Tolerance of ambiguity in young multilinguals: Decoding meaning in an unknown language

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TOLERANCE OF AMBIGUITY IN YOUNG MULTILINGUALS: DECODING MEANING IN AN UNKNOWN LANGUAGE

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TOLERANCIJA NEODREĐENOSTI KOD VIŠEJEZIČNE DJECE: DEKODIRANJE ZNAČENJA NA NEPOZNATOM JEZIKU

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Abstract

The study aimed at examining how learners decode meaning of unknown words and sentences presented through a multilingual picture storybook as well as at examining variations in learners' tolerance of ambiguity. The instruments used were the multilingual picture storybook *Mixter and Mixus Mic: Europe Adventure* and the Tolerance of Ambiguity Questionnaire that the learners completed after reading and listening to the storybook. The findings suggest that the learners use a set of vocabulary discovery and lexical inferencing strategies when decoding meaning of words and phrases in foreign languages, and that they extensively rely on their previous language knowledge in this process. Additionally, it has been found that a choice of strategies and knowledge sources they use depends on the contextual factors, i.e. availability of resources, contextual cues and the nature of a task at hand. .

Key words: *lexical inferencing; meaning decoding; multilingualism; plurilingualism; tolerance of ambiguity; vocabulary discovery*

1. Introduction

Imagine you are playing Chinese whispers. You are supposed to pass on the message, but you are not sure what exactly the person who has just passed the message to you said because he or she was not loud enough. Maybe that person speaks with a foreign accent. A lack of context prevents you from drawing inferences about the exact words of the message and the fact that you only had a chance to hear the message without seeing it in writing does not make the task easier. Now imagine that you do not speak the language used in the game. This imaginary situation vividly illustrates the ambiguity we experience in the process of language learning. Erten and Zehir Topkaya (2009) claim that "ambiguity is an inevitable reality of learning a new language and people do tend to have different levels of ambiguity" (p. 32).

The process of meaning decoding inevitably includes ambiguity and unfamiliarity at some point, and how we cope with that ambiguous content might have an effect on our success in the process. Investigating how students deal with the ambiguous content and what strategies and cues they rely on can give us a clearer image of the process of meaning decoding, and therefore provide useful tools for facilitating language acquisition.

The aim of this study was to examine how learners decode meaning of unknown words and sentences presented through a multilingual picture storybook. Additionally, the study aimed at examining how learners use their existing knowledge in this process as well as at detecting variations in learners' tolerance of ambiguity.

The paper begins with a brief review of knowledge on tolerance of ambiguity in language learning and the connection between tolerance of ambiguity and multilingualism, as well as its connection with plurilingualism, based on previous research. The theoretical part of the study is concluded with an overview of meaning decoding strategies and their classifications. The final part of the paper is the study itself based on *Mixter and Mixus Mic: Europe Adventure* multilingual picture storybook and the Tolerance of Ambiguity Questionnaire designed for the purposes of this study.

2. Theoretical framework

2.1. Tolerance of ambiguity (TA) in language learning

Atamanova and Bogomaz (2014) compare learning of a foreign language to "exploring a terra incognita", and on this quest "language learners constantly encounter a great variety of ambiguous stimuli ranging from confusing sounds to exact meaning of vocabulary items or idioms, as well as grammar aspects or sociocultural issues of the language being acquired" (Ely, 1989, as cited in Atamanova & Bogomaz, 2014, p. 347). Language acquisition is a complex process and it includes many components, from learning vocabulary items and grammatical rules of a language, through mastering the skills of reading, writing and speaking in that language, to understanding the sociocultural aspect of a language, and the paving on the road leading through this process is not always clear and stable, but rather chipped or shaky. According to Chiang (2016), "[s]uccess in this complex process involves several individual components, including the level of tolerance for the ambiguity encountered while learning a new language" (p. 61). Budner (1962) recognized three basic types of ambiguity, the first one stemming from new situations, the second from complex situations, and the third from contradictory situations (as cited in Owen & Sweeney, 2002). Learning of a foreign language can include all these types of ambiguity, and learning how to cope with all these ambiguities can either facilitate or impede learning. Chiang (2016) claims that "[i]nvestigating the factors related to this psychological phenomenon is important because awareness of how it affects the language learning process may aid the development of appropriate lesson plans and the identification of ways to overcome psychological obstacles to learning" (p. 61).

The question that now imposes is what can be considered ambiguous? Nezhad et al. (2013) define ambiguity as "uncertainty in language learning situations [...] usually caused by an inability to determine the appropriate context for cues or other stimuli provided in specific situations" (as cited in Chiang, 2016, p. 65). Norton (1975) mentions eight categories that define something as ambiguous, and they include: 1) multiple meanings, 2) vagueness, incompleteness, or fragmentarity, 3) probability, 4) unstructuredness, 5) lack of information, 6) uncertainty, 7) inconsistencies and contradictions, and 8) unclearness (as cited in Owen & Sweeney, 2002). Being tolerant to ambiguity means that one is able to go beyond these hindrances instead of letting them obstruct one's way. In other words, when encountering such vague or unclear information, an individual tolerant to ambiguity will be more likely to come

up with a new way of dealing with the given situation, while the one intolerant to ambiguity might rather give up in the start.

Having defined ambiguity, more should be said about the concept of tolerance of ambiguity. Budner (1962) defined tolerance of ambiguity (TA) as "the tendency to perceive ambiguous situations as desirable" (as cited in van Compernolle, 2016, p. 319). Individuals tolerant to ambiguity "are more likely to be open to new and different experiences because of their open attitudes toward unique or different situations" (Chiang, 2016, p. 64). Moreover, van Compernolle (2015) states that TA "reflects a person's comfort with dealing with novel, unfamiliar situations in which multiple, and sometimes conflicting, cues are present" (p. 62). Ambiguity tolerant individuals should perform well in new and complex learning situations. On the other hand, "[ambiguity] intolerant learners may tend to avoid or give up when encountering ambiguous situations" (Owen & Sweeney, 2002, p. 2). Ellis (1994) describes TA as "an ability to deal with ambiguous new stimuli without frustration and without appeals to authority" (as cited in Atamanova & Bogomaz, 2014. p. 347). In Brown's (2000) opinion, TA can be viewed as "the degree to which you are cognitively willing to tolerate ideas and propositions that run counter to your own belief system or structure of knowledge" (as cited in Atamanova & Bogomaz, 2014, p. 347). In terms of foreign language learning, it all boils down to an individual's ability and readiness to feel comfortable when handling ambiguous situations. The difference between an ambiguity tolerant individual, as opposed to an intolerant one, is in their attitudes and judgement - the tolerant one is more likely to approach this new and vague situation from a different perspective and give it a try, while the intolerant one is more prone to giving up and concluding that it is not worth the effort.

2.2. Tolerance of ambiguity and multilingualism

In this study, multilingualism is observed in a broad sense, which means that it includes knowledge of two or more languages, but not necessarily their complete mastery. In accordance with that, multilinguals can be described as "people with at least partial mastery in a number of languages" (Dewaele & Li, 2013, as cited in van Compernolle, 2016. p. 62). When talking about multilinguals, van Compernolle (2017) mentions both individuals raised in a multilingual environment and those who begin learning additional languages later in life (either in instructed or noninstructed contexts). The same point of view is taken in this study, so the term 'multilingual' is

used both with individuals who acquired languages due to their bilingual or multilingual upbringing as well as individuals who acquired languages through e.g. formal study in school or their stay in a foreign country. Studies in the fields of education and teaching have been investigating the link between multilingualism and tolerance of ambiguity. Thompson and Lee (2013) argue that "multilinguals have a heightened sense of metalinguistic awareness, which could arguably decrease their language learning anxiety", and conclude that "learning additional languages increases metalinguistic awareness" (p. 732). Van Compernolle (2017) mentions the link between TA and several domains of multilingualism, one of those being additional language learning. He explains that individuals with lower TA are likely to regard ambiguous situations as negative and consequently might feel threatened by them, while those with higher TA are more likely to regard such occurrences as stimulating, exiting and even desirable. Taking this into account, it can be said that a higher level of tolerance of ambiguity may be beneficial in foreign language learning as it allows learners to be more open towards the new, unfamiliar and unclear. However, it is justified to wonder whether the TA level can be too high, i.e. such that it results in a complete and unwarranted acceptance of ambiguous content. Ely (1995) claims that overtolerance may lead to this kind of unquestioned acceptance, and that in an ideal case the learner should neither be "inhibited by low tolerance of ambiguity nor oblivious to linguistics subtleties" (as cited in Erten & Zehir Topkaya, 2009, p. 32). Likewise, El-Koumy (2000) found that "moderately tolerant students were more successful than both high tolerance students and low tolerance students" when it comes to language learning and reading comprehension (as cited in Erten & Zehir Topkaya, 2009, p. 32). Similar findings were reported by Dewaele and Li (2013), who point out that "a moderate level of TA might be ideal for language learning". They explain that "learners with very high levels of TA might show an unquestioning acceptance and cognitive passivity", while "learners with very low levels of TA might lack the willingness to take intelligent risks with the new language" (as cited in van Compernolle, 2017, p. 319). Furthermore, a causal multidirectional link has been found between TA, multilingualism, and living abroad. The link is multidirectional since, on one hand, learners with a high level of tolerance of ambiguity may be more disposed to enjoy language learning with all its complexities, and on the other, this may consequently also increase their TA. Moreover, learners who decide to stay abroad may have a higher level of TA, and their residence abroad and experience they

get with it may also cause their TA to be higher (van Compernolle, 2017). A link has also been found between tolerance of ambiguity and code-switching. Van Compernolle (2017) perceives code-switching as ambiguous because "it involves the alternation between two or more linguistic systems within a given interaction or even within a particular utterance" (p. 319). Findings suggest that there is a connection between TA and the degree to which multilinguals regard code-switching more positively or more negatively (van Compernolle, 2017). Accordingly, it can be expected that multilinguals with higher TA will have more favourable attitudes towards code-switching than those with lower TA.

2.3. Plurilingualism - towards embracing the ambiguous

Today we live in a society where almost everyone speaks at least two languages, i.e. their mother tongue and one or more foreign languages. If you were to ask random passers-by how many languages they speak, it would probably be easier to find someone who is multilingual than someone who does not have any foreign language knowledge. Since today everyone is at least bilingual, plurilingual approach in education and teaching has been increasingly recognized as a necessity. Proof for this claim can be found in the Council of Europe's official documents such as the *Common European Framework of reference for languages* (CEF) and the *Guide for the Development of Language Education Policies in Europe.* In the *Guide* plurilingualism is defined as "the potential and/or actual ability to use several languages to varying levels of proficiency and for different purposes" (Council of Europe, 2007, p. 10). This definition is in accordance with the definition of multilingualism as it is perceived in this study. More precisely, plurilingualism does not imply a total mastery of the languages spoken by an individual, but rather any knowledge of a particular language or languages. What distinguishes multilingualism from plurilingualism is that the latter emphasizes the fact that an individual "builds up a communicative competence to which all knowledge and experience of language contributes and in which languages interrelate and interact", rather than keeping them separated as it is the case with multilingualism (Council of Europe, 2001, p. 4). It can be said that plurilingual approach therefore goes beyond multilingualism in the sense of the knowledge of a number of languages, and towards building a broader, superordinate competence. Some of the features of plurilingualism are that it is a competence that can be acquired; it is a repertoire of communicative resources that

speakers use according to their own needs; this repertoire is not necessarily homogeneous and is regarded as changing; and that the plurilingual competence is transversal and it extends to all the languages acquired or learnt (Council of Europe, 2007). The features mentioned are illustrative of a shift from a perspective focusing on languages in terms of a state (monolingual, bilingual, trilingual etc.) to the one focusing on speakers of these languages. This focus on the speaker is noticeable in the *Framework*, which describes plurilingual and pluricultural competence as "the ability to use languages for the purposes of communication and to take part in intercultural interaction, where a person [...] has proficiency, of varying degrees, in several languages and experience of several cultures", and by that implies its complexity in terms of acquisition and use (Council of Europe, 2001, p. 168). Depending on a situation, an individual can utilize different aspects of his or her plurilingual competence to take part in communication and achieve a desired goal in this communication. This claim is in accordance with the aims of the research since one of the assumptions in devising the study was that learners would draw useful information from their linguistic repertoires in order to overcome ambiguity and decode the meaning.

Candelier et al. (2010) use the term 'pluralistic approach' in plural, referring to didactic approaches which use both learning and teaching activities involving more than one variety of language. They juxtapose pluralistic approaches to singular approaches, which focus on only one language in isolation. They identify four pluralistic approaches: the intercultural approach, the integration of didactic approaches, the approach of inter-comprehension, and awakening to language, among which the last three are more linguistically oriented and therefore more relevant to the study. The integration of didactic approaches aims at establishing links between languages taught within the school curriculum, its goal being to use the language of education as a springboard in facilitating acquisition of a first foreign language. These two languages then serve as the basis for acquiring a second foreign language and so on, and the process can go in both directions. The approach of inter-comprehension promotes learning of several languages of the same linguistic family parallelly. The mechanism is similar to the one applied in the integration of didactic approaches, only the focus is on languages that belong to the same linguistic family, and these languages may be related either to the learner's mother tongue or to another language that the learner already acquired. Awakening to language includes some features

present in the integration of didactic approaches as well as in the approach of inter-comprehension, such as learning several languages at the same time or making a connection between languages that the learner already knows and those being learned. However, this approach goes even further and it includes a number of other languages and linguistic varieties that learners encounter at home, at school or in other places, without exclusion in terms of the number of languages or connection between languages being learned, which is present in the other two approaches discussed. This approach "was designed principally as a way of welcoming schoolchildren into the idea of linguistic diversity" but it can also serve as "a support to language learning throughout the learners' school career" (Candelier et al., 2010, p. 6). Elements of all three approaches listed above were employed in devising this study. One of the assumptions guiding the study was that the learners would draw from their linguistic repertoires, that is from their existing language knowledge, when decoding meaning of words and phrases in foreign languages. It was expected that in this process they would also look for parallels between languages they know and those they are unfamiliar with, especially when faced with a language they hear or see for the first time ever. In other words, they would use what they know from before in order to decode the unknown. However, that might not be the case with all learners since "[p]lurilingual ability may remain latent or only be developed with respect to varieties very close to the first language", and this is the reason why one of the goals of plurilingual education is precisely "to make speakers aware of this potential, to value it as such and to extend it to other varieties" (Council of Europe, 2007, p. 38). On the other hand, learners who are multilingual can utilize their plurilingual ability when decoding meaning since "[t]here are many common factors in all languages, and in learning languages: once learners master some of the basics, they can apply their knowledge about languages in general and their learning strategies to further languages" (Skutnabb-Kangas, 2002, p. 17). This means that multilinguals not only have an advantage in terms of the number of languages they speak, but also in terms of linguistic awareness and all the benefits that go with it.

Plurilingualism is more than knowledge or mastery of more languages, it certainly enables us to exchange information or convey a message, and in this way "forms the basis of communication in Europe, but above all, of positive acceptance, [which is] a prerequisite for maintaining linguistic diversity" (Council of Europe, 2007, p. 10).

Thus, tolerating what is different or unfamiliar, however ambiguous it might be, is a step in the right direction - a step towards embracing the diversity.

2.4. Meaning decoding strategies

As mentioned earlier, the process of language learning inevitably includes ambiguity at one point. The same can be said for the process of language comprehension, especially if one is not proficient in the target language. The fact that L2 learners need to know between 90 and 95% of tokens to achieve a sufficient comprehension of a text illustrates this claim (Prior et al., 2014). Moreover, encountering many new words may have a negative influence on reading comprehension (Nassaji, 2003). When facing a completely unknown language, the task becomes even more demanding. To beat the odds, learners use a variety of strategies when they encounter unfamiliar words. Oxford (1990) defines strategies as "specific actions taken by the learner to make learning easier, faster, more enjoyable, more self-directed, more effective, and more transferable to new situations" (as cited in Rousoulioti & Mouti, 2016, p. 57). Scarcella and Oxford (1992) offer a similar definition, describing strategies as "specific actions, behaviors, steps, or techniques [...] used by students to enhance their own learning" (as cited in Oxford, 2001, p. 2). Yang's (2006) definition emphasizes the problem tackling aspect of strategies, describing them as "cognitive actions taken to repair problems resulted from the insufficiency of language knowledge and to get liberal meaning" (as cited in Alkhaleefah, 2016, p. 164). Strategies are sometimes defined with regard to their purpose. In that sense, we can distinguish between e.g. language learning and language use strategies, or listening comprehension and reading comprehension strategies. In reading research, for example, strategies are defined as "cognitive or behavioral action[s] enacted under particular contextual conditions, with the goal of improving some aspect of comprehension" (Graesser, 2007, as cited in Alkhaleefah, 2016, p. 175). In a similar fashion, Alkhaleefah (2011) defines reading comprehension strategies as "any physical or mental processes that are consciously and deliberately employed by EFL/L2 readers in order to either solve problems in and/or facilitate comprehension of texts during the reading task(s)" (as cited in Alkhaleefah, 2016, p. 164). Of course, the boundaries are not clear-cut and the same or slightly modified strategy often can be used for fulfilling various language learning

goals. What these definitions have in common is that they all include a learner who purposefully uses his or her cognitive capacities in order to facilitate learning. How does one know whether a specific strategy is suitable for a particular learner or for achieving a particular learning goal? According to Oxford (2001), a strategy is useful if it relates well to the L2 task at hand, if it fits the learner's learning style preferences to a degree, and if the learner employs the strategy effectively and links it with other relevant strategies. These linked strategies are sometimes referred to as a strategy chain, and they represent "a set of interlocking, related, and mutually supportive strategies" (Oxford, 2001, p. 10).

Given that the focus of the study is on unknown word comprehension, the paper will deal primarily with strategies aiming at decoding these unknown words and phrases in foreign languages. Schofield (1982) believes there are three main types of 'word attack strategies' or possible scenarios that may occur when a learner encounters an unknown word or phrase: skipping, guessing (or inferencing), and appealing to another source for help (either a person or reference materials) (as cited in Rousoulioti & Mouti, 2016). Schmitt (1997) distinguishes between discovery strategies, used for the discovery of a new word's meaning, and consolidaton strategies, used for consolidating a word once it has been encountered. He maintains that learners have two options when encountering new vocabulary: they can use their knowledge of the target language, contextual clues, or reference materials (determination strategies), or they can ask someone else for help (social strategies). Among consolidation strategies there are social, memory, cognitive, and metacognitive strategies (as cited in Rousoulioti & Mouti, 2016). Oxford (2001) makes her own classification and groups strategies into these 6 categories: cognitive, metacognitive, memory-related, compensatory, affective, and social. Four categories from her classification correspond to Schmitt's categories (cognitive, metacognitive, memory-related, and social strategies). Cognitive strategies enable learners to manipulate the language material in direct ways, e.g. through analysis or reorganizing information. Metacognitive strategies are used for managing the learning process in general, such as identifying one's own learning style preferences and needs. Memory-related strategies enable learners to learn and retrieve information through different means, e.g. body movement (total physical response), or location on a page or blackboard. Affective strategies include e.g. identifying one's anxiety level, or using deep breathing, while social strategies help the learner cooperate with others, e.g. by

asking for clarification, or talking with a native speaker of the target language. Learners use compensatory strategies when they need to make up for missing knowledge, for example guess the meaning of a word or phrase from the context. Oxford states that when applied to skills of reading and listening, compensatory strategies include guessing using linguistic clues, as well as using other clues available. She believes that "[g]uessing is essential for listening and reading [because] it helps learners let go of the belief that they have to recognize and understand every single word before they can comprehend the overall meaning" (Oxford, 1990, as cited in Rousoulioti & Mouti, 2016, p. 59). Linguistic clues are certainly helpful, but the importance of other clues learners have at their disposal should not be taken for granted since the comprehension process goes beyond mere decoding of the literal meaning of an utterance. Frank and Goodman (2014) explain that "by making the assumption that speakers choose their words to be informative in context, listeners routinely make pragmatic inferences that go beyond the linguistic data" (p. 80). As a result, language learners who make such assumptions should be able to infer word meanings in otherwise ambiguous situations. Willingham (2006) maintains that there are three important factors in reading comprehension: monitoring one's comprehension, relating sentences to one another, and relating sentences to background knowledge. He believes that an effective reader relates sentences at two levels: a textbase, which is derived from the text, and a situation model, which relies on both the text and the reader's background knowledge and it is crucial for true comprehension. A situation model can be developed by connecting information from the text to information that the learner already knows, and this is the reason why it is essential to build learners' background knowledge. He suggests that "[t]he more information [readers] have stored in long-term memory, the more likely they are to be able to develop a situation model, and the better their reading comprehension (p. 41). In addition, Willingham (2006) offers strategies designed to aid each of the three factors that he finds important for reading comprehension, such as listening actively, graphic organizer, or vocabulary-comprehension relationship. Still, he points out that learners who have not become fluent in decoding yet simply do not have enough working memory space available to implement strategies since their working memory is occupied by decoding processes. According to Willingham and Lovette (2014), reading comprehension strategies cover the following three areas: vocabulary, monitoring comprehension, and making inferences. They mention two groups of

strategies used for making inferences: relating meaning across the text (e.g. summarizing, making a visual mental image), and relating to the knowledge about the content of the text (using cues such as the title or the topic itself). Therefore, it can be said that lexical inferencing contributes to a deeper processing of information from the text and consequently results in a better comprehension. What exactly does lexical inferencing involve? It involves "making informed guesses of the meaning of an unknown word with the help of all available linguistic cues as well as other sources of knowledge the learner can resort to" (Qian, 2004, as cited in Rousoulioti & Mouti, 2016, p. 59). In other words, lexical inferencing relies on a variety of linguistic and nonlinguistic cues that help one decode the meaning of unknown words.

Researchers have made different classifications of knowledge sources that foreign language learners use while making lexical inferences. Haastrup (1991) offers an elaborate classification, in which she identifies three such knowledge sources: contextual, intralingual, and interlingual. She further divides these three main categories, so the category of contextual knowledge has two subcategories: knowledge of co-text (which includes four more subcategories), and knowledge of the world. The second knowledge source, intralingual knowledge, involves cues based on the learner's knowledge of the target language, and it includes these two subcategories: the test word itself, and the syntax of the sentence containing the test word (both branching into more subcategories). The third knowledge source, interlingual knowledge, contains two subcategories: L1 and Ln, where Ln refers to all languages except for the learner's L1 and the target language (as cited in Akpinar, 2013). Although organized in a different manner, knowledge sources identified by De Bot, Paribakht and Wesche (1997) generally correspond to Haastrup's categories. They propose eight categories of knowledge sources learners can draw from when making lexical inferences: sentence level grammar; word morphology; punctuation; world knowledge; discourse and text; homonymy; word associations; and cognates (as cited in Akpinar, 2013). Schmitt and McCarthy (1997) recognize three categories of knowledge sources: linguistic knowledge, world knowledge, and strategic knowledge. Linguistic knowledge includes three subcategories: syntactic knowledge, vocabulary knowledge, and word schema. World knowledge refers to the learner's background knowledge on what constitutes a certain word, while strategic knowledge refers to conscious control over cognitive resources (as cited in Akpinar, 2013). Another classification has been proposed by Nassaji (2003), who identifies five types of

knowledge sources: grammatical knowledge; morphological knowledge; world knowledge; L1 knowledge; and discourse knowledge. Grammatical knowledge refers to using syntactic categories or grammatical functions (e.g. relative clauses, adjectives, adverbs), while morphological knowledge refers to using knowledge of word formation and word structure (e.g. word stems, suffixes, prefixes). World knowledge involves using knowledge of the content or the topic that goes beyond what is in the text. When learners use their L1 knowledge as a source, they are attempting to figure out the meaning of the new word by translating it or finding a similar word in their L1. The last category, discourse knowledge, includes using knowledge of relations between or within sentences and the connectors between words or sentences. The same author identifies a set of strategies that learners use to make lexical inferences, namely: repeating, verifying, self-inquiry, analyzing, monitoring, and analogy.

In reading comprehension research, strategies have often been categorized into larger units, which consist of individual strategies. Olshavsky (1976-77) offers three such units: word-level strategies, clause-related strategies and story-related strategies. Her classification is based on the level of processing, so each of the three units comprises a set of strategies related to its unit. The unit of word-level strategies includes use of context, synonym substitution, as well as stated failure to understand a word. Among clause-related strategies there are inference, re-reading and personal identification, while story-related strategies include use of information about the story (as cited in Alkhaleefah, 2016). Block (1986) distinguishes comprehension (general) strategies and linguistic (local) strategies. Some of comprehension strategies he mentions include anticipating content, recognizing text structure, and integrating information. These strategies refer to more general processes, as opposed to linguistic strategies, which are applied locally on a particular text. They include paraphrasing, rereading, questioning meaning of a word etc. (as cited in Alkhaleefah, 2016). Sarig's (1987) taxonomy has four main categories: technical-aid moves, clarification and simplification moves, coherence-detecting moves, and monitoring moves. Technical-aid strategies or 'moves' are used to facilitate processing of a text, while clarification and simplification moves help the reader clarify and/or simplify utterances in the text. Coherence-detecting moves demonstrate the reader's intention to find coherence in the text, and monitoring moves refer to the reader's active monitoring of text processing (as cited in Alkhaleefah, 2016). Pritchard (1990) presents five categories

of strategies: developing awareness, accepting ambiguity, establishing intrasentential ties, establishing intersentential ties, and using background knowledge. His categories are based on the processes that the reader employs while reading (as cited in Alkhaleefah, 2016).

