

# The Acquisition of Wh-questions in English and Croatian: A Case Study

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**The Acquisition of *Wh*-questions in English and Croatian: A Case Study**

Master's Thesis

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## **Usvajanje pitanja u engleskom i hrvatskom jeziku: studija slučaja**

Diplomski rad

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Mojoj majci Sanji, koja me naučila govoriti

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## **Abstract**

This case study followed the process of first language acquisition of a child learning the Croatian language. A Croatian girl named Franka was recorded in her home, by her parents, several times per month, from the age of two until the age of three years old. The goal of the study was to collect recordings of the child's spontaneous speech in order to examine more closely the development of interrogative forms in children learning Croatian, as compared to children learning English as their first language. The paper first provides a comparison between the ways interrogative forms are constructed in English and Croatian. It gives an overview of previous findings on question acquisition, focusing more narrowly on the acquisition of *wh*-questions. What was gathered from the acquired data is then compared to a study of communicative functions in typically developing Croatian children, as well as to general information on question acquisition found in readers and studies on language development, which were mainly grounded on data collected from children learning English. Finally, it is shown that the results from the case study point to similarities as well as some significant differences in the processes of question acquisition between children acquiring Croatian in comparison to children acquiring English as their first language.

**Key words:** *first language acquisition, Croatian, case study, acquisition of wh-questions*

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## **1. Introduction**

In her book titled *First Language Acquisition*, Clark (2009) notes that “across languages, children’s early word combination take a remarkably similar form and cover a similar range of functions”. She mentions “similarities from one language to the next which can be seen in children’s two-word utterances from English, Luo (Kenya), and Finnish, languages from three very different language families” (157). The findings which Clark references here were recorded and published by Dan Slobin in the late 1960s. In his paper on universals of grammatical development in children, Slobin (1970) explains how, despite “a number of small, but intriguing differences ... what is remarkable at first glance is the uniformity in rate and pattern of development ... Within a given culture, and between cultures, the rate of development may vary somewhat from child to child, but the order of stages seem to remain constant” (3).

This paper will look for evidence of universalities as well as individualities between the processes of first language acquisition in children acquiring the Croatian language and children acquiring the English language, focusing primarily on the acquisition of interrogative forms. It will observe the various functions of interrogatives which appear in children’s speech and study more closely the process of acquisition of *wh*-questions in these two languages. For this purpose, a case study was conducted following the first language acquisition of a Croatian girl named Franka<sup>1</sup>. The child’s spontaneous speech was recorded in her home, by her parents, several times per month, from the time she was two years old until she turned three years old. The results from the present case study will be compared to the information provided by various sources on children’s acquisition of the English language, and to the results of several studies exploring question acquisition based on data collected from children acquiring English, as well as a study of children acquiring Croatian.

## **2. Interrogative forms in English and Croatian**

In order to draw a fair and detailed comparison between the processes of question acquisition in children acquiring English and children acquiring Croatian, it is necessary to first describe the structure of interrogatives in both languages. As will be shown, questions in both languages take very similar forms.

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<sup>1</sup> For the template of the parental consent form used to obtain consent, see Appendix.



## 2.1 Interrogatives in English

Bieber et al. (2013) identify three main types of questions: *wh*-questions, *yes/no* questions and alternative questions, whose basic uses are “to elicit missing information”, “to ask whether a proposition is true or false” and “to ask which of two or more alternatives is the case”, respectively (249). *Wh*-questions are described as beginning “with a *wh*-word that refers to a missing element in the clause” (250), the *wh*-words being *who*, *whom*, *whose*, *what*, *where*, *which*, *when*, *how*, and *why*. *Yes/no* questions are defined by having a verb-subject word order (“Are you okay?”), as opposed to the usual subject-verb word order of declarative sentences in English (“You are okay.”) (251). The verb-subject word order is also present in *wh*-questions when the *wh*-word is the subject of the sentence, as in “Who can give me some help?” (see Eastwood 2002, 28). As will be explained later in the text, this process of rearranging the word order when posing questions is called inversion, and is very important in studying language development as children who are beginning to learn and speak English often fail to invert the subject and the auxiliary verb when asking a question. Lastly, Bieber et al. describe alternative questions as “structurally similar” to *yes/no* questions; however, this type of question, instead of expecting a *yes/no* answer, “presents alternatives for the addressee to choose between”. The example mentioned is “Do you want one or two?” (251).

Alongside these three “main” types, there are other ways to form questions, such as using question tags (252); words *if* and *whether* can be used to introduce dependent *yes/no* interrogative clauses to express indirect questions (326), and adverbs such as *really* and *seriously* can stand alone and be used as questions (207). Questions can also consist of verbless structures, as in the sentence “How about your wife?” (440). Furthermore, declarative clauses with the subject-verb structure can be used to ask questions, their “question status being signalled in speech by rising intonation or in writing by a question mark” (249). It is important to note here, as the grammar notes as well, that all three types of questions can be used not only for eliciting information, but also for other purposes, such as posing a rhetorical question, giving suggestions and orders, as well as making polite requests (251).

## 2.2 Interrogatives in Croatian

In the introduction of his paper on questions in the Croatian language Mihaljević (1995) stated that the issue of questions was neglected in contemporary Croatian linguistics, and posed some questions which linguists ought to answer. Actually, questions are, according to Mihaljević, the most neglected area of Croatian linguistics (17).

Mihaljević explains that traditionally, questions are categorized either as general, with the whole proposition in the form of a question, or as special questions, where only one part of the sentence is questioned - the ones belonging to the latter category include question words such as *who*, *what*, *where*, etc. (19). Mihaljević himself, on the other hand, differentiates between *yes-no* (Cro: *potvrdno-niječna*), special (that is, *wh*-questions; Cro: *posebna*), alternative (Cro: *alternativna*), tag (Cro: *dopunska*), and echo questions (Cro: *ječna*) (20). The first three types have already been described. Tag questions comprise of a declarative clause and what Biber et al. (2013) describe as question tags - an operator + pronoun subject, used to “seek confirmation of the statement the speaker has just uttered”, such as “She’s so generous, *isn’t she?*” (251). Next, Mihaljević (1995) defines echo questions as “reactions to the interlocutor’s statement” in situations in which a person fails to hear something the interlocutor said, or if something said was unbelievable and therefore an explanation is required. They are requests for information about indeterminate parts of another person’s spoken word, specific in two ways: the interrogative pronouns are not placed at the beginning of the sentence, and they are stressed. The author offers several examples of these questions, such as “They are two what?” (Cro: *Oni su dva što?*) (32).

