Exploring augmentation of meaning through intersemiotic complementarity in children comic book series

Nur Annisa Haris, Yusnita Febrianti*, and Nurenzia Yannuar
English Language and Literature Study Program, English Department, Faculty of Letters, Universitas Negeri Malang, Jalan Semarang No. 5 Malang, Jawa Timur, Indonesia

ABSTRACT
Comic books are taking a new turn as a medium of learning. The combination of visual and verbal modes in comics is a rich source of meanings. They are arguably one of the contributors to why comic books are considered a form of reading material for the purpose of language learning. With this regard, the present study is looking into a comic book series targeted for young readers, entitled 'Little Dim Sum Warriors'. The overall aim of the study is to comprehend how the readers are likely to learn language with the comic. More specifically, the study addresses the details of the verbal-visual relation in LDSW and the prediction on how readers might be able to perceive the meaning-making process in LDSW. In doing so, the study analyzes the first two installments of the series in terms of the relationships between the verbal texts and visual images in terms of the ideational meanings. Data analysis is facilitated primarily using Royce's (1998) framework of ideational Intersemiotic Complementarity to map out and categorize any instances of visual-verbal relation in the data in terms of the instances of repetition, synonymy, antonymy, hyponymy, meronymy, and collocation. Through the analysis, the study found that the verbal-visual relations mostly fall into the categories of repetition and collocation, which further indicate that the repeated meaning in both verbal and visual aspects are found effective in learning language. Other relations, however, such as those that appeared as anonymy or synonymy, might require the attendance of teachers or parents to create a discussion with the young readers regarding the meaning-making process. The results of the study also implied some hints on how reading activities between parents and children may be conducted.

Keywords: Comic books; intersemiotic complementarity; Little Dim Sum Warriors

INTRODUCTION
This study explores the composition of meaning found in a children comic book series. Initial studies on comics found that comics are relatively uncensored visualized forms of literature that usually present adventure and mystery (Bender & Lourie, 1941). They are staple reading materials for children and youth since the 1930s (Morrison et al., 2002). In terms of presentation, Kaindl (1999) defines comics as series of at least two pictures in which a narrative or a story is told. Despite the rough beginning in the early years, comics are becoming widely accepted and enjoyed (Bender & Lourie, 1941; Kaindl, 1999; Morrison et al., 2002). In its more recent development, there is a noticeable shift in the comic industry. Aside from being used as a form of enjoyment, recent studies show that comic books are also used as learning media (Damayanti & Febrianti, 2020; Lin et al., 2015; Lin & Lin, 2016; Tatalovic, 2009; Widyastuti et al., 2017). The use of comic books as learning media includes introducing or learning a certain topic in a

---

school subject such as mathematics or science (Lin et al., 2015; Lin & Lin, 2016; Tatalovic, 2009; Widyastuti et al., 2017)) or as a material in language learning (Damayanti & Febrianti, 2020; Omaggio, 1979). Constructing the story within comics involves several aspects that are carefully placed and curated (Kaindl, 1999), for example by exploring the aspects of linguistic, typographic, pictorial and combination of signs, as well as other unique aspects such as onomatopoeia and speech bubbles. These examples provide an argument that comics, as multimodal texts, are a form of reading material that stimulates meaning-making by utilizing two different forms of meaning resources, namely the visual and verbal modes. Hence, it is important to further explore these meaning resources, which can essentially be seen from the perspective of multimodality.

As the main data in the present study, the comic book series were examined on the basis of the two separate modes that compose them: verbal texts and visual images. Verbal text in the comic is a form of language use presented in its written mode (Kress, 2010) as it appears on the comic pages. On the other hand, visual images may consist of shapes, lines, graphs, and colour (Kress & van Leeuwen, 2006). In comic pages, the visual images are the colorful drawing or illustration showing different characters in various scenes. As semiotic modes are shaped by culture and social environment (Jewitt, 2014), both verbal texts and visual images are seen as important elements as the available source of meanings in comic book series that becomes the focus of this study.

As a multimodal text, comics contain the combination of two modes or more such as images, gesture, language (speech and writing), icons, or typography (Kress, 2014). Hence, they should be analysed using the suitable concepts, methods and a framework for the collection and analysis of visual, aural, embodied, and spatial aspects of interaction and environments, and the relationships between these (O'Halloran & Smith, 2011). Overall, the analysis of a multimodal text is usually aimed at discovering what it is represented, what ideas are being communicated and how it is achieved, and how it encourages the viewer to relate to the image (MODE, 2012). Many research in multimodality emphasised that multimodal texts should be seen as a single, unified unit of meaning. Multimodality has since been analysed using a number of different approaches ranging from social semiotics (Kress & van Leeuwen, 1996), multimodal discourse analysis (Kress & van Leeuwen, 2001; Royce & Bowcher, 2007), to those talking about multimodal film analysis (Wildfeuer, 2012, 2014), and multimodal grammar (Fricke, 2012, 2013). Other than understanding the semiotic modes that compose multimodal texts, these research provide hints that it is important to learn about the relation between language and images in a multimodal text which has now become an important aspect of language competence (Siefkes, 2015; Unsworth & Ngo, 2014; Vu & Febrianti, 2018).