When it comes to meaning decoding, vocabulary knowledge certainly is an important factor facilitating the process, but there are also other factors affecting comprehension. With a vast array of strategies on their hands, learners can afford the luxury of picking as many as they want, as long as the strategies match their learning styles and goals.

3. The study

3.1. Aims

The aim of this study was to examine how learners decode meaning of unknown words and sentences presented through a multilingual picture storybook. Two additional aims were the following:

- to examine how learners use their existing language knowledge to decode meaning in unknown languages, and
- to examine variations in learners' tolerance of ambiguity, that is, the potential difference in decoding only one word or phrase in an unknown language, as opposed to decoding a whole sentence or paragraph in an unknown language.

The assumption behind these aims was that learners would rely on linguistic and extralinguistic cues in order to overcome ambiguity and decode meaning of new vocabulary. They were expected to draw from any knowledge source available to them, such as their mother tongue and foreign language knowledge, as well as the story context and accompanying visuals seeing that “plurilinguals as a group [...] think in more flexible and divergent ways than monolinguals as a group” (Skutnabb-Kangas, 2002, p. 17). In addition, it was assumed that the learners’ tolerance of ambiguity would be higher when it comes to decoding a single vocabulary unit, and lower when there is an entire sentence or paragraph in an unknown language.

3.2. Research questions

There were four research questions in the study:

1. What strategies do learners apply in decoding meaning in an unknown language?

2. How and to what extent do learners rely on their existing (language) knowledge in decoding meaning?

3. How and to what extent do learners rely on the context in decoding meaning?

4. What are the potential differences when it comes to decoding only one word or phrase in an unknown language, as opposed to decoding a whole sentence or paragraph in an unknown language?

3.3. Socioeducational background

The Croatian education system promotes learning of foreign languages from the early age, and state-owned primary schools in Croatia introduce learning of the first foreign language from Grade 1. Additionally, students can choose to learn the second foreign language as an elective subject in Grade 4 (Cindrić & Milković, 2022). By the time they complete secondary education, the majority of students will have studied at least two foreign languages (Trinki & Letica Krevelj, 2020). The most frequently taught foreign language is English, followed by German, Italian, French and Hungarian. However, the English language is highly prevalent in the early stage of learning, and is learned by 88.95% of students, while German is learned by 9.17% and all the other languages by only 1.88% of students (Croatian Bureau of Statistics, 2022, Table 1.5). Despite the fact that multilingualism is becoming the reality of language learning curricula in the European Union, and that Croatian students learn foreign language(s) from the early age, the student make-up in Croatia is still predominantly monolingual (Trinki & Letica Krevelj, 2020). On one hand, the Croatian education system recognizes the importance of foreign language learning and therefore languages are taught from Grade 1. On the other hand, foreign languages have been set apart and not been recognized as constituent parts of students' linguistic repertoires. This is additionally emphasized by the fact that the official language of schooling is Croatian, which is the majority language, and that students are rarely non-native speakers of Croatian, so there is not much mention of acknowledging other languages spoken by students (Trinki & Letica Krevelj, 2020).

3.4. Sample

The survey was conducted on 41 primary school students. The participation was voluntary and it included Grade 2 to Grade 4 students with different language learning backgrounds. Out of 41 participants, 39 listed Croatian as their mother tongue, while 2 students listed Turkish as their mother tongue. Likewise, 39 participants considered Croatia their home country, while 2 considered Turkey their home country. Only 1 participant reported a longer stay (more than 3 months) abroad. When asked about other languages they speak, the participants mentioned English (85.4%), German (70%), French (22%), Italian (14.6%), Spanish (12.2%), Bosnian (9.8%), Czech (7.3%), Serbian (7.3%), Russian (4.9%), Slovenian (4.9%), Chinese (4.9%), and Korean (2.4%) (see Figure 1).

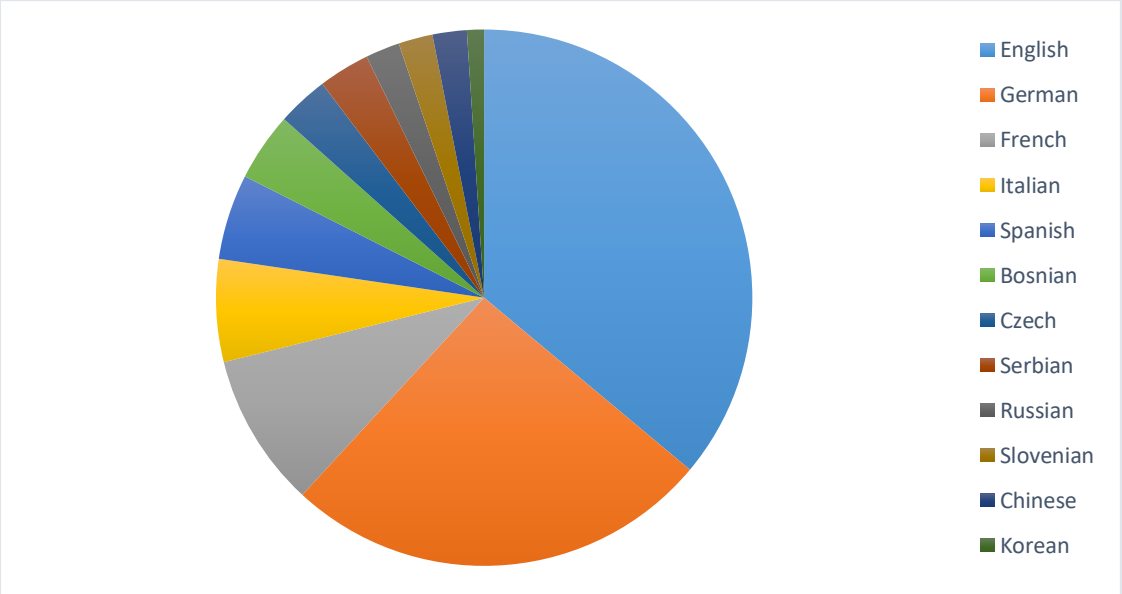

Figure 1. Foreign languages spoken by the participants

When it comes to languages used in the participants' families, they use Croatian (80.5%), English (58.5%), German (9.8%), Czech (7.3%), Turkish (4.9%), Belgian, Korean, Albanian, Italian, Bosnian, French, and Slovenian (2.4% each) (see Figure 2).

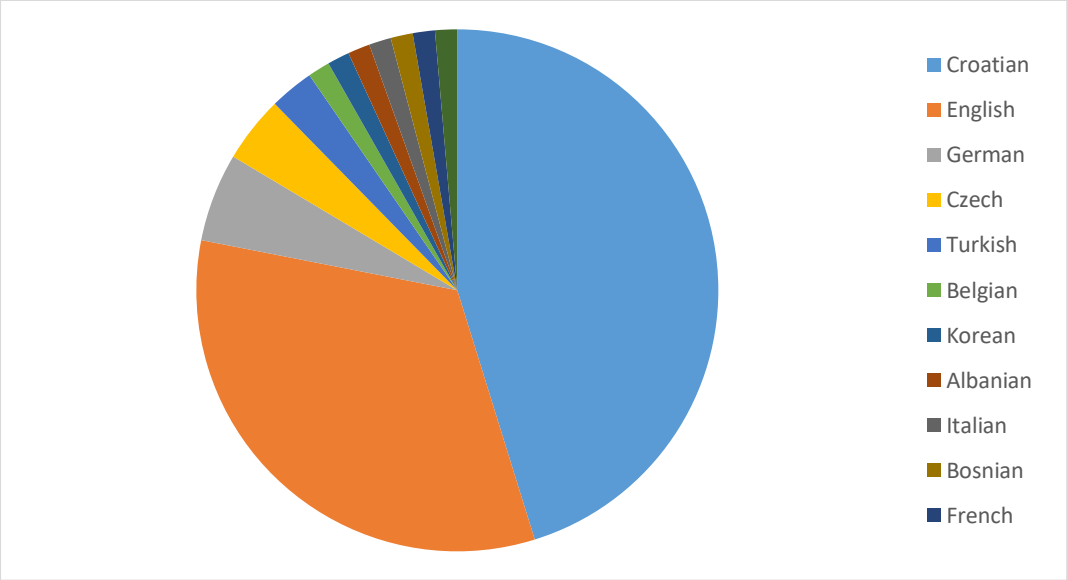

Figure 2. Languages spoken in the participants' families

3.5. Instruments and procedure

Two instruments were used for the purposes of conducting this research study. The first instrument was the multilingual picture storybook *Mixter and Mixus Mic: Europe Adventure* (written and illustrated by Marija Košutić, see Appendix A). The storybook included nine languages in total, most of it was written in English, while other languages include Swedish, German, Hungarian, Croatian, Italian, French, Spanish and Portuguese. The translation of the parts written in foreign languages was not provided, so the story went uninterrupted by any additional explanations. The second instrument used was the Tolerance of Ambiguity Questionnaire designed for the purposes of this research study. The reasons for designing a new questionnaire was the participants' young age, as well as the fact that the questions had to be adjusted to the other instrument used, i.e. the picture storybook. The questionnaire was anonymous, and it consisted of two parts, the first part addressing the students' general background information, such as their mother tongue and other languages they speak, as well as their disposition to learn and explore language(s), while the second part focused on the students' impressions of the storybook, and on the process of meaning decoding (see Appendix B).

The participants were characterized as having a high degree of TA if they found code-switching between different languages normal and/or took part in code-switching themselves; if they were willing to try to understand a language they do not speak when they hear it; if they found it easy or at least not difficult to follow the

storybook; if they experienced positive feelings when they encountered words they did not understand in the storybook and had fun figuring out the meaning of foreign words; and if it did not bother them that they didn't understand all the words. Likewise, the participants were characterized as having a low degree of TA if they did not find code-switching between different languages normal and did not take part in code-switching themselves; if they were unwilling to try to understand a language they do not speak when they hear it; if they found it difficult to follow the storybook; if they experienced negative feelings when they encountered words they did not understand in the storybook and did not have fun figuring out the meaning of foreign words; and if it bothered them that they didn't understand all the words.

The participation in the study was voluntary, and the consent for participating in the research study was obtained online from the participants' parents when they applied for filling out the questionnaire.

Thirty-seven responses were collected in a classroom environment, while four were submitted online, via Google Forms. The procedure in both cases was the same; the students watched and listened to a voice-over narration of the storybook, so they had an opportunity to both hear and see the languages used by the storybook characters. Then they were asked to complete the questionnaire. While completing the questionnaire, the students were also provided with a paper copy of the storybook, so they were able to search through it when answering the questions. The students who submitted their answers via Google Forms had the storybook in PDF at their disposal.

3.6. Results and discussion

1. What strategies do learners apply in decoding meaning in an unknown language?

The participants were asked what helps them understand the meaning of a foreign word in general, as well as what helped them in figuring out the meaning of foreign words in the storybook. When it comes to understanding the meaning of foreign words in general, they relied on language similarity (46.3%), context (29.3%), Google Translate (24.4%) and other dictionaries (14.6%), asking somebody (14.6%), illustrations or pictures (9.8%), games (7.3%), gestures (4.9%), textbook (4.9%), and subtitles (2.4%). These answers illustrate the participants' general sense of what it is that helps them understand the meaning of foreign words, i.e. when the context is not specified or restrained in any way. Accordingly, they mentioned an array of strategies, such as finding similarities between different languages or inferring based on familiar

elements, as well as tools that enable them to get a better understanding of unfamiliar vocabulary, such as consulting a dictionary or relying on gesticulation. In the storybook they relied on illustrations (78%), flags (31.7%), word similarity (17.1%), context (9.8%), asking somebody (7.3%), language similarity (4.9%), and slow pace (4.9%). Unlike it was the case in the previous question, which focused on what the participants believed it would help them understand the meaning of a foreign word, this question focused on their actual behaviours in the given context. Due to this restriction, their answers are illustrative of the nature of the context in which they performed the task and more homogenous in terms of their diversity. Moreover, this set of answers suggests that the context of the situation prompted the participants to come up with some new strategies that they found useful in this particular context, such as using flags to pinpoint the language that the storybook characters spoke or relying on the pace of the voice-over narration to grasp the meaning of words.

Table 1. Strategies used by the participants when decoding the meaning of foreign words in general (n=41)

type	**strategy**	percentage of participants using the strategy
INF*	understand the meaning through other words in the sentence	46.3%
DIS**	use a dictionary	39%
DIS	understand the meaning through context	29.3%
DIS	ask the teacher or a family member	14.6%
DIS	understand the meaning through illustrations	9.8%
DIS	look up the word in textbooks	4.9%
DIS	other	14.6%

* INF denotes lexical inferencing strategies; ** DIS denotes vocabulary discovery strategies

The answers were categorized in two main groups of strategies adapted from Rousoulioti and Mouti (2016), namely vocabulary discovery and lexical inferencing strategies (see Tables 1 and 2). The strategy ‘ask the teacher’ was changed into ‘ask the teacher or a family member’, and the new strategy ‘understand the meaning through illustrations’ was added. The rest of the set stayed the same.

Table 2. Strategies used by the participants when decoding the meaning of foreign words in the storybook (n=41)

type	**strategy**	percentage of participants using the strategy
DIS	understand the meaning through illustrations	78%
INF	look for similar words in other foreign languages	22%
DIS	understand the meaning through context	9.8%
DIS	ask the teacher or a family member	7.3%

DIS	other	31.7%
INF	other	4.9%

Tables 1 and 2 show that the choice of strategies differed depending on whether the context was specified or not. Almost half of the participants (46.3%) attempted to decode the meaning with the help of other words in the sentence, which supports the claim that lexical inferencing is the most popular strategy in foreign language comprehension (Rousoulioti & Mouti, 2016). This finding is in line with Fraser (1999), who found that a greater percentage of learners resorted to lexical inferencing than to dictionary use when encountering a new word (as cited in Rousoulioti & Mouti, 2016). The same strategy was used by the participants in Rousoulioti and Mouti's (2016) study, where almost half (42.1%) of them stated that they often understand the meaning of an unknown word with the help of other words in the same sentence, whereas 17.5% stated they do so sometimes.

Still, a high percentage of the participants (39%) opted for consulting a dictionary, and it is interesting to note that even 24.4% of them chose specifically Google Translate. This is probably due to the fact that this tool is easy to use and accessible to anyone with internet access. This finding is in line with findings reported by Fraser (1999), who also found that 39% of participants consulted a dictionary to learn the meanings of new words when reading (as cited in Nassaji, 2003). Although the numbers are the same, it should be noted that the participants in Fraser's study were adult learners, while the participants in the current study were primary school students. Similarly, participants in Rousoulioti and Mouti's (2016) study reported using a dictionary to find out the meaning of a word: 10.5% of them stated they use it often, while 38.6% reported doing so sometimes. However, the participants in their study were older (university students) than the participants in this study.

A relatively high percentage of the participants (29.3%) claimed that they try to understand the meaning through the context, although the same strategy was not so frequently employed (9.8%) while decoding the meaning of foreign words in the storybook, that is, applied to the task at hand. The reason for this discrepancy might lie in the fact that in everyday life we fill in the missing pieces of information on a daily basis. Often it happens that we do not hear every single word someone said because of the background noise, or we are not sure what the movie is about because we did not catch the beginning, but we can easily fill these blanks if we connect the

dots of what we have heard or what we already know. However, it is easier to catch these clues when you are a speaker of the language that you are dealing with, which was not always the case in the storybook. Also, it is important to notice that the first number (29.3%) refers to the participants' beliefs, that is, what they believed they do when trying to understand the meaning of foreign words, while the other number (9.8%) refers to their actual behaviour in the storybook. Understanding the meaning from the context was a frequently employed strategy in both Akpınar's (2013) and Rousoulioti and Mouti's (2016) studies. Akpınar (2013) found that 30% of learners always use contextual guessing, while 70% of them reported doing so sometimes. Almost half of the participants (45.6%) in Rousoulioti and Mouti's (2016) study reported that they often rely on the context to understand the meaning of a word, while 17.5% of them reported doing so sometimes.

Another strategy used was 'ask the teacher or a family member', where 14.6% of the participants said they would use this strategy when encountering unfamiliar words, while 7.3% of them actually used this strategy while reading the storybook. The lower percentage of use of this strategy in the storybook (7.3%) than in a hypothetical context (14.6%) is understandable when we take into consideration that the storybook includes more foreign languages and therefore has many unfamiliar elements, so asking for clarification or explanation for each would take too much time. Also, the participants had only the teacher at their disposal while completing the questionnaire (except for those who submitted their answers online), so they could not turn to their parents for help. Similar findings were reported by Qian (2004) and Akpınar (2013), who found that asking for help from a teacher was among the least used strategies. Rousoulioti and Mouti (2016) found that 12.3% of learners often turned to a fellow student in order to seek assistance with the understanding of an unknown word, while the number of those who sometimes use this strategy reached 42.1%. However, the number of learners who would seek assistance from the teacher reached a high 87.7% in their study, which differs significantly from the findings in the present study.

As opposed to lexical inferencing being the most frequently used strategy in meaning decoding in general, understanding the meaning through illustrations was convincingly the most frequently used strategy (78%) in the storybook comprehension. This strategy was also mentioned in meaning decoding in general, where the context was not specified, but obviously with a much lower frequency (9.8%). The data was not surprising since the instrument of the study was a

multilingual picture storybook. Faced with that many unfamiliar languages, the participants found other types of clues that helped them grasp the meaning, and the most obvious one was the component part of every picture storybook - illustrations. The practical application of this strategy can be seen from the examples of word meanings they recognized in the storybook but did not know before, such as *smörgåsbord* and *chap*. These two word meanings were recognized by a considerable number of participants (*smörgåsbord* 30.1%; *chap* 17.9%), and even though the word *smörgåsbord* has a very similar equivalent in the English language, it is not very likely that the learners were familiar with it since it is not usually covered in vocabulary at this stage of language learning. Therefore, it can be concluded that the clue used in decoding the meaning of these two words were indeed illustrations, and not their cognates in other languages.

Other often mentioned method that aided decoding were flags (31.7%). Although it can be considered a part of the understanding the meaning through illustrations strategy, it was labelled as 'other' since many learners mentioned it separately from illustrations, and because it is not clear how exactly flags as picture clues helped them figure out the meaning of foreign words. The flags could certainly have been helpful in detecting the language or country, but anything else seems a bit far-fetched.

As mentioned above, lexical inferencing was a frequently employed strategy among the participants. When asked how languages they knew from before helped them in decoding meaning of unfamiliar words in the storybook, they stated the languages helped them because of word similarity (36.6%), language similarity (17.1%), due to the fact that they already speak or learn some of the languages in the storybook (14.6%), and because the languages enabled them to draw inferences (4.9%). This shows that the learners were aware of the fact that they can use their existing language knowledge and make connections across languages to figure out word meaning. More about using previous language knowledge in meaning decoding will be discussed in the following paragraph.

The participants were also asked about the ways they can help themselves when they do not understand some word(s). Here they opted for asking somebody (63.4%), consulting Google Translate (39%) or other dictionaries (9.8%), relying on language similarity (17.1%), illustrations (12.2%), textbook (7.3%), notebook (4.9%), context (4.9%), word similarity (4.9%), and looking closely (2.4%) (see Table 3).

Table 3. Strategies used by the participants when they do not understand a foreign word (n=41)

type	strategy	percentage of participants using the strategy
DIS	ask the teacher or a family member	63.4%
DIS	use a dictionary	48.8%
INF	look for similar words in other foreign languages	22%
DIS	understand the meaning through illustrations	12.2%
DIS	look up the word in textbooks	12.2%
DIS	understand the meaning through context	4.9%
INF	examine whether part of the word is familiar	2.4%

The most frequently used strategy here was asking the teacher or a family member (63.4%). A high percentage can indicate that due to their age the participants are still not independent learners and therefore tend to turn to others when they get stuck and cannot figure something out on their own. Many learners (48.8%) decided to use a dictionary, and again a high percentage (39%) opted for Google Translate. Although not famous for its accuracy, this tool is accessible and user-friendly so it is not surprising that it is used so often. Interestingly, one participant noted that Google Translate is 'not always correct'. On the other hand, part of the learners relied on lexical inferencing strategies. Among these, 22% of the participants decided to look for similar words in other foreign languages and 2.4% decided to examine whether part of the word is familiar. The percentages seem somehow low when compared to the fact that 90.2% of the learners noticed that some words are the same or similar in different languages, but this still serves as evidence of their awareness of connections and similarities between different languages. Even though looking for similar words in other languages did not rank high, it was certainly not the learners' last choice when it comes to understanding the meaning of unknown words, as it was the case in Rousoulioti and Mouti's (2016) study. Nevertheless, it should be noted that both studies relied on the participants' self-reported strategy use and reported similar findings. Their study found that 19.3% learners often looked for similar words in other foreign languages, and that 36.8% of them did so sometimes, which closely matches the number of learners who reported using this strategy in the present study (22%).

The use of illustrations as clues was significantly lower (12.2%) than in the storybook itself (78%), and about the same as in foreign word decoding in general (9.8%). This

deviation seems to be the result of a difference in contextual factors. In the storybook, the learners extensively relied on illustrations since they are the most prominent element and speakers of any language can 'read' them. However, there are no illustrations in every learning material or situation, so the learners have to resort to other clues. A similar deviation was noticed in understanding the meaning through context. More about that will be said in the section about the context.

2. *How and to what extent do learners rely on their existing language knowledge in decoding meaning?*

A very high percentage of the participants (92.7%) reported that they study on their own languages they also learn at school, which shows a strong motivation for and interest in language learning. They reported studying languages via mobile phone applications (89.5%), through listening to music (60.5%), via playing games (57.9%), through watching movies (50%), and 5.3% reported they study languages via other methods (private lessons and conversation practice).

Their interest in languages is also seen from a considerable percentage of learners who liked learning languages in general (100%, that is, all of them!) and learning new words and phrases in different languages (again 100%!). They believed that language learning enables them to travel abroad (41.5%), to learn new things (26.8%), to understand and speak to foreigners (22%), that it is fun (22%), gives them an opportunity to read books in foreign languages (4.9%), play video games (2.4%), watch movies (2.4%), and even create a better future (2.4%).

Moreover, there is a significant percentage (92.7%) of the participants who reported that they try to understand a language they do not speak when they hear it. Even though these numbers suggest a strong motivation for language learning, it should be noted that the high percentage of learners who reported interest in learning new words and phrases in different languages, as well as interest in learning languages in general, reflects their beliefs and estimates of their own behaviour rather than their actual behaviour.

When it comes to the learners' behaviour in the task at hand, 78% of them reported that languages they knew from before helped them understand the parts of the storybook written in foreign languages, 4.9% said that helped them a little bit, 4.9% were not sure, and 12.2% said that did not help them. The strategies they used in the process were already mentioned in the previous section. Even though 12.2% said languages they knew from before did not help them understand the languages in the

storybook, a lot of learners (87.2%) reported they recognized the meaning of some words they did not know before. Among the most frequently recognized word meanings were *smörgåsbord* (30.8%), *noche* (17.9%), *chap* (17.9%), *bonjour* (12.8%), *portionen* (12.8%), and *storia* (12.8%). Table 4 shows all examples that the participants reported.

Table 4. Word meanings recognized in the storybook (n=39)

word / phrase	**percentage of participants who recognized the word meaning**	**word / phrase**	**percentage of participants who recognized the word meaning**
smörgåsbord	30.8%	buongiorno	5.1%
noche	17.9%	Hallo	2.6%
chap	17.9%	Ábenteuer	2.6%
bonjour	12.8%	Bon appétit	2.6%
portionen	12.8%	Käse	2.6%
storia	12.8%	Gutten Appetit	2.6%
merci	10.2%	ristorante	2.6%
palacsinták	10.2%	aventura	2.6%
delizioso	7.7%	leggenda	2.6%
välkommen	7.7%	shriek	2.6%
Gäste	5.1%	Duna	2.6%
día	5.1%	pasta	2.6%

Many of these words have cognates in other languages, e.g. *noche*, *portionen*, *storia*, *delizioso*, *día*, and some even have cognates in Croatian, e.g. *palacsinták*, *ristorante*, *aventura*, *leggenda*, *Duna*, which strongly suggests that the learners were relying on their previous language knowledge and on word similarities when decoding their meanings. Some words and phrases from Table 4 can be labelled as greetings or commonly used phrases, such as *bonjour*, *merci*, *välkommen*, *buongiorno*, *Hallo*, *Bon appétit* and *Gutten Appetit*. Although some of them have cognates in other languages, which could have been useful when decoding their meanings, it is also possible that the learners here relied on the context. Greetings usually have an established position in the course of a conversation, they do not randomly pop out in the middle of a sentence but rather appear at the beginning or the end. It is not unlikely that at least a part of the participants noticed that pattern and used it as a clue in meaning decoding. The use of illustrations as clues cannot be disregarded, especially for words such as

smörgåsbord , *chap* and *Duna*; more on this subject has already been said in the section about the strategies.

The participants were also asked about the differences and similarities between the languages in the storybook. Regarding the differences between languages, 88.6% of the participants noticed that some languages in the storybook look or sound different from each other, while 11.4% did not notice such differences. Most differences were noticed between Croatian and French (14.6%), Croatian and Hungarian (12.2%), Hungarian and Spanish (9.8%), and Croatian and Swedish (7.3%). According to the learners, what makes these languages different from each other is orthography (out of 41 learners, 3 made a remark about differences in language ortography), punctuation (3 remarks) and the fact that they 'sound weird'(2 remarks). Unusual orthography was noticed in Swedish, whose alphabet includes letters *å*, *ä* and *ö*. These letters do not exist in the Croatian alphabet, what surely makes Swedish look different from Croatian. Swedish was also described as 'sounding weird' and a possible explanation for this could be its unique and therefore unusual vowel sounds. Unusual punctuation was attributed to Spanish, principally because of its inverted question marks and exclamation points that cannot be found in other languages in the storybook. What makes them even more unusual is that they appear both at the beginning and the end of an interrogative clause or exclamation, which makes Spanish unique.

On the other hand, 82.5% of the participants noticed that some languages in the storybook look or sound similar to each other, 15% did not notice such similarities, while 2.5% were not sure whether there were similarities between the languages. Most similarities were noticed between English and German (45%), Italian and Spanish (17.5%), German and Swedish (12.5%), and English and Swedish (7.5%). The learners believed English and German have some similar words, such as *hello* and *Hallo*, which allowed them to draw parallels between these two languages. The same reason was mentioned for similarity between English and Swedish, where the learners noticed that the words *welcome* and *välkommen* look alike. When it comes to similarity between German and Swedish, the participants claimed that both have long words.

Besides noticing the differences and similarities, it is noteworthy that the learners' opinions on similarities between the languages in the storybook were much more

synchronized than those on differences between the languages, which can indicate that they focused more on common features and finding connections across languages. This is further supported by the fact that 90.2% of the participants noticed that some words in the storybook are the same or similar in different languages. The most common examples of such words were *välkommen* and *welcome* (31.7%), *Hallo* and *hello* (26.8%), *appetit* and *apetit* (26.8%), *noche* and *noć* (26.8%), and the sequence of words from the storybook cover (*adventure - äventyr - Ábenteuer - avventura - aventure - aventura*; 26.8%). We have seen in the section on the strategies that the learners tend to look for similar words in other foreign languages when they do not understand a word, but what seems significant here is that these examples surely show that the learners compared words to similar words in Croatian, but also to words from other languages.

3. *How and to what extent do learners rely on the context in decoding meaning?*

Earlier it was stated that 29.3% of the learners claimed they use context as a clue in meaning decoding, as well as that 9.8% of them relied on the context while decoding the meaning of foreign words in the storybook (see the section about the strategies). However, more should be said about the ways they make use of context. This strategy is not the participants' first choice when they are faced with an unfamiliar word (4.9%), but it has a rather high frequency of use in meaning decoding in general (29.3%). This variation may be the result of a difference in the context in which the word appears. It seems completely logical that the context is not so useful when one is faced with an isolated word in a foreign language, as opposed to when that word is a constituent part of a sentence or a paragraph. Neighbouring words and information from the surroundings are by all means helpful whenever we have something unfamiliar in front of us, we just need to figure out how to make use of them.

Judging by the percentage of those who relied on context when decoding the meaning of foreign words in the storybook (9.8%), the learners evidently know how use this clue. The fact that 5% of the participants stated that context made it easy to follow the storybook further supports this claim. A lower frequency of use of this strategy in the storybook might be attributed to the learners' estimate that it would not provide them information needed in that particular case since there are many foreign languages and consequently many unfamiliar elements. Other strategies, such as use

of illustrations or looking for similar words in other languages, turned out to be a safer choice for that purpose.

So far it has become evident that a choice of strategies and the whole course of action the learners take largely depends on contextual factors such as availability of resources, contextual cues and the nature of a task.. When the context is not specified or restricted in any aspect, the learners may simply have a wider array of strategies and mechanisms to choose from. Likewise, when they are familiar with the conditions and the goal of a task, they tend to pick the option they belive it is the best for the given situation. However, these premises are only speculative and were not confirmed in the course of this study, and they certainly require further investigation.

4. *What are the potential differences in learners' tolerance of ambiguity when it comes to decoding only one word or phrase in an unknown language, as opposed to decoding a whole sentence or paragraph in an unknown language?*

Almost all participants (97.6%) found it normal when people use more than one language at the same time, 41.5% reported they personally combine more languages while communicating, while 34.1% reported they do so sometimes. They combine languages for fun (73.2%), practice (31.7%), when travelling abroad (14.6%) and engaging in a conversation with foreigners (12.2%), playing games (14.6%), and when doing their English homework (12.2%). Other reasons for combining languages were that it sounded better to them (9.8%), it helped them when they forget the Croatian term (2.4%), and a part of them reported doing it while taking part in activities such as singing, reading, watching movies or playing with friends (2.4% each). The data presented here suggests that the learners perceive code-switching as something common and acceptable, and that many of them code-switch in everyday activities.

Their open attitude towards code-switching and communication in foreign languages can also be seen from the percentage of the participants who liked the storybook (100%). Among the reasons why they liked the storybook were that it had many foreign languages (27.5%) and many countries (15%), it helped them learn new things (15%), and it included their mother tongue, Croatian (2.5%), as well as Croatian dialects (7.5%). It seems that foreign languages together with all their novelties and peculiarities did not make the storybook too complicated or unusual, but on the contrary, foreign languages were the element that the learners liked very much.

They were happy to spot something close and familiar to them, such as their mother tongue, but it is noteworthy that they also recognized the potential of the storybook to teach them something new.

The participants were also asked to select what they liked the most about the storybook and the cats (34.1%) as characters was the most common answer, followed by many countries (29.3%), languages (26.8%) in general and the fact that they could hear these languages (17.1%). These findings are in accordance with the learners' openness to foreign languages and new elements that they inevitably include.

When asked whether they consider some language(s) in the storybook especially easy or difficult to understand, the participants opted for Croatian (26.8%), English (17.1%), and German (9.8%) as the easiest to understand, and for Swedish (24.4%), Hungarian (19.5%), French (7.3%), and Italian (7.3%) as the most difficult languages to understand. The most common reasons why they consider some languages easy to understand were that it is their mother tongue (out of 41 learners, 4 made this remark about Croatian), and that they learn that language (1 remark about English, 2 remarks about French). The most common reasons why they consider some languages difficult to understand were that the language sounds and looks strange (out of 41 learners, 5 made this remark about Swedish), it is very different from Croatian (3 remarks about Hungarian), and they do not understand it or it is new to them (1 remark about Swedish, 1 Hungarian, 1 Italian, 1 French). The data indicates that the learners perceived languages that they speak and learn as easier to acquire than those that in some aspect seem different from other languages they know. Interestingly, 7.3% of the participants considered all the languages they speak easy to understand, and 4.9% of them considered all the languages they do not speak difficult to understand, which basically sums up their general attitude on language difficulty.

Although it may seem that some were not so enthusiastic about a plenitude of new and foreign segments, 92.7% of the participants had fun figuring out the meaning of foreign words, and 80.5% were not bothered by the fact that they did not understand all the words. The feelings they experienced when encountering words they did not understand ranged from excitement to sadness (see Table 5).

Table 5. Emotions the participants experienced when encountering unfamiliar words

emotion / feeling	percentage of participants who experienced this emotion	emotion / feeling	percentage of participants who experienced this emotion
excited	24.4%	confused	7.3%
happy	14.6%	a bit worried	7.3%
unusual	14.6%	curious	7.3%
not worried	9.8%	neutral	4.9%
worried	9.8%	magical	4.9%
cool	7.3%	surprised	2.4%
okay	7.3%	bored	2.4%
relaxed	7.3%	sad	2.4%

Table 5 shows that positive feelings prevailed, with the highest percentage of learners reporting they felt excited (24.4%) and happy (14.6%) when they encountered unfamiliar words. Nevertheless, it cannot be disregarded that a portion of the participants experienced some rather negative emotions, such as confusion, worry and even sadness. This range of emotions suggest that even though most learners demonstrated openness to and acceptance of foreign and uncommon, some still did not welcome this amount of novelty and ambiguity. On the other hand, a range of positive attitudes and emotions experienced by the participants is indicative of their higher TA. As pointed out by van Compernolle (2015), the link between positive attitudes towards linguistic variation and TA suggests that learners who have higher TA, that is, who are more tolerant of ambiguous and/or complex situations, may deal with content that differs from their communicative contexts more easily than learners who are less tolerant or intolerant to such situations. The positive attitudes and emotions reported by the participants may also stem from the fact that they speak and/or learn more languages and express interest for learning languages in general since "higher levels of multilingualism are related to more positive attitudes toward linguistic variation" (van Compernolle, 2015, p. 66).

3.7. Conclusion

The data gathered in the course of this research has shown that the learners employed a set of vocabulary discovery strategies in decoding meaning in an unknown language. Among most commonly used vocabulary discovery strategies were understanding the meaning through illustrations (78%), through context (9.8%), and asking the teacher or a family member for help or clarification, that is, social strategies (7.3%), while relying on the pace of the narration in order to understand

foreign words (4.9%) was a less commonly used strategy. The learners also reported using various knowledge sources, such as dictionaries, textbooks and mobile phone applications available to them. Besides using vocabulary discovery strategies, the learners relied on different lexical inferencing strategies. Having to figure out the meaning of unknown words in a foreign language, they for the most part looked for similar words in other foreign languages (36.6%), but also tried to find similarities between different languages in general (17.1%), while they less often tried to draw inferences based on their metalinguistic awareness, that is, the knowledge of how language(s) function (4.9%). Additionally, it has been found that the participants' choice of strategies and knowledge sources is heavily dependent on the contextual factors, i.e. availability of resources, contextual cues and the nature of a task at hand.

Moreover, the data has shown that the learners rely considerably on their previous language knowledge when decoding meaning of words and phrases in unknown languages. A high percentage of the learners reported that languages they knew from before helped them understand the parts of the storybook written in foreign languages (78%), and noticed that some words are the same or similar in different languages (90.2%) as well as that some languages in the storybook look or sound similar to each other (82.5%). Their awareness of similarities and common elements between different languages enables them to utilize their existing language knowledge and make it a valuable knowledge source for drawing inferences.

Besides relying on their language knowledge, the learners also use context as an aid in the process of meaning decoding, but in a moderately different manner. While their reliance on the existing language knowledge becomes more substantial with an increase in the number of unfamiliar elements, the reliance on the context seems to decrease when there are too many elements that they do not understand or fail to recognize. As it was noted for strategies in general, the choice of whether the learners will use these two mechanisms (language knowledge and context) in meaning decoding depends on the context and the nature of the task.

The findings have also shown that the participants' tolerance of ambiguity is quite high when it comes to foreign languages and a cluster of novelties and peculiarities that they entail. They have demonstrated openness to and acceptance of new and uncommon, as well as great interest in and motivation for language learning. However, the potential differences in the learners' tolerance of ambiguity when decoding only one word or phrase in an unknown language, as opposed to decoding a

whole sentence or a paragraph in an unknown language were not established and require further research.

3.8. Limitations of the study

A future study on this topic should include a larger number of participants, since the present study was conducted on a relatively small sample of 41 learners. Also, information regarding the participants' age and gender was not collected, which left the learner profile incomplete.

A suggestion for the future study is to design a set of tasks including target words, phrases or even whole sentences in order to get a better insight into the process of meaning decoding and the mechanisms it entails, especially with younger learners, which would then enable to determine the potential variations in their tolerance of ambiguity in the process.

If the future study is to be done with the same instrument that was used in the present study, that is, the multilingual picture storybook *Mixter and Mixus Mic: Europe Adventure*, or with a similar type of instrument, one suggestion would be to mark target words, phrases or whole sentences which the participants are expected to decode. This would help the learners focus on specific vocabulary items, especially younger ones as it was the case in this study. Ideally, for each targeted vocabulary item the learners would state what helped them understand that specific word or phrase. Another suggestion would be to add a five-point Likert scale ranging from 'very easy' to 'very difficult' for each of these vocabulary items and sentences. This would be appropriate for the learners' young age and it would enable to establish which of the items the learners found easy and which they found difficult to understand, and therefore help in determining the potential variations in their TA.

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Sažetak

Cilj rada bio je istražiti kako učenici dekodiraju značenje nepoznatih riječi i fraza predstavljenih putem višejezične slikovnice, te istražiti varijacije u njihovoj toleranciji neodređenosti. Kao instrumenti korišteni su višejezična slikovnica *Mixter and Mixus Mic: Europe Adventure* i upitnik o toleranciji neodređenosti koji su sudionici ispunili nakon čitanja i slušanja slikovnice. Rezultati su pokazali da učenici koriste sklop strategija za otkrivanje vokabulara i leksičko zaključivanje kada dekodiraju značenje riječi i fraza na stranim jezicima, te da se u tom procesu uvelike oslanjaju na svoje prethodno znanje jezika. Osim toga, utvrđeno je da izbor strategija i izvora znanja ovisi o kontekstualnim čimbenicima, tj. o dostupnosti resursa, kontekstualnim znakovima i prirodi samog zadatka.

Ključne riječi: *dekodiranje značenja; leksičko zaključivanje; otkrivanje vokabulara; plurijezičnost; tolerancija neodređenosti; višejezičnost*

Appendix A
The multilingual picture storybook:
Mixter and Mixus Mic: Europe adventure

Figure A1

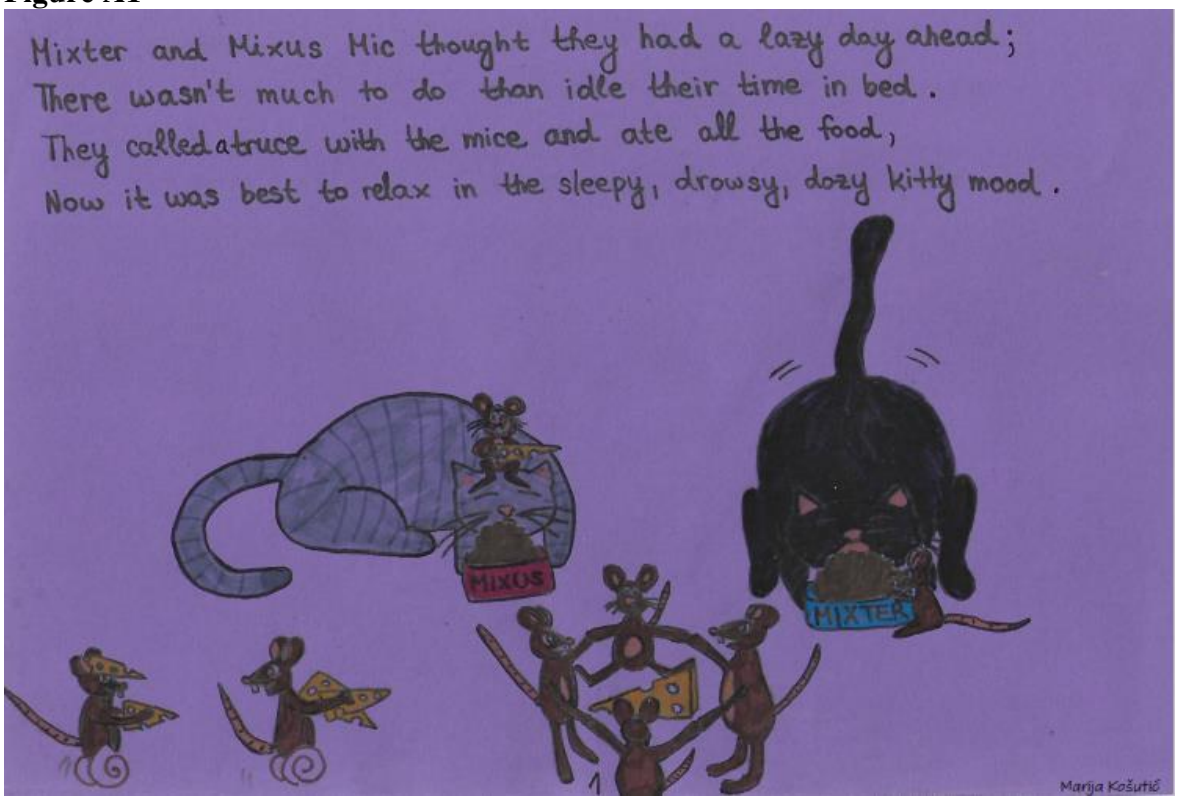
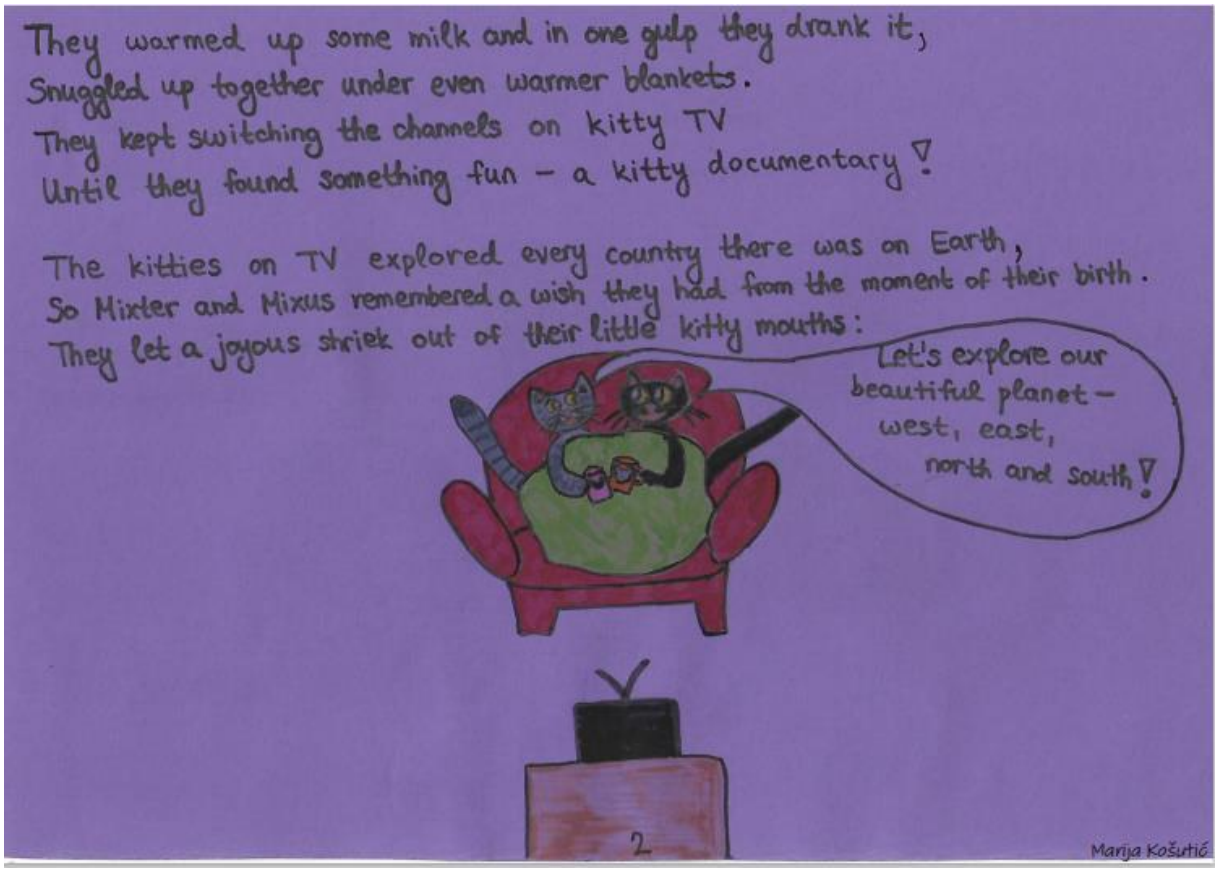


Figure A2



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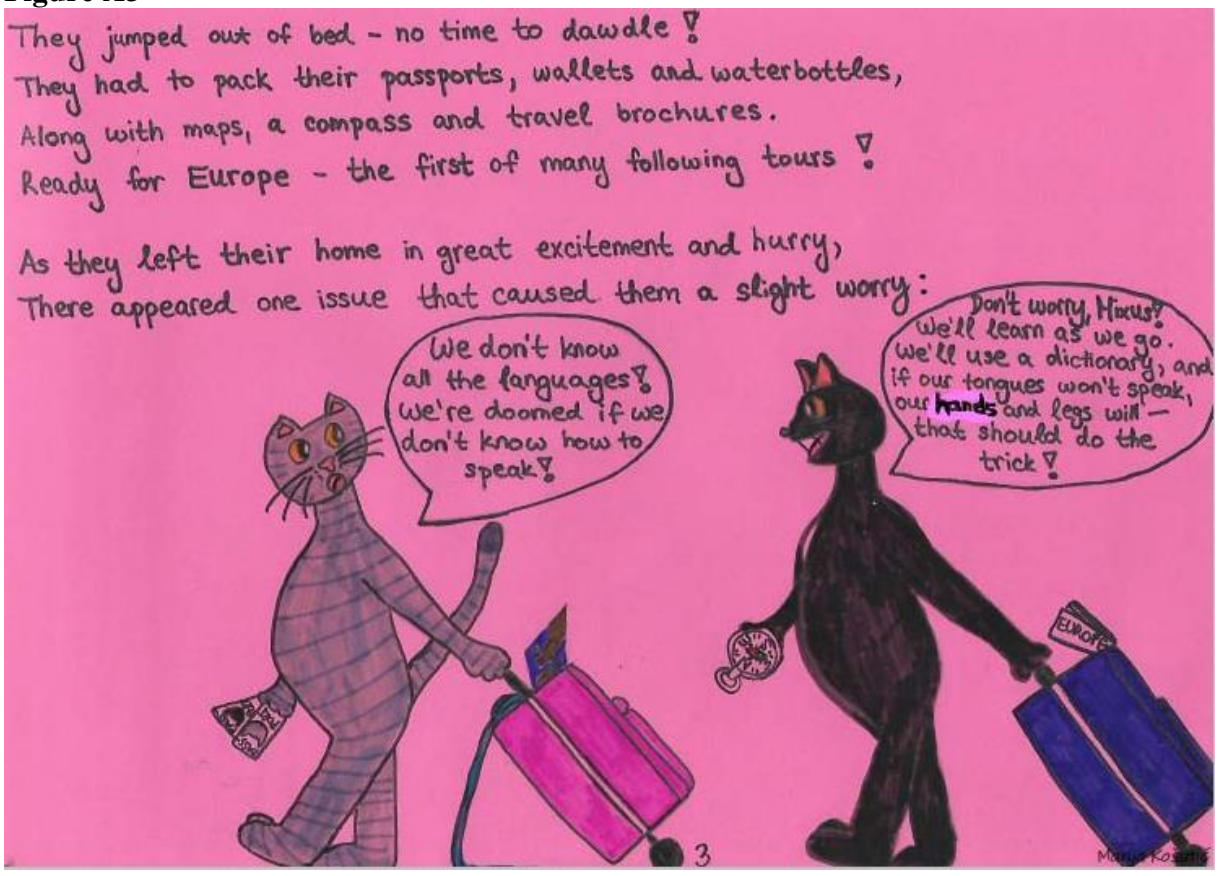

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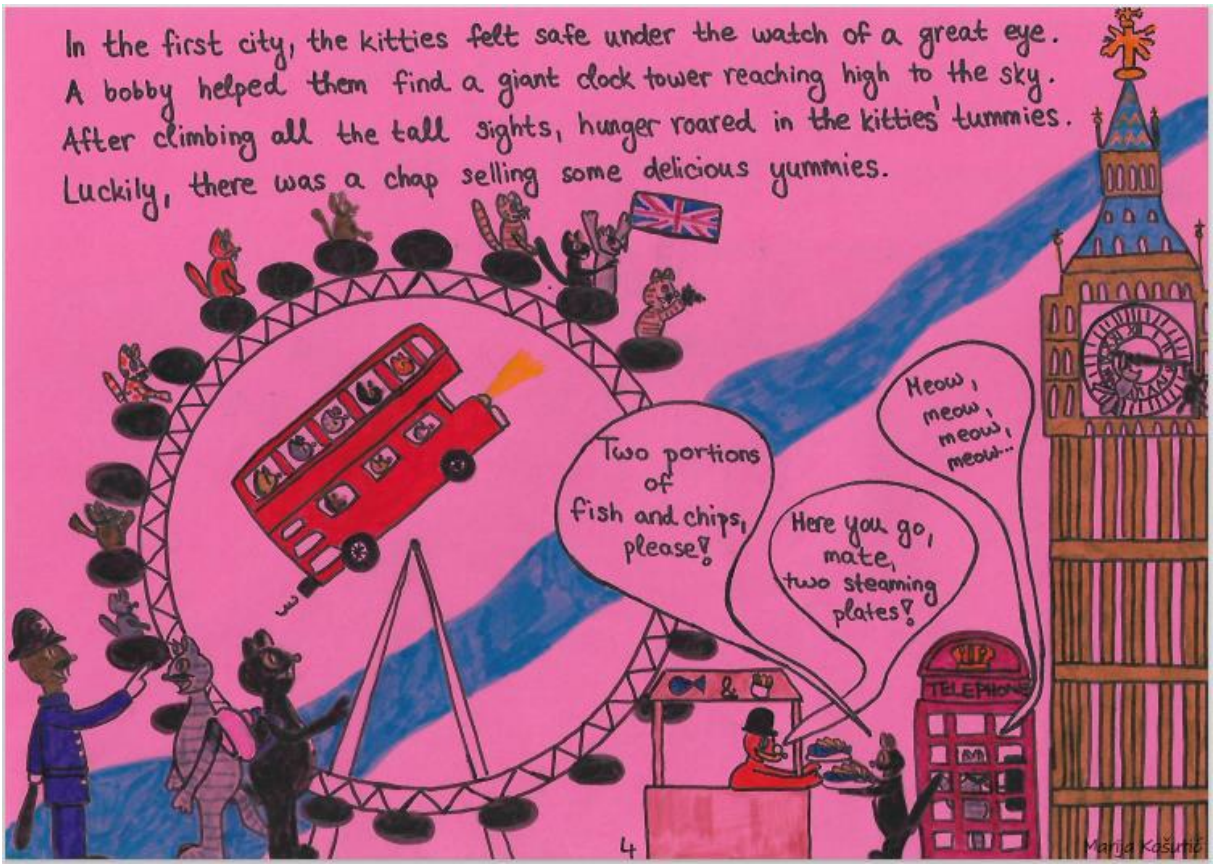


