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Original Paper

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The role of argumentation in seven-year-olds joint comprehension of written text[3]

***Abstract**: Argumentation is a dialogical activity during which partners try to increase or decrease the acceptability of expressed ideas. It is considered as one of the main factors of development and learning through peer interaction, since several studies show that argumentative dialogues offer more opportunities for learning than other types of dialogues. Having in mind the importance of argumentation in the construction of new knowledge and individual development of seven-year-olds, the aim of this study is to understand how children use argumentation while reading together. Within a larger corpus of data (including 45 sequences) we have analysed ten sequences in which the divergence of opinions was resolved by the use of argumentation. The results show that at the considered age there are two different effects of argumentation use: (1) the acceptance of the standpoint supported by the argument; (2) the change in the way the joint activity is performed. In addition, we have found several indicators of argumentation use limitations connected with the difficulty experienced by the children to take the position of the partner, to coordinate different perspectives and to build collaboration. We conclude that joint work at the age of seven offers educationally relevant benefits, thus that it should be included in the classroom activities with continuous scaffolding provided by the teacher.*

***Key words**: argumentation, symmetrical peer interaction, learning through interaction; reading together.*

Introduction

Taking the perspective that cognitive processes are socially embedded, Vygotsky defines learning as a process of participation in a social process of knowledge construction rather than an individual effort (Vygotsky, 1962; 1978). Following that idea, many scholars have studied and identified different factors that are relevant in terms of opportunities to learn and develop through interaction with others (e.g. Doise, Mugny & Perret-Clermont, 1975; Mugny & Doise, 1978; Doise & Mugny, 1979; Light & Perret-Clermont, 1989; Schwarz, 1995; Schwarz et al., 2000; Howe et al., 2007; Schwarz & Linchevski, 2007; Schwarz et al., 2008; Howe, 2010). Depending on the participants' age, type of interaction (sym-

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metrical/asymmetrical), goals of interaction, type of joint activity and so on, these factors and their influence on learning can vary. As the focus of this paper is symmetrical peer interaction between seven-year-olds, we will consider the factors especially relevant for development through interactions at this age.

Studies of symmetrical peer interaction are mainly focused on the conditions under which participants can jointly solve the tasks which they cannot complete individually (Ames & Murray, 1982; Schwarz et al., 2000). One of the key factors underlined in these studies is that through the joint work participants consider different ideas about the possible solution (Doise, Mugny & Perret-Clermont, 1975; Doise & Mugny, 1979; Light & Perret-Clermont, 1989; