



Constructing My World: A Case Study Examining Emergent Bilingual Multimodal Composing Practices

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Abstract

An extensive focus on written language in early literacy instruction and assessment for emergent bilinguals places students at a disadvantage since they are learning English as a new language. Typically, classroom instruction has a narrow view of literacy and is dominated by a focus on tested skills, with little emphasis on the diverse backgrounds and experiences of today's students. In order to value the rich meaning-making process that emergent bilinguals bring with them to the classroom, this article explores the ways in which technology affords multimodal composing opportunities. A case of one emergent bilingual, Alon, whose home language is Tagalog, is presented to showcase his text productions as responses to children's literature. The findings help extend an understanding of articulating meaning through talk, contributions of written language, and the importance of the visual mode. This case helps educators see the need to take into account a cohesive portrait of composing processes as a way to make sense of the strengths of emergent bilingual students in English-only classrooms.

Keywords Emergent bilinguals · Multimodal · Early literacy · Composing · Assessment · Technology

Introduction

Young students explore their worlds in multimodal ways that bring together diverse ways of thinking and being. Composing practices at school are no different. Drawing and creating images are often the beginning of the process as students document thoughts and ideas (Mavers 2011). This complex literacy process also involves various aspects, such as oral language, listening, reading, viewing, visually representing, and writing. Together, these elements work as integrated communicative methods within varying contexts in the classroom environment. Research on literacy has contributed to our understanding of the ways in which these components develop and impact student success (Bentley and Souto-Manning 2019; Kuby and Rucker 2016; Rowe 2012). However, traditional literacy instruction within the

United States is dominated by a focus on tested skills, with little emphasis on the diverse backgrounds and experiences of today's students. There are decades of research investigating the writing practices of monolingual students, but considerably less examining emergent bilingual children in early childhood (Williams and Lowrance-Faulhaber 2018). As researchers investigate the development of literacy in relation to emergent bilingual students, further information is necessary to aid practitioners in constructing strategies that emphasize the potential of diverse students to establish meaning making through multimodal text production. For these reasons this study investigates the following questions: (1) What can be learned from the experiences of an emergent bilingual developing literacy in an English-only early childhood classroom? (2) How can a young emergent bilingual student showcase their literacy development using multimodal tools? And (3) What multimodal ensembles were made using available resources?

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Emergent Bilingual Literacy Development

As attention has shifted to highlight the increasing diversity in the classrooms of today, research has concentrated on strategies for practitioners to engage emergent bilinguals in the classroom. These students are in the process

of developing academic skills related to two or more languages simultaneously (Bauer et al. 2017; García and Kleifgen 2018). This process may require emergent bilingual to engage in what is known as translanguaging. According to Li (2018), translanguaging is “the fluid and dynamic practices that transcend the boundaries between named languages, language varieties, language, and other semiotic systems” (p. 9). Simply put, students are drawing from their rich linguistic repertoires that are part of their very existence as young language learners. Sometimes this means moving between different languages, and at other times it means that students will infuse creative meanings into their communication.

English-only instruction, which is predominant in the United States, results in curricula that is heavily informed by monolingual culture. Previous attempts to categorize emergent bilingual learners, using terms such as English language learners (ELLs), English learners (ELs), or English for Speakers of Other Languages (ESOL), have only served to further marginalize linguistically diverse students in instruction as these terms only specify one language. Thus, the cultural influence that makes emergent bilinguals unique in their approach to learning is silenced by traditional literacy curricula (Bauer et al. 2017). It has been shown that emergent bilinguals approach literacy activities in a way that is defined by their unique cultural experiences (Axelrod 2014). This process of making meaning through the appropriation of material such as assigned text, popular media, culture, multiple modes, etc. results in an outlet for students to share knowledge, form relationships, and to make sense of their experiences (Dyson 2018; Williams and Lowrance-Faulhaber 2018). Therefore, consideration must be given to the resources emergent bilinguals draw from during the composing process.

Conceptual Framework

Sociocultural Literacies

Barton and Hamilton (1998) define literacies as social practices that are embedded in larger practices of social institutions like schooling, as well as in other cultural contexts. Given the diverse nature of emergent bilinguals within American classrooms, it is important to give attention to cultural ways of being. Diverse ways of representing knowledge require acknowledgement and value. Often, the world of a child is constructed through processes involving tools that mediate thinking, especially in interactions with others or with the use of oral language (Lantolf 2000). In addition, meaning-making is interpreted from one’s cultural perspective where background experiences and interactive processes give meaning to events. Words, expressions, connections, and images are interwoven in ways that each

student develops their own understanding of a literacy experience (Pérez 2004). This perspective stems from Vygotsky’s (1978) sociocultural theory that notes the unique blending of speech and actions as problem solving processes where languages serve as an avenue to go beyond previous experiences and expand into new communicative functions or modes.

Social Semiotics and Multimodality

Social semiotics is a way to view learning where attention is given to semiotic resources or the “actions and artifacts we use to communicate, whether they are produced physiologically—with our vocal apparatus; with muscles with use to create facial expressions and gestures, etc.—or by means of technologies—with pen, ink, and paper; with computer hardware and software,” (van Leeuwen 2005, p. 3). The multiple formats of meanings and messages are explored. To understand this perspective, it is essential to understand signs or resources (i.e., color) and the signified, a meaning associated with the sign (i.e., red means danger). As students make meaning in classrooms, they draw upon a vast number of signs to make meaning of their world. Knowing this provides a pathway for capturing what students know, especially when the signs are not limited to the written word. Lotherington (2011) draws attention to the importance of semiotic resources for student ownership. An eclectic use of resources can enhance the richness of communication in school settings. She connects this to the use of visuals and first language resources.

A multimodality framework utilizes a focus on the action of meaning making and the resources used in conjunction with one another. Sefton-Green et al. (2016) draw attention to the importance of multimodality in the tech-rich world that is growing at a rapid pace. They view representation, communication, and interaction as utilizing multiple modes. Multimodal learning involves making meaning through different semiotic resources or using more than two modes (speech, image, gesture, music, etc.), with attention paid to the complete whole (Jewitt et al. 2016). Working through the use of multiple modes usually involves synaesthesia; the process of shifting between modes to make meaning. In other words, learners gain a deeper level of insight in a subject when the process is multifaceted (Kalantzis and Cope 2012). This type of pedagogical approach requires active learning. Each act in the multimodal composing process allows the sign maker or student to make decisions about which signs to use based on the affordance of each (Pahl and Rowsell 2012).

Once the signs are brought together in a cohesive manner, the result is a production where additional modes contribute as part of the final text or ensemble (Kress and van Leeuwen 2006). The term multimodal ensemble

is used when students select modes of representation and bring them together to form a cohesive piece of work where the resources used form mutual interdependence (Kress 2010). Mills (2016) cautions that within multimodality there are political struggles within school systems as to which modes are valued. It is the hope of researchers to not extinguish the written mode, but to substantially value additional modes especially those made available through technology.

Literature Review

Use of Technology for Enhanced Literacy Learning

To push back against print-centric practices, educators can utilize digital tools to open new avenues for multimodal learning. There is an increasing importance placed on digital devices as a means of communication and text production in the world today. As a result, classroom teachers can capitalize by integrating digital tools into the curricula to prepare today's learners for a technologically consumed future (Rowe and Miller 2016). The use of technology embedded into the lesson can present new opportunities for learners to illustrate their knowledge and ideas. For example, Sakr et al. (2016) found young learners to be innovative with the creation of digital art and the ways they expressed meaning regarding cultural experiences. Students utilized stamps, color, and scribble writing to inform others.

Rowe and Miller's (2016) research showed that the use of iPad technology provided an environment for multimodal composing that supported the development of two languages. Additionally, it allowed for new opportunities for literacy development that were not available in page-based composing. In this study, students used two languages, oral and written, plus images to compose comprehensible texts that were shared with others. Without the use of a digital recording software, the composers would not have capitalized on the aural mode which was one of their strengths. This research was similar to the use of ScribJab (a multilingual iPad application) to provide particular semiotic resources to students which were used to express personal and social meanings (Dagenais et al. 2017). Additionally, Rowsell and Harwood's (2015) longitudinal iPad study with 3 to 5-year old's documented thick descriptions of early year experiences using technology to construct meaning within sociocultural contexts. They found the children remixed modes to make meaning. For example, children used the movie *Frozen* as a base to make their own digital stories. Semiotic resources were used to create, enjoy, and socialize.

Multimodal Text Composition

Linguistic modes of communication are traditionally preferred for instructional practices in American education. It is common for teachers to engage students during reading by partaking in verbal discussions or written response to determine comprehension or facilitate discussion about a text (Barone and Barone 2017). While this is not unusual when considering the influence of the dominant culture in instruction, it is an assumption that limits discourse involving other types of semiotic resources. When considering the increasing diversity of classroom populations to include emergent bilinguals, the use of multimodal composition is the preferred method of communication.

Research into literacy practices has long accentuated the addition of a visual component as a means to understanding and comprehension of text. A combination of verbal and visual elements in an assignment allowed students use various multimodal resources which led to increased comprehension through revision and valuing student work (Shanahan 2013). The chance to embrace multimodal text composition as a method of conveying personal understanding is something that engages the technologically savvy students of today. Particularly, the combination of the verbal and visual provides an opportunity for students who may otherwise struggle with communicating comprehension of a topic to share their ideas (Barone and Barone 2017). Pahl's (2009) 2-year study of young learners highlighted the importance of talk during the semiotic design process of panorama boxes. She found collaborative talk to be a foundation for the meaning-making process during the creation of multimodal texts. Students made unexpected use of available resources as they negotiated meanings with one another. She referred to this as improvisation which is important in understanding multimodal composing from a student perspective.