In regards to the relations between semiotic modes in a multimodal text, the concept of intermodality or intersemiosis is useful. It refers to the relation between modes in which one mode influences other modes in terms of semantic and/or stylistic properties (Siefkes, 2015; Wildfeuer, 2012). One technical framework is proposed by Royce (1998) called Intersemiotic Complementarity, which formulates that not only both visual and verbal modes are simply co-occurring in a single page, but they also support one another in communicating meanings or ideas as opposed to those conveyed by only one mode (see also Royce & Bowcher, 2007). Adopted from Systemic Functional Linguistics' (SFL) system, Royce's (1998) framework mapped the relation of meanings in terms of interpersonal, ideational and textual meanings (Halliday & Matthiessen, 2014).

Several studies have shown that Intersemiotic Complementarity has a lot of contributions to the learning process of meaning-making (Damayanti & Febrianti, 2020; Hu & Qiu, 2020; Nakakuwa & Jawahar, 2020). For example, intersemiotic complementarity helps to structure reading paths and coherent messages throughout children's picture books, which is deemed essential to children's language development (Damayanti & Febrianti, 2020; Hu & Qiu, 2020). Consequently, it is hypothesized that Intersemiotic Complementarity also helps teachers or parents decide where to start a discussion about the book to engage children's interest to then create talk-around-text activities regarding the content of the book. Different research found that in a classroom where students are learning science in a second language class, the relations between verbal-visual modes, for example in the form of science illustrations, support the learning process by acting as the visual stimulus or a specific reference point (Omaggio, 1979; Unsworth & Ngo, 2014; Wright, 1989), and therefore, may unconsciously use intersemiotic complementarity to improve science pedagogy (Nakakuwa & Jawahar, 2020).

The previous studies clearly indicate that the combination of visual and verbal modes in multimodal texts have great potentials for a variety of learning purposes. It is thus arguable that the combination of both visual and verbal modes may affect children's cognitive ability (Marchetti & Cullen, 2016), for example in terms of children's ability in determining strategies to understand the meanings that come from the images, the written language and the relationships between both.

The present study focuses on one particular comic book series for children, entitled "Little Dim Sum Warriors" (henceforth, LDSW). Created by

researchers in the field of children's language development, LDSW has gained staggering popularity among parents, teachers, and children alike. The comic series were produced for the purpose of language learning. It promotes a fun way to learn a new language, especially for younger readers. Therefore, the present study intends to investigate whether the values manifested in both verbal and visual resources as a comic series are suitable for this purpose. So far, there are a few still studies conducted using LDSW as the main data, specifically in terms of the verbal-visual relation in the comic and how it caters to the meaning-making process that would later play into the language learning process. In doing so, the study explores two aspects, namely the presence of ideational intersemiotic complementarity in LDSW to reveal how the young readers are likely to learn language with the comic. This research aims at investigating the relation between the illustrations and texts in LDSW on a multimodal approach using Intersemiotic Complementarity framework (Royce, 1998). This research is guided by two broad aims, these are: (1) comprehending the verbal-visual relation in LDSW, and (2) predicting how readers might be able to perceive the meaning-making process in LDSW.

METHOD

The present study uses qualitative descriptive in presenting and discussing the findings. The primary data used in this research is an ad hoc selection of the first two installments of the LDSW comic book series. They are Book 1: 'Papa, I'm Still Not Sleepy' and Book 2: 'My Way is The Best!'. Each book focuses on two different settings and plots. As mentioned above, the study implemented Royce's (1998) Intersemiotic Complementarity framework. This framework follows SFL's system in which meanings are mapped in terms of interpersonal, ideational and textual meanings. In this study, the analysis is focused on ideational intersemiotic complementarity, that is the meaning whereby a phenomena is related with regard to things, goings-on (what the things are or do), and the context in which they occur. In this way, the study focuses to examine the main content of the story and the verbal texts that support or augment the visual images, and vice versa. Royce's (1998) framework on ideational intersemiotic complementarity categorizes the instances into six types: repetition, synonymy, antonymy, hyponymy, meronymy, and collocation. The categorization can be seen in Table 1.

Table 1
Royce's Ideational Intersemiotic Complementarity Framework

Visual Meanings	Semantic relationships	Verbal Meanings
Identification: who or what are the represented participants?	Repetition: identical experiential meaning.	Identification: who or what is involved in any activity?
Activity: what action is taking place, events, portrayal, scene, states, types of behavior	Synonymy: the same or similar experiential meaning	Activity: what action is taking place, events, states, types of behavior.
Circumstances: where, who with, and by what means are the activities being carried out?	Antonymy: opposite experiential meaning	Circumstances: where, who with, and by what means are the activities being carried out?
	Meronymy: the relation between the part and who of something.	Attributes: what are the qualities and characteristics of the participants?
Attributes: what are the qualities and characteristics of the participants?	Hyponymy: the relation between a general class of something and its sub-classes.	
	Collocation: an expectancy or high probability to co-occur in a field or subject area.	

The study obtained the consent from the publisher to use the pages for the purpose of the analysis. Note that the annotation of the comic was done on the pages to indicate the analyses of the verbal texts and visual images. The data analysis procedure was conducted through a particular set of steps that contributed to the whole understanding of verbal-visual meanings and how both modes can contribute to the reading experience itself. The first step was to do a general reading of both books. This step is essential to map out or list any relations of meanings between the visual and verbal modes that exist on the same page. Using the framework, any occurrences of visual-verbal relations happening on each page were annotated. Following the framework, a number of questions are used to guide the mapping of the visual and verbal meaning, they are (1) who or what are the represented participant,

(2) the activity that is currently involving the participants, (3) the place, the people, the reason of why the activity took place, and lastly, (4) whether the participants have certain characteristics on them. However, it is emphasized by Royce (1998) that these questions heavily depend on the presentation format of the observed multimodal text, as not all questions may not be answered at one time.

The second step was to categorize any represented instances of verbal-visual meaning that we had established in the earlier process. In this step, the relation between both visual and verbal modes in the comic were considered. In Royce's (1998) framework these relations are categorized into Repetition (R), Synonymy (S), Antonymy (A), Hyponymy (H), Meronymy (M), or Collocation (C). From the result, we determined how LDSW Book 1 & 2 present the verbal-visual relationship, as well as discussed how this discovery could be used by readers to conduct fun learning. In addition, the verbal texts were analysed in terms of the semantic meanings of the lexical choices to understand the ideational meanings.

FINDINGS

Overall, the series is intended to target young readers with the overall goal of teaching them a new language. The relationship between the verbal text and visual images on each page is crucial for deciphering the message in the LDSW comic book series, as it is in many other comic books. In Book 1, we are following little Baozi's story where he and his parents go about their routines before bedtime. It begins with Mama who tells Papa that it is his turn to coax Baozi to start preparing for bed. So, Baozi changes into pajamas, brushes his teeth, and gets cozy on his bed; whether or not he is able to sleep, however, is proven to be the hardest part yet. Many attempts later, and probably some begging, Baozi falls asleep. The ending of story shows that somehow Papa is the one who cannot sleep. On the other hand, Book 2 revolves around our three main characters of this universe as they play with a tool called 'Boing Boing Sticks'. Some playful banters are thrown at each other as they argue and discuss the best to play with the stick. In the end, however, it seems like everyone has their own opinion and agrees to disagree as long as they can have fun. In terms of verbal texts, both books deliver each story with simple phrases and clauses, mainly characterized by the use of repetitions.

As a comic book that is catered to younger readers, each book in the LDSW series focuses on a specific event in the characters' daily lives. Thus, it becomes a relatively easy-to-read reading material for children. Since the main event of the story requires little to no big changes in the aspect of places, almost all pages in both books have a white background, which creates a contrast to the colorful illustration. This enables the reader to focus more on what is happening around and to the characters (Damayanti & Febrianti, 2020). A sample of the comic page without annotation is shown in Figure 1.

Figure 1
White background in the comic

The result from the mapping and categorization instances of intersemiotic complementarity provides evidence that further strengthens the augmentation of meaning as contributed by the verbal texts and visual images on the comic pages. To analyze the intersemiotic complementarity, we first need to dissect and decide the represented visual and verbal modes that exist in both books.

Book 1: 'Papa, I'm Still Not Sleepy'
It was previously discussed that to examine the existing data, we have to determine who or what is the represented participant(s), which includes both animate and inanimate objects. In addition to that we should also take note of the kind of action or event that is currently taking place on that specific page and what the action represents, following the whole context of the story.

The identification process on LDSW's first installment, Book 1, reveals that there are a few represented participants that appear throughout the whole book. As the main characters, there is the family of Baozi consisting of Papa, Mama, and Baozi himself. The visual images show that both parents are adorning rather comfortable-looking sleepwear and each put on a different headpiece. Mama has a mud mask on. Baozi on the other hand is wearing his everyday clothes before then changing into a pajama. Other represented participants are inanimate objects such as a bed. The portrayal of the background images help shift from one scene to another. Also, it provides information that the scenes do not occur in the same room as the previous scene. A stuffed toy or plushie is portrayed to stay by Baozi's side as well as a storybook entitled "Goodnight, Everybody" appear in every scene. Both the plushie and the storybook function as a constant variable in the overall comic. There are also several instances of electronic gadgets, such as tablets and phones that are seen in the story, for example in the first two pages and the last page. Other less prominent features in the book are the illustrations for other stories that Papa has suggested for Baozi as his bedtime story.

Meanwhile, if we look at the action that is taking place in this book, we can observe quite a lot of movements that are portrayed differently from page to page. To name a few, they include pointing to a certain direction, putting a hand(s) on the hips, holding/reading a book, begging on their knees, and laying on the bed/sleeping. We can also note the range of emotions/expressions in the participants: annoyed/angry, shocked, displeased, sleepy/tired,

and goofy. These instances are going to be referenced as the action or expression of the characters.

Looking into the circumstances, there are at least two or more represented participants, that is Baozi and papa characters that would appear in a single page/scene. It is important to consider this as well since it would cater to how an object carried or worn by the main participant is used in an action (Royce, 1998).

Lastly, regarding the symbolic attributes, certain characteristics and qualities that come with the participants were also analyzed. This book focuses on the main characters in the story, which is a small family consisting of three characters that are getting ready to sleep. This moment indicates that they are currently in a private space of their own home, despite the lack of detail in the background. This is further supported by how all three participants are wearing something comfortable to indicate how they are. For example, one in particular even appears with a mud mask which is green and slimy-looking, arguably eliciting fear. Two of the primary participants (Papa and Baozi) then move into a different setting (bed) and proceed to go through a bedtime routine (storybook, plushie). Electronic gadgets seem to have become a hindrance in this particular scenario since, in all of its appearances, the one operating is either disturbed or getting disapproval from another. We also noted how the action or expression of the primary participants becomes their way to communicate, indicating certain emotions and feelings. Table 2 provides the summary of the findings above.

Table 2
Intersemiotic complementarity of LDSW Book 1

Represented Participants	Visual representational meanings in the comic	Corresponding verbal texts in the comic
The Family (primary participants)	The main characters identified as Papa, Mama, and Baozi	"GOODNIGHT, EVERYBODY" // "Goodnight, Papa. Goodnight, Mama. Goodnight, Bed. Goodnight, Pillow, Goodnight, Stinky..."
Sleepwear/Pajamas/Comfortable clothes	A symbol of bedtime, sleep	"GOODNIGHT, EVERYBODY" // "Goodnight, Papa. Goodnight, Mama. Goodnight, Bed. Goodnight, Pillow, Goodnight, Stinky..."
Mud Mask	A slimy mask, elicit fear	He said my mud mask is scary.
Bed	A place where bedtime routines took place and were portrayed in the story.	Stop playing! Get into bed!
Storybook "Goodnight, Everybody."	A symbolizing reading activity	Papa, read me a story! // Alright!
Plushie "Stinky"	A toy close to Baozi	"GOODNIGHT, EVERYBODY" // "Goodnight, Papa. Goodnight, Mama. Goodnight, Bed. Goodnight, Pillow, Goodnight, Stinky..."
Illustrations on other Stories	A symbol of said stories: Three Little Baos, The Ugly Dumpling, Baos in Boots	How about "THE THREE LITTLE BAOS"? "THE UGLY DUMPLING"? // "BAOS IN BOOTS"?

Aside from the visual aspects of the book, we also examined the verbal texts in the data. Royce (1998) mentions that the decision to include or exclude a lexical item concerning the visual meanings lies on the notion where the lexical item is closest semantically in meaning to each visual element or expected to co-occur or collocate in that particular situation. In this study, the inclusion of the verbal texts is based on the relevance between the verbal texts and the visual images in the adjacency in order to map the relation.s In the data of Figure 1, for example, the lexical item in written language 'I can't control it' is put in adjacency of an image of the character Baozi jumping up and down on the giant whisk with zig zag line, indicating the lack of control.

Book 2: 'My Way is The Best!'
In Book 2, we identified other three primary represented participants: Baozi, Shaomai, and Xiajiao. They wear casual clothes with little details on each character to differentiate: Xiajiao with the ribbons, Shaomai with the pull-ups, Baozi with the belt on his hips. A seemingly significant tool named "Boing-Boing Bats" is prominent throughout the entire chapter. There are not as many participants that appear in Book 2 as compared to Book 1 since it does not contain any indication of a change of setting.

The action is also rather monotonous as the three main characters are either playing on the bats or not. Their expressions and gestures, however, play important roles in strengthening the main idea of the story in this particular chapter. One prominent expression that occurs is that of frustration when the characters argue with one another which are mostly shown in their arm movements and facial expressions. Despite the lack of idea as to where exactly the story is taking place, we still can see that there are other participants aside from the primary ones. Across the pages, the Three Little Dumplings features as the primary participants alongside an additional participant that is a toy named Boing Boing Bats. Hence, the possible relation that happened between both participants can be established.

Table 3 presents the symbolic attributes associated with the three main characters that are shown in their casual clothes. They are shown in a casual setting with the use of consistent background image. Another participant is a simple tool that is then identified as a plaything. The idea of the bats is similar to what we know as pogo sticks, cleverly taking the shape of a whisk to fit in the whole food theme in the series' universe.