Mihaljević (1995) also mentions interrogative sentences which do not function as questions, such as the so-called rhetorical questions, and discusses the notion that interrogative sentences can also be used to make requests, wishes, demands, etc., or simply to test the communication channel, as children often do by saying “Guess what?” (33). Lastly, Mihaljević discusses politeness. In order to provide a short review, he explains that in most languages, politeness is expressed through asking the interlocutor about their abilities, wishes, and intentions. This is, according to the author, another linguistic phenomenon which is often neglected in Croatian linguistics. (35)

In his paper, Mihaljević (1995) noted that, at the time, not one Croatian grammar offered a classification of questions (17). This is still true in several more recent Croatian grammars, such as Katičić (2002), Barić et al. (2005), as well as Silić and Pranjković (2005). Describing questions, Barić et al. (2005) first note that the only mark of an interrogative sentence can be its rising intonation in spoken language, indicated by a question mark in written language. They continue to explain that “beside interrogative intonation, which marks every interrogative sentence, a question can be expressed by using interrogative particles” which are *li*, *da li*, *je li*, *da*, and *zar* (447). On the topic of what is usually defined as *wh*-questions, Barić et al. simply note that when (declarative) sentences are restructured into questions, indefinite pronouns are

replaced by interrogative pronouns such as *tko, što, koje* (*who, what, which*) and indefinite adverbs are replaced by interrogative adverbs such as *gdje, koliko* and *kada* (*where, how much, when*) (449). This approach, according to which interrogative, as well as negative sentences, are viewed as restructured declaratives is a rather dated view of this problem. Silić and Pranjković (2005) similarly note that, while declarative sentences are unmarked, interrogatives are marked either by interrogative pronouns and adverbs, intonation, or by interrogative particles (281). Katičić (2002) offers an almost identical account of the ways questions are constructed in Croatian. It is interesting to note that Ronelle Alexander (2006), in her attempt to offer an English written grammar of three quite similar Slavic languages - Bosnian, Croatian and Serbian, does note that “there are two basic kinds of questions” in the three languages she describes, the first type beginning with a question word such as *who, what, where, when*, structurally similar to the English *wh*-questions, and used to request concrete information, and the second type expecting either *yes* or *no* as an answer, normally containing the particle *li* (9). These types are evidently what Mihaljević (1995) described as special and *yes-no* questions, respectively.

The main differences between the structures of interrogatives in English and Croatian seem to lie firstly in the fact that Croatian makes use of interrogative particles such as *li*, while English mainly resorts to subject-verb inversion. Despite this difference, it is clear that questions are formed in a very similar manner in both languages, which allows for a sensible and effective comparison between the ways in which children learning these two languages acquire interrogative forms. Although the same types of questions appear in both languages, this paper will mainly focus on children’s acquisition of *wh*-questions in order to examine the differences and the similarities in the process of their acquisition.

### **3. Children’s question acquisition**

In their review of the literature on question asking in childhood, Ronfard et al. (2018) note that “the ability to actively gather information from other people and to integrate it with what they are learning through exploration, observation, and testimony is one of the most powerful learning mechanisms available to children” (1). They note two studies, one conducted with 12-month-old infants, and another with 16-month-olds, which have found what is described as the earliest evidence that infants seek information from an adult in response to a lack of knowledge (5). The ability to gather information is naturally closely related to the ability

to pose questions, the answers to which will then provide the child with the information he or she wants or needs.

Michelle Chouinard et al. (2007) worked on four studies investigating children's questions as a mechanism for cognitive development. In the first one, they compiled a corpus of "naturally occurring, spontaneous questions asked by children aged 1;2-5;2 years" and divided the children's questions into "information-seeking versus non-information-seeking questions" in order to examine questions that seek out information (17). They found that the main function of questions for children is to gather information about the world. Based on their finding according to which, when conversing with an adult, children on average ask from 76 to as many as 95 questions per hour, they concluded that "asking questions is not rare or even intermittent for children - it is a constant, natural, central part of their interactions with the adults in their environment" (42). Based on their findings in all four studies, Chouinard et al. found evidence for the following five predictions:

- (1) Children can and do ask questions to gather information.
- (2) Children get the information they request.
- (3) Children are motivated to get the information they request.
- (4) The questions children ask are relevant to their cognitive development.
- (5) Children can generate questions purposefully to achieve a goal, and use the information they get to reach that goal and achieve a change in knowledge state. (99)

Although both studies examined data collected from recordings of children learning English, it is safe to assume that evidence for all of these claims can be found both in data collected from children learning any other language, as well as in the present study.

### **3.1 Acquisition of *wh*-question forms**

Eve Clark (2009) notes that "children start to make requests from a very early age ... but they take time to master the adult forms of questions" (210). When it comes to the acquisition of *wh*-questions, Clark explains that "children display a rather stable order of emergence for different question-types ... an order that appears to follow their understanding of each *wh*-question word". The order of acquisition, according to Clark, is the following: *where*, *what*, *why*, *who*, *when* (208). However, researching the linguistic factors that contribute to the sequence of acquisition of *wh*-questions, Bloom et al. (1982) found that the order of acquisition for all seven children in their study was "*where* and *what* at average age 26 months, then *who* at average age 28 months, then *how* at average age 33 months and *why* at average age 35 months", while "*which*, *whose*, and *when* questions occurred rarely, even at age 36 months

when the study ended” (1086). In a 2003 study of twelve children, Rowland et al. confirmed Bloom’s order of acquisition (see Rowland et al. (2003)).