Other work in modality has focused on the use of visuals. Pantaleo's (2012) case study of 11 year-old Anya explored the use of visual meaning making resources. The use of color was evident in her own multimodal composition after reading graphic novels and picture books. The student was able to consider numerous affordances of color like hue, darkness, saturation, purity, etc. As a result, Anya developed expertise in using color to communicate essential features of her that would otherwise go unnoticed. Further, Bearne's (2009) research on multimodal texts created by 7-year old's highlighted the importance of images. Student work was analyzed in terms of content, size, color, tone, line, and use of space. She found parallels between the use of words and images with rich details noted in the images. The level of image details was more complex than would be communicated through traditional literacies. The students were skillful in combining modes to form complex, cohesive ensembles. Mills and Unsworth (2018) invited students

to show emotions through animated drawings using tablet computers. In this instance, multimodal communication was extended through several digital techniques such as mouth movements, eye changes, and eyebrow movement. These experiences were later applied to narrative writing. The animations served as a rehearsal for story writing. All of these studies showcase the value of communication through multiple modes in the twenty-first century.

Context and Participant

A case study approach was applied to capture the context of one emergent bilingual student's experiences in an English-only school to closely examine the practices associated with multimodal literacy learning. Emphasis was placed on oral and written language because "language is both a repository of cultural meanings and a medium for the production of meaning in everyday life (Dyson and Genishi 2005, p. 5)". In addition, attention was given to the roles of visual and gestural modes to investigate communication, learning, and representation (Flewitt 2011).

This research was conducted in an urban, high poverty elementary school in the Southeastern United States. The school serves a total of 530 students from kindergarten through fifth grade. Eighty-percent of students enrolled belong to a minority group. Of standardized tests, only 19% were proficient in reading during the 2016–2017 school year, resulting in the school being ranked in the bottom half of all schools in the state. Ninety-three percent of students are eligible for free or reduced lunch ("The Governor's Office of Student Achievement," n.d.).

Purposeful sampling procedures were applied to identify and select a case that was rich in information related to the research questions from the available emergent bilingual participants (Palinkas et al. 2015). This case does not lead to generalizable findings, but rather facilitates a more comprehensive understanding of the multimodal experiences of young bilinguals using digital tools.

Alon (pseudonym), an 8-year old emergent bilingual student in second-grade whose native language was Tagalog, was selected for this case for a couple of reasons. First, Alon was unique in relation to the other seven students in the initial larger sample because he was the only one in the classroom who spoke Tagalog. Therefore, he was not able to draw from conversations and interactions with others in his native language. Second, Alon showed measured progress between beginning and end of the year work samples.

Alon moved to the United States at the beginning of his second-grade year, and this is when he began learning English. He previously attended school in the Philippines, where he spoke and learned mainly Tagalog in school. Alon received ESOL services for thirty minutes per day

through a pull-out program. Alon was tested using the Measures of Academic Progress (MAP), a standardized test used to compare student growth across the school year against a national norming sample to determine progress. At the beginning of the year, Alon received a Rasch UnIT (RIT) score of 166, and the end of the year score was a 177, meaning that Alon did not meet expected growth by district standards (a score of 188). Alon was also given the Assessing Comprehension and Communication in English State-to-State (ACCESS) test which was used to assess progress for emergent bilinguals learning English on a scale from 1 (Entering) to a 6 (Reaching). Alon's initial score of English proficiency was 1.5, and he ended the year with a score of 3.8 indicating he was midway to achieving English proficiency.

Sally (author) served a participant observer as she taught literacy lessons to a small group of six students (two emergent bilinguals, Alon and a Spanish dominant student, and four English-only peers) twice per week (Spradley 1980). During this time, Sally (first author) read aloud from a culturally relevant text or provided students with texts to read independently. After the reading, students responded to the books using tablet computers. The app, Sketch, offered a plethora of choices for students including drawing tools of many types, stickers (clip art), emojis, the ability to take photographs, etc. Students were encouraged to respond in any language and in any format. During the composing process, dialogue surrounding each literacy event was recorded.

The experiences of Alon were documented over the course of a school year through a multimedia data set that included the collection of work samples (texts), videotaped small group literacy lessons, observations recorded in field notes, dialogue collected about text productions, and an interview. Because of the social nature of learning, the videos were viewed several times and key literacy events were transcribed. These events were selected because they were connected to the research questions. The modes of each data form assisted in understanding the interrelationship among data (Flewitt 2011). Information from the classroom teacher was utilized to situate Alon's literacy development. Rather than triangulation, the data were used to complement one another to identify all sources of meaning making and potentials for learning (Kress 2011). A total of 21 work sample ensembles were collected and analyzed.

An inductive approach to data analysis was used where the data collected were compared, coded, and the relationships examined. Ideas and concepts were systematically tested across the data to identify trends. Specifically, there was an investigation focusing on semiotic action, or the choices of the sign maker, as new signs were made or reshaped to make meaning (Kress 2011). During this reflective process, the researchers discovered recurring themes related to Alon's work and experiences that lead to developing a

contextualized case study portrait (Dyson and Genishi 2005).

The researchers developed and piloted an assets-based tool, *Multilingual Writing Profile for Multimodal Texts* (Brown, Under Review), designed to acknowledge the academic efforts of emergent bilingual students when creating multimodal ensembles (see Online Appendix). Three areas were evaluated: oral language, written language, and image construction/new literacies. Additional modes were evaluated with each of these categories. For example, gesture was included across all areas as students frequently used body movements to assist in delivering information about their ensemble. Table 1 showcases samples from the overall assessment, and each of these were scored on a scale of one to five.

