

The Use of Visual Metonymy in English Textbooks for Young Learners: Evidence From Croatia

Ivana Moritz

Faculty of Education, University of Osijek, Osijek, Croatia

Ivana Marinić

Faculty of Education, University of Osijek, Osijek, Croatia

Abstract—Multimodal communication is found in modern discourse types, including textbooks, influencing the attitude and motivation in message interpretation. The paper will explore instances of visual metonymy in English textbooks for young learners (grades 1-4) approved by the Ministry of Science and Education in the Republic of Croatia. Metonymy is qualitatively simpler than conceptual metaphor (Rundblad & Annaz, 2010), requires less cognitive effort to process and is, therefore, more salient in textbooks for children. Previous studies (Guijarro, 2015; Littlemore, 2009) indicated its important role in both these fields of authors' interest. The occurrences of visual metonymy in the approved textbooks will be collected, analysed and grouped according to the metonymic target (actions, emotions, occupations, etc.). The results will show which concepts appear most commonly as metonymic targets in the visual form in the textbooks and attempt to determine their appropriateness for the chronological, mental and cognitive age of children. Also, the functions of visual metonymies will be identified.

Index Terms—conceptual metonymy, young learners, multimodality, cognitive development

I. INTRODUCTION

The significance of visual communication has dramatically increased in the last two decades. Statistics indicate its increase of 400% in literature over the previous twenty years and 9900% on the Internet since 2007¹. Rarely do people nowadays come across plain texts that do not integrate visual aids. Newspaper articles, gossip columns, and, particularly, the expanding manner of social network communication are abundant with different multimodal items, from photographs to emoticons and video clips. Visual imaging helps people understand the message of a text more easily, as well as transfer their own messages more effectively. We may not be aware of it, but multimodality has become our way of life, communication and expression.

Conceptual metonymy has proved to be a particularly fruitful mechanism used in multimodal communication. Its feature as being conceptually simpler than metaphor, as well as its ability to highlight the relevant features of the message, has contributed to metonymy becoming a prevalent cognitive mechanism in multimodal communication in various media. Additionally, a speaker, author or communicator, who uses metonymy in multimodal communication, can select the vehicle and the target of their own preference and, thereby, transmit the message exactly as they intended.

As for children and metonymy, the research has shown that metonymy is a helpful strategy for understanding and motivation. Visual metonymies can offer additional as well as essential information in, for example, picture books or textbooks and, therefore, add dynamic and coherence to the narrative. Text only is not as interesting and attractive to children as when it is combined with visual representations. Visual metonymy, moreover, is by all means appropriate for use in the media and materials intended for children since, alongside the aforementioned, it requires less cognitive effort to decode than conceptual metaphor, and it is acquired earlier in life than metaphor (Rundblad & Annaz, 2010).

However, there are some issues when it comes to visual metonymy and second language learning and acquisition due to, for instance, cross-linguistic variations, even though the research (Piquier Piriz, 2008) has shown that Spanish children did not have trouble with comprehension of frequent English metonymies that are based on some universal metonymic relations, such as PART FOR WHOLE or ACTION FOR RESULT. On the other hand, visual metonymy can help second language learners understand the functioning of the second language, along with learning how to express different discourse and contextual functions.

The paper aims to present instances of multimodal conceptual metonymy in English language textbooks for Croatian young learners (grades 1 to 4, age 7 to 10) of English as a second language and to establish which of the visual metonymy patterns are most frequently used in the mentioned textbooks. Also, the authors will try to determine to what extent visual metonymies in the textbooks are appropriate for children aged 7 to 10, taking into consideration Piaget's

¹ <https://neomam.com/interactive/13reasons/>

(1952) and Tomasello's (2003) stages of cognitive development, as well as single out a few examples of visual metonymies that appeared particularly interesting and that, for certain reasons, stand out. Additionally, remarks on the different functions of multimodal and visual metonymies in English textbooks for young learners will be made.

II. THEORETICAL BACKGROUND

A. Multimodality and Visual Images

According to Kress and van Leeuwen (2001, p. 20), multimodality is defined as using multiple semiotic modes and their combinations in a socio-cultural domain, resulting in a semiotic product or event. Visual images, as elements of multimodal reality, serve the function of representing the experiential world, of interacting with readers or audience and of arranging visual resources; in other words, all the functions a plain text used to serve (Sobrino, 2017, p. 20) and still does on some occasions.

Even though we like to think that old-school communication, exclusively textual or verbal, still exists, according to Sobrino (2017, p. 24), it is an exception rather than a rule. However, no matter to what extent the middle and elderly generation might regret this communication change, both cognitive linguists and marketing experts give evidence of more positive effects of integrated multimodal representations when compared to exclusively verbal language – they motivate more positive attitudes and arouse interest to interpret the message (Sobrino, 2017, p. 25). All walks of communication, including mass media, magazines, comics, documents issued by corporations, universities, government departments and alike, contain illustrations accompanied by modern design and imaging.

Consequently, the concept of literacy has changed its meaning and scope. Technological advance has affected contemporary text, particularly by image insertion, and therefore has been changing the ways in which people read and write. Rojo (in press, p. 7) emphasises that "reading written verbal texts is no longer enough – it is necessary for it to be placed before a set of signs from other language modalities (a static image, a moving image, sound, speech) that surround it, or intersperse or impregnate it" (in Da Costa & De Barros, 2012, p. 39). In other words, meanings can be and are conveyed in different modes. Contemporary literacy has also, therefore, been heading in the direction of multimodality, where images can encode emotion (Kress & van Leeuwen, 2001), and they certainly do, on an everyday basis (e.g. emoticons). As stated, "we see multimodal texts as making meaning in multiple articulations" (p. 4).

Accepting the fact that modern children have been growing up in a technologically advanced and, therefore increasingly multimodal world of communication, textbook authors have adapted and incorporated different modes apart from text into textbooks, workbooks and other teaching materials with clear pedagogical purposes (Da Costa & De Barros, 2012), turning them into multimodal media.