It is important to keep in mind that initially, children heavily rely on formulaic utterances in asking questions, and that, as Clark (2009) notes, production does not necessarily imply understanding. In acquiring *wh*-questions, children demonstrate a gradual progression from simple, formulaic frames for asking questions, such as *wh*-word + demonstrative to more elaborate interrogative items, such as *wh*-word + demonstrative + noun + verb phrase (210). To be able to “produce creative syntactic constructions”, children need to first segment out the *wh*-element (211). This gradual progression from formulaic frames to more elaborate formulas takes place during the acquisition of *yes/no* formulas as well, where children gradually extract the verbs. Clark provides the example of progress from “Want this?” to “D’you want this?” (212).

Hoff (2013) notes that the first questions expressed by children learning English are affected by their late acquisition of auxiliaries. Their earliest *wh*-questions “are typically affirmative statements with a *wh*-word at the beginning, such as ‘What that is?’ Next, auxiliaries appear in questions” (182). However, the auxiliary verb *to be* is already present in this example sentence. Hoff continues to explain that after the auxiliaries have “appeared”, “*wh*-questions are still not adultlike because children do not invert the subject and auxiliary, instead producing utterances like ‘What a doctor can do?’ Once subject-auxiliary inversion has been acquired, *wh*-questions are adultlike in form” (182). This account of the process of acquisition of *wh*-questions seems as an over-simplification, as the process of acquiring the inverted form of *wh*-questions is not as straightforward as it would seem according to Hoff’s description. Firstly, it is important to note that research has shown that “children produce uninverted *wh*-questions at the same time as they are beginning to produce a large number of correctly inverted *wh*-questions”, as Rowland and Pine (2000) note in their study of subject-auxiliary inversion errors (159).

In the study, the authors argue against the idea that children use the subject-auxiliary inversion rule to produce correctly inverted *wh*-questions. Rather, they assume, and find, that early production of correctly inverted *wh*-questions can be expected without general access to the subject-auxiliary inversion rule, simply relying on the input the children receive. Their study of fifty five hours of data collected from one child between the ages of 2;3.4 and 4;10.23 finds that the inverted and the uninverted *wh*-questions the child produced involved different pairs of *wh*-words and auxiliaries. The child therefore consistently used structures such as “Where

did...?” and “What are...?”, and at the same time “Why I can’t...?” (169). Rowland and Pine (2000) concluded that the inverted questions in the child’s data are those that had occurred with high frequency in the child’s input, and they defined their results as adding “to a growing body of evidence that suggests that children’s early multi-word speech may reflect low scope lexically-specific knowledge, not abstract category-general rules” (177), as opposed to what Hoff’s somewhat simplified account of *wh*-question forms suggests. Brooks and Kempe (2014) note two more errors which often appear in children acquiring English: “raising errors in which the auxiliary is omitted and the tense and agreement marking remains on the main verb (e.g., *What we saw?* instead of *What did we see?*) and double marking errors in which tense and agreement are marked both before and after the verb (e.g., *Why can he can’t go to the park?*)” (508). Although this paper does not argue either for or against various approaches to first language acquisition, it is worth mentioning Rowland and Pine’s (2000) findings and their insistence on the importance of input in children’s language acquisition.

Aside from the issue of interrogative forms treatment in Croatian linguistics, the process of question acquisition appears to be equally understudied. An exception is a 2019 study by Nadina Božić, conducted in order to research the order and time of appearance of late communicative functions in children, such as the function of requesting information. This study provides very useful information for further research in question acquisition in Croatian. The study included 134 Croatian children of typical development, aged between 18 and 47 months, and the data collected was based on a questionnaire filled out by their parents (from Abstract). In her paper, Božić (2019) explains that late communicative functions are those that appear when children are over 18 months old, and that this is the period in which the already existing functions are developing: children learn to use them in a more appropriate and flexible manner; and, additionally, many new functions appear (11). In order to explain and illustrate the communicative function of requesting information, Božić paraphrases a list of communication milestones in children’s development provided in the *Guide to Communication Milestones* by Lynn Flahive and Janet Lanza, which they describe as based on “numerous reliable sources” and representing “an average age at which most monolingual, English-speaking children will acquire a skill” (3). Flahive and Lanza (2012) note that a child that is 1-2 years old, “starts to use question forms, beginning with ‘What’s that?’” and “uses rising intonation”. A 2-3 year old child might be expected to ask “simple ego-centric questions, such as ‘Where cookie?’”, as well as “‘Where...?’, ‘What...?’, ‘What...doing?’ questions”, while children that are 3-4 years old are expected to use *what*, *where*, *when*, *how*, and *whose* when asking questions, they are

expected to ask “one word ‘why’ questions”, and “‘is’ questions”, and to invert the subject and the auxiliary in *wh*-questions (19). Their account of the order and expected ages of acquisition almost entirely agrees with the information provided by Bloom et al. (1982). Božić (2019) continues by noting that the development of children’s ability to ask questions can be traced by examining the frequency of interrogative forms in the relation to their overall production, and by taking notice of the age at which certain forms first appear in their speech. (13).

The author then compared these notes on milestones in the process of language acquisition, which were primarily based on research carried out on data of children learning English, to the results of her study. When it comes to requesting information on inanimate objects by using questions such as “Where is something?” and “What is something?”, her results generally agree with the information provided by Flahive and Lanza (2012) relating to the expected age of acquisition of “What...?” and “Where...?” questions. When it comes to requesting information on other people, Božić’s (2019) study confirms the notion that the first questions to appear are those on others’ actions. As children’s social cognition develops, they ask more questions and make more comments on other people’s, as well as their own, wishes, thoughts, and feelings. At two years old, children begin to look for the causes of people’s mental states. The results of her study show a sharp incline around the children’s third birthday in both requesting and giving information on other’s thoughts (23). However, a major difference Božić found between the results of her study and the supposed order of acquisition of *wh*-questions was in relation to the *wh*-word *whose*: while what Božić calls “foreign literature” notes that the question “Čije je nešto?”, that is, “Whose is something?” appears in the speech of three-year-olds, her own study showed that this question appeared a lot earlier in children learning Croatian. It was already present in the speech of 60% of the children younger than 24 months, as well as in the speech of 90% of the children that were between 24 and 29 months old, appearing more often even than the question word *što* meaning *what*, which is considered to be the first *wh*-question word children acquire (22).