Figure A5

Figure A6

Figure A7

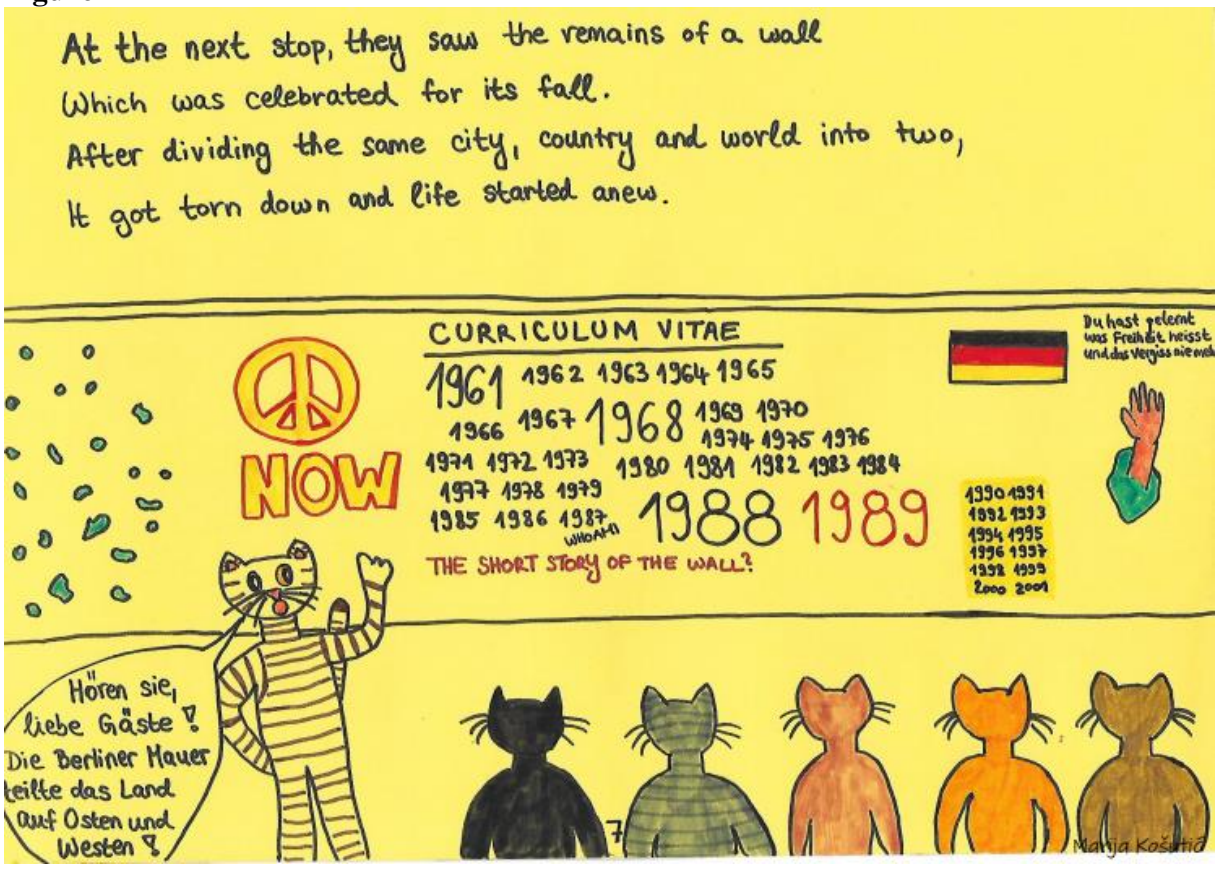


Figure A8

Figure A9

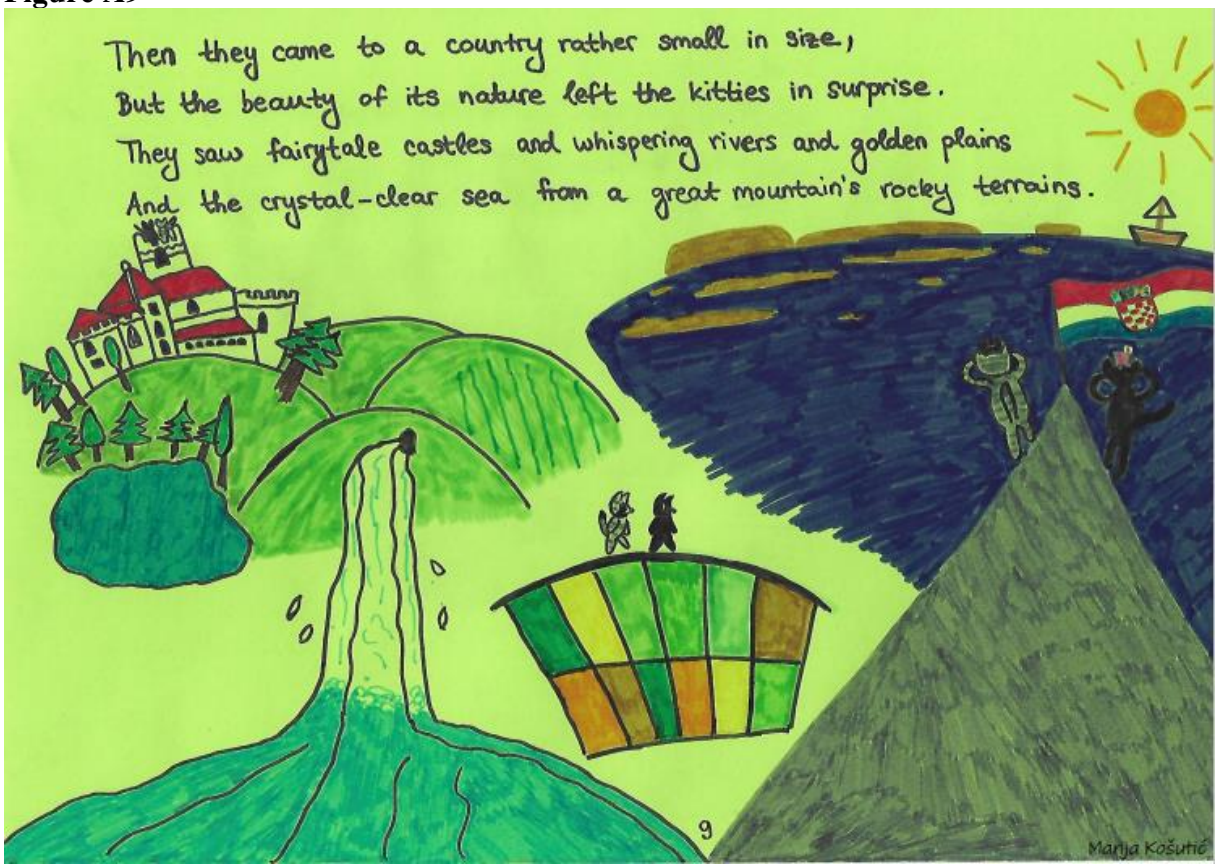
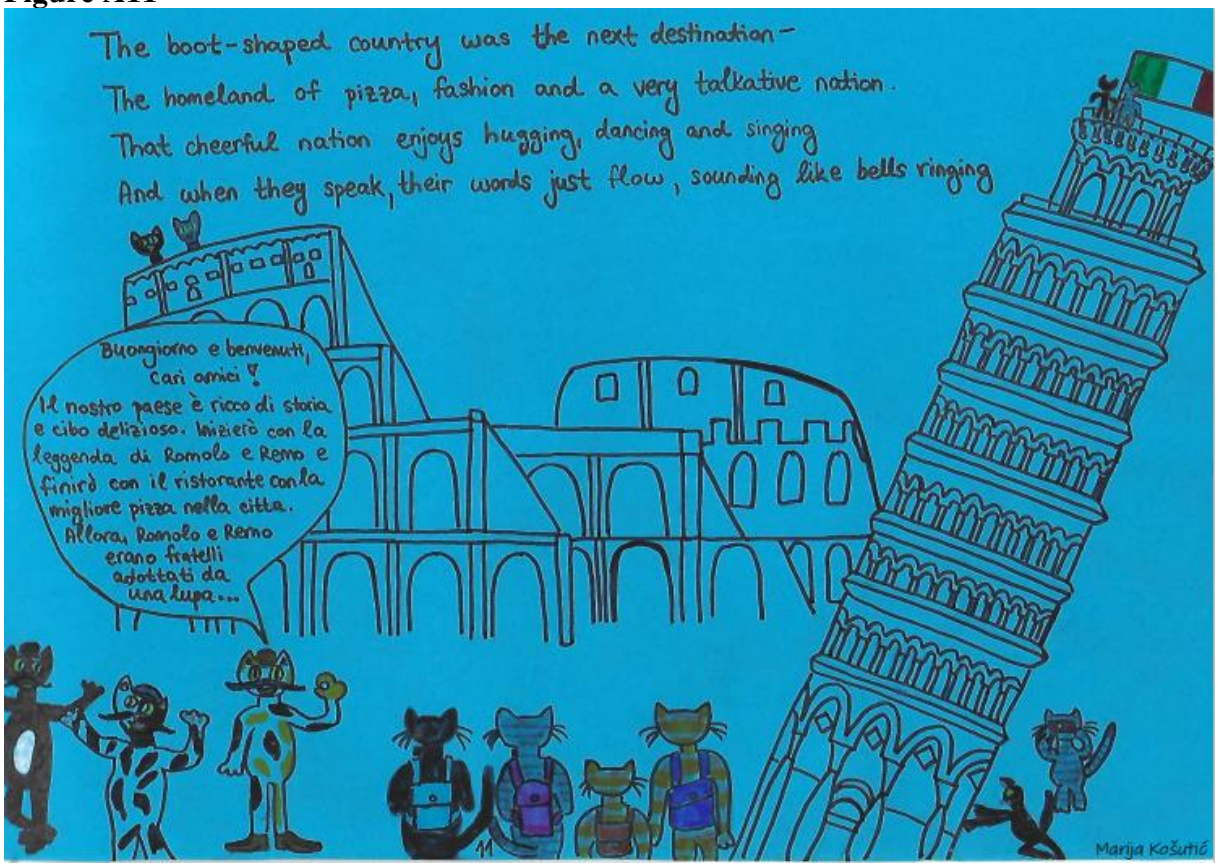