B. Metonymy

The theories of conceptual metaphor and metonymy have been around in modern linguistic science for more than four decades, since Lakoff and Johnson's *Metaphors We Live By* (1980). Both these phenomena have been accepted by contemporary linguistic society. However, conceptual metaphor has been more extensively explored than metonymy. Both metaphor and metonymy are cognitive operations or mechanisms. Ruiz de Mendoza (2011, p.104) defines the cognitive operation as a mechanism whose purpose is to derive full semantic representation out of a symbolic device (such as text or drawings) in order to make it fully meaningful in the context in which it is to be interpreted (Sobrino, 2017, p. 55).

Not only cognitive scientists but also advertising experts and other professionals working in and with the media have taken the importance of conceptual metaphor and metonymy as undeniable and inevitable in their walk of work. The present paper examines metonymy, a cognitive mechanism which employs one entity to stand for another, whereby both entities belong to the same conceptual domain or ICM (Idealized Cognitive Model) (Lakoff, 1987). What it does, is, basically, move the focus from the target to the vehicle, for example:

(1) *The pen is mightier than the sword.*

where the vehicles are *pen* and *sword*, and the targets are *words* and *fighting*. This feature enables conceptual metonymy to be frequently used to highlight the relevant features of the message in all sorts of communication: news reports, political speeches, everyday conversations, and even in children's speech.

When it comes to multimodal metonymy, the mappings most commonly occur across text and images, at least in picture books and textbooks. In other words, one concept can be accessed by mentioning another concept, involving a mode shift in the case of multimodality (Sobrino, 2017). The tendency in multimodal media and materials is to represent source domains visually and target domains in images and words, as in Figure 1, where we can observe the instance of the conceptual metonymy UNIFORM FOR OCCUPATION. The UNIFORM, as a vehicle in the visual mode, directs the viewer's attention to the person's occupation, i.e. to the target, in this case A PHYSICIAN.



Figure 1. Multimodal Metonymy UNIFORM FOR OCCUPATION (Ban & Blažić 2013, p. 96)

Interestingly, the research conducted by Rios and Alonso (2017, p. 359) suggests that metaphors, metonymies and image schemas are more frequently used in the visual than in the verbal mode (in the discourse on terrorist affairs).

Hereby the questions arise: why would people use metonyms and conceptual metonymy in general in all types of communication to such a great extent? Moreover, for what reason and how do they select the metonyms and the modes they use? The reasons are numerous and, when carefully considered, quite obvious. Conceptual metonymy allows the addressee to infer the meaning of the target concept, thereby making the metonymic source salient, perspectivizing it and evaluating target aspects. Also, the form and the mode of the metonymy influence its interpretation and can intensify the connotations (Forceville, 2009, pp. 69, 70). So, relevance and communicative intentions are the key factors in using a certain metonym (Sperber & Wilson, 1985). Metonymy leads the reader's or addressee's attention to specific meaning extensions and inferences (Barcelona, 2002, p. 226).

Metonymy, unlike conceptual metaphor, demonstrates a tendency to exploit existing relationships rather than to create new ones. Therefore, it is usually a constituent of 'playful' communication in all modes of expression, particularly involving humour and creation (Littlemore, 2015), which makes it particularly appropriate for use in the media intended for children, as well as in textbooks and teaching materials. In other words, metonymy uses well-known relationships, ready for children and easily and simply accessed and understood by them.

There are two kinds of metonymy: referential, which relates one entity to another, as in:

(29) *The suit got off his bike and picked up the bottle.*

'*the suit*' here standing for '*the person wearing a suit*'. A referential metonym (*suit*) serves the function of being a shortcut to a more complex expression or concept (*the person wearing a suit*), and its main feature is a quick and easy identification of the referent (Lakoff & Johnson, 1980; Nunberg, 1979; Papafragou, 1996). Figure 1 is an example of referential metonymy in the visual mode from one of the textbooks analysed, metonymy being UNIFORM FOR OCCUPATION, where the UNIFORM provides quick identification of the referent's occupation.

Propositional metonymy relates two propositions, as in:

(2) *It won't happen while I still breathe.*

'*breathe*' here standing for '*while I still live*' (Warren, 2006). Figure 2 below is an example of a propositional multimodal conceptual metonymy PART OF THE SCENARIO FOR THE WHOLE SCENARIO, where a moment captured represents the entire event or activity.



Figure 2. Propositional Visual Metonymy PART OF THE SCENARIO FOR THE WHOLE SCENARIO (Dooley, 2019, p. 9)

In conclusion, metonymy is not just a rhetorical decoration but "reaches beyond the confines of language and constitutes an interesting case of interconnections between language and other domains of human experience" (Panther, 2005, p. 5). Radden and Kövecses (1999, p. 24) go as far as to claim that "since we have no other means of expressing and communicating our concepts than by using forms, language as well as other communication systems are of necessity metonymic."

C. *Children and Metonymy*

Children do not only have to learn behaviour and language but also the set of signs and referents of their communication system, culture and society. "...human beings cannot be born with any specific set of communicative behaviours. Young children must learn during their individual ontogenies the set of linguistic conventions used by those around them, which for any given language consists of tens of thousands, or perhaps even hundreds of thousands, of individual words, expressions, and constructions" (Tomasello, 2003, p. 1). The process, of course, involves a considerable length of time and a considerable number of communication units, both linguistic and non-linguistic, including the elements of conceptual metonymy.

Studies have shown that metonymy, both visual and verbal, is acquired earlier than metaphor in the process of language acquisition (Rundblad & Annaz, 2010), since it requires less cognitive effort and processing time (Klepousnitou & Baum, 2007, in Sobrino, 2017, p. 172).