The scores were used to identify strengths and shifts over time in each area and a total score indicated cohesiveness of the ensemble produced. This approach to assessing is supported by the work of Baroutsis et al. (2019) where they stress the importance of including associated talk when analyzing student drawings. A simple researcher analysis of drawings can be biased, but a multipronged methodology ensures a more accurate interpretation of the drawings.

In this study, sign making was situated within talk, written language, and image construction, which were all influenced by cultural and social practices. To fully understand the composing processes of Alon, attention was given to the inter-semiotic relationships among the multiple modes within the context of the classroom setting (Kress and van Leeuwen 2006). The utterances of children influenced and informed sign making, and were studied to create a deeper understanding of the composing process, especially paying attention to things not communicated through language (Coates and Coates 2006). The ultimate goal was communicative competence by the child (Lindfors 1991).

Findings

The findings are divided into three categories: oral language, written language, and image construction. Within each of these categories, themes and subthemes emerged. First, articulating meaning through talk is discussed with the subthemes of personal connections, grammatical structures, and vocabulary. The second theme, decline of the importance of written words, revisits the same three subthemes as oral language. Lastly, the visual mode is presented to highlight the importance of personal connections and vocabulary as mentioned in the other two categories. The affordances of the digital tools added an additional layer of resources for the student and therefore, aspects of technology were used as part of the meaning-making process. Each of these findings allowed for an examination of Alon’s developing literacy

Table 1 Samples from the *Multilingual Writing Profile for Multimodal Texts*

Focal area of assessment	Element evaluated	Scoring example	Connection to Alon’s samples
Oral language	Oral vocabulary	Score of 5: Student uses extended academic vocabulary when talking about their work. Example: “Well, when I was writing about the moral of the story, I thought about the character’s perspective. Then, I made a picture to show those story events. And then I added the other characters.”	Alon’s score averaged 1.88 out of 5 across all of his work samples. Alon struggled using English to describe his learnings
Written language	Written vocabulary	Score of 5: A creative approach is used to integrating stimulating vocabulary. Languages may be mixed and/or include cognates. May include use of new or imaginative words. Example – The grand normal dog gobbled up so much food that he puked	Alon’s score averaged 1.65 out of 5 across all of his work samples. This score was a bit lower than his oral language score indicating his struggle to produce written language
Image construction	Visual vocabulary	Score of 5: Image is easily interpreted and contains extensive contributions for a cohesive message. The image provides a complete story. Example—the girl, horse, fence, background including grass and a sun, plus a tear coming down the girl’s face with a second image of the horse on the ground	Alon score averaged 2.05 out of 5 across all of his work samples. This was his highest score indicating that he was able to contribute more visually to explain his understanding of texts

skills within the context of an English-only classroom environment. Table 2 introduces three texts created by Alon that include representations in oral language, written language, and images. Each one represents a different period during the school year to show the range of his abilities over time. The samples are discussed according to the identified themes and subthemes.

Articulating Meaning Through Talk



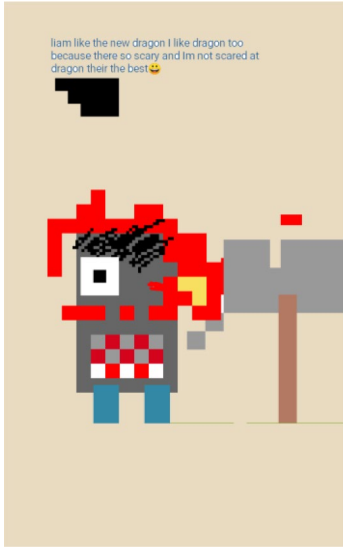
Oral language is an expected form of communication in schools even for young children. It offers a space for authentic learning interactions where students can become socialized into ways of being within culturally situated environments (Clay et al. 2015). In order for emergent bilinguals to take advantage of their oral language abilities, there must be a move away from Eurocentric practices that privilege particular types of language like standard English

(Souto-Manning and Martell 2016). In the case of Alon, it is imperative to apply a broader view of literacy and to consider what gets counted as such. His communicative competence is dynamic and unfolded across literacy events when he engaged through multiple modes as was asked to tell about his work. As Alon became aware of his own language use, he adapted his language style on different occasions becoming more standard over time (Genishi and Dyson 1984).

Personal Connections

Alon was able to use his English oral language to communicate meaning about each of his texts. The main idea of Alon’s talk was clear in each case indicating his ability to explain the overall message. In sample A, Alon said, “Like I’m really happy because that’s my first time in Christmas here (U.S.). Last year I was in the Philippines.” This was his