In relation to this large disparity, it is interesting to mention a 1975 study by Svenka Savić in which she discussed the problem of *wh*-question acquisition in relation to adult-child communication in children acquiring what was at the time called the Serbo-Croatian language, but what would today be identified as the Serbian language, as the children were born and grew up in Novi Sad and spoke Serbian. However, there are innumerable similarities between the two languages, and the *wh*-question words in the two languages are largely identical, with the exception of Serbian using *šta* instead of the Croatian *što*, *gde* instead of *gdje* and *ko* instead of

*tko*. In her study, Savić (1975) noted the frequency and order in the production of questions in a pair of twins, Jasmina and Danko, from the time they were 13 months old until they were 36 months old. Questions beginning with the question word *čije* - *whose* first appeared in Jasmina's speech at the age of 24 months, while in Danko's speech they first appeared at the age of 29 months (257). Other data provided by Savić will be discussed in relation to the findings of the present study.

#### 4. Case Study

The child's parents started recording Franka when she was 2 years and three weeks old - 2;0.21, and stopped recording her speech regularly when she was 3 years and 26 days old - 3;0.26. She was recorded two to three times per month, usually once every fortnight. There are some recordings missing from 2;6 and 2;9 due to the child having a cold. Altogether, there are 43 recordings, and around 12 hours of data. The child's mother is a middle school professor of geography and the father is a meteorologist, and at the time they lived in Sesvete, a city district of Zagreb. The parents were 32 and 37 years old respectively when the recording sessions took place, and both had previously obtained their Master's degrees. The mother grew up in the Slavonian region and speaks with a Slavonian dialect, with hints of Kajkavian due to her having lived in Zagreb for more than ten years, and the father grew up in Zagreb and speaks with a Kajkavian dialect. Franka's dialect is most correctly described as Slavonian, but with a clear influence of Kajkavian. Franka was raised monolingual, although in two of the recordings she can be heard listing to some English words for colours and numbers - this was due to her watching some cartoons in English. However, at the time of recording she was not actively learning the English language, or any language other than Croatian. It is also significant to note that Franka was already attending kindergarten at the beginning of the recording period.

In research on first language acquisition, children's mean length of utterance is often noted in order to point to their stage as well as rate of linguistic development. Brooks and Kempe (2014) define mean length of utterance or MLU as "a commonly used measure of syntactic development based on samples of spontaneous speech" which "refers to the average number of morphemes produced per utterance" (693), a method that was first introduced by Brown (1973). It is important to take notice of the arguments for, as well as the arguments against, using a child's MLU, as the method has several shortcomings. In their review of the practice of using MLU for identifying language impairment in preschool children, Eisenberg et



al. (2001) invite the reader to consider the following two utterances: “want more cookies Mommy” and “I want to go home” and point that, although both utterances are five morphemes in length, the first sentence is an ungrammatical simple sentence, while the second one is a grammatical sentence containing two clauses in an embedded relationship (324). They also note that “two studies have reported that MLU is larger for samples that are elicited at a child’s home than for samples that are elicited at a clinic” (326), and discuss at length the challenges of utterance segmentation and exclusion, as well as morpheme assignment, in determining a child’s MLU. The authors call attention to the fact that most published textbooks suggest using Brown’s rules for determining utterance exclusion, although some other textbooks suggest their own rules which Brown does not mention, such as excluding imitations of immediately prior adult utterances (328). Eisenberg et al. (2001) conclude that MLU should not be viewed as a measure of syntactic development, but as one way of measuring utterance length (338), and point out that several authors have suggested words as a better unit for measuring utterance length (339). Similarly, in their text on emergence of syntax in children, Marina Vasilyeva et al. (2008) cite several studies and argue that MLU “does not provide as accurate an assessment of skill level in later stages of syntactic development as at earlier stages” (85).

It is important to note here that Croatian is a morphologically rich language, which is why the two sentences mentioned above containing five morphemes, translated into Croatian, would contain at least six or even seven morphemes, depending on the morpheme assignment method used by the researcher. In research concerning the language development of children learning Croatian, children’s mean length of utterance is not often calculated, nor is it often used to signal their syntactic development. In rare cases when it is noted, it is usually determined using words rather than morphemes (Cro: *PDIr - prosječna duljina iskaza u riječima*, Eng: MLUw) (as in Vidović and Mildner (2010)). In their overview of various types of measurements of language development as markers of specific language impairment, Kelić and Kuvač Kraljević (2012) state that research has shown that MLU and MLUw highly correlate with each other. They emphasise that, due to the MLUw being much easier to calculate, especially in languages with complex morphology, it is often advised that this method be used (25). Since this paper compares language acquisition processes in children learning English and Croatian, it did not seem productive to determine Franka’s MLU. However, in relation to the above mentioned *Guide to Communication Milestones* by Flahive and Lanza (2012), as well as to Božić’s (2019) diagram representing the course of development of communicative functions, it was easy to determine that Franka was a typically developing child with no developmental delays.

## 4.2 Methodology

Franka was recorded in her home, sometimes in the home of her grandparents and a couple of times on other locations, by her parents, using their smartphones. The recording sessions usually took place during intervals of play and reading, as well as before or during meals. Ambridge and Rowland (2013) describe recording children's spontaneous speech in conversation with caregivers as "perhaps the simplest method for studying language development" and warn that "far from providing a direct window on what children say and hear, spontaneous-speech methods provide a tiny sample" as the sampled data could underestimate, as well as overestimate productivity (150). However, as many of Franka's recording sessions took place while the child and her mother were reading various picture books, the mother can often be heard asking Franka questions about what the characters are doing, wearing, etc., which are questions that would, according to Ambridge and Rowland, fall under the category of elicited production. The authors define the family of methods known as elicited production as "a close second" to analysis of spontaneous speech data in language acquisition research. These methods lie along a continuum from least to most structured, and Ambridge and Rowland (2013) illustrate the least structured method of eliciting production as showing children "a picture, animation, video or live enactment" and asking "a neutral question such as 'What's happening?'" while "more constraining questions such as 'What's Ernie doing?'" are often used "when it is desirable to exert more control over the constructions that the child could use for her answer" (151). Similar questions can often be heard in the conversations between Franka and her mother. However, it is important to note that in this study the parents were not instructed to attempt to elicit any certain kind of response, they were instructed to simply encourage the child to speak as they normally would in their everyday communication. Even before the recording sessions began, the mother would often use these situations, such as reading picture books, to encourage Franka to speak. Therefore, the method used in this research would still more correctly be described as recording spontaneous speech in conversation.

