and gaze play essential roles in the meaning-making process. For example, Kenny's gesturing to the STEPS+G handout and Ricki's gaze on Jessica's screen are what Goodwin (2007, 2013) calls "environmentally coupled gestures," which link language to specific artifacts or phenomena in the surrounding environment.

In detailing and tracing students' writing as it emerges through interactions, this study reveals how texts are consequences of a coordination of resemiotizing moves. The text construction process detailed in these two transcripts follows the pattern of resemiotization that Iedema (2003) proposes for cross-modal meaning making. The students first engage in the ephemeral mode of talk and then this talk gets transcribed into print, which is a more permanent, lasting record of the meaning-making process. In Iedema's (2003) model, these resemiotizing (cross-modal) moves, while not necessarily chronologically discrete, unfold in a linear, sequential manner. In this research, however, the talk and writing occurred simultaneously with each one informing the shape of the other. The social actors' cross-modal interactions provided important opportunities for students to work together in order to pool their linguistic resources, background knowledge, and writing expertise. Such dialogic interactions are key to the interpretation and meaning-making processes.

Recently, education reform efforts in the United States have resulted in the development of new standards during online writing tasks. For example, the Common Core Standards for writing state that students are expected to use the Internet in order to (1) produce and publish writing, (2) collaborate and interact with others, and (3) gather and integrate information from a variety of sources (Leu, Kinzer, Coiro, Castek, & Henry, 2013, p. 1155). The focal students in this study engaged in all three of these tasks. They were exposed to a variety of texts (written documents, images, graphs, and multimodal media) and were encouraged to engage with these materials through a number of different interactional activities, including pair and small group work. For emergent bilinguals, such interactional opportunities are also spaces that support and encourage the use of their home languages and literacies as entry points into the curricular content and bridges to English academic discourse.

In many schools, an emergent bilingual student's texts are traditionally analyzed according to how well they approximate a standard form of English academic writing. Such product-centric approaches may prove useful in identifying areas where a student can improve her writing skills and how teachers and schools can provide additional support. However, they do not lend themselves to understanding how and why an emergent bilingual produces certain texts or what the texts may mean about her learning and meaning-making processes. In order to engage in instruction that places students at the center of inquiry, teachers and educators can approach writing from a dialogic perspective, analyzing their work as it unfolds in interaction with others. This can be most effectively accomplished through the use of connective methodologies that bridge boundaries across social actors, spaces, modes, and languages. For emergent bilinguals, such an approach not only supports their development as individual students but also recognizes their contributions to the social processes of meaning making and learning.

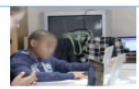
Appendix

Transcription Notations

(.)	untimed perceptible pause within a turn
.	sentence-final falling intonation
,	continuing intonation
?	yes/no question rising intonation
-	abrupt cut off
:	lengthened vowel sound
(xxx)	inaudible speech
(())	comments on background or nonverbal behavior
°soft°	spoken softly/decreased volume
underline	stress
italics	original Spanish
bold	English translation of Spanish spoken text
bold underline	added onscreen writing

Transcript Excerpts

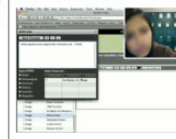
Transcript Excerpt 1.1.

	T.S. (Spoken & Gestural)	K (Spoken & Gestural)	K (Written)	K (Online Navigation)
14		((silently reads the paper handouts))	the government had the power of the states.	
15		((raises hand for help)) 		
16	((Approaches K))			
17		((Points to STEPS+G handout)) Um. this says ((reads aloud)) *what laws and decisions did the government make about the segregation*, right? 		
18	Mm-hmm.			
19		Um. I can write that. ((reads from aloud handout of speech)) *One day right there in Alabama little boys and girls will be=*		
20	=So that's- that's what Martin Luther King wanted. Right?			
21		Oh.		
22	That was the- that was the dream. Right?			
23		Yeah.		

Transcript Excerpt 1.2.

	T.S. (Spoken & Gestural)	K (Spoken & Gestural)	K (Written)	K (Online Navigation)
38	'cuz he doesn't- he doesn't believe- the governor doesn't believe the same thing as Martin Luther King.		the government had the power of the states.	
39		hmm. (.5) So that was the uh- the decision? 		
40	Yeah. So that's the political part ((points to STEPS+G handout)). Because the government says one thing and the people say another.			
41		(1.0)		
42		So that was the decision, right? ((pointing to handout)) that the governor-		
43	Mm-hmm. ((nods head))			
44		What 's the laws? ((points to STEPS+G handout))		
45		(2.0)		
46	[Well what have you] learned about, right?	[Same thing, right?]		
47	'member you learned that like the schools were segregated, you learned about the water fountains, all of that? Those are all of the laws (.) that the government makes.	((nods head))		
48	((Turns attention to another student))	((turns to laptop and types))	the government had the power of the states. **the gover decision was that**	((Places cursor in notepad and types)) 

Transcript Excerpt 2.1.

	R (Spoken & Gestural)	J (Spoken & Gestural)	J (Written)	J (Online Navigation)
1			white people only(,negros and mexican) out. **i think**	
2	((looks at J's screen)) 	*¿Qué es >lo que (xxx) escribir<?* **What is it (xxx) to write?**		
3	((Reading J's note aloud)) °out. I thin- (.) think°			
4		*¿Qué es >lo que hay que escribir<?* **What is it we're supposed to write?**		
5	They be racist.			
6		They. ((types))	white people only(,negros and mexican) out. i think **they**	
7	Racy.			

Transcript Excerpt 2.2.

	R (Spoken & Gestural)	J (Spoken & Gestural)	J (Written)	J (Online Navigation)
43	((looking at J's screen)) 	*Me pusé* white peop- oh no. I think white people not like the people of Mez-Mexico and *negros* because the- *ellos piensan,* ((taps head)) **I put white people- oh no. I think white people not like the people of Mez-Mexico and blacks because the- they think,**	white people only(,negros and mexican) out. i think the white people not like that peoples of mexican and negrous because they	
44	*Uhh. Po:rque:°Porque. Porque. Porque. Porque. Porque. Porque.°* **Uhh. Because. Because. Because. Because. Because. Because. Because.**			
45	(1.2)			
46	*¿Porque ellos son diferentes razas?* **Because they're different races?**			
47	Mmhm. Mmhm. ((Nods head))			
48		((types)) (to self) °differ- (.) different°	white people only(,negros and mexican) out. i think the white people not like that peoples of mexican and negrous because they **different**	
49		((types)) (to self) °colors.°	white people only(,negros and mexican) out. i think the white people not like that peoples of mexican and negrous because they different **colors**	

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