Table 2 Alon’s text productions

Timeline	Sample A (Dec.)	Sample B (Jan.)	Sample C (April)
Book	Response to <i>Pete the Cat Saves Christmas</i> (Dean 2012)	Response to <i>Art and Max</i> (Wiesner 2010)	Response to <i>It Came in the Mail</i> (Clanton 2016)
Image	<p>pete the cat save Christmas. santa is sick but santa call pete santa said im sick can you help? Christmas pete said ok if I can</p> 	<p>They like to paint but art is mad because max put paint on his body.</p> 	<p>liam like the new dragon I like dragon too because there so scary and Im not scared at dragon their the best 😊</p> 
Text	pete the cat save Christmas. santa is sick but santa call pete santa said im sick can you	They like to paint but art is mad because max put paint on his body	liam like the new dragon I like dragon too because there so scary and Im not scared at dragon their the best
Oral language	“Like I’m really happy because that’s my first time in Christmas here (US). Last year I was in the Philippines.”	“This is Max and the paint spilled in his head. Dots are the skin not the paint.”	“I’m doing this (pointing to page with dragon and fire.)” I want to learn Spanish. Hey can you teach me how to Spanish?” (talking to another student who ignored him). I made it because it looks like this. I have black and gray, it have peach, yellow, red and a little bit of brown. That’s Liam.” (Holding up book). Black is his hair.”
Overall score	37.00	38.00	48.00

response associated with the Pete the Cat Santa drawing, and there is a connection between Christmas in the story and his own life. Alon was able to use contractions (I'm, that's) to combine words. He also used the conjunction 'because' to link his happiness to Christmas in the United States. The word 'last' signifies a period of time which he links to his life in the Philippines. Alon clearly demonstrated the personal and cultural meaning inspired from the reading of a book or relating the new experience to the known (Lindfors 1991). Communicating meaning was the function of language and the most important aspect in social contexts. His prior experiences with the English language were used to pull together grammatical form and structure in order to express ideas which are becoming part of his language habits (Lindfors 1991; Wong Fillmore 1991).

Grammatical Structures

Upon a closer analysis of English grammatical structures, there were a couple of areas where Alon's oral language was still developing. One area of confusion for Alon was related to his use of prepositions. In many instances, he misused English prepositions, yet his meaning making was evident. Sample B showcased his struggle to select the correct prepositions. He says, "This is Max and the paint spilled *in* his head." The preposition *on* would be more appropriate. Subject-verb agreement was also developing as seen in the same sample. Here, Alon said, "it have peach," instead of, "it has peach." The noun phrase was followed by a verb phrase that forms of simple sentence (Clay et al. 2015). These small details did not interfere with the overall message, but could be overemphasized in traditional assessments and as a result discounting Alon's successful ability to communicate meaningfully.

Vocabulary

When evaluating Alon's ability to use oral language to expand on his written words and the images he constructed across the 21 samples, he seemed to limit his talk to reiterate what he had communicated through other modes. He tended not to extend, especially in the area of oral vocabulary. Alon used many common or general words when talking about his multimodal work and gestures. The oral language in Sample C was initiated with a gesture, "I'm doing this (pointing to the page with dragon and fire)." This was an act of clarification, ensuring that his intent was understood (Genishi and Dyson 1984). It appeared that Alon did not have the English vocabulary to say what he wanted, so he turned to the mode of gesture in the form of pointing (to a page in the book). This tool was his means for communicating the dragon had fire spurting out of his mouth, allowing him to showcase his literacy development.

Sample C also showed Alon's oral language used as a description for his image. He listed colors (black, gray, peach, red, yellow, etc.) to describe what he created. In this case Alon did not push beyond the boundaries of simple vocabulary to explain more about the events in the story like that the magic dragon was coming out of the mailbox because of the main character's wish. This may be associated with his developing English skills. Although he had the option to communicate in his first language, he chose not to do this. He was fully aware of the academic expectations at this English-only school. Alon drew upon the linguistic and cultural resources he brought to the classroom and used them to foster his own language and literacy development (Soltero-González and Reyes 2012). This example from Alon represented comprehensible output based on the form he produced, which will be later followed by more appropriate form over time (Krashen 2003).

Contributions of Written Language

As children develop, their ability to communicate through oral language increases. The introduction of school practices to a child at a young age provides opportunities to develop academic oral language, which in turn affects the ability to produce academic written language (Clay et al. 2015). Written language is an expected form of communication for children in schools, and it occurs on a spectrum that is dependent upon different factors, such as exposure to instruction or cultural influences related to learning and understanding. For emergent bilingual students, the production of written language can be particularly challenging as they are often learning multiple languages simultaneously, each with its own grammatical and structural rules and conventions in writing (Gort 2019). This theme explores why it is necessary to include instructional practices that play to the strengths of emergent bilingual students in writing in order to allow them opportunities to communicate their unique knowledge and point of view, rather than diminishing value based entirely on English language conventions in writing.

Personal Connections

Through his work samples, it was evident that Alon was able to use his written language abilities to communicate a level of meaning related to his drawing and understanding of the texts read in his small group (Dyson 2018). Alon typically used written language in a descriptive format, discussing both details of his drawing as well as the plot of the book. He also described his feelings related to the text. For example, in sample C, Alon said, "iam like the new dragon I like dragon too because there so scary and Im not scared at dragon their the best." In this sample, Alon used written language to make connections between the book and how

it made him feel. Similar to his use of oral language, Alon utilized a contraction (I'm) to combine words, as well as the conjunction 'because' to demonstrate the connection between elements of the plot and what he liked about them. Through the use of these skills, Alon indicated his personal connection garnered from reading the text and also related the new information to previously learned experiences (Mavers 2011).

