Mediational Modalities: Adolescents Collaboratively Interpreting Literature through Digital Multimodal Composing

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While literary interpretation and other traditional written genres have continued to be foundational to secondary English language arts curricula, there has concurrently been a call for an expanded view of literacy that requires students to be skillful consumers and producers of digital multimodal compositions. Bridging these often-conflicting priorities in the ELA classroom, some scholars have begun to examine how adolescents can interpret literature through digital multimodal composing. This study builds upon this developing field by exploring how 27 culturally and linguistically diverse 10th-grade students collaboratively interpreted literature by creating two digital projects—a hypertext literary analysis and a video literary analysis. In particular, sociocultural and social semiotics theoretical frameworks were integrated to understand how working with visuals, sound, and text in digital spaces mediated students’ interpretations of literature during their composing processes. Data sources included screen capture and video observations, design interviews, written reflections, and multimodal products. Through qualitative and multimodal data analysis, three main themes emerged for how multiple modes mediated students’ literary interpretive processes: (1) conceptualizing literary themes, (2) constructing multilevel connections to literature, and (3) elucidating literary meaning. These findings contribute new insights into how multiple modes can serve as valuable tools for thinking during students’ composing processes, including helping students to collaboratively discuss and articulate their understanding in complex and innovative ways. This study concludes with implications for how secondary ELA teachers can effectively integrate digital multimodal projects in the multilingual classroom to support literary interpretation.

Literary interpretation and analysis have a long history in high school English language arts classrooms. By assigning interpretive essays, ELA teachers aim for students to advance beyond a cursory understanding of plot and characters to carefully examine how various rhetorical devices (e.g., metaphor and symbolism) contribute to their understanding of a literary work as a whole. Effective interpretation requires students to substantiate their detailed analysis with textual evidence and sound reasoning (Hillocks, 2011). Along with supporting students in becoming critical readers, analyzing literature fosters empathy and the ability to take another person’s point of view (Mar, Oatley, & Peterson, 2009). Research...
also underscores that literary interpretation is a complex problem-solving task (Lee, Goldman, Levine, & Magliano, 2016) that is particularly challenging for culturally and linguistically diverse students (National Assessment of Educational Progress, 2011).

While literary interpretation and other traditional written genres have continued to be foundational to ELA curricula, there has concurrently been a call internationally for an expanded view of literacy (Multimodal Literacies Issue Management Team of the NCTE Executive Committee, 2005). This view requires students to be skillful consumers and producers of digital texts that incorporate multiple modes (e.g., visuals, sound, text, and movement) to make meaning.

A wide range of reasons supporting the integration of digital multimodal literacies in the ELA curriculum have been advanced. Some researchers have illustrated how a growing majority of today’s adolescents create and share multimodal content online for authentic purposes and audiences (Ito et al., 2010). Thus, dramatic disconnects often exist between the types of compositional practices adolescents experience in and out of school (Alvermann, 2008). Others contend that the print-centric learning environments offered in most schools often do not match students’ new learning needs, and that engaging with digital multimodal texts involves different and innovative ways of thinking (Hull & Nelson, 2005; Mayer, 2008). Scholars stress that explicitly teaching multimodal literacies in schools is imperative for teachers whose students do not have access at home, in order to improve equity and support all students in becoming critical global citizens (Leu et al., 2014). Especially in today’s simultaneously interconnected and divided world, youth must develop cosmopolitan habits of mind so that they can effectively make their voices heard in global dialogues (Hull & Stornaiuolo, 2010; Hull, Stornaiuolo, & Sahni, 2010). Finally, many emphasize the promise that multimodal literacies offer to culturally and linguistically diverse youth for drawing upon their cultural lifeworlds in empowering ways (Anderson, Stewart, & Kachorsky, 2017; Hull & Katz, 2006; Vasudevan, 2009).

Bridging these often-conflicting priorities in the ELA classroom, some scholars have examined how culturally and linguistically diverse adolescents can interpret literature through digital multimodal composing (Curwood & Gibbons, 2009; Doering, Beach, & O’Brien, 2007; Jocius, 2013; Newfield, 2014; Smith, 2018). This research describes how students are able to explore literary devices, characterization, and themes through creating a variety of digital projects, and points to the pedagogical potential for multimodal literary interpretation in multilingual classrooms.

Still, a deeper understanding is needed of the academic learning potential for multimodal composing (Moje, 2009). Similar to scholarship on writing-to-learn, which explores how writing serves as a tool for thinking, more research is needed that investigates multimodal composing-to-learn—that is, understanding how composing through multiple modes supports and possibly transcends learning in the ELA classroom.

This study contributes by exploring how 27 culturally and linguistically diverse 10th-grade students interpreted literature by creating two digital projects—a
hypertext literary analysis and a video literary analysis. In particular, I examine how the process of working with a variety of modes in digital and multilingual spaces mediated students’ interpretations of literature. This study provides new insights into how students conceptualized literary themes, constructed multilevel connections to literature, and elucidated literary meaning through multiple modes.

Theoretical Perspectives and Related Literature

Social semiotics (Hodge & Kress, 1988; Kress, 2010) and sociocultural perspectives of mediated action (Vygotsky, 1978; Wertsch, 1991, 1998) were integrated to explore students’ multimodal literary interpretations.

Social Semiotics

Social semiotics theory (Hodge & Kress, 1988; Kress, 2010) is grounded in the understanding that various modes—including but not limited to visuals, sound, text, movement, and gesture—are integral to meaning-making. Through this approach, writing is no longer privileged as the starting point of analysis (Jewitt, 2009); instead, it is but one mode out of a multimodal palette of communicative possibilities (Kress, 2010).

A social semiotic perspective elucidates how meaning is created through the synergistic interaction between different modes. The unique interweaving of modes creates generative messages that no single mode can express independently (Jewitt, 2009; Stein, 2008). Thus, endless combinations and intersemiotic relationships can be crafted by combining modes (Burn, 2017; Unsworth, 2008). In addition to offering a variety of communicative possibilities for composers, these multidimensional messages also present numerous interpretations for audiences (Lemke, 1998).

Another important tenet of a social semiotics framework is the understanding of how modes are shaped by sociocultural factors that influence how they are employed in communication. A mode is imbued with specific semiotic resources based on its social history, cultural uses, and material features. These modal affordances (Kress, 2010) offer distinctive potentials that make a particular mode better for certain communicative tasks than other modes. Some multimodality studies have examined how youth leveraged the affordances of specific modes (e.g., visuals and sound) in their digital products (Dalton et al., 2015; Shanahan, 2013; Wargo, 2017). Furthermore, students often demonstrate and express different modal preferences for how they choose to communicate (Smith, 2017; Smith, Pacheco, & de Almeida, 2017). For example, one student might be able to express personal emotions visually and aurally in ways that would not be possible through writing, whereas another student might prefer to rely on the specificity of linguistic modes to convey a message. These modal affordances are individualistic and vary for different composers, genres, and intended messages.

Multimodal Composing as Mediated Action

This study is also guided by a sociocultural view of literacy, particularly New Literacy Studies (Gee, 2012; Street, 1984), which emphasizes how literacy practices
are shaped by a constellation of social, cultural, material, historical, and personal factors. Foundational to a sociocultural perspective is the understanding that meaning-making is mediated between agents and their cultural tools (Vygotsky, 1978; Wertsch, 1991, 1998). These tools—both material and psychological—can “alter the entire flow and structure of mental functions” (Vygotsky, 1981, p. 137) and play a critical role in shaping learning and composing processes.

Vygotsky’s (1981) seminal work on mediation primarily focused on the role of language as a cultural tool; however, he also recognized other semiotic modalities, including “works of art, . . . diagrams, maps, mechanical drawings; [and] all sorts of conventional signs” (p. 137). When the concept of mediated action is applied to multimodal composing, salient tools can include multiple modalities (e.g., visuals, sound, and text), online resources (e.g., hyperlinks, Google, and Wikipedia), digital programs (e.g., iMovie and PowerPoint), and material technologies (e.g., laptops and mobile devices). Furthermore, meaning is also mediated through collaborative discussions centered on these tools (Cole, 1998).

Wertsch posited “basic claims” of mediated action that are valuable when applying the concept to how composing with multiple modes in digital environments can mediate students’ learning. First, an “irreducible tension” exists between agents and mediational means (Wertsch, 1998, p. 25). Thus, critical to this perspective is examining how agents (e.g., multimodal composers) and their cultural tools (e.g., modalities, online resources, and technologies) interact during the composing process. Second, mediational means “constrain as well as enable action” (Wertsch, 1998, p. 25). When applied to multimodal analysis, this claim elucidates how different modalities, digital tools, and multimedia genres offer unique affordances and limitations for how students can engage with literature. Third, mediated action typically involves multiple simultaneous goals and complex relationships. Along with the desire to communicate a message, composers are concurrently driven by personal and contextual goals, which also interact with the goals of their collaborators (Smith, 2019). Lastly, new mediational means “transform” mediated action:

The introduction of a new mediational means creates a kind of imbalance in the systemic organization of mediated action, an imbalance that sets off changes in other elements such as the agent and changes in mediated action in general. Indeed, in some cases an entirely new form of mediated action appears. (Wertsch, 1998, p. 43)

This concept is useful when considering how literary interpretation, which is traditionally mediated through writing, might be transformed through the new mediational means of multiple modalities in digital and multilingual composing contexts (Cole, 1998).

Research on Multimodal Composing and Academic Learning
While research on multimodal composition in secondary schools primarily focuses on the benefits for fostering student engagement, identity expression, and agency (Hull & Katz, 2006; Hull et al., 2010; Vasudevan, 2009), less research has closely examined how multimodal composing can support academic learning. Some
research in secondary STEM classrooms emphasizes the importance of multiple representations, which include visuals and text, for promoting conceptual learning (Ainsworth, 1999). For example, Gunel, Hand, and Gunduz (2006) found that students gained a deeper understanding of physics concepts by creating a multimodal presentation compared to writing a summary report.

Within the instructional context of secondary ELA, a growing body of research has examined multimodal literary interpretation (Doering et al., 2007; Smith, 2018). Jocius (2013) described how 12th-grade students learned literary devices by creating digital videos and multimodal PowerPoint presentations. Similarly, Bailey (2009) illustrated how 9th-grade students “learned literary elements, poetic devices, rhetorical elements, and used reading and writing strategies in ways that previous classes never had before” through multimodal projects connected to literature (p. 230). Curwood and Gibbons (2009) described how marginalized youth leveraged various modes of representation to create empowering counternarratives when responding to poetry.

Other research has provided insights into how the practice of translating meaning across different modes can reshape learning (McCormick, 2011; Whitin, 2005). Describing this process as transmediation (Siegel, 1995; Suhor, 1984), this scholarship has emphasized how interpreting literature across modes fosters students’ abstract and critical thinking. For example, Whitin (2005) found that students generated multilayered interpretations of literature when they transmediated their ideas across multiple modes. Newfield (2014) examined how 10th-grade students transmediated their responses to poetry through drawings, maps, textiles, and performances. Newfield (2014) concluded that the process “led to the deepening, enriching, modification, supplementation, and complexification of understanding around poetry and self” (p. 113). Siegel (2006) emphasized that instead of merely mapping content from one modality onto another, transmediation can be a generative process that involves innovative and reflective thinking on the part of composers as they transform meaning across modes.

Building upon this research, the current study was designed to provide an in-depth exploration of multimodal composing-to-learn within the context of interpreting literature in culturally and linguistically diverse ELA classrooms. Specifically, this study was guided by the following research questions:

1. How do multiple modalities mediate adolescents’ collaborative literary interpretation processes?
2. How might the process of literary interpretation, which is typically mediated through writing, transform when mediated through multiple modalities in digital and multilingual composing spaces?

Methods

The Setting and Participants
This study was conducted in four 10th-grade classes (N = 98) at an urban Title 1 charter high school in a major southeastern city in the United States. The school
was situated in a community composed of Cuban exiles and families who immigrated from Central and South America. The majority of students were Latinx (72%), with approximately one third (30%) designated by the school as English language learners.

Through purposeful sampling (Patton, 1990), 27 students representing 12 small groups were chosen for an in-depth analysis of their processes when interpreting literature through multiple modes (Table 1). A variety of methods were used to identify students who varied in literacy abilities, out-of-school interests, class engagement, and technology experience—including classroom observations, student questionnaires, and consultations with the teacher (Mr. Lopez; all names are pseudonyms).

Out of the 12 small groups, 6 collaborative pairs (n = 12 students) were selected for investigation of their processes in creating a hypertext literary analysis project, and 6 different small groups of 2 to 3 students (n = 15 students) were selected for investigation of their processes in creating a video literary analysis project.

During the time of the study, Mr. Lopez was in his seventh year of teaching at the high school. Mr. Lopez explained how, in the past, he had solely assigned written literary analysis essays, which was standard practice at his school. He admitted to several “apprehensions” about assigning multimodal projects that ranged from the “role reversal” of having students know more about technology than he did, to uncertainty that his students would “rise to the challenge” of being asked to “do something new and different.” Ultimately, Mr. Lopez expressed excitement to see if the multimodal projects would “reach [his students] in a way that maybe more traditional essay assignments hadn’t” (teacher interview).

I became acquainted with Mr. Lopez through a graduate student who had taught at the same high school. I learned that Mr. Lopez was interested in receiving support to incorporate multimodal projects into his curriculum, and I approached him about participating in the study. As a participant observer (Spradley, 1980), I collaborated with Mr. Lopez to develop the curriculum and to apply a scaffolded multimodal composing workshop model to align with his unit goals. Mr. Lopez and I regularly met in the first six weeks of the school year to codeesign the multimodal literary interpretation units. I often brought ideas for how students could use digital tools, and we made adaptations based on his curricular expectations,

<table>
<thead>
<tr>
<th>Age</th>
<th>Gender</th>
<th>Race/Ethnicity</th>
<th>Home Language</th>
<th>Birthplace</th>
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</thead>
<tbody>
<tr>
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<td>Spanish: 22</td>
<td>USA: 14</td>
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<tr>
<td>16 years: 8</td>
<td>Female: 12</td>
<td>White: 4</td>
<td>English: 2</td>
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<td></td>
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<td>Cantonese: 1</td>
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<td>Nicaragua: 1</td>
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</table>
scheduling constraints (e.g., testing and grade-term deadlines), and students’ prior knowledge. Although I occasionally modeled a mini-lesson or assisted students during in-class workshops, my primary focus was on collecting data.

**Multimodal Literary Interpretation Units**

I examined two literature units with different multimodal projects—a hypertext poetry analysis and a video literary analysis. The purpose of collecting data for two separate projects was to see if themes of how multiple modes mediated students’ literary interpretations emerged across projects and were not bound to a specific genre or digital tool.

**Hypertext Poetry Analysis**

First, students participated in a four-and-a-half-week poetry unit (eleven 110-minute classes) during the middle of the fall semester. The culminating project centered on students creating a hyperlinked PowerPoint that analyzed the multiple layers of meaning in a poem. Students were provided a handout with poems that represented a range of authors (e.g., Langston Hughes, Maya Angelou, Pat Mora, Walt Whitman, Emily Dickinson, etc.). Each poem uniquely connected to the unit theme of *identity*, including engaging with issues of biculturalism, racial identity, belonging, and/or immigration. Students could select from the provided list or choose a different poem with Mr. Lopez’s approval.

For the hypertext project, students were challenged to use the interpretive skills they had developed with traditional written assignments, but expand them to a nonlinear and multimodal format so that they could have more freedom and creativity in their responses. Each hypertext analysis included a “home slide” where students presented their chosen poem. Specific words and phrases were hyperlinked from the poem to other slides, where students could explore a variety of elements in greater depth, including key words and phrases, themes, literary devices, intertextual connections, questions, and personal reactions (Figure 1).

**Video Literary Analysis**

The second unit occurred at the end of the school year and was four weeks in length (nine 110-minute classes). Students worked in small groups to create a video that explored a literary theme from Kurt Vonnegut’s short story “Harrison Bergeron” (1961). Selected by Mr. Lopez, the satirical dystopian story occurs in the year 2081 and describes a society where citizens wear handicaps to promote “equality” (e.g., the beautiful are forced to wear masks and the strong to carry weights). Along with choosing a theme from the short story to explore, students had freedom in how they constructed their video analysis, including which perspective(s) they used (e.g., narrator, character, personal, or others), the setting(s) (e.g., time and place), and the overall video genre (e.g., animation, documentary, narrative, etc.). Emphasis was placed on students expanding their creativity and considering a broader audience (e.g., the classroom community) when composing their videos.

Mr. Lopez presented a grading rubric when introducing each of the multimodal assignments. Students were told that they would be assessed on the quality of their
Figure 1. An example of a hypertext literary analysis project, showing how PowerPoint slides linked from specific words and phrases in the poem (this figure shows 9 of the 14 total slides)
interpretations and their explicit connections to the literature. Considerable weight was also given to the multimodal aspects of their projects, including the “effective use of multiple modes (visuals, sound, format, video, movement, etc.) . . . [which] should serve as a primary vehicle for analysis” (hypertext grading rubric).

**Scaffolded Multimodal Composing Workshop**

For both units, students participated in a multimodal composing workshop (Dalton, 2013) intended to cultivate intentional designing for targeted purposes and audiences. The units followed a similar scaffolded sequence that involved explicit instruction, combined with opportunities for students to analyze a variety of examples, receive peer feedback, reflect on their process, and follow their own unique modal paths.

Explicit instruction targeted different analytic, design, and technical aspects of students’ processes. Since Mr. Lopez had recently assigned a literary analysis essay to his 10th-grade classes, he spent a brief amount of time at the beginning of each unit reviewing the purpose and key elements of the genre. Students also learned about multimodal composing, including different modalities and how they could be combined for distinctive effects. They examined a variety of compositions and discussed how the composers used different modes and the rhetorical results of their design decisions. Because the classes represented a wide range of experiences with digital tools—from primarily using technology outside of school for socializing to creating and sharing multimodal creations online—students engaged in short, targeted tech tutorials to become familiar with the composing tools. One mini-lesson also focused on search strategies for finding fair-use multimedia resources, including using specific websites (e.g., Flickr and Creative Commons) and narrowing search results based on usage rights.

Along with explicit instruction, the workshops were also designed to offer freedom for students to pursue their own unique modal preferences and multimodal composing paths. Students were not required to write or storyboard elements of their projects before using other modes. They could select their collaborative partners for each project and speak in their home languages during the composing process. Students also had flexibility in the digital tools and programs they could choose to compose with. A classroom laptop cart was available for each workshop, and some students brought their own laptops or tablets. A majority of students relied on PowerPoint to create their hypertext literary analyses; however, more variety was observed in how students created their video analyses, with many using iMovie, MovieMaker, and/or their mobile devices.

The units were also scaffolded so students could receive feedback from their peers at different stages of their process. Students participated in one peer workshop for each project that included a graphic organizer to guide their feedback. In-process work was shared through gallery walks and informal presentations, and all groups showcased their finished projects during a celebratory class session at the end of each unit.
Finally, students submitted written reflections to accompany their final projects. Guided by prompts, they described their collaborative composing process, connections to literature, and multimodal designs.

**Data Collection**
To allow for examination of students’ literary interpretation processes, each small group shared research laptops with screen capture software that recorded their composing activities during in-class workshops. This software tracked the movements of their mice, websites visited, and all media used and edited. The accompanying audio was also recorded during the composing process, which provided insights into verbal interactions.

Because screen capture recorded composing activities and audio during workshops, video cameras were positioned toward each small group during in-class workshops so that their faces, bodies, and interactions were also recorded. These observational data provided insights into affective reactions or other in-the-moment elements of multimodal composing that might not be apparent through computer screen recordings alone. Video data were complemented with observational field notes that focused on patterns related to students’ use of digital tools and interactions centered on the literature they interpreted. I recorded these field notes by circulating around the classroom during workshop time and observing the small groups. On my laptop, I made note of any emerging insights that I would explore further during data analysis.

Additional data sources were gathered to glean students’ perspectives on their literary interpretations. I collected the final multimodal projects and the written reflections that students submitted at the end of both units. Each student also participated in a 30-minute, semistructured design interview (Dalton et al., 2015) to allow me to learn more about how they interpreted literature through multiple modes. I conducted these interviews (27 in total) on the days following both multimodal units by meeting individually with students in an adjacent classroom during class time. Using a laptop that recorded the screen and audio, students pointed out elements of their work and explained the reasoning behind specific design decisions.

In total, I spent 12 weeks collecting data for the two multimodal literary analysis units, which included time spent observing each lesson and conducting subsequent student interviews.

**Data Analysis**
Qualitative data analysis (Glaser & Strauss, 1967; Strauss & Corbin, 1998) was an iterative process that involved four phases (Table 2).

**Phase 1: Multimodal Analysis of Video Data**
Multimodal analysis of the screen capture and video observation data was conducted to gain an in-depth understanding of students’ composing processes. First, I focused on the six pairs of students designing their hypertext projects by creating time-stamped video logs. Moving sequentially through the video data sources for each in-class workshop, I created a fine-grained multimodal record of their
compositional actions (e.g., image search, image design, audio search, audio remix, voice record, etc.). See Table 2 for a comprehensive list of codes.

Phase 2: Open and Axial Coding
The second phase of analysis included open coding (Strauss & Corbin, 1998) across data sources to develop emergent categories for how students collaboratively analyzed literature through their use of various modes. This phase involved identifying, naming, and categorizing the different ways students connected to literature during their multimodal composing processes. Not only did I look for these literary associations in how students designed on their laptops, but I also added to the video logs instances when students collaboratively discussed their poem, developing interpretations, and design decisions. After coding the video logs, I shifted analysis to the interviews and written reflections. I continued to openly code across these data sources to develop overall categories for how students explained the role of different modalities in supporting their literary interpretation processes.

Axial coding (Strauss & Corbin, 1998) was then used as I traversed across data sources to begin relating codes and developing their definitions. I often tried to connect students’ perspectives to what they said and did while immersed in their composing processes.

Phase 3: Constant Comparative Method
The third phase of analysis focused on refining the codes I initially developed by applying them to the data for the second multimodal project (video literary analysis). Similarly to the first phase, I began by conducting a multimodal analysis of students’ processes for each of the six small groups and for all of the in-class workshops. Next, I employed the constant comparative method (Glaser & Strauss, 1967) by recursively traversing the video logs, interview transcripts, and reflections to understand whether the codes I developed for the hypertext project applied to multimodal interpretation with a different genre, composing tool, and literature. This analytic process helped me further conceptualize and broaden my emerging themes. For example, some codes developed from the hypertext project centered on how students used visuals and music to gain an understanding of the author’s background and the historical context of the poem. These codes were expanded to an overall category of contextualizing when I examined the phenomena across both digital projects.

Phase 4: Selective Coding
For the final phase of analysis, I circled back across all of the data for both multimodal projects to conduct selective coding (Strauss & Corbin, 1998). The goal for this focused analysis was to validate whether my overall categories were abstracted enough to encapsulate elements of the process for the variation in composers, interpretations, and digital projects. I continually refined my categories and attempted to achieve saturation by examining whether new student data provided further insights or different categories (Creswell, 2013). Through this process, I ultimately developed three main themes for how multiple modes mediated students’ interpretations of literature (Table 2).
### Table 2. Phases of Data Analysis

<table>
<thead>
<tr>
<th>Phase 1: Multimodal Analysis</th>
<th>Phase 2: Open and Axial Coding</th>
<th>Phase 3: Constant Comparative Method*</th>
<th>Phase 4: Selective Coding</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>DATA SOURCES</strong></td>
<td>Screen capture</td>
<td>Design interviews</td>
<td>Screen capture</td>
</tr>
<tr>
<td><strong>PROJECT</strong></td>
<td>Hypertext literary analysis</td>
<td>Video analysis</td>
<td>Video analysis</td>
</tr>
<tr>
<td><strong>CODES</strong></td>
<td>Multimodal analysis</td>
<td>Literary theme: (specific name)</td>
<td>Conceptualizing theme</td>
</tr>
<tr>
<td>· Image search</td>
<td>· Collaborative literary interpretation</td>
<td>· Understanding the poem</td>
<td>· Conceptualizing theme</td>
</tr>
<tr>
<td>· Image design</td>
<td>· Abstract image search</td>
<td>· Visualizing</td>
<td>· Visual brainstorming</td>
</tr>
<tr>
<td>· Audio search</td>
<td>· Poem keyword image search</td>
<td>· Images</td>
<td>· Aural brainstorming</td>
</tr>
<tr>
<td>· Audio remix</td>
<td>· Abstract song search</td>
<td>· Songs</td>
<td>· Video brainstorming</td>
</tr>
<tr>
<td>· Voice record</td>
<td>· Poem keyword song search</td>
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</tr>
<tr>
<td>· Transitions</td>
<td>· Collaborative literary interpretation</td>
<td>· Informational search</td>
<td>Multilevel connections to literature through multiple modes</td>
</tr>
<tr>
<td>· Video search</td>
<td>· Poem keyword song search</td>
<td>· Poet background</td>
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<tr>
<td>· Video remix and editing</td>
<td>· Collaborative literary interpretation</td>
<td>· Contextual information</td>
<td>· Layering meaning</td>
</tr>
<tr>
<td>· Text type and revision</td>
<td>· Collaborative literary interpretation</td>
<td>· Intertextual connection</td>
<td>· Contextualizing</td>
</tr>
<tr>
<td>· Text design</td>
<td>· Collaborative literary interpretation</td>
<td>· Personal connection</td>
<td>· Intertextual connections</td>
</tr>
<tr>
<td>· Informational Internet search</td>
<td>· Collaborative literary interpretation</td>
<td>· Personal connection</td>
<td>· Personal connections</td>
</tr>
<tr>
<td>· Project review and sharing</td>
<td>· Collaborative literary interpretation</td>
<td>· Exploring language through visuals</td>
<td>Elucidating literary meaning through multiple modes</td>
</tr>
</tbody>
</table>

*Multimodal analysis of video and screen capture data for the video literary analysis project (see Phase 1) was conducted at the beginning of Phase 3 before the constant comparative method.
Trustworthiness
I worked to strengthen the trustworthiness of my findings by triangulating different sources and methods (Erlandson, Harris, Skipper, & Allen, 1993). I compared students’ processes and perspectives, as well as the different viewpoints of students within small groups. Instead of forcing my own interpretation of how modes mediated students’ literary analysis processes, I strove to forefront students’ explanations so that I could understand their processes through their eyes via interactions, interviews, and reflections.

Findings
Across composers and digital projects, there were three central ways multiple modes mediated students’ interpretations of literature: (1) conceptualizing literary themes, (2) constructing multilevel connections to literature, and (3) elucidating literary meaning. In the following section, each theme is explained with illustrative examples.

Conceptualizing Literary Themes through Multiple Modes
Students collaboratively conceptualized literary themes with visuals, music, and videos in the early stages of their composing processes. By brainstorming through nonlinguistic modes, students developed an understanding of the undergirding themes in a poem or short story. These instances of collaborative meaning-making with imagery and sound often preceded textual aspects of their projects and provided a thematic foundation from which students constructed their multimodal interpretations.

A majority of small groups (8 out of 12) launched into their interpretations during the first in-class workshop by multimodally conceptualizing through visuals. This process involved conducting online image searches with abstract keywords, including “biculturalism,” “equality,” “American dream,” and “identity.” Next, students visually brainstormed by viewing and assessing the multiple images that resulted from their searches, which sparked generative conversations about thematic interpretations (Figure 2). For example, Maddie, a bilingual Latina student from the United States, and Issa, a bilingual Latina student who had moved from Argentina at a young age, initiated their analysis of Langston Hughes’s “Harlem” (1958) by searching for “words that really stood out” from their poem, including “dying dreams,” “forgotten dreams,” and “lost dreams” (Maddie, hypertext interview). With one side of their shared laptop screen displaying the poem and the other side designated for conducting image searches, they engaged in productive discussions related to their developing interpretations. At one point, Maddie explained to Issa her understanding of a theme from the poem as they viewed a detailed photograph of a dandelion with half of its spores withered and blowing away (Figure 2): “I don’t know how to explain it. It’s kind of like you had a dream as a 20-year-old, but it’s useless and dried up by the time you are 40.” After their visual brainstorming process, which lasted 23 minutes during their first in-class workshop, the pair further developed their written thematic interpretation that
centered on how many African Americans have been forced to defer their dreams because of racial discrimination in the United States. In her design interview, Maddie described how working with images aided her interpretive process: “I thought putting images first would help me to understand the poem better with seeing it visually than just reading it” (hypertext interview).

<table>
<thead>
<tr>
<th>Students</th>
<th>Poem</th>
<th>Image Keyword Search</th>
<th>Image Discussed</th>
</tr>
</thead>
<tbody>
<tr>
<td>Issa &amp; Maddie</td>
<td>“Harlem” by Langston Hughes (1958)</td>
<td>“dying dreams”</td>
<td></td>
</tr>
<tr>
<td>Ernesto &amp; Sam</td>
<td>“I’m Nobody! Who Are You?” by Emily Dickinson (1891)</td>
<td>“no identity”</td>
<td></td>
</tr>
<tr>
<td>Elian &amp; Thomas</td>
<td>“An Arabic Tongue that only Understands the English Language” by Mais Amad (2015)</td>
<td>“words shatter reality”</td>
<td></td>
</tr>
</tbody>
</table>

**Figure 2.** Examples of images discussed by students while multimodally conceptualizing during the first hypertext literary analysis class workshop.

Three groups of students also multimodally conceptualized themes by listening to music or watching videos at the beginning of their composing process. Similar to visual brainstorming, this process involved students searching for abstract keywords (e.g., “identity song”) and collaboratively reviewing various options. Alvaro shared in his design interview how *aurally brainstorming* through music helped him “a lot to understand a theme” in “Harrison Bergeron” (Vonnegut, 1961). On the first day of in-class workshops, Alvaro and Lena, both bilingual students whose families immigrated from Cuba when they were children, searched YouTube for “fear of change song” and “change song.” The pair watched three music videos before deciding on a unifying song to connect to their theme:

Our theme was fear of unknown or fear of change. We picked that since it kind of relates to us—we are Cuban. My fear of change was how different it is going to be when I get
We started to listen to songs on YouTube, and I was like, “Oh, Lena, listen to the song by Michael Jackson called ‘Heal the World.’” We were thinking about the theme and then somehow [the song] related. (Alvaro, video interview)

Ultimately, the Michael Jackson song provided a cohesive thread for their final video literary analysis project. Lena and Alvaro detailed how they organized textual elements and voiceover narration based on the song and relied on the lyrics to punctuate the meaning of their theme at certain moments in their video.

Visual and aural modes were critical in conceptualizing literary themes at the initiation of students’ multimodal composing processes. Nonlinguistic modalities served as mediational means for inspiring abstract thinking, collaborative conversations, and thematic explorations of literature.

**Multilevel Connections to Literature through Multiple Modes**

All 12 groups of students forged multilevel connections to literature throughout their multimodal composing processes. These complex linkages occurred on a range of historical, cultural, intertextual, political, and personal levels—and often simultaneously—as students explored hyperlinked multimedia and layered numerous connections in their designs.

Students contextualized literature by navigating networks of hyperlinked multimedia and informational websites to interpret the historical climate of the poem or short story they analyzed. Many students (16 out of 27) explained how their process of contextualizing through multimedia provided additional insights into the literature and the author’s motivations. Instances of contextualization included reading informational webpages, watching related videos, viewing historical photographs, and listening to music from the time period. For example, Steve and Javi, both bilingual Latino students born in the United States, followed a complex path of hyperlinked webpages and multimedia that shaped the focus of their video project. During the second in-class workshop, they searched via Google “what happened in 1961?”—the year Vonnegut wrote “Harrison Bergeron.” From there, they collaboratively learned about the Cold War and conducted 35 subsequent searches throughout the following three in-class workshops, ranging from “how did the Soviet government work?” to “Cuban missile crisis.” Along with what they learned from websites, much of the information they consumed during this process was multimodal, including videos, photographs, maps, and infographics. Javi and Steve discussed new information they encountered along the way, maintained notes on a shared Google document, and forged historical connections to the short story. Their final video analysis was an informational “smash video” that incorporated what they learned by drawing parallels between Vonnegut’s dystopian plot and elements of the Soviet Union government during the time it was written (Steve, video interview).

Contextualizing through multiple modalities also offered students a window into the authors’ lives and their possible exigences for writing. For the hypertext literary analysis, each of the six groups viewed and included at least one poet photograph in their final project “so people could see how he [or she] looks”
A majority of students (five out of six groups) also explored the authors’ experiences and mental states—examples included Emily Dickinson’s isolation, Carl Sandburg’s time in the military, and Maya Angelou’s sexual assault as a young girl—which offered a revealing and empathetic lens for interpreting their poems. Multiple modes and online resources mediated students’ processes by providing accessible ways to understand the context of the literature they interpreted. As Maddie said to Issa while creating their hypertext, “We are learning things I did not know!”

Along with exploring the influences of literature, each student also made outward multimodal connections to other works and current issues. Intertextual connections during their composing processes represented a variety of linkages to speeches, literature, plays, artwork, famous people, songs, television shows, and video games. Associations with contemporary culture and political issues mediated through multiple modes also fostered personal connections to literature. Isaiah, for example, combined visuals with text to relate Langston Hughes’s poem “I, Too” (1926) to current events and his “personal experiences as an African American male” (hypertext interview). At the beginning of the fifth in-class workshop, he devoted 26 minutes to crafting a written personal reflection on the poem (Figure 3). Next, Isaiah searched for imagery to extend his written reflection. He began

Figure 3. Isaiah combined images with text to make intertextual connections between Langston Hughes’s poem “I, Too,” his personal experiences, and the “current ongoing struggle of African Americans.”
with an online search for the phrase “Black man shot down” and examined graphic photographs from recent news stories. His subsequent Google image searches also focused on current events, including “Kaepernick kneeling,” which produced photographs of the professional quarterback Colin Kaepernick kneeling during the national anthem to protest police brutality toward African Americans, and “I can’t breathe,” which was a reference to a video of Eric Garner, who died after yelling these words while restrained in a chokehold by New York City police. Isaiah also searched for the names of two teenage African American males who were recently shot and killed by police officers (i.e., “Trayvon Martin” and “Michael Brown”). Isaiah’s final hypertext analysis layered three photographs behind his written personal reflection, including professional basketball player LeBron James wearing a t-shirt with the words “I CAN’T BREATHE” in reference to Eric Garner, Colin Kaepernick kneeling during the national anthem, and an aerial shot showing the body of “a Black guy that got shot a week ago for no apparent reason” (conversation with partner during in-class workshop).

Isaiah’s multidimensional design layered text that connected the poem to his personal experiences with visuals that connected the poem to the “current ongoing struggle of African Americans” in the United States. When reflecting on the hypertext analysis project and comparing it with written analyses, Isaiah explained:

I feel as if I was on the outside looking in [with written analysis essays] as opposed to inside looking out. This project is something that would make you go home and research all the stuff that is going on. It just felt like moving to me... Whereas the essay it was just writing an essay, but with the hypertext analysis, I feel like I poured more of my inner part. (hypertext interview)

Composing with multiple modes provided a conduit through which many students simultaneously made personal, historical, political, and cultural connections to literature. Students traversed informational hyperlinks and viewed multimedia that gave them a deeper understanding of the contextual influences that shaped literature. At the same time, they examined how literary themes still related to modern issues and their personal lives.

**Elucidating Literary Meaning through Multiple Modes**

Nonlinguistic modes supported students in exploring specific literary meanings and collaboratively developing their interpretations. This process was particularly evident during the hypertext literary analysis project, in which three out of six student pairs listened to or watched readings of the poem online, and all but one student dyad regularly conducted image searches for specific vocabulary in their poem.

An example of how students collaboratively comprehended literature through multiple modes was when Elian and Thomas interpreted the poem “An Arabic Tongue that only Understands the English Language” (Amad, 2015). Both bilingual Latino students employed a variety of multimodal strategies to clarify Arabic and unfamiliar vocabulary, including conducting image searches, using Google Translate, and listening to words or phrases online. Visuals also mediated their understanding of specific literary devices. When examining the line “your
existence in my life has been colonized by the imperialist,” they first read it aloud together, and Elian said to Thomas, “let’s try to find out what it means.” Next, the pair searched online for “colonization definition,” “colonization broad definition,” and “imperialism definition.” Still unsure whether the phrase could be considered an example of personification after discussing definitions, they conducted an image search for the term “imperialism.” The pair scanned through their search results and came across an image of the United States flag with its red stripes encircling and choking the earth. “Perfect!” exclaimed Elian, and they decided to include the striking image in their hypertext before completing their written interpretation: “The existence of her mother language has been conquered by the imperialist and she feels like she can’t speak it because it’s been taken away from her.” When reflecting upon their process, Thomas explained how the image they included depicted “exactly” what they “were trying to say” (hypertext interview).

Students also described how visuals allowed them to “see literature”—including vocabulary and literary devices—and explore the meaning before articulating the written aspects of their interpretation. Ines, a bilingual student born in Cuba, explained, “When you’re looking at pictures, you can visualize it and you can think of it. It really helps to understand” (hypertext interview). Ines and her partner, Liliana, who was born in the United States and also spoke Spanish at home, used this technique to understand the unfamiliar term “handy token” when analyzing the following lines from “Legal Alien” (Mora, 1985): “an American to Mexicans / a Mexican to Americans / a handy token / sliding back and forth / between the fringes of both worlds.” The pair discussed their interpretation of the lines in class:

LILIANA: What are you trying to say?
INES: I don’t know how to put it. . . . I am trying to say in terms of it’s a handy token that she has like many characteristics. . . . She compares herself to different cultural identities. She doesn’t stick to, “I’m Cuban and I have to be 100% Cuban.” . . . She’s like a mix of different cultures.

After struggling to express exactly how “handy token” could serve as a metaphor for the narrator’s bicultural identity, Ines and Liliana visually searched for the term “token” on their shared laptop. They discussed a few options based on their image search and ultimately included an image of a token into their PowerPoint slide. Next, the pair crafted their written interpretation:

In this poem, a “handy token” means that the author feels like a portable tool that has many features and abilities. She slides back and forth between different identities, not only adopting, but also adapting.

Both Ines and Liliana believed that the inclusion of visuals elucidated their interpretation: “When other people see the pictures they can understand what we are talking about” (Liliana, hypertext interview).

A majority of students explained that composing with multiple modes helped them to “understand” the language they analyzed, as well as accurately represent
their interpretations for others. All but two students (25 out of 27) stated they preferred to interpret literature through a multimodal project compared to a written literary analysis essay. Students shared how they enjoyed breaking free from the constraints of written interpretations “because [they] had more ways to explain the meaning” (Alvaro, hypertext interview):

Cuz with written assignment you have to have something specific—a body paragraph, your introduction, your ending. But in a video, it can be in a different order, and you can add different things. . . . It does not have to be one thing. (Li, written reflection)

It forces me to think harder. . . . I now use sounds and pictures to paint an idea that correlates to the literature. (Carolina, written reflection)

I prefer to analyze literature in a multimodal way because it gives life to it. Traditional writing is boring. . . . Multimodal analysis opens a person's head, filling it with ideas and joy for something that usually gives nothing but pain. (Chris, written reflection)

Multiple modes mediated students’ comprehension of literature in a variety of impactful ways. Seeing, hearing, and discussing literary meaning facilitated their interpretation of specific vocabulary and literary devices before writing. Students believed that their careful use of visuals and sounds, combined with text, fully encapsulated their ideas for others to also “understand.”

Discussion
This study contributes an initial understanding of how multiple modes served as valuable tools for thinking during adolescents’ literary interpretations. Across the composing processes of 12 small groups of culturally and linguistically diverse 10th graders, multiple modes mediated opportunities for conceptualizing themes, constructing multilevel connections to literature, and elucidating literary meaning. Examining these findings through an integrated social semiotics (Jewitt, 2009; Kress, 2010) and mediated action (Vygotsky, 1978; Wertsch, 1991, 1998) framework is helpful when considering how literary interpretation, which is usually mediated through writing, might be transformed through the new mediational means of multiple modalities in digital and multilingual composing spaces.

The findings illustrate two central ways nonlinguistic modes aided students in developing and articulating their understanding of literature. First, multimodal conceptualization through visuals (Bruce, 2009), music, or videos at the beginning of their processes supported students in collaboratively brainstorming literary themes. Second, students relied on visuals and sound to elucidate specific vocabulary and literary devices. In each case, this innovative process of transmediating meaning across multiple modes sparked generative conversations centered on interpreting literature. These findings point to the promise of multimodal composing for clarifying, organizing, and extending ideas.