When it comes to children, the first observed thing related to metonymy acquisition and production are metonymical overextensions, in other words, the instances when children use a referent (word) for a broader range of concepts than it is originally intended for, for example, when *dog* refers to all animals. Later on, creative metonymical shrinking appears, which is a phenomenon where children use metonyms with the aim of communicating something with minimum effort. A commonly quoted example is "I really like being a sandwich", in translation, "I like being one of the children who bring sandwiches to school". Adults use metonymy to achieve cost-effective communication (Nerlich & Clarke, 1999), which is precisely what children try to do in the later stages of metonymy acquisition.

Tomasello (2003, p. 4) listed skills that begin to emerge early in human development, even before the beginning of language acquisition and involve the following: the ability to recognise perceptual and conceptual categories of analogous things and events, the ability to create schemas from repeating perception patterns (e.g., Conway & Christiansen, 2001; Piaget, 1952; Schneider, 1999), the ability to "create analogies (structure mappings) across two or more complex units, based on the similar functional roles of some elements in these different wholes" (Gentner & Markman, 1997, in Tomasello, 2003, p. 4). All of the mentioned early-development abilities involve skills needed for the identification and production of metonymy, first visual, then verbal.

Köder and Falkum (2020, p. 2) conducted research using gaze data, and the results suggest that children are sensitive to metonymy as early as the age of three, with a continuous tendency of improvement with age. Numerous authors claim that children can identify and use associative relations, i.e. metonymy, in their communication from a very young age, such as smacking lips for 'food' (Acredolo & Goodwyn, 1988), which is an example of multimodal propositional metonymy. There are also many examples where a sound represents an object; for example, *bow-wow* stands for 'dog' (Laing, 2014, in Köder & Falkum, 2020, p. 3). In the study by Nerlich et al. (1999) that used short stories containing instances of metonymy, children were presented with two pictures, one bearing literal and the other metonymic interpretation. They were supposed to pick one showing the events of the story. Four- and five-year-old children performed better than younger ones (two- and three-year-olds). The interpretation for both groups of children was better when the accompanying text directly mentioned the metonymy-based relation (Köder & Falkum, 2020, p. 3). A recent study by Falkum et al. (2017) also supports the fact that children by the age of 3 can understand some novel metonymies in the context and that metonymy interpretation improves with age. However, the authors also found out that four- and five-year-old children had the inclination to interpret metonymies literally. This phenomenon was explained by the development of some other communicative abilities at that age, meaning that they might start analysing literal uses of language, i.e. their metalinguistic awareness gets more advanced, and they tend to overemphasise literal meanings (Falkum et al., 2017; Köder & Falkum, 2020, p. 2).

Authors and illustrators of picture books and textbooks for children have recognised the importance and appropriateness of conceptual metonymy and have used it extensively. Moya (2011) examined the discourse functions of metonymy in children's picture books. It turned out to be a valuable strategy in understanding, as well as an element of motivation and attracting children's attention to the plot (Sobrino, 2017, p. 96). Furthermore, when it comes to visual metonymies in discourse intended for children, they provide pieces of information that have not been offered in verbal or textual modes and, simultaneously, add dynamic to the plot. Young children, those who are not fully competent in reading, therefore, can find it easier to follow the plot and understand the message expressed, at least in part, by metonymy. Picture books, as well as English textbooks for children or young learners (aged 7 to 10), are composed both of text and images or illustrations, and if we omitted one of those modes, they would not function properly, i.e. children's understanding of the plot and the message would be lacking relevant aspects. Not to mention, it is far more interesting and attractive for children to 'read' such composite picture books or textbooks. However, images and illustrations must be created by experts, in other words, images and illustrations involving conceptual metaphor and metonymy must convey the meaning unambiguously and be appropriate for children's cognitive and chronological age.

Metonymy comprehension reaches its ceiling around the age of 12 (Littlemore, 2015). Also, it has been suggested that the impairments in understanding metaphors and metonymies can lead to serious difficulties in conceptual learning and social communication (Van Herwegen et al., 2013, p. 1302).

D. *Metonymy and SL Learners*

The most commonly represented research methods in metonymy comprehension are eye tracking, brain scanning, reaction-time studies and straightforward metonymy comprehension tasks. Across different age groups, by using the eye tracking method, results suggest that processing conventional metonymies functions in the same way both in second and first language as literal language uses (Frisson & Pickering, 1999, in Littlemore, 2015, p. 147). Brain-imaging techniques indicate the same results when it comes to processing conventional metonymies. Still, in the case of novel ones, the processing is different because it involves integrating world knowledge (Littlemore, 2015).

Some issues may arise when it comes to second language learners and metonymy comprehension. For example, the way of presentation of metonymical items might present a problem to second language learners. They are frequently "delicately presented" and occasionally deciphered with difficulty (Littlemore, 2015, p. 116).

Also, metonymic variations across languages must be mentioned in the context of metonymy comprehension in second language learners. In her research with young Spanish learners of English, Piquier Piriz (2008) found that typical metonymies for the English language did not present a problem for Spanish children. Metonymic multi-word expressions, such as 'give me a hand' and 'I didn't open my mouth' were easily comprehended by Spanish young learners of English, due to the fact that the metonymies are based on well-established metonymic relations PART FOR WHOLE and ACTION FOR RESULT (Littlemore, 2015, p. 174).

As mentioned earlier in the text, the use of conceptual metonymies in different types of children's discourse has many advantages. Even though cross-linguistic influence cannot be ignored, metonymy in education possesses an ability to help learners develop a clearer image of how a foreign language works. When the learners reach a more fluent stage, metonymy can help them express persuasion, relationships, humour, irony and other rhetorical intentions.

However, Littlemore and Low (2006, p. 61) claim that it is still not certain if metonymies truly present issues for non-native speakers to the same extent as metaphors. Native speakers are often incapable of noticing metonymies, even though they know their meanings.

Littlemore (2009, pp. 180ff) gives two reasons for the relevance of metonymy in second language acquisition:

- they serve "a variety of different functions in language", e.g. achievement of reference, managing discourse communities, creation of euphemism, expression of attitudes, humour, vagueness and pragmatic inferencing
- the way metonymy is used varies significantly across languages (Barcelona, 2010), thereby adding to the diversity and complexity of second language knowledge.