In addition to the simplicity of this method which Ambridge and Rowland mention, it is worth noting some of its other benefits. Firstly, the method allowed for the recording sessions to take place in the child's own home where she was surrounded by her parents, and occasionally other family members, around whom she was most relaxed and naturally most talkative. There was no need for the researcher to be present. Also, as the parents' smartphones were always on hand, the recording sessions could, and did, start spontaneously, when the

parents noticed that the child was particularly talkative. Since the child was already familiar with and used to the smartphones often being in her vicinity, they did not get in the way of the child's usual play and did not interfere with the conversation flow as she was usually not aware that she was being recorded. This method even allowed for some recordings to be made of the child deep in play by herself.

### 4.3 Acquisition of Croatian *wh*-questions

The first question Franka uttered while being recorded for the first time was a repetition of her mother's question "Šta je mama radila?" - "What did Mommy do?", although at the time Franka was not able to pronounce the letter *r*, or the Croatian letter *š*, known in English as the fricative sound /sh/ or *ʃ*, which is not in the least surprising for a 2 year old child. Accordingly, at the time Franka was not able to pronounce her name, and referred to herself as *Anka*. She would later on learn to articulate the phoneme /r/, at 2 years and seven months of age, and by the age of three she was able to pronounce all of the phonemes of the Croatian alphabet. During the first recording sessions which lasted 12 minutes and took place when Franka was 2;0.20 old, she asked her mother the following 16 questions, some repeated more than once:

(Š)ta to?	What that? (x4)
Ko je to?	Who is that?
Di je bubama(r)a?	Where is the ladybug?
(H)o(ć)emo jo(š)?	Will we have some more?
(Š)ta je Anka (r)adila?	What did Anka do? (x2)
(Š)ta (j)e to?	What is that? (x7)
Kako se to zove?	What is this called?
Da (li) moze Anka papati to?	Can Anka eat this?
(Š)ta (r)adi ovo?	What does this do?
Je (č)i(s)to?	Is it clean?
(H)o(ć)e(š) još? <sup>2</sup>	Want some more?

During this recording session, she uttered many two-word utterances but also several three- and four-word utterances. In all of the data collected from the recordings, there are 766 questions posed by Franka, some of which are one-word questions such as "Why?", some of which are direct repetitions of questions posed to her by her parents, some of which are rhetorical questions, etc. At the beginning of the recording period, she already showed clear understanding of the question words *što*, *tko*, and *gdje*, meaning *what*, *who* and *where*,

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<sup>2</sup> Bracketed are the phonemes which Franka either omitted or replaced by other phonemes which children often use to substitute for the ones which are harder for them to articulate. This is so as not to create an illusion that she articulated everything correctly. E.g. she often used /l/ instead of /r/, and /t/ instead of /ch/ and /sh/. For more information on simplifications in early language production, see e.g. Clark: Sounds in words: Production (94-121).

respectively. However, the forms she actually used were *ta* as the fricative free version of *šta*, the informal form of *što*. It is important to note here that the informal forms of *tko* and *što - ko* and *šta* are widely spread across all dialects of Croatian and are regularly used by Croatian speakers in everyday informal speech. These forms are so common that Franka began forming all of her questions by using *ko* and *šta* a lot sooner than she started using *tko* and *što* - in fact, there is not one recorded instance of her using *tko*, while the earliest instance at which she can be heard using *što* was when she was 2;11.4 old, after which she used it a handful of times. Similarly, when it comes to the Croatian equivalent of the English *what - gdje*, there is an informal form *di*, which is again widely used in colloquial Croatian. Although already at 2;1.10 Franka can be heard attempting to say *gdje* and uttering *dje*, once even beginning to say *gdje*, she most often opted for *di*. Moreover, the formerly described interrogative particle *li* which is used to pose *yes* or *no* questions is more often than not omitted in informal settings and there is no record of Franka using it. All of this is worth mentioning in order to clarify beforehand that if Franka's questions sound ungrammatical or incorrect the reason for this is often the colloquial speech, and input, of her parents, and not necessarily her inability to articulate the formal forms of words.

Although Bloom et al. (1982) noted that "Who...?" questions appeared on average at 28 months of age (1086), Franka made use of these questions from the beginning of the recording period. She would often use "Ko to?" meaning "Who that?" when referring to animate as well as inanimate objects. She was rarely corrected on this and in the first recordings her mother can often be heard using either *tko* or *ko* (who) instead of *što* (what) when asking the child questions about inanimate objects. In an interview, the parents mentioned that around the time at which the recording sessions took place, Franka was asking "Ko to?" so often that her neighbours nicknamed her "Ko-To". In the transcripts, there are 52 instances of her using this syntagm, and only 4 instances in which the short form of the verb *biti - to be* was not missing from the question, and she uttered "Ko je to?" - "Who is that?". Although she understood and sometimes made use of various forms of *što*, it might be that the syntagm "Ko to?" was simply easier for her to pronounce, and since the people surrounding her understood the question without problem, there was no need for the child to adapt it.