Grammatical Structures

As seen with Alon's oral language, there are several areas where his written language was still developing in relation to English grammatical structures. Throughout his samples, there were many instances where Alon had issues with subject-verb agreement. For example, in sample A, Alon wrote, "pete the cat save Christmas." Since Alon wrote the singular subject, Pete the Cat, he needed to use the singular verb, saves. Alon also frequently misused the homophones there, their, and they're. In sample C, Alon wrote, "I like dragon too because there so scary and Im not scared at dragon their the best." In this sentence, both instances of the word were used incorrectly, as *they're* used as a product of the words, they and are would have been most appropriate. However, despite these struggles, Alon's meaning behind his written language is still clear overall. It is important to note that more traditional assessments would typically fault Alon for these mistakes, discounting his ability to successfully communicate his thoughts for mistakes that do not take away from the message of his written language (Bauer et al. 2017; Genishi and Dyson 1984).

Vocabulary

Previous analysis of Alon's use of vocabulary across samples found that he does not extend his depth of understanding through the use of oral vocabulary. This meant that Alon used oral language to echo meaning that he has previously communicated in other ways. This was consistent with his written language and the vocabulary he used, which focused mainly on describing aspects of the plot, his feelings related to the text, as well as examples of dialogue between characters. Little academic vocabulary and writing conventions were utilized throughout his samples, choosing instead to engage in the use of more common descriptors and simple sentences. Furthermore, Alon grappled with consistent application of capitalization and punctuation. Throughout his samples, Alon utilized capitalization and punctuation correctly only some of the time, showing that he is still developing this knowledge. Despite this, it is important to remember that he had only been in the United States and learning English since the beginning of the school year.

Throughout his samples, Alon was able to utilize simple vocabulary and sentence structure successfully to influence his meaning and demonstrate his understanding of the text. This is likely a result of his developing English language skills, which showed improvement over time. Alon's success at communicating meaning through written language can be partially attributed to his usage of the word prediction or text editor feature. This feature, included on the app that was used by students to produce drawings, allowed students to alter their written text by providing alternative options when the student made a mistake (Rowe and Miller 2016). This could be interpreted as elevating Alon's writing in an unfair way, as he did not write or spell a particular word correctly to begin with. However, when examining Alon's written language abilities from a strengths-based perspective, it should be acknowledged that the use of the text editor feature was actually a positive strategy that he employed to influence his understanding of English language writing and spelling. Alon utilized the text editor to alter his writing, but in doing so, still had to discriminate between the correct versus incorrect word options.

The Importance of the Visual Mode

Personal Connections

Alon used details in the images he created in order to highlight an understanding of story events. According to Kress (1997), "children act energetically, intellectually, and perceptively, out of the interest to communicate and represent their experiences (p. 113)." Alon's samples showed this as his objective. He drew from available resources and modes to represent his knowledge and personal meaning (Dyson 2018). For example, Sample A drew upon Alon's personal connections with Christmas and Santa. First, in celebrations in the Philippines and second in the United States. His use of the colors red and white offered a Pete the Cat Santa that was much like what was portrayed in the media and in the book.

Sample C represented a connection Alon had with dragons. The red around the head of the boy signaled fire from the dragon's mouth. According to Alon, he played video games with dragons and read books like *Dragons Love Tacos*. In all of his experiences, including the reading of this book, *It Came In the Mail*, dragons breathed fire. He used this personal experience as a basis for creating his own image. Thus, personal connections served as a resource for new learning.

Vocabulary

An evaluation of Alon's performance as a text designer revealed strength in creating images that extended the meaning-making process by supplementing his talk about

the work and his written language (Mavers 2011). Images added depth to oral descriptions and his written words in 95% of the work samples. The depth was significant because it indicated Alon understood much about the stories he read and listen to than he communicated using the linguistic mode. When looking at oral language vocabulary, Alon's average performance was 1.88 on a scale of 5.

Similarly, his written language vocabulary rated 1.65 out of 5. Collectively, this information highlighted the critical value of creating images in Alon's learning process. His knowledge of both oral and written language in English developed as one might expect (Gort 2019). However, without an opportunity to create images to supplement his expression of knowledge, the teacher may not fully understand his competence in terms of reading comprehension or abilities as a composer.







The term *visual vocabulary* is used to explain more about Alon's process of image construction. It is defined as the use of visual details in an image to showcase content and information that a student is not yet able to communicate through language. One example is Alon's transformation of a rectangle with smaller rectangles and squares into a chimney since he did not know this word in English or Tagalog

(Table 3). In other words, images or drawings represented Alon's voice along with his cognitive potential (Bartoutis et al. 2019; Kress 1997). Thus, requiring careful attention to what Alon physically represented in the visual mode.

Alon's use of visual vocabulary is discussed based upon the three samples presented in Table 3, which showed his response to three fictional stories. Reading his written words and the oral language describing the work revealed incomplete information. Studying the details in the image added made the work multidimensional (Mavers 2011). Here, Alon showed his capacity to identify story details and record them in his work.