E. Genre and Context

In order to fully understand the theory of conceptual metonymy, it is highly important to analyse its occurrence and meaning creation in various genres and contexts. The context is crucial for understanding metonymy.

When it comes to children's literature, it is evident that visual conceptual metonymies are of extreme importance to convey the meaning of the plot or the message as well as to keep children interested and motivated. The most common metonymical patterns occurring in visual mode in picture books are, for example: FACIAL EXPRESSION OR GESTURE FOR EMOTION, PART FOR WHOLE...

The processing of both metaphor and metonymy is highly dependent on the context since it provides the readers with the information on whether the text is to be understood literally or non-literally (Giora, 2002). Context, therefore, is also the one affecting the choice of the vehicle and the target (Van Herwegen et al., 2013, p. 1301). Conceptual metonymy relies heavily not only on the context but also on shared experience. Thereby it can function as a cohesive mechanism across a whole text or a book (Littlemore, 2015, p. 194). So, it helps the readers follow the intended referents throughout the text or book, as Barcelona (2010, p. 144) labels it – "achieving *referential coherence*".

The results of Moya-Guijarro's (2019) research suggest that visual metonymies used in Browne's picture books mainly "highlight or minimise a character's status over another fictional actor, ... ascribe negative qualities or attitudes to the main characters and... foreshadow what is yet to come in the story" (p. 1).

The context of textbooks is in many ways similar to that of picture books since the target audience are children, in many cases of the same age. Analysing the textbooks for Croatian young learners of English as a second language, metonymies appear to be shortcuts to understanding, motivation and cohesion elements. They also help teachers by providing them with more time and less explaining some concepts that metonymies make obvious, like in Figure 1, where the metonymy instantly implies that the person is a physician; it does not have to be explicitly uttered.

III. CORPUS

The present analysis considers the cognitive linguistic framework, especially the previous studies on conceptual metonymy (Lakoff & Johnson, 1980; Radden & Kövecses, 1999), as well as available research results on metonymy acquisition in young children and young second language learners.

The textbooks used for the research were the ones approved by the Ministry of Science and Education of the Republic of Croatia for the school year 2019/2020². The textbooks are intended for grades 1 to 4 of primary school, i.e., children from 7 to 10 years of age. The textbooks are:

Grade 1

² A few new textbook titles have been introduced since, due to the introduction of the new National Curriculum in 2020/2021.

Let's Explore 1. Oxford: Oxford University Press

New Building Blocks 1. Zagreb: Profil Klett

Dip in 1. Zagreb: Školska knjiga

Smiles 1 New Edition. Newbury: Alfa

Tiptoes 1. Zagreb: Školska knjiga

Grade 2

Let's Explore 2. Oxford: Oxford University Press

New Building Blocks 2. Zagreb: Profil Klett

Smiles 2 New Edition. Newbury: Alfa

Dip in 2. Zagreb: Školska knjiga

Tiptoes 2. Zagreb: Školska knjiga

Grade 3

New Building Blocks 3. Zagreb: Profil Klett

Smiles 3. Newbury: Alfa

Let's Explore 3. Oxford: Oxford University Press

Dip in 4. Zagreb: Školska knjiga

Tiptoes 3. Zagreb: Školska Knjiga

Grade 4

Dip in 4. Zagreb: Školska knjiga

New Building Blocks 4. Zagreb: Profil Klett

Smileys 4. Newbury: Alfa

The examples of visual metonymy were extracted and collected manually, as well as analysed using descriptive methodology.

IV. REPRESENTATION AND DISTRIBUTION OF VISUAL METONYMIES IN ENGLISH TEXTBOOKS FOR YOUNG LEARNERS

In this section, the most frequently employed metonymic targets will be listed, and examples for those conceptual metonymies will be given.

A. Facial Expression for Emotion

The most frequent visual metonymy occurring in previously listed textbooks is FACIAL EXPRESSION/GESTURE/REACTION FOR EMOTION. This is an entailment of the high-level metonymy EFFECT FOR CAUSE. In Figure 3 the expression on the princess' face obviously reflects fear, her FACIAL EXPRESSION stands for FEAR.



Figure 3. Visual Conceptual Metonymy FACIAL EXPRESSION FOR EMOTION (Dooley & Evans 2103, p. 20).

The facial expression of fear often involves some of the following: widened eyes, dilated pupils, raised upper lip, raised eyebrows, horizontally stretched lips (Ding, 2012), almost all of which the girl in the picture demonstrates. They all stand for her emotion of fear, and, apart from that, they help the pupils understand and follow the plot of the comic. It does not have to be written that the princess is scared, young readers can see that immediately and draw conclusions regarding her personality, character, and other features of the story conveyed in the comic.

The function of visual metonymy in this instance is directing young readers towards a correct interpretation of the comic plot, adding connotation and detail to the story, emphasising the emotions. It might be unusual or awkward to express feelings verbally in a comic. Therefore, conceptual metonymy in the visual form as an aid to understanding and comprehension in general is of great significance and importance.



Figure 4. Visual Conceptual Metonymy FACIAL EXPRESSION FOR EMOTION (Gustović Ljubić et al., 2019, p. 36)

The girl's facial expression in Figure 4 stands for her confusion. Pupils will easily recognise the characteristics, such as widened eyes, open mouth, and, seeing the complete image, it will instantly be clear to them that the girl is confused. Obviously, this girl's emotion is important for the message of the image. Her appearance and behaviour were put in perspective by her facial expressions. It also shows us that she is surprised, confused, and probably about to learn something new and unexpected, which also goes for the pupils since they get directly involved. Therefore, visual metonymy, where the girl's facial expression stands for her feeling of confusion, draws attention to the relations in the picture, putting them in perspective and thus, indirectly, helping young learners to grasp the situation.



Figure 5. Visual Conceptual Metonymy FACIAL EXPRESSION FOR EMOTION (Dooley, 2020, p. 24)

Smiling stands for the emotion of happiness, satisfaction. The emotion of the characters will instantly be available to 9-year-old pupils, everybody knows what is behind a smile, even considerably younger children. Also, it is the most common instance of FACIAL EXPRESSION FOR EMOTION metonymy in the analysed textbooks.

Visual conceptual metonymy FACIAL EXPRESSION FOR EMOTION is very common in both static and moving images in the textbooks studied. Facial expression or gestures can stand for emotions, states of mind or behavioural reactions. These are important to be expressed visually, in this case metonymically, since they construe emotive meanings, and emotions are abstract concepts. Furthermore, they add to the plot and support the narrative of the textbooks. In addition, readers can draw inferences about the narrative spontaneously and quickly by simply seeing the image containing multimodal/visual metonymy.

B. Moment of Action for Action

The second most commonly used visual metonymy is MOMENT OF ACTION FOR ACTION, more generally PART OF A SCENARIO FOR THE WHOLE SCENARIO, or, using a common high-level metonymy, PART FOR WHOLE.



Figure 6. Visual Conceptual Metonymy MOMENT OF ACTION FOR ACTION (Dooley, 2020, p. 10)

When it comes to static images, visual representations provide a snapshot of movement to represent the whole action or activity, like clapping or dancing on the stage in Figure 6. This can be illustrated by using the representation of gesture, touch and facial expression. Motion lines are frequently used in illustrations to represent the moment of action. Using visual conceptual metonymy is, possibly, the most efficient way to illustrate a moment of action. It is a shortcut to a much more complex situation, and in a very short time, via visual metonymy, pupils can infer numerous diverse information about the situation. Figure 6, 7 and 8 are examples of the same conceptual metonymy.



Figure 7. Visual Metonymy A MOMENT OF ACTION FOR ACTION (Ban & Blažić, 2013, p. 65).

In Figure 7 it is evident that the spiral motion lines, i.e. the moment of taking a bow, stand for the complete activity of taking a bow, and children can recognise it, even if it is a static image. Again, the general atmosphere is illustrated using a combination of visual metonymies in this image: the girl's action and emotion, the boy's emotion and consequently, their current relation.

Motion lines in Figure 8 represent the whole event of playing a drum.



Figure 8. Visual Metonymy A MOMENT OF ACTION FOR ACTION (Dooley, 2020, p. 64)

This visual metonymy, where a moment of action represents the whole action is of extreme importance in visual representations, not only in printed materials, but also in video materials, since it greatly helps in the construction of characters' attributes, in the categorisation of characters (hero, villain...). Actions, and their representations, are fundamental origins of the characteristics crucial for a narrative (Smith, 1995, p. 121).

C. Gesture for Emotion (Action for Attribute)

Gestures are an essential source of the traits we assign to a character's attributes in narratives. When it comes to metonymy ACTION FOR ATTRIBUTE, or, more specifically, GESTURE FOR EMOTION, children have to activate their world knowledge and social standards to be able to understand the metonymy. Gestures, or outer physical attributes, refer to conceptual attributes of a character based on shared cultural knowledge. Similarly to the metonymies in the previous section, gestures reflect emotions and general atmosphere. Also, interpreting this conceptual metonymy involves cultural or world knowledge, i.e. pupils are expected to have encountered situations involving these gestures.

Figures 9, 10 and 11 illustrate the conceptual metonymy GESTURE FOR EMOTION, namely HANDS ON HIPS FOR BEING ANGRY, HAND ON MOUTH FOR BEING SURPRISED and STRETCHED ARMS FOR BEING RELAXED, respectively.

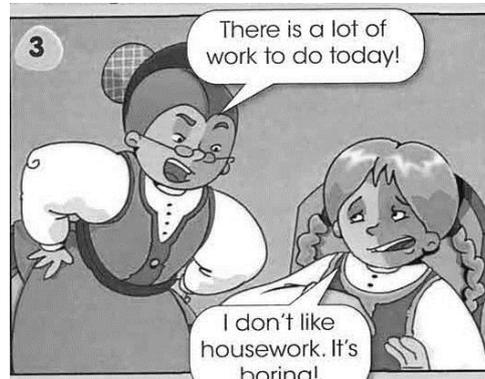


Figure 9. Conceptual Metonymy GESTURE FOR EMOTION (ACTION FOR ATTRIBUTE) (Dooley, 2020, p. 84)



Figure 10. Conceptual Metonymy GESTURE FOR EMOTION (ACTION FOR ATTRIBUTE) (Ban & Blažić, 2013, p. 32)



Figure 11. Conceptual Metonymy GESTURE FOR EMOTION (ACTION FOR ATTRIBUTE) (Charrington & Shipton, 2019, p. 28)

D. Identity for Stereotypical Attribute (Category)

"A member or subcategory can stand metonymically for the whole category" (Lakoff, 1987, p. 79). There are numerous examples of the common overarching conceptual metonymy IDENTITY FOR STEREOTYPICAL ATTRIBUTE (CATEGORY) in the analysed textbooks. Some of them are in Figures 12, 13 and 14.



Figure 12. Conceptual Metonymy IDENTITY FOR STEREOTYPICAL ATTRIBUTE OR CATEGORY (Dooley, 2020, p. 24)

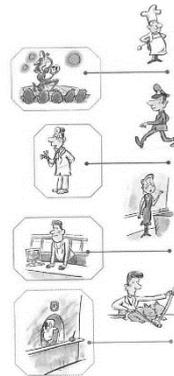


Figure 13. Conceptual Metonymy IDENTITY FOR STEREOTYPICAL ATTRIBUTE OR CATEGORY (Ban & Blažić, 2013, p. 50)



Figure 14. Conceptual Metonymy IDENTITY FOR STEREOTYPICAL ATTRIBUTE OR CATEGORY (Dooley, 2020, p. 42)

As Lakoff (1987, p. 79) put it, this is a common metonymy, but he also adds to the previous quotation: "for the purpose of making inferences or judgments". Unfortunately, this is, to a great extent, present in the analysed textbooks. For instance, uniform often represents pupils or students, and older adults are almost always depicted with grey hair, glasses and walking sticks. There is an instance when a female opera singer has a bun and is overweight. These are examples of stereotyping or making judgements. Images like this draw upon pupils' previous knowledge and experience, but they can also be interpreted as raising judgement and prejudice, and illustrations like this should be used very carefully with young learners.