Multimodal composing processes not only fostered students’ development of
ideas, but were also integral to students in communicating their thinking to help others “understand.” The affordances (Kress, 2010) of different modalities were leveraged in distinctive and individualized ways. Students layered multidimensional designs and often relied on different modes to convey unique aspects of their interpretations. Many students also revealed that they felt an image or song could “exactly” convey their intended message. Furthermore, a majority reflected that communicating ideas in their multimodal projects was easier for them than doing so in written interpretations traditionally assigned in secondary ELA classrooms. Prior research has emphasized the semiotic benefits for students expressing their identities and promoting social justice through their multimodal compositions (Anderson et al., 2017; Hull et al., 2010; Vasudevan, 2009). The findings of this study complement this research by showing how digital projects can also support students in conveying academic content in complex and inventive ways.

Furthermore, students’ processes demonstrated that while interpreting literature, they concurrently forged multilevel connections to literature. Focused literary connections were made to the author and the surrounding context, while students also connected outward to other works, current issues, and personal experiences. A large body of research has emphasized the benefits of culturally and linguistically diverse students making meaningful connections to their lives and cultures when reading literature (Kirkland, 2011; Lee, 2001). These findings suggest that multimodal literary interpretation can extend the possibilities for how students create layered and complex connections while also closely analyzing literature.

Multimodal literary interpretation in online and digital spaces supported students in learning through the composing process. While composing with digital tools to create their projects, students also took advantage of the availability of other technical resources. Online tools—including search engines, multimedia resources, and hyperlinked content—mediated students’ processes by helping them to learn more about the literature they engaged with, as well as unfamiliar vocabulary, genre elements, and literary devices. The immediacy of these available tools empowered students to access the information they needed when they needed it. These findings connect to previous research explaining how multimodal composing processes offer students flexibility in orchestrating multiple modes and following unique modal preferences (Bruce, 2009; Smith, 2017; Smith et al., 2017). At the same time, this study contributes fresh insights into how individualized composing processes allow students to agentively obtain the information they need along the way. Importantly, students also had the ability to choose how they consumed information—whether in textual or multimodal formats. Research on multimodal composing often focuses tightly on how modes are used in students’ final designs. These findings work to broaden the investigative scope to also consider how multimodal composing processes can promote individualized learning.

Across the three main themes, collaboration was an integral mediational means for students’ multimodal literary interpretive processes. Through generative discussions with peers centered on visuals and sounds, students were able to conceptualize, connect, and comprehend literature. The importance of collabora-
tion during multimodal composing processes has been emphasized by research situated in and out of schools, which illustrates how adolescents distribute labor and provide one another valuable feedback on their designs (Ito et al., 2010; Jocius, 2013). Contributing to this work, we gain insights into how visual and aural modes can also serve as conduits through which students engage in productive conversations connected to content. These opportunities for the dialogical construction of knowledge through multiple modes can be empowering in multilingual classrooms where students can discuss and build upon one another’s interpretations (Cole, 1998; Higgs, 2017).

It is important to acknowledge that, in addition to enabling collaborative literary interpretation, the mediational role of modalities and digital tools also constrained (Wertsch, 1998) possibilities for some students. These constraints ranged from the materiality of specific tools to the communicative possibilities for different modalities. For example, interpreting poetry through hyperlinks in PowerPoint offered students the ability to link to and analyze specific elements of language. The video genre promoted the layering of modes (Burn, 2017), but it did not foster an in-depth explication of language, and most thematic interpretations were quite broad. Considering the multiple interpretations that multimodal texts offer readers (Lemke, 1998), some of the nuanced connections to literature could be difficult for an external eye to identify (or assess). As a result, students needed to provide insights into their designs through class presentations, written reflections, or design interviews.

**Implications**

Future research should explore the possibilities of multimodal composing for mediating and transforming academic learning. As these findings are situated in a specific instructional context where small groups of students created two distinctive multimodal projects, much more needs to be understood about multimodal composing-to-learn across different composers, contexts, genres, and digital tools. It would be beneficial if future research continued to examine how transmediating meaning across multiple modes can support comprehension and abstract thought, particularly for culturally and linguistically diverse students who traditionally struggle with literary interpretation (National Assessment of Educational Progress, 2011). In addition, research exploring whether the interpretive skills developed through multimodal means can be traced to other contexts and genres (e.g., academic writing) would be valuable.

These findings also have implications for integrating multimodal composing into the secondary ELA classroom. Learning to interpret literature through different modalities and with digital tools was initially a challenge for many students, especially those who did not have prior multimodal composing experience. Echoing the scaffolding strategies suggested by others (Dalton, 2013; Mills, 2010), it was crucial that Mr. Lopez provided targeted technology lessons to put everyone on equal footing. Additionally, students benefited from examining a variety of multimodal examples and being able to collaborate throughout the composing process.
Along with supporting their literary interpretation processes, it was also imperative for the teacher to provide students creative freedom. Research demonstrates that teachers often fall back on writing scaffolds to support multimodal composing, including having students write elements of their projects before attending to other modes (see Smith, 2014, for a review). However, these findings show how a majority of students multimodally conceptualized their interpretations and relied on visuals and sound in important and individualized ways. Future attention should be devoted to supporting teachers in striking the delicate balance between scaffolding students’ processes and leveraging the multiple points of entry and unique meaning-making possibilities offered by multimodal projects.

Finally, this study raises new questions regarding how we ask students to express their understanding and views. The students in this study were able to break free from the constraints of the written essay to interpret literature through their complex use of visuals, sounds, and text. However, research shows that ELA teachers overwhelmingly rely on written assignments for students to analyze literature and other foundational genres, including persuading, informing, and creating narratives (Purcell, Buchanan, & Friedrich, 2013). No doubt, writing is an imperative skill for student success (National Commission on Writing, 2004). At the same time, international policy and curricula reflect how learning to effectively communicate multimodally is also becoming increasingly important for students in today’s digital and networked world (Jenkins, Purushotma, Weigel, Clinton, & Robinson, 2009). Future attention should be devoted to understanding the relationship between both forms of expression and how they can be complementarily integrated (e.g., Leander, 2009). Furthermore, we should reexamine the privileged position of writing in the classroom and continue to explore the meaning-making and learning potential mediated through multiple modes of expression.

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