Table 3
Summary of Intersemiotic complementarity of LDSW Book 2

Represented Participants	Visual representational meanings in the comic	Corresponding verbal texts in the comic
The Three Little Dumplings	The main characters identified as Baozi, Xiajiao, and Shaomai	See? Even Baozi can do it! Shaomai, it's really easy to play with this! Xiajiao, it's not easy learning something new. You should be more understanding of your little brother.
Boing Boing Bats	A plaything that the little dumplings are playing with	I really don't know how to play this thing... Hey! Boing-Boing Bats are fun! I love playing with Boing-Boing Bats!
Characters' expressions and gestures	A way to communicate shows certain emotions and feelings	Xiajiao, it's not easy learning something new. You should be more understanding of your little brother. And Shaomai, you shouldn't give up so quickly. Aiyah! Suck, squat, and soar! How hard is that?

DISCUSSION
All verbal-visual relationships in both texts were categorized, and the results are quite intriguing. Only two of the six categories of ideational intersemiotic complementarity are found to be consistently present in both books. The two most prevalent forms in both books are repetition and collocation (see Table 4). Damayanti and Febrianti (2020) propose that discussing meanings of lexical choices is one of the essential concerns in language learning activities alike. Therefore, it is essential to have both the languages and images/pictures create a close relationship in the meaning-making process. In order to elaborate this idea further, we will take a look at some of the instances.

Table 4
Result of the overall ideational intersemiotic complementarity categorization in Book 1 and Book 2

No.	Types of ideational intersemiotic complementarity	Number of instances	
		Book 1	Book 2
1.	Repetition (R)	18	16
2.	Synonymy (S)	0	6
3.	Antonymy (A)	1	3
4.	Hyponymy (H)	1	N/A
5.	Meronymy (M)	1	N/A
6.	Collocation (C)	25	32

Figure 2
Instances in the Book 1 for repetition and collocation.

Figure 2 is a sample comic page taken from Book 1 in which the story revolves around bedtime. In this instance, we can see Papa and Mama are in comfortable wear, which is commonly associated with sleep attire. To add to the characterization, each participant has a headpiece on to indicate the Chinese background culture. Also, Mama has a rather striking feature on her face, a mud mask, which is indicated using a blue square in the annotation. The arrows from the verbal texts *mud mask* and *too scary* map onto the visual images, that is the green and slimy-looking mud mask. Each of the phrases has its meaning-making relation with the represented visual. The phrase mud mask is directly represented in the visual, thus this fall into an instance of repetition. The phrase *too scary*, however, is considered as an instance of collocation since it is an inferred meaning of the slimy-looking mud mask. Both instances provide both the idea of the word 'mud mask' and what is highly expected to co-occur with the word-which, in this particular context, is *fear* or *scary*. Another interesting part that may be pointed out while reading the book out loud with children is that we may also motivate the young readers to look up the association of both *mud mask* and bedtime routine; especially, since the entire book setting happened around bedtime. It can also be seen that the participants in the scene that are verbally represented using *he* and *your* are mapped onto the visual images as indicated by the arrows.

Figure 3
Instances in Book 1

For sample in Figure 3, we are introduced to another character, this time appears to be a younger one, i.e. Baozi. Looking into the dialogue, we can see that both visual and verbal modes contain the idea of *Papa* and *Baozi*. The blue arrows in Figure 3 annotation map the verbal texts of these names onto the visual images of the participants. This will help the readers establish who is who, which then leads to another occurrence of repetition. The yellow highlight in the callout from Papa maps onto the placement of his hand on the hip, indicating authority to tell Baozi to *go and brush his teeth.* This is responded by an exclamation in verbal text *Aiyah!* spoken by Baozi accompanied by a startled look on his face, as indicated by the yellow annotation. The same occurrence happened in the second image, where almost every noun in the dialogue is repeated in the picture, such as papa, bed, pillow, and Stinky. The initial mapping reveals that *Stinky* refers to the plushie that Baozi has had near him since the start of the book, which has been consistently shown as a visual image. On this page,

however, it is the first time the name *Stinky* is shown as a verbal text. This reveals that having repetition in this instance is also useful for a moment of talk-around-text, enabling interactive discussion regarding the content of the book itself (Damayanti & Febrianti, 2020). It means that there is a potential that the character *Stinky* can be used as a discussion in talk-around-text activity in which parents or caretakers can help young readers to recall the character from the first parts of the story.

A similar instance appeared in one of the pages in Book 2, as depicted in Figure 4 and annotated using yellow arrows. On this specific page, one character, Xiajiao, is depicted to be riding the 'Boing Boing Stick'. As she rode on it, she said "Look! Lean! Lift!" which is indicated by the illustration of her doing exactly what she said. The

identical meaning between the illustration and the text is what we categorized as repetition. Still, on the same page, we can see the character Baozi in the back, waving and approaching the other two characters. He greeted them by addressing both characters' names, Xiaojiao and Shaomai. Another repetition happened here as we can also see both Xiajiao and Shaomai in the same frame. Instances such as this one encourages the young readers to a process of meaning-making between both modes.