The textbooks also contain numerous other visual conceptual metonymies, and some of them are:

- NOTES FOR SINGING/MUSIC
- SUN FOR SUNNY WEATHER
- QUESTION MARK AND EXCLAMATION MARK FOR CONFUSION
- HEAR FOR LIKING/LOVE
- THUMB UP FOR POSITIVE/GOOD
- SUN FOR SUMMER
- LIGHTNING FOR BAD WEATHER
- SNOWMAN FOR WINTER
- RED FOR HOT
- RAIN FOR AUTUMN
- RAIN FOR THE UK

SNOW FOR RUSSIA
 BLUE FOR COLD/WINTER
 SNOWFLAKES/SNOW FOR WINTER
 ICE-CREAM FOR SUMMER
 GLASSES FOR STUDYING/NERD/CLEVER PERSON
 PART FOR WHOLE
 GRADE BOOK FOR TEACHER

and many others appropriate to be presented visually.

V. DISCUSSION

If we refer to Piaget's (1952) stages of cognitive development, the textbooks studied for the purpose of this research are intended for children in the concrete operational stage, aged 7 to approximately 11. According to his theory, during this stage, children participate actively in the learning process, which consists of performing experiments and observing, and, in such interaction, children acquire new knowledge, upgrade the existing knowledge and thereby, by gaining experience, change their viewpoints using the new knowledge.

The concrete operational stage is the third stage in Piaget's theory of cognitive development, characterised by the development of logical thought and concrete thinking enriched by more sophisticated thinking. This is a transitional stage between the earlier stages of development – sensorimotor and preoperational stages - and the stages of abstract and hypothetical thought. Therefore, children are not entirely comfortable with abstract ideas during the concrete operational stage, which, when it comes to metonymy, implies that they can process and understand metonymies based on previously acquired relations. Inductive reasoning is their strong side in this period, which means they can infer a general principle from a specific experience; in other words, if they have come across instances of a single metonymy, they will be able to identify and possibly even use it. Deductive logic, on the other hand, is rather difficult for them; in other words, applying a general principle to a specific situation might cause them issues.

However, 7- to 11-year-olds understand the reversibility of actions, for example, the order of different relationships, making them capable of understanding the relationships between the vehicle and the target with little effort. Furthermore, children in this stage can concentrate on more than one part of the problem, in other words, "decenter", which helps them understand, for example, a conversation, but also follow and link mappings within a multimodal piece of discourse, the one containing both images and texts, such as English textbooks.

Metaphor and metonymy comprehension depends greatly on mental and chronological age, metaphor being the one to develop at a slower pace. However, there is a limited number of data on metonymy comprehension in children compared to those on metaphor comprehension. The participants of the Rundblad and Annaz's (2010, p. 547, 548) study across all ages (45 participants aged 5 to 37) demonstrated a better interpretation of metonymy by 21%. Furthermore, it has also been proved that figurative expressions do not require a longer processing time in comparison with literal expressions (McElree & Nordlie, 1999; Gibbs, 1984, 1990, 2002; Turner and Katz, 1997). This can also be due to the fact that metaphor links two different domains, as opposed to metonymy, which functions within a single domain, thereby requiring less cognitive effort for understanding (Van Herweegen et al., 2013, p. 1303). This might be why Moya-Guijarro (2015, p. 2) found no metaphors in picture books for children under nine years of age, possibly due to children's still developing cognitive abilities and maturity. Moreover, the author found out that the audience under 9 is capable of comprehending the meanings of visual metonymies, and the occurrence of those in picture books is significantly higher.

Conceptual metonymy possesses great pedagogical and teaching potential and can be used not only in language teaching but also in other school subjects, thereby creating shortcuts and making it easier both for teachers and students to understand concepts without the need to explain them verbally. In teaching English as a second language to young learners, in the textbooks currently used, visual metonymy is used to emphasise attributes, put stories and situations in perspective, evaluate concepts, interpret gestures and expressions, intensify or minimise emotions, direct attention to certain concepts not mentioned in the accompanying text, and for humour.

VI. CONCLUDING REMARKS

"Conceptual metonymy is an *all-purpose inferencing device*, a general more-or-less conscious cognitive mechanism used productively inside and outside language" (Panther 2005). English textbooks for young learners aged 7 to 11, approved by the Ministry of Education and Science of the Republic of Croatia, can be observed as items both inside and outside language since they contain traditional text and multiple visual and multimodal forms. The importance of multimodality in the modern world has grown significantly, and it is present in all walks of everyday communication. Conceptual metonymy, particularly in its visual form, has fit perfectly into the modern way of communication.

Since it requires less cognitive effort for processing, it is not surprising that conceptual metonymy is omnipresent in children's media, including English language textbooks. The paper has presented selected most frequent instances of visual metonymy in English language textbooks for young learners (aged 7-11) approved by the Ministry of Science

and Education of the Republic of Croatia. Taking into account the number of visual metonymies found, it can be concluded that they also contribute to the change of the concept of modern literacy.

The functions of visual instances of conceptual metonymy in the analysed corpus are diverse, for example, putting emphasis on certain features and attributes, putting concepts and situations in perspective, evaluating, interpreting, intensification or minimisation of the same, as well as highlighting, drawing attention, providing missing information and humour. Therefore, after analysing the mentioned corpus, it is evident that conceptual metonymy in visual form can be of great help in teaching and education.