Figure A10

Figure A11



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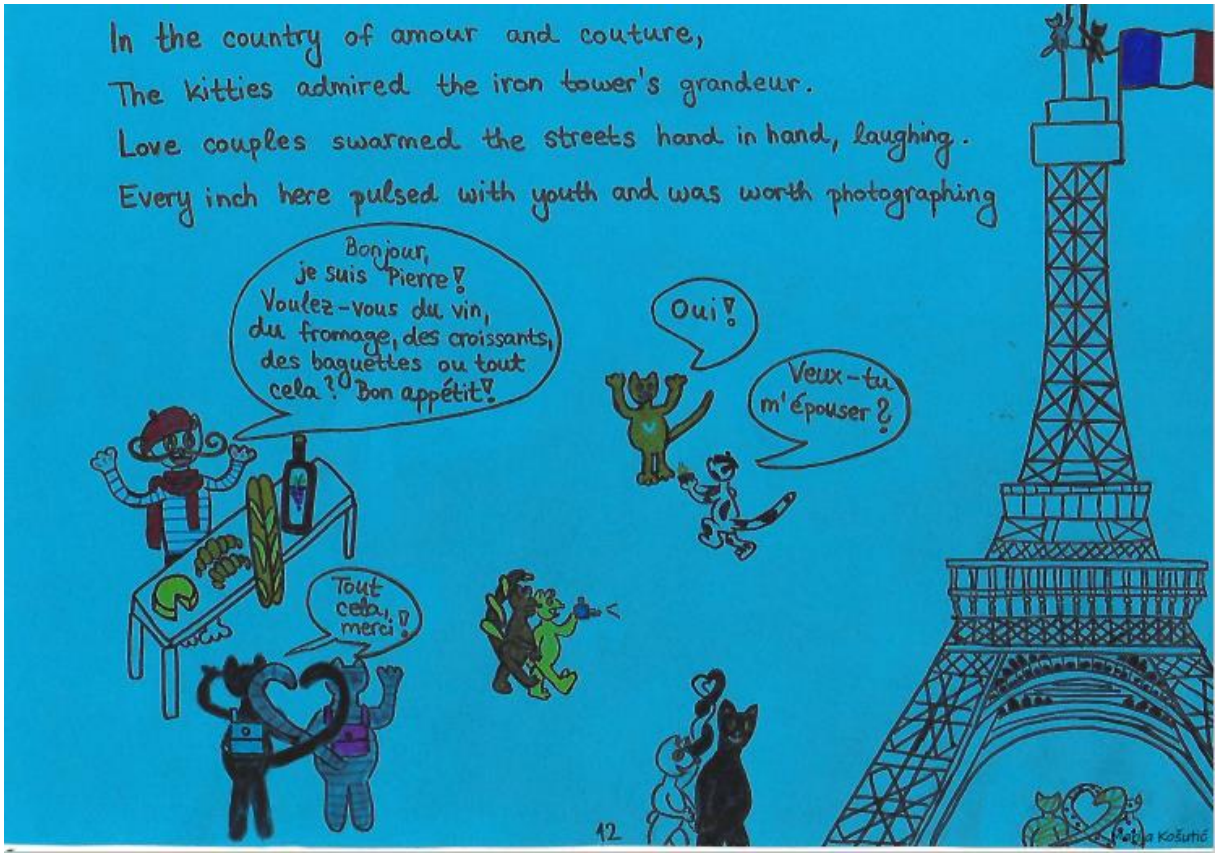
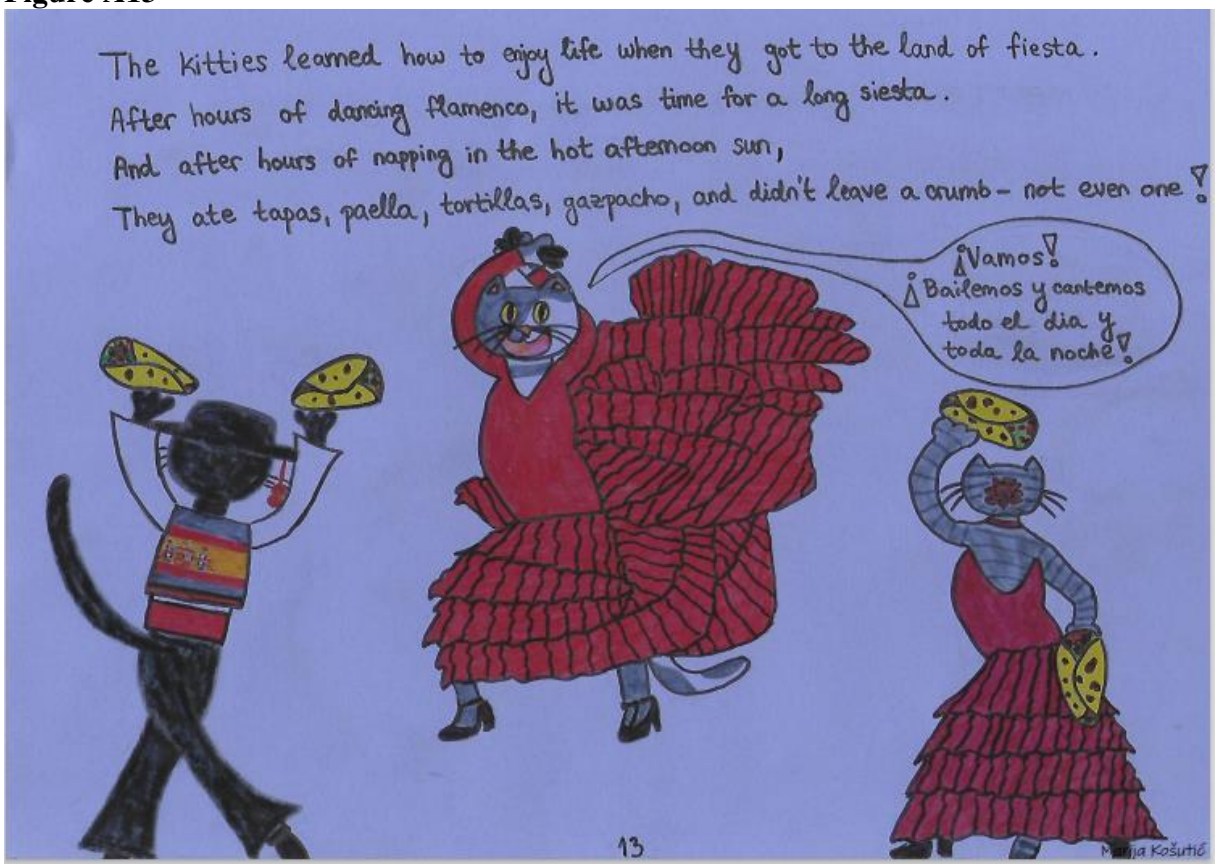


Figure A13



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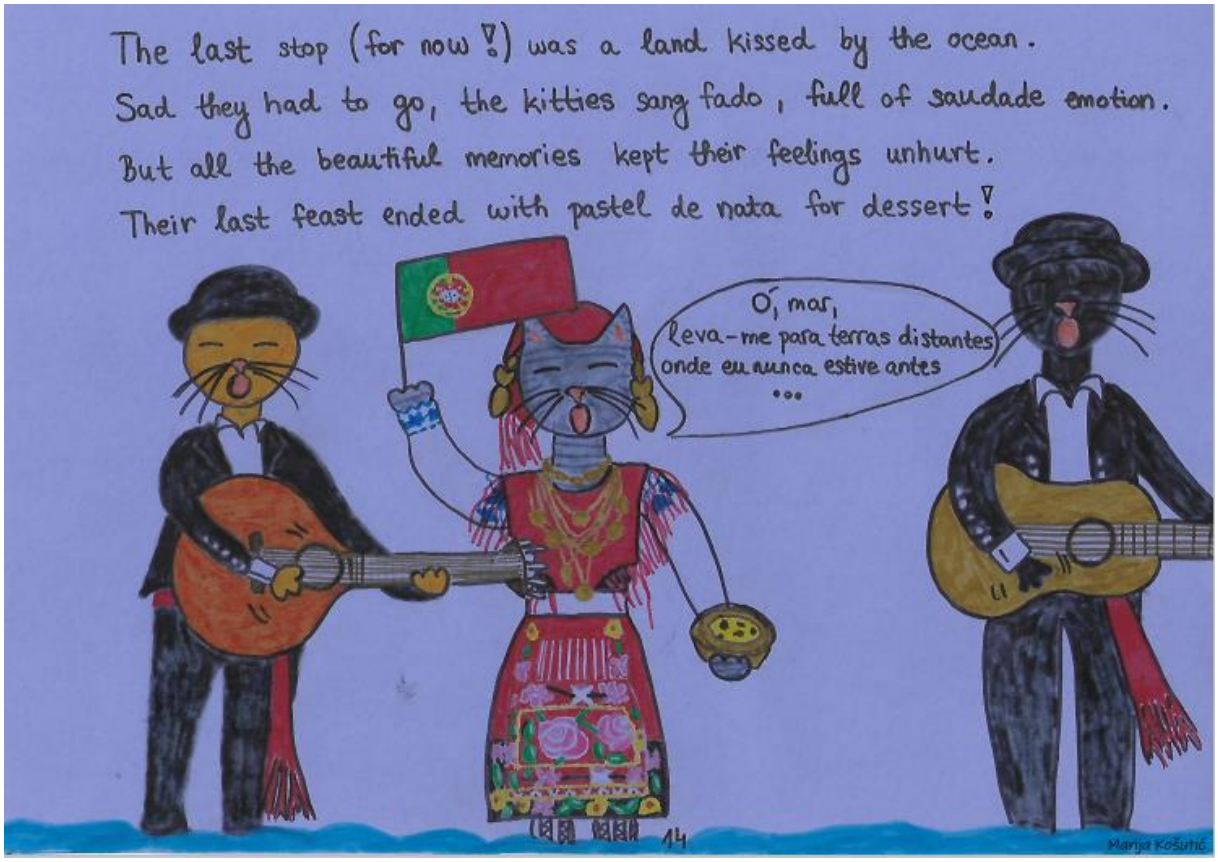

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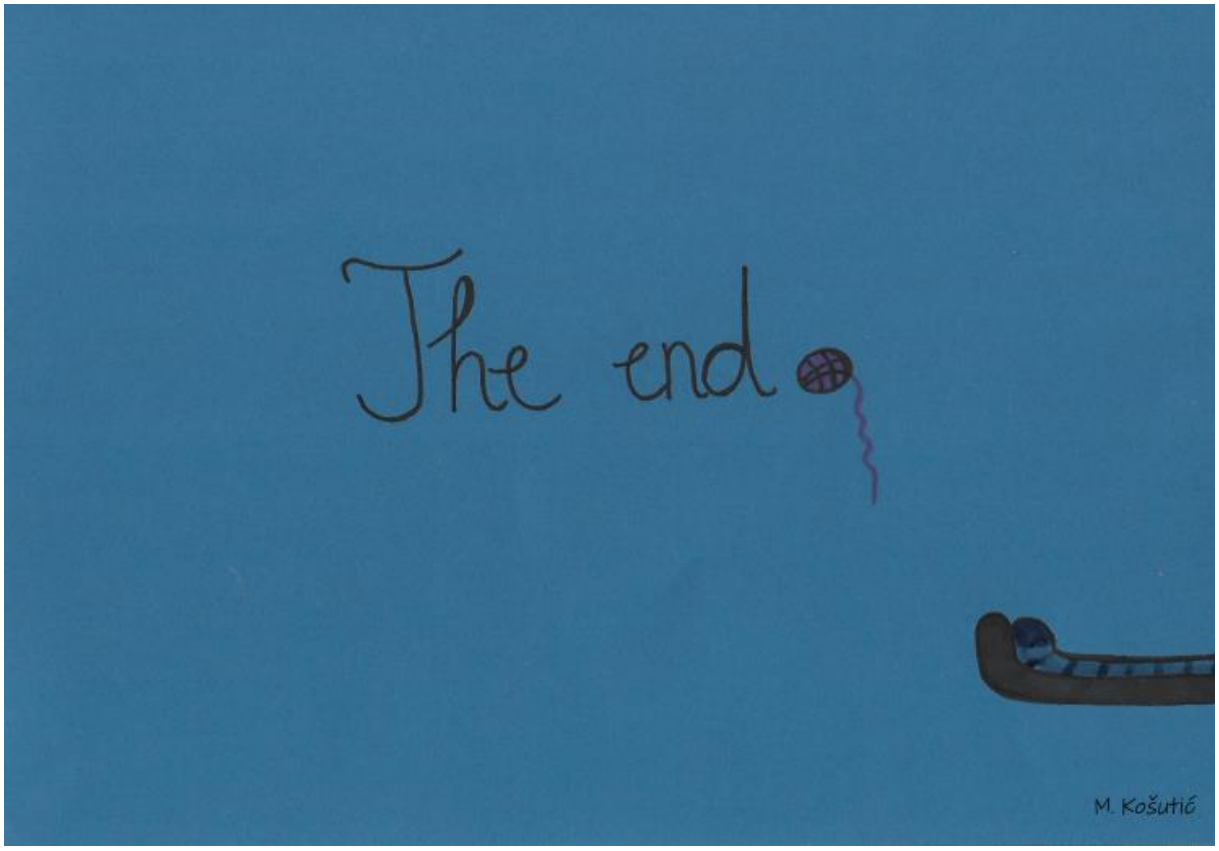

Figure A16

Appendix B

Tolerance of ambiguity questionnaire

GENERAL BACKGROUND:

1. My home country/-ies is/are ...
2. Have you lived/spent more than 3 months outside your home country/-ies? If yes, for how long?
3. My mother tongue(s) is/are ...
4. What other languages do you know/speak (even if just a little bit)?
5. Do you like learning languages? Why?
6. What languages are used in your family?
7. Do you find it normal when people use more than one language at the same time?
8. Do you or your family combine more languages while communicating?
9. Why do you combine different languages? (e.g. because you can't remember the word, because it sounds better to you, just for fun etc.)?
10. Do you like learning new words and phrases in different languages?
11. Do you study on your own (at home, in your free time, via mobile phone applications, through reading stories, listening to music…) the languages you also learn at school?
12. If you don't speak a language, do you still try to understand it when you hear it?
13. What helps you understand the meaning of a foreign word?

THE STORYBOOK:

14. Did you like the storybook? Why?
15. Was is easy or difficult to follow the storybook? Why?
16. How did you feel when you encountered words you didn't understand in the storybook? Were you worried like Mixus, or excited like Mixter?
17. Did you have fun figuring out the meaning of foreign words?
18. Did it bother you that you didn't understand all the words?
19. Did the language(s) you knew from before helped you understand the foreign languages in the storybook? How? Can you give an example?
20. What can you do to help yourself when you don't understand some word(s)?
21. Did you recognize the meaning of some words you didn't know before? If yes, which one(s)?

22. Is there a language in the storybook that you have heard for the first time? If yes, which language?
23. Do you consider some language(s) in the storybook especially difficult or easy to understand? Why?
24. What helped you in figuring out the meaning of foreign words in the storybook? Please give some examples from the storybook.
25. Which of the languages did you like best and why?
26. Did you notice in the storybook that some languages sound/look different from each other? Please give some examples.
27. Did you notice in the storybook that some languages sound/look similar to each other? Please give some examples.
28. Did you notice in the storybook that some words are the same or similar in different languages? Can you give some examples of such words from the storybook?
29. What did you like the most about the storybook?