In terms of collocation, Book 1 gives out many instances that would collocate with the overall theme in the story: bedtime. Figure 2 has shown a mud mask as an instance of collocation. Another example is presented in Figure 5.

Figure 4
Repetition in Book 2

Figure 5
Collocation in Book 1

Each one of the pictures has an illustration of a bed, which in the previous section is identified with bedtime routines. In this instance, the activities related to bedtime such as *singing a lullaby* or *reading a story* are expressed in the verbal texts. Then, the page also depicts a visual image of a book that also collocates with *read* or *story*. Note that the annotations are made in different colours for easy distinction. The use of collocation creates a chance for the young readers, who are currently learning

languages through this book, as well as parents or teachers to communicate and discuss meanings of what is happening at that point of the story. This also offers an opportunity for parents or teachers to introduce young children to multimodal texts; therefore, supporting the development of their meaning-making competence in multimodal texts early on (Damayanti & Febrianti, 2020). A similar instance such as this one is presented in Figure 6.
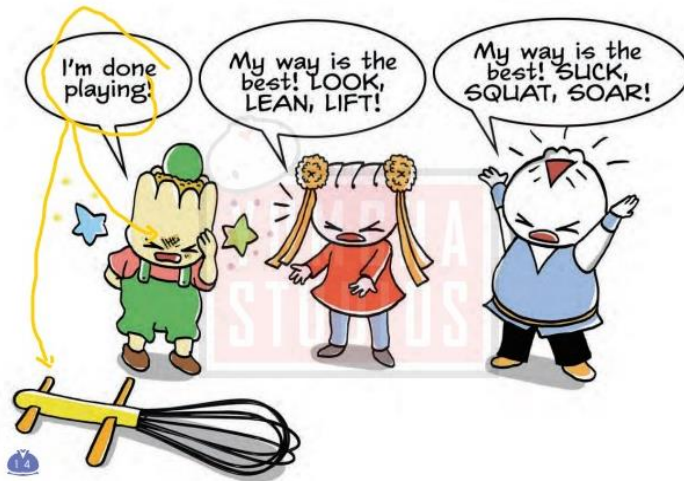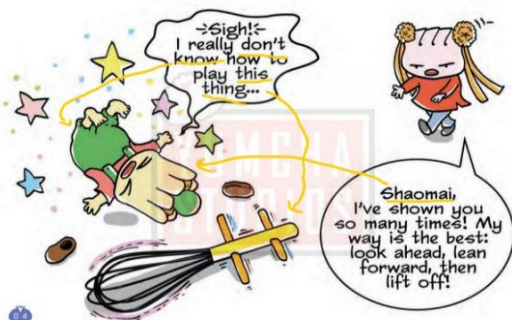
Figure 6
Collocation in Book 2

Figure 6 depicts a collocation specifically between the gesture or expression of the characters and a specific part of the dialogue. There we can see how *I'm done playing* is being reinforced by the wince on Shaomai's face, the bruise on his forehead, and the Boing-Boing Bats which is laying on the ground in front of him. It encourages young readers to thread the meaning between Shaomai getting hurt from falling off of the bats and his utterance that he is no longer interested to play with it. Nevertheless, young readers may not immediately piece this information together, therefore it is crucial for guardians around them to have a fun discussion regarding this matter.

More about the discovery, the result also shows several instances from the other types. Figure 7-9 contains a couple of excerpts taken from both Book 1 and Book 2.

Figure 7.
Bao complaining that he is still not sleepy

Figure 8
Bao claiming that he loves playing with the bat

Figure 9
Shumai falling from the bat

Figures 7 and 8 contain instances of antonymy, in which opposite meanings occurred in both represented visual and verbal modes. In the first picture, Baozi appeared to have been asleep whilst his dialogue says otherwise. Figure 8 shows Baozi saying how he loves playing with the Boing-boing Bats, but the expressions on both Xiajiao and Shaomai's faces do not reflect Baozi's sentiment. The contradiction shown in antonymy between the verbal texts and the visual images may attract the readers' interest. Consequently, parents, teachers, or caretakers would need to guide the discussion regarding the context of that particular page.

On the contrary, Figure 9 is an example of synonymy, where the two modes are similar but not necessarily repeating one another. Figure 9 has used a specific term, *this thing,* while referring to the fallen Boing-boing Bats. The visuals on these instances create a slight discrepancy between the two modes, and as a result, the readers might not be able to process meaning-making as fast as what will happen if both modes are directly repeating one another. Therefore, teachers or parents are the main keys to point out and help the younger audiences in figuring out the relation of meaning between both modes.