REFERENCES

- [1] Acredolo, L., & Goodwyn, S. (1998). Symbolic gesturing in normal infants. *Child Development*, 59, 450–466.
- [2] Ban, S., & Blažić, D. (2013). *Dip In 4*. Školska knjiga.
- [3] Ban, S., Žepina, A., Reič Šučur, D., & Mimica Tudor, H. (2020). *Tiptoes 3. Udžbenik za engleski jezik s dodatnim digitalnim sadržajima u trećem razredu osnovne škole. Treća godina učenja*. Školska knjiga.
- [4] Barcelona, A. (2002). Clarifying and Applying the Notions of Metaphor and Metonymy within Cognitive Linguistics: An Update. In: R. Dirven & R. Parings (Eds.), *Metaphor and Metonymy in Comparison and Contrast* (pp. 207-277). Mouton de Gruyter.
- [5] Barcelona, A. (2010). Metonymic inferencing and second language acquisition. *AILA Review* 23, 134-154.
- [6] Cortés de los Ríos, M. E., & Alonso, P. F. (2017). A multimodal analysis of cognitive tools portraying terrorist affairs. *Revista de Lenguas para Fines Específicos*, 23(2), 359-383.
- [7] da Costa, E. P. M., & de Barros, C. G. P. (2012). Multimodal genres in textbooks: are students being schooled for visual literacy? *Bakhtiniana*, 2(7), 38-56.
- [8] Covill, C., Charrington, M., & P. Shipton. (2019). *Let's Explore 1. Class Book*. Oxford University Press.
- [9] Covill, C., Charrington, M., & P. Shipton. (2020): *Let's Explore 2. Class Book*. Oxford University Press.
- [10] Čajo Anđel, K., & Knezović, A. (2014). *New Building Blocks 3*. Profil Klett.
- [11] Čajo Anđel, K., & Knezović, A. (2014). *New Building Blocks 4*. Profil Klett.
- [12] Čajo Anđel, K., Domljan, D., Knezović, A., Singer, D., Gustović Ljubić, H., Sertić, M., & Rezo, N. (2019). *New Building Blocks 2*. Profil Klett
- [13] Ding, F. (2012). Metaphor and Metonymy in Emotion Category. *Theory and Practice in Language Studies*, 2(11), 2384-2397.
- [14] Dooley, J. (2019). *Smiles 1 New Edition*. Alfa.
- [15] Dooley, J. (2019a). *Smiles 2 New Edition*. Alfa.
- [16] Dooley, J. (2020). *Smiles 3 New Edition*. Alfa.
- [17] Dooley, J., & Evans, V. (2013). *Smileys 4*. Alfa.
- [18] Džeba, B., & Živković, V. (2019). *Dip in 1*. Školska knjiga.
- [19] Džeba, B., & Mardešić, M. (2020). *Dip in 2*. Školska knjiga.
- [20] Falkum, I. L., Recasens, M., and Clark E. V. (2017). The moustache sits down first': on the acquisition of metonymy. *Journal of Child Language*, 1(44), 87-119.
- [21] Forceville, C. (2009). Metonymy in visual and audiovisual discourse. In E. Ventola & A. J. Moya Guijarro (Eds.), *The World Told and the World Shown: Issues in Multisemiotics* (pp. 56-74). Palgrave Macmillan.
- [22] Frisson, S., & Pickering, M. J. (1999). The processing of metonymy: Evidence from eye movements. *Journal of Experimental Psychology: Learning, Memory, and Cognition*, 6(25), 1366–1383.
- [23] Gentner, D., & Markman, A. B. (1997). Structure mapping in analogy and similarity. *American Psychologist* 52(1), 45–56.
- [24] Gibbs, R. W. (1984). Literal Meaning and Psychological Theory. *Cognitive Science*, 3(8), 275-304.
- [25] Gibbs, R. (1990). The process of understanding literary metaphor. *Journal of Literary Semantics*, 19, 65-94.
- [26] Gibbs, R. (2002). A new look at literal meaning in understanding what is said and implicated. *Journal of Pragmatics*, 34, 457-486.
- [27] Giora, R. (2002). Literal vs. figurative language: Different or equal?. *Journal of Pragmatics*, 34, 487–506.
- [28] Gustović Ljubić, H., Jeren, M., Rezo, N., Čajo Anđel, K., Domljan, D., Knezović, A., & Singer, D. (2019). *New Building Blocks 1. Class Book*. Profil Klett.
- [29] Klepousniotou, E., & Baum, S. (2007). Disambiguating the ambiguity advantage effect in word recognition: An advantage for polysemous but not homonymous words. *Journal of Neurolinguistic*, 20, 1–24.
- [30] Köder, F., & Falkum, I. L. (2020). Children's metonymy comprehension: Evidence from eye-tracking and picture selection. *Journal of Pragmatics*, 156, 191-205.
- [31] Kress, G., & van Leeuwen, T. (2001). *Multimodal Discourse: The Modes and Media of Contemporary Communication*. Arnold.
- [32] Laing, C. E. (2014). A phonological analysis of onomatopoeia in early word production. *First Language*, 34(5), 387-405.
- [33] Lakoff, G. (1987). Cognitive models and prototype theory. In U. Neisser (Ed.), *Concepts and conceptual development: Ecological and intellectual factors in categorisation* (pp. 63–100). Cambridge University Press.
- [34] Lakoff, G., & Johnson, M. (1980). *Metaphors We Live By*. University of Chicago Press.
- [35] Lauder, N., Torres, S., & Shipton, P. (2020). *Let's Explore 3. Class Book*. Oxford University Press.
- [36] Littlemore, J., & Low, G. (2006). Metaphoric competence and communicative language ability. *Applied Linguistics*, 27(2), 268-294.
- [37] Littlemore, J. (2009). *Applying Cognitive Linguistics to Second Language Learning and Teaching*. Palgrave Macmillan.
- [38] Littlemore, J. (2015). *Metonymy: Hidden Shortcuts in Language, Thought and Communication*. Cambridge University Press.
- [39] Mardešić, M. (2020). *Dip in 4*. Školska knjiga.
- [40] McElree, B., & Nordlie, J. (1999). Literal and figurative interpretations are computed in equal time. *Psychonomic Bulletin & Review*, 6(3), 486–494.