It is interesting to note that during the first recording session, at 2;0.21 she also used the question word *kako* which Flahive and Lanza (2012) identify as a communication milestone for children three to four years old. *Kako* is the Croatian equivalent of the English question word *how*, although in the phrase "Kako se to zove?" it translates to "What is this called?" and if the

question was in reference to an animate being and phrased “Kako se on/ona zove?” it would translate to “What is his/her name?”. While, according to Flanza and Flahive (2012) as well as Bloom et al. (1982), children learning English are supposed to acquire *what* around this age, the average age for learning *how* is, according to Bloom et al., 33 months (1086). In Franka’s speech, the first fifteen times it was recorded, *kako* was always part of this same formula, asking what somebody or something’s name was. However, already during the recording session which took place when she was 2;2.4 old, she for the first time uttered a question using the question word *kako* followed by a different sequence of words: “Kako se ovo h(l)adi?” meaning “How do you cool this down?”. In the data following this recording session, there are eleven more “Kako se to/on/ona zove?” questions, and fifteen different questions where *kako* was often used in the meaning of *how*, which is evidence that around the age of 2;2 she had segmented out this question word and was able to produce various interrogative forms beginning with *kako*.

Moreover, although Flahive and Lanza (2012) identify one-word “why” questions as a 3-4 year milestone, Franka uttered her first recorded *why* question at 2;4.23 old, and she continued to pose 76 more *why*-questions recorded in the data before her third birthday. Božić (2019) also noted that 60% percent of children belonging to the 24-29-month-old group asked *why* somebody was doing something, and that 28% of the same group of children asked questions about why somebody did not want to do something and why somebody was feeling a certain way (24).

As already mentioned, Božić (2019) found that 18-month-old children learning Croatian already made use of *čije* ‘whose’, although this question word is expected to be present in the speech of three-year-olds, according to Flahive and Lanza (2012). In her study of *wh*-questions, Susann Kessler examined the recordings of a child learning English from the age of 2;3.4 to 3;3.18, and she noted that the question word *whose* was “absent from his speech” (8). Rowland et al. (2003) examined data from twelve English-speaking children with their ages ranging “from 1;8.22 to 2;0.25 at the start and 2;9.10 to 3;0.10 at the end of the study” (614), and found that only one child acquired the question word *whose*. Franka asked her first recorded *whose* question *Čije su to noge?* ‘Whose legs are those?’ at 2;1.10, and there are eight more similar “Whose...?” questions recorded in the data. This is perhaps the largest disparity in the processes of *wh*-question acquisition in English and Croatian.

The first recorded instance of Franka using a “Which...?” question is from a recording session which took place when she was 2;2.4 old, and there are 45 more recorded instances of her using the question word *koji*. As in Croatian *koji* agrees with nouns in gender, number, and

case, taking on various suffixes, it is worth noting that Franka in most cases used the correct form of the word, depending on the noun it referred to.

Susann Kessler (2004) mentions two instances of a “When...?” question in her data (8), which is, according to Clark (2009), the last *wh*-question word children learn to use and comprehend. In Franka’s case, there is no record in the data of her producing a “When...?” question. Interestingly, there are 26 instances of Franka using *kada*, the Croatian equivalent of *when*, in its shortened form *kad*, as a conjunction indicating at what time something happened. In their study on linguistic factors contributing to the sequence of acquisition of *wh*-questions, Bloom et al. (1982) also found that “the conceptual notions that are encoded by later appearing questions, time (*when*) and causality (*why*), were encoded reliably at an earlier age in other linguistic structures” (1090). The most interesting example of Franka using *kad* is from a recorded dialogue with her mother which took place when Franka was 2;4.0 old, and although it was not used in a question, it provides interesting insight into the way children’s minds work:

F: Sam(o) sam se (s)puštala na toboganu.

M: Da, na toboganu si se puštala,  
sa Vitom. A jesi hodala po onom-

F: A nemam glavu tu.

M: Kako nemaš glavu?

F: Ne. Ne. Ja sam se d(r)ugi spu(š)tala  
tobogan i pa nemam glavu.

M: Kako nemaš glavu,  
a di ti je glava?

F: Ne, ne. Ja sam se spu(š)tala  
*kad* nema moje glave.

M: Kak’ nema tvoje glave, a di je bila  
glava dok si se spuštala?

F: Emm, unut(r)a.

M: Aha, u toboganu?

F: Da.

M: U cijevi?

F: Da.

M: Aha, spuštala si se niz cijev tamo,  
tobogan je kao cijev, pa  
ti se nije vidjela glava?

F: Da.

F: I only went down the slide.

M: Yes, you went down the slide,  
with Vita. And did you walk on-

F: I don't have a head here.

M: How do you not have a head?

F: No. No. I went down a different  
slide and so I don't have a head.

M: How do you not have a head,  
where is your head?

F: No, no. I slid down  
*when* my head is gone.

M: How's your head gone, where was it  
while you slid down?

F: Umm, inside.

M: Oh, in the slide?

F: Yes.

M: In the tube?

F: Yes.

M: Oh, you slid down the tube there,  
the slide is like a tube, so  
your head wasn't visible?

F: Yes.

Finally, the following table portrays the average age of acquisition of *wh*-questions, in months, as noted by Bloom et al. (1982) and confirmed by Rowland et al. (2003), the age at which the children are expected to produce these questions according to Flahive and Lanza (2012), the age at which they first appeared in the speech of the twins Jasminka and Danko (Savić 1975), the age at which they appear in Croatian children according to Božić (2019), and finally the age at which they first appeared in Franka’s data. The asterisks are employed here as a reminder that Bloom et al. (1982) noted that *when*, *which* and *whose* questions appeared rarely even at the age of 36 months. It is essential to note here that in their study Bloom et al. used a third-use acquisition criterion, that is, “only the *wh*-forms that were used productively (with productivity defined as the use of at least three different questions with a particular *wh*-form) by at least five of the seven children were included in computing the rank order of emergence” (1085). The double asterisks point to the age at which Savić’s twins acquired the *wh*-words according to this criterion, and to the age at which Franka did so as well. As can be seen, in Franka’s case, it was usually a matter of weeks between her first and her third unique use of the same question word.

	<b>Bloom et al.</b>	<b>Flahive and Lanza</b>	<b>Božić</b>	<b>Savić J/D</b>	<b>Savić** J/D</b>	<b>Franka</b>
<b>what</b>	26	12 - 24	< 24	14/14	15/18	< 24
<b>where</b>	26	24 - 36	24 - 29	19/20	21/20	< 24
<b>who</b>	28	-	-	24/23	24/25	< 24
<b>how</b>	33	36 - 48	24 - 29	24/24	25/25	< 24/**25
<b>why</b>	35	36 - 48	24 - 29	25/25	29/29	28/**28
<b>when</b>	36*	36 - 48	-	36/29	-/-	-
<b>which</b>	36*	-	-	25/29	30/29	26/**27
<b>whose</b>	36*	36 - 48	< 24	24/29	25/33	25/**26

Table 1. *The order of acquisition of wh-questions*

As can be seen, there are clear similarities between what Božić (2019) found in her study, what Savić (1975) extracted from the data of the Serbian twins and what has been gathered from Franka’s data. There are also noticeable differences between the children acquiring English and the children acquiring Croatian, with the largest disparity observable in the case of the question word *whose*.

#### **4.4 Communicative functions of children’s questions**

As was previously mentioned, alongside asking for information, questions can be used for various other purposes, such as to make wishes and polite requests, in order to suggest or

demand for something, as well as rhetorically. Chouinard et al. (2007) found that in the data they examined 71% of the children's questions were information-seeking, while 29% were non-information-seeking questions (23). The latter were divided by type into those whose purpose was to seek attention, clarification, or permission, to ask adults to take an action, to address an inanimate object during play, to address an animal or a baby who cannot answer, and "unknown", that is, questions whose function they were not able to determine (17). Although in their study the information-seeking questions outnumber the non-information-seeking ones across all ages from 18 months to 5,5 years, it is interesting to note that while children younger than two years of age asked non-information-seeking questions only 9% of the time, children who were 2-2,5 years old asked such questions 34% of the time (26). What is more, while they are surely not as nearly as frequent as the information-seeking questions, it is very interesting to observe the various other purposes for which children use interrogative forms.

In Franka's data, there are around 158 non-information-seeking questions, which makes up around 20% of all questions asked. It is important to note, however, that Chouinard et al. (2007) identify "Hey mom?" as an attention-seeking question (17). Since in Croatian the phrase is usually just "Mama?/!", most of such exclamations were here identified as imperatives rather than interrogatives, which is why there are only six questions identified as attention-seeking in Franka's data. The type of non-information-seeking questions which appeared most often is not defined by Chouinard et al. Here these will be described as offers. There are 62 recorded instances of Franka who, rather than seeking permission or asking adults to take action, either offered something or invited those around her to do something together with her or by themselves. These account for 8% of all recorded questions. She posed one such question during the very first recording session, when she asked her mother whether she wanted some more (food). Here are some more examples:

2/2/26: (H)oće(š) pomi(r)isat ovo?	Do you want to smell this?
2;3.17: F: Jo(š) jednu s(v)je(č)icu i gotovo, mo(ž)e?	F: One more candle, and we're done, okay?
M: Može.	M: Okay.
F: Mo(ž)e?	F: Okay?
M: Može	M: Okay.
F: Je tako dogovo(r)eno? Dogovo(r)eno?	F: Do we have a deal? Deal?
M: Je, tako je dogovoreno.	M: Yes, we have a deal.



2;6.19: (H)oćeš sa mnom tak vježbati?	Do you want to work out with me like this?
2;7.22: (H)oćemo nap(r)avit vlakić od lakova?	Do you want to make a train out of nailpolish with me?
2;8.19: (H)oćete vi šlag sa čokoladom i čaj? (H)oćeš ti malo meda tata? (H)oćeš malo limuna sa medom? (H)oćeš u žutu ili u plavu? Može još malo toplog mlijeka? Može malo još mlijeka i čokoladne loptice?	Do you want some whipped cream with chocolate and tea? Do you want some honey Daddy? Do you want some lemon with the honey? Do you want in the yellow or the blue one? How about some more warm milk? How about some more milk and chocolate balls?

The child asked all of these questions while playing with her parents and with her aunt. It is possible to even argue that these types of questions in general appear more often when children are playing, as in most cases these are play or pretend offers. The recording sessions which Chouinard et al. (2007) analysed in their study usually took place during meals and other routine activities, and in two out of four cases the researchers were present during the recording, which is why it is safe to assume that children were not as playful as they would be when surrounded only by their family members. This might be the reason why similar questions are absent from the study of Chouinard et al., or maybe they simply overlooked this question type and defined the children's utterances as action-seeking.

It is not surprising that the second most frequent type of questions in Franka's data is the one in which she addresses inanimate objects during play. There are 42 instances in which she posed questions to inanimate objects, often as part of a pretend dialogue. While Chouinard et al. (2007) found that this question type made up only 1% of all questions, in Franka's case, they make up for 5.5%. The reason behind such a large disparity lies in the fact that on several occasions, her parents were able to record Franka while she was playing with her toys by herself, making up her own dialogues. It is interesting to note here that it is precisely in these dialogues that Franka can be heard using the formal form of *what: što* instead of the informal *šta*. She used *što* to begin a question only on two other occasions, once at 2;11.4 and once at 3;0.25, while during playtime by herself she used it seven times. Her articulation of this question word gradually developed from *ta* to *sta*; the last time she could be heard saying *ta* was when

she was 2;2.26, although at this point she was regularly saying both *sta* and sometimes even *što*. There is no record of her ever beginning a question with *sto*, although she did regularly use *sto* as a relative pronoun. She also continuously used *šta* as a relative pronoun, and *što* in this function again only in play dialogues with herself. A plausible reason for the switch to the formal form during playtime might lie in the fact that in the television programs and cartoons she watches, the characters always use the formal form, *što*. The child's mother usually opted for the informal form *šta*, and her father, who speaks with a Kajkavian dialect, used the form typical for this dialect - *kaj* instead of *što*.

Franka also used interrogative sentences not only as a way to seek information, but also to give information to those around her, as in the following examples:

2/6/6: Ti si tužna ako sam ja bubana, zna(š) mama?	You are sad if I am sick, you know Mommy?
2/9/29: Ona ima ovako tu iza i oženila se, znaš? I tete se ožene, znaš? I ti si se oženio za mamu kad mene nije bilo, znaš?	She has this on her back and she got married, you know? Aunties get married as well, you know? You married mom when I wasn't here, you know?
2/10/25: Ja volim bit bosa, znaš?	I like being barefoot, you know?