Elements one and three represented specific English words that Alon could not express. When composing sample A with his peers, Alon said, "This is where Santa goes. You know that thingy on people's houses." He referred to a chimney even although he did not write the word or explain it. The chimney image was constructed in a rectangular shape consistent with the book's representation. Alon added smaller rectangular objects as bricks along with a white layer of snow on top. The details all contributed to an extensive understanding of the book. The same was true of element three, where Alon took great care in adding small brown

Table 3 Visual vocabulary

Element #	Visual element	Visual vocabulary	Significance
1	 Sample A	Chimney (made from bricks)	Alon did not have the English words for chimney but included it in his drawing to indicate where Pete the Cat was going
2	 Sample A	Package or gift	Essential detail of the story. Santa was sick. Pete the Cat had to deliver packages
3	 Sample B	Scales (not paint)	Both Art and Max were desert lizards. The dots represented the scales on their skin
4	 Sample B	Paint bucket	Although not in the book, Alon added a paint bucket on Art's head to show where the paint came from
5	 Sample C	Flag (on the mailbox)	The flag was the clue to for the new batch of magic deliveries
6	 Sample C	Fire (coming from the mailbox and dragon)	The fire played a role throughout the story. It was a problem for the dragon

dots all over the face of Art the lizard to show scales. Even though Alon never used words like scale, desert, or lizard, his image communicated these vocabulary words visually.

Elements two, four, five, and six added visual vocabulary in an alternative way. These elements brought forth details from each of the stories that were central to the overall message of the book. Alon remembered these details from the books and worked agentively to incorporate them into his pictures. They are evidence of a deep comprehension of stories. For example, the mailbox flag in element five traversed the entire book. The main character, Liam, put up the flag each day to signal for magic mail delivery. Alon used the color red for the flag in contrast to the gray mailbox. A close examination showed that Alon's flag was up and not down which also meant that Liam placed mail in the box. The extensive use of red in element six provided visual details about the role of the fire in the story. Although Alon did not say there was a fire breathing dragon, he drew one. Another extension of his written and oral language descriptions.

Technology

Within this section about the visual mode, the affordances of the drawing resources available on the tablet computer were worth exploring. Alon wove together multiple visual modes to produce cohesive texts (Kress 2010). Not only did Alon use color as a means for communication (red = fire), but he utilized different types of tools with the use of color. For example, sample A was drawn with a thin-lined black pen. Once the entire drawing was complete, Alon selected the fill tool (paint bucket) to select individual colors for smaller pieces. Upon clicking the fill tool, the color automatically filled in the empty white space. He did not color each individual element. A different approach was used with sample B. In this case, Alon colored everything himself. He changed the width of his digital marker on several occasions. It was made very thin when drawing the circular outline of the eyes and expanded to be very wide when coloring the tan mouth.

Sample C was created using the pixel drawing tool that allowed Alon to tap on block squares for coloring. His selection of colors was intentional, but so was the tool. He commented, "I want to make a Minecraft picture. It will be so cool. Just like when I play Minecraft." Not only did Alon experiment or play with this new tool, but he also connected to his personal experience playing a video game (Dyson 2018). There was a clear demonstration of Alon's proficiencies with technology. Rarely did Alon seek assistance with the digital tools, and on many occasions, he helped others. Each of his work samples represented attention to detail in the images incorporating numerous essential elements from books.

Collectively, the analysis of Alon's images demonstrated the vast amount of information that he knew about the books

he listened to or read. Each sign was chosen with a purpose and placed intentionally within the overall design (Kress 1997). This information was not accessible from examining his written and oral language work. There is a clear inter-relationship between reading, writing, talking, and drawing. Particularly, Alon re-shaped and re-mixed design elements and resources for personally relevant meaning-making. Images functioned as full communicational entities (Kress 1997). Through analysis, the researchers were able to determine the multimodal ensembles that Alon relied on when composing samples, which included various resources utilized to represent his cultural experiences and communicate understanding.

Discussion

Speech is distinct from writing and forms part of what is known as language, but this does not tell the whole picture. Written language is no longer the most valuable form of knowledge representation (Kress 2010). Considering how speech or oral language is only a piece of the communication landscape is essential in understanding the multimodal composing work of emergent bilinguals. As Alon demonstrated, his development of spoken English was not as complex as his understanding of children's literature. He extended his speech by using gestures to point to concepts and ideas that he could not explain through oral language. This was synaesthesia or moving information from one mode to another (Kalantzis and Cope 2012). Although Alon heard stories being read aloud, he was not always able to communicate his understandings orally. However, he could move that information to the visual mode and represent it through images, using various colors, layouts, and shapes. Multimodal tools allowed Alon to showcase his literacy competence and level of comprehension.

While there are some complexities in Alon's use of written language, he continued to work on more technical aspects of writing like subject-verb agreement and vocabulary development. One would expect Alon's written English development to be a work in progress as it takes many years to master a new language (Wong Fillmore 1991). There is an expectation that Alon will develop these skills over time with authentic learning opportunities (Gort 2019). The ingenuity of Alon in terms of spelling was noted by his brilliant use of the text editor. His abilities in this area illustrate his skills with technology, and with being agentive to figure out how to overcome the English spelling barrier. However, what must be focused on in the meantime? A holistic perspective of his composing process that considers many modes and resources.