CONCLUSION

Throughout the study, we have analyzed the first two installments of the LDSW and outline an implication on how young readers may learn vocabularies from the comic. Using Royce's (1998) Ideational Intersemiotic Complementarity framework, we have categorized visual-verbal relations in the data. It is found that the two most recurring types of intersemiotic complementarity are repetition and collocation. This indicates that the series values how repeating meaning in both verbal and visual aspects is very effective in learning a new language. The study has also found instances from the other types such as antonymy or synonymy. With these instances, however, young readers will need the assistance of teachers or parents concerning the process of meaning-making. For example, having a read-around-text activity to engage children in a discussion about a particular subject.

These findings were not undesirable, despite the lack of variation found in the instances. As LDSW comic book series is catered to younger readers, having both the visual and verbal modes help them grasp the story even easier; thus, explains why more repetition types are occurring in the comic. The whole experience of reading the comic is supposed to gain several simultaneous benefits. It should be fun and stress-free for both the children and their parents, provide educational information as well as engage the young readers with learning. As a result, it has become more important for children to understand and be familiarized with the ability to conduct meaning-making from both images and language modes. This is how children's overall multimodal literacy development is supported using the appropriate multimodal texts.

Finally, it is worth noting that the data used in this research were taken only from the first two books out of six LDSW series. Including more books in the data will be more ideal in order to capture more representations of ideational intersemiotic complementarity. Explorations of the data can also be expanded into other verbal-visual relations as well as other aspects of meaning making in the comic in different lights of multimodal investigation.

REFERENCES

Bender, L., & Lourie, R. S. (1941). The effect of comic books on the ideology of children. *American Journal of Orthopsychiatry*, *11*(3), 540–550. https://psycnet.apa.org/doi/10.1111/j.1939-0025.1941.tb05840.x

Damayanti, I. L., & Febrianti, Y. (2020). Multimodal literacy: Unfolding reading path in children's picture book and its potential for EFL classrooms. *Indonesian Journal of Applied Linguistics*, *9*(3), 616–627. https://doi.org/10.17509/ijal.v9i3.23212

Fricke, E. (2012). *Grammatik multimodal: Wie Wörter und Gesten zusammenwirken* [Grammar multimodal: How words and gestures work together]. de Gruyter.

Fricke, E. (2013). 46. Towards a unified grammar of gesture and speech: A multimodal approach. In C. Müller, A. Cienki, E. Fricke, S. Ladewig, D. McNeill & S. Tessendorf (Eds.), *Body - language - communication: An international handbook on multimodality in human interaction* (Vol. 1) (pp. 733-754). De Gruyter Mouton. https://doi.org/10.1515/9783110261318.733

Hu, Y., & Qiu, Q. (2020). A study on verbal and image relations in multimodal texts from the perspective of intersemiotic complementarity. *Canadian Social Science*, *16*(10), 50–56. http://doi.org/10.3968/11938

Kaindl, K. (1999). Thump, whizz, poom: A framework for the study of comics under translation. *Target: International Journal of Translation Studies*, *11*(2), 263–288. https://doi.org/10.1075/target.11.2.05kai

Kress G., & van Leeuwen, T. (2001). *Multimodal discourse: The modes and media of contemporary communication*. Arnold.

Kress, G., & van Leeuwen, T. (1996). *Reading images: The grammar of visual design*. Routledge.

Kuttner, P. J., Weaver-Hightower, M. B., & Sousanis, N. (2020). Comics-based research: The affordances of comics for research across disciplines. *Qualitative Research*, *21*(2), 195–214. https://doi.org/10.1177/1468794120918845

Lin, S.-F., & Lin, H. (2016). Learning nanotechnology with texts and comics: The impacts on students of different achievement levels. *International Journal of Science Education*, *38*(8), 1373–1391. https://doi.org/10.1080/09500693.2016.1191089

Lin, S.-F., Lin, H., Lee, L., & Yore, D. L. (2015). Are science comics a good medium for science communication? The case for public learning of nanotechnology. *International Journal of Science Education, Part B: Communication and Public Engagement, 5*(3), 276–294. https://doi.org/10.1080/21548455.2014.941040

Marchetti, L., & Cullen, P. (2016). A multimodal approach in the classroom for creative learning and teaching. *Psychological and Creative Approaches to Language Teaching*, *5*(1), 39–51.

MODE. (2012). Glossary of multimodal terms. https://multimodalityglossary.wordpress.com/. Retrieved 02 August 2021.

Morrison, T., Brian, G., & Chilcoat, G. (2002). Using student-generated comic books in the classroom. *Journal of Adolescent & Adult Literacy*, *45*(8), 758–767.

Nakakuwa, T., & Jawahar, K. (2020). Intersemiotic complementarity In Namibian physical Science Teachers' classroom practice. *African Journal of Research in Mathematics, Science and Technology Education*, *24*(3), 387–399.

Omaggio, A. C. (1979). Pictures and second language comprehension: Do they help? *Foreign Language Annals*, *12*(2), 107–116. https://doi.org/10.1111/j.1944-9720.1979.tb00153.x

Royce, T. D. (1998). Synergy on the page: Exploring intersemiotic complementarity in page-based multimodal text. *JASFL Occasional Papers*, *1*(1), 25–49.

Royce, T. D., & Bowcher, W. L. (2007). *New directions in the analysis of multimodal discourse*. Erlbaum.

Siefkes, M. (2015). How semiotic modes work together in multimodal texts: Defining and representing intermodal relations. *10plus1: Living Linguistics, 1,* 113–131.

Tatalovic, M. (2009). Science comics as tools for science education and communication: A brief, exploratory study. *Journal of Science Communication*, *8*(4), A02. https://doi.org/10.22323/2.08040202

Unsworth, L., & Ngo, T. (2014). Vai trò của hình ảnh trong sách giáo khoa dạy tiếng Anh ở Việt Nam: Part 1 [The role of images in English language textbooks in Vietnam: Part 1]. *Linguistics Society of Vietnam*, *11,* 104. https://hdl.handle.net/1959.11/16347

Vu, T., & Y. Febrianti, (2018). Teachers' reflections on the visual resources in English textbooks for Vietnamese lower secondary schools. *TEFLIN Journal*, *29*(2), 266. http://doi.org/10.15639/teflinjournal.v29i2/266-292

Widyastuti, P. D., Mardiyana, M., & Saputro, D. R. (2017). An instructional media using comics on the systems of linear equation. *Journal of Physics: Conference Series*, *895*. 10.1088/1742-6596/895/1/012039

Wildfeuer, J. (2012). Intersemiosis in film: Towards a new organisation of semiotic resources in multimodal filmic text. *Journal Multimodal Communication*, *1(3), 276–304.* https://doi.org/10.1515/mc-2012-0016

Wildfeuer, J. (2014). *Film discourse interpretation: Towards a new paradigm for multimodal film analysis*. Routledge.

Wright, A. (1989). *Pictures for language learning: Cambridge handbooks for language teachers*. Cambridge University Press.

APPENDIX
Categorization in Book 1

Sentences	The represented participant's symbolic features							
	Papa, Mama, Baozi	Bedtime, sleep	Slimy, fear	Bedtime routines	Three Little Baos, The Ugly Dumpling, Baos in Boots	Reading activity	A toy close to Baozi	A way to communicate, shows certain emotions and feelings
1			Mud mask (R) Scary (C)	Mud mask (H/M)				
2	Baozi (R)	Go to bed (C)		Brush your teeth (C)				Go to bed (C) Go and brush your teeth (C)
3	Papa (R)							Aiyah! (C)
4		Pajamas (C)		Put on your pajamas (C)				Stop playing! (R/C) Go and put on your pajamas! (C)
5								Stop playing! (R/C) Get into bed! (C)
6	Papa (R)			Read me a story! (C)				Alright! (C)
7	Papa (R) Mama (R)	Bed (R) Pillow (R) Goodnight (C)		"Goodnight everybody" (C) Goodnight (C)		"Goodnight everybody" (R/C)	Stinky (R)	
8					Three little baos (R)			
9					The Ugly Dumpling (R) Baos in Boots (R)			
10								That's enough! (C)
11		SLEEP! (C)						
12				Lullaby (C)				
13	Papa (R)							
14	Papa (R)	Not sleepy (A)						
15		Sleep well (R)		Sleep well (R)				I love you, precious bao. (C)
16								Stop playing! (C)
17								Aiyah! (C)

Categorization in Book 2

Sentences	The represented participant's symbolic features		
	Baozi, Xiajiao, Shaomai	**Plaything**	**A way to communicate, shows certain emotions and feelings**
1			Aah! (C)
2			Sigh! (C)
3		This thing (S/C)	
4			Look (C)
			Lean (C)
			Lift (C)
5		Boing-boing Bats (R)	I love playing with Boing-boing Bats (C/A)
		Fun (C)	
6	Baozi (R)	Can do it (C)	See? (C)
7	Shaomai (R)	This (S)	It's really easy (C)
		It's really easy (C)	
8	Xiajiao (R)	Not easy (A)	Understanding (A)
	Little brother (S)		
9	Shaomai (R)	Give up (C)	
10		Squat (C)	Squat (R)
11		Soar (C)	Soar (R)
12		Try it! (S)	Squat (R)
		Suck-Squat-Soar (C)	
13		Aah! (C)	Aah! (R)
		Wah! (C)	Wah! (R)
			Sigh…(R)
14		It wouldn't work (C)	See? (C)
15		Suck, squat, and soar (C)	Aiyah! (C)
16		Done (C)	Done playing (C)
		Playing (S)	
17		Learned (C)	Wah! (C)
		How to do it (R/C)	How to do it (C)
18	Shaomai (R)	Did it (R/C)	
19	My way(S)	My way (C)	BOING! (R)
		BOING! (R/C)	