When it comes to politeness, Hoff (2014) noted that “children as young as 3 years know to use a less direct form when they are asked to be more polite” (228). There is a great example of this from a recording session which took place during a meal in which Franka, at the time 2;8.12 old, requested from her mother to wipe her hands clean by saying “Daj mi obriši ruke mama.” - “Wipe my hands mom.” to which her mother replied that she would, but continued doing something else, and after 10 seconds Franka asked “Mama oćeš mi ob(r)isat (r)uke?” - “Mom can you wipe my hands?”. Perhaps it is worth noting the switch from articulating the letter *r* in her request to substituting it with the phoneme // in her question, as she did when she was not yet able to pronounce her *r*'s. There are also some examples of the opposite, of Franka first voicing her request with a question which progressively turned into an imperative, as in this conversation she had with her father, Goran:

G: Kaj bi napravila?  
 F: Predstavu!  
 G: Ajde. Očeš ti to sama a ja gledam, može?  
 F: Ne, očeš ti prvo sa žabicama, a ja ću gledat sa Janjom i Madom, može?  
 G: Ma ne, sad kak si išla, smijala se, daj da vidim kak ćeš ti.  
 F: A ja ću napraviti predstavu: ja gledam, a ti sa ovim, može?  
 G: A ne, ajde ja gledam a ti to ideš.  
 F: Ne, daj ti tata, daj ti napravi predstavu! Ja ću gledat. Može tata? Daj, molim te.  
 G: Ajde ti meni probaj, prvo mi pokaži kak treba ić ta predstava. Nisam sad siguran...  
 F: Daj tata ja ću gledat! Tata ja ću gledat!

G: What do you want to make?  
 F: A play!  
 G: Okay. Will you do it by yourself and I will watch, okay?  
 F: No, will you go first with the froggies and I will watch with Janja and Mada, okay?  
 G: No, the way you did it now, laughing, let me see how you'll do it.  
 F: I will make a play: I watch and you with this, okay?  
 G: No, I will watch and you do that.  
 F: No, you do it dad, you make the play! I will watch. Okay dad? Come on, please.  
 G: You can try, first you show me how the play is supposed to go. I'm not sure...  
 F: Come on dad I will watch! Dad I will watch!

Lastly, it is interesting to notice how already at 2;5.24, Franka reversed the roles during one of their routine picture-book readings: although usually her mother would ask Franka questions and encourage her to answer, or Franka would ask about things she didn't know and her mother would provide the answer, this time Franka playfully pretended not to know the answer to her mother's question and encouraged her mother to answer her own question:

M: Ko je to?  
 F: Ne znam.  
 M: Je to jazavac možda?  
 F: Ne.  
 M: Nije?  
 F: Koje?  
 M: To.  
 F: Ne.  
 M: Je neki medo?  
 F: Ne-ne.  
 M: Nego?  
 F: Kak' se zove, pokaži mi?  
 M: Ja mislim da je to jazavac.  
 F: Možda... Jazavac!

M: Who is that?  
 F: I don't know.  
 M: Is it maybe a badger?  
 F: No.  
 M: Is it not?  
 F: What?  
 M: This.  
 F: No.  
 M: Is it a bear?  
 F: No-no.  
 M: Well then?  
 F: What's it called, show me?  
 M: I think it's a badger.  
 F: Maybe... A badger!

## 5. Conclusion

There are many universals in first language acquisition, which is why it is very interesting, and important, to look for and research the differences in the stages and steps between the processes of acquiring different languages. The aim of this study was to explore children's question acquisition by analysing data collected from twelve months of regular recording sessions of a preschool child learning Croatian, and comparing the findings to other studies based on data from children learning English. Besides various similarities, some interesting differences have also been found, including further evidence for Božić's discovery that children learning Croatian, and perhaps children learning Serbian as well, seem to acquire some *wh*-question words, and most noticeably *whose*, at a much younger age than children learning English. This information might prove useful in further research on the order of acquisition of *wh*-questions, as researchers investigate what it is that most strongly influences the order as well as the expected age of their acquisition - parental input, linguistic complexity, or children's cognitive abilities.

Children use questions to learn about the world surrounding them, but also to express wishes, to appear more polite while making their requests and offers, and, notably, to play. One of this study's strongest points has been the method which was used to collect data and the ease with which the parents were able to record the child when she was most talkative, and even while playing by herself, as if no one was listening. The method of recording spontaneous speech, despite some of its drawbacks, has been proven quite effective, as recordings of Franka deep in play have provided some unpredicted findings: it is interesting to note that the child opted for a more formal question word form when practicing her speech in self-dialogues, as well as to observe the way children use interrogative forms to make offers, invites and "strike deals". To further explore these findings and assess their significance, it would be necessary to first provide a comparison with a larger body of data collected from other Croatian children, but also from preschool children acquiring other languages. There is evidently much to be discovered by taking a closer look at children's questions, as they can point to a lot more than what children want to know.

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## 7. Appendix

### SUGLASNOST

Naslov istraživanja: Usvajanje pitanja na hrvatskom i engleskom jeziku: studija slučaja

Mjesto istraživanja: Zagreb

Istraživač: Leona Grgić

Mentor: dr. sc. Irena Zovko Divković

Informiran/a sam da je tema ovog istraživanja jezični razvoj djece. Suglasan sam da moje dijete \_\_\_\_\_

(prezime i ime)

sudjeluje u istraživanju te da se prikupljeni audio materijali koriste u svrhu navedenog istraživanja. Materijali će se prikupljati snimanjem zvučnih snimki djeteta u svakodnevnim situacijama. Ne postoje rizici tijekom istraživanja. Svjestan/na sam da rezultati istraživanja mogu biti publicirani te da će se bilježiti podatci o djetetovom imenu, dobi, i spolu. Karakter, zahtjevi, rizik i korist od ovog projekta su mi objašnjeni. Potpisujući svoj pristanak na ovom formularu, odričem se svih zahtjeva, prava ili pravnih sredstava.

\_\_\_\_\_  
(potpis roditelja)

\_\_\_\_\_  
(mjesto i datum)