For Alon, one such resource was within his image construction. His visual vocabulary skills were extensive as he

created images using details to convey what he understood from the stories. This aspect of his learning was of the utmost importance as it helped to view Alon from a strengths perspective showing all that he can do and understand. Paying attention to visual vocabulary challenges conventional school thinking because images are usually not evaluated as part of the composing process (Baroutis et al. 2019).

Each mode added another layer of meaning to his construction of a text thus contributing to the overall ensemble. The powerful transformation did not occur until Alon connected one mode to another creating a cohesive response to the book (Kress 2010). Therefore, we must allow students to combine signs to obtain meaning as a whole (Kress 1997). The utterances of children have the power to influence and inform their work, sign making, and therefore should be studied to create a deeper understanding of the composing process especially paying attention to those things they cannot communicate through language (Coates and Coates 2006; Shanahan 2013).

Implications

Classroom teachers need to consider holistic elements when assessing the composing process of emergent bilingual students. Limiting an analysis of student performance to written language alone perpetuates a deficit view of emergent bilinguals (Souto-Manning and Martell 2016; Hopewell and Escamilla 2014). Instead, a more inclusive approach including the use of visuals like creating images that extend the meaning found within written language, is necessary (Kress 2010). The student-created images should be scrutinized for evidence of *visual vocabulary* that supplements what was written. This additional step has the potential to add depth to the emergent bilingual's understanding of a text or reading comprehension. This process may also capture cultural aspects of the child's learning experiences as they transacted with the text (Axelrod 2014). The case study of Alon can be applied to many other emergent bilinguals with a limited English vocabulary. Visual vocabulary offers an additional avenue for student knowledge production. If meaning making is the goal of literacy learning, then expanding vocabulary to visual modes has the potential to make a significant difference in capturing what a student truly knows.

Also, gestures may add even more information (Kress and Bezemer 2016). Pointing is one-way emergent bilinguals have to communicate their ideas and to capitalize on this mode for meaning-making, resources must be available to facilitate the process. For example, it is much easier for emergent bilinguals to refer back to a book when it is in paper form rather than digital. The physical books allow for the reexamination of pictures, words, ideas, and sequence of story which all assist with responding to the book. There

may be a use for digital texts, but in this case, students preferred to use the paper-based versions to scaffold their literacy learning experiences.

Even though this research advocates for the use of paper-based books, it also highlights the digital resources made available through the use of tablets and the Sketch app. In particular, the text editor feature for written language was highly utilized as a means for overcoming the spelling obstacle. Therefore, it is recommended that a text editor be a resource for emergent bilinguals during the composing process.

Oral language use must also be included in the composing process. When emergent bilinguals struggle to write words in English, they may be able to explain or add depth to their writing by talking about their work (Clay et al. 2015; Lindfors 1991). This process may include translanguaging where the student pulls from their linguistic repertoire to communicate in a way that makes sense to them. It is not enough to value oral language. A concerted effort to accept and appreciate multiple languages is required for young emergent bilinguals (Li 2018). This means teachers must take the time to ask students about their composing process and to listen to their responses. Alon is not unique in this case. Research (Rowe 2018; Zapata and Van Horn 2017) documents the ongoing struggle for emergent bilinguals to spell in standard English especially where value is placed on written language. Accepting the use of text editor and utilizing multiple languages are beneficial for many students. Clearly, a multimodal approach to contemporary composing is no longer optional if teachers are to meet the needs of a diverse student population (Rowe 2018).

Conclusion

Findings from this case study demonstrate the importance of viewing the development of literacy as a complex process that involves various aspects, such as oral language, listening, reading, viewing, and writing. Previous research into literacy development within the context of early childhood education classrooms has contributed to a greater understanding of the ways that these aspects influence student understanding and overall success. However, it has been demonstrated that traditional curricula place a greater emphasis on tested skills, rather than acknowledging the diverse background knowledge and experiences of emergent bilingual learners, a disservice to both emergent bilingual learners and their monolingual peers. Axelrod (2014) asks, "What is possible when we put children first, honor their complex and diverse languages practices, allow them to draw from their full linguistic repertoires and recognize the importance of their families and communities?" (p. 107). As emergent bilingual students approach literacy development

and practices in a way that is considerate of their unique cultural experiences, respect must be given to the resources that these students draw upon to inform their understanding.

Mavers (2011) reminds us that representation and communication are never neutral. Questions must be asked about the texts that emergent bilinguals produce. What is valued? What is ignored? “As children transport representational resources between schools and home, they make the most out of familiar and newly discovered forms in their shaping of meaning (Mavers 2011, p. 5)”. Early childhood classrooms should be spaces where teachers build upon existing student resources for effortful meaning making. Attention should be paid to what students can do, the way materials get remixed, and the purposefulness of their work. Failure to recognize the potential within each emergent bilingual neglects their true value as learner. In the long term, emergent bilinguals in English-only classrooms will continue to be marginalized in classroom practices do not change (Bauer et al. 2017).

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