- [41] Mimica Tudor, H., Reić Šučur, D., Žepina, A., & Ban. S. (2019). *Tiptoes 1. Udžbenik engleskog jezika u prvom razredu osnovne škole. Prva godina učenja*. Školska knjiga.
- [42] Mimica Tudor, H., Reić Šučur, D., Žepina, A., & Ban. S. (2020). *Tiptoes 2. Udžbenik engleskog jezika s dodatnim digitalnim sadržajima u drugom razredu osnovne škole. Druga godina učenja*. Školska knjiga.
- [43] Moya, A. J. (2011). Visual metonymy in children's picture books. In M. J. Pinar, (Ed.), *Multimodality and Cognitive Linguistics. Special issue of Review of Cognitive Linguistics* (pp. 336–352). John Benjamins,
- [44] Moya Guijarro, A. J. (2015). Visual metonymy in children's picture books. In M. J. P. Sanz, (Ed.) *Multimodality and Cognitive Linguistics*. (pp.115-130). John Benjamins.
- [45] Moya Guijarro, A. J. (2019). Textual functions of metonymies in Anthony Browne's picture books: A multimodal approach. *Text and Talk*, 39(3), 389-413.
- [46] de Mendoza, R. F. (2011). Metonymy and cognitive operations. In R. Benczes, Barcelona, A., & de Mendoza Ibáñez F. J. R., (Eds), *Defining Metonymy in Cognitive Linguistics*. (pp. 103-124). John Benjamins Publishing Company.
- [47] Nerlich, B., & Clarke, D. D. (1999). Semantic fields and frames: Historical explorations of the interface between language, action and cognition. *Journal of Pragmatics*, 3(2), 125-150.
- [48] Nunberg, G. (1979). The non-uniqueness of semantic solutions: Polysemy. *Linguistics and Philosophy*, 3, 143-184.
- [49] Panther, K.-U. (2005). Metonymy inside and outside language. In A. Makkai, W. J. Sullivan, & A. R. Lommel (Eds). *LACUS Forum XXXI: Interconnections* (pp. 15-32). The Linguistic Association of Canada and the United States.
- [50] Papafragou, A. (1996). *On metonymy*. *Lingua*, 99, 169-195.
- [51] Piaget, J. (1977). *Origins of intelligence in the child*. Penguin Books.
- [52] Piquer P fiz, A. M. (2008). Reasoning figuratively in early EFL: Some implications for the development of vocabulary. In F. Boers, & S. Lindstromberg (Eds.). *Cognitive Linguistic Approaches to Teaching Vocabulary and Phraseology*. (pp. 219-240). Mouton de Gruyter,
- [53] Radden, G., & Z. Kövecses (1999). Towards a theory of metonymy. In U.-K. Panther, & G. Radden, (Eds.). *Metonymy in language and thought* (pp. 17-59). John Benjamins.
- [54] Rezo N. (2014). *New Building Blocks 2. Class Book*. Profil Klett.
- [55] Rundblad, G., & Annaz, D. (2010). The atypical development of metaphor and metonymy comprehension in children with autism. *Autism*. 14(1), 29-46.
- [56] Smith, M. (1995). *Engaging characters: fiction, emotion, and the cinema*. Clarendon Press.
- [57] Sobrino, P. P. (2017). *Multimodal Metaphor and Metonymy in Advertising*. John Benjamins Publishing Company.
- [58] Sperber, D., & Wilson, D. (1985/6). Loose talk. In S. Davies, (Ed.). *Proceedings of the Aristotelian Society LXXXVI* (pp. 153-71). Aristotelian Society.
- [59] Tomasello, M. (2003). *Constructing a language: A usage-based theory of language acquisition*. Harvard University Press.
- [60] Turner, N. E., & Katz, A. (1997). Evidence for the availability of conventional and of literal meaning during the comprehension of proverbs. *Pragmatics and Cognition*, 5, 203–237.
- [61] Van Herwegen, J., Dimitriou, D., & Rundblad G. (2013). Development of novel metaphor and metonymy comprehension in typically developing children with Williams syndrome. *Research in Developmental Disabilities*, 34(4), 1300-1311.
- [62] Warren, B. (2006). *Referential metonymy*. Almqvist & Wiksell International.

Ivana Moritz was born in Osijek on 11th March 1976. She graduated from the Faculty of Humanities and Social Sciences, the University of Osijek as an English and German language and literature teacher in 1999. She obtained her doctoral degree at the Faculty of Humanities and Social Sciences, University of Osijek, in philology, English studies in 2015.

She has worked in primary and secondary schools in Croatia, and spent a year in the UK as an EFL assistant in Rydal Penrhose School in Colwyn Bay, North Wales. She has been at the Faculty of Education, University of Osijek, Croatia, since 2006, as a teaching assistant, senior assistant, and since 2019 as an Assistant Professor. She has taught courses in English grammar, English as a foreign language, English language practice, English teaching methodology and early language learning and acquisition. Her research interests are cognitive linguistics, phraseology, language learning and acquisition.

She is a member of the Croatian Applied Linguistics Society.

Ivana Marinić was born in Osijek on 14th February 1976. In 1998, while she was still studying English and German language and literature at the Faculty of Humanities and Social Sciences, University of Osijek, she started working full-time as an English teacher in a primary school in Osijek. From 1998 to 2008, she gained a lot of teaching experience and got interested in drama pedagogy and the education of children with special educational needs.

Currently, she is the Assistant Professor at the Faculty of Education in Osijek, where she has been employed since 2008. Her research and teaching interests revolve around current cognitive theories of mind and language and EFL teaching issues, mainly those concerning young learners.

She is the author of a series of textbooks for primary school students of English aged 10 to 14, published by Školska knjiga, Zagreb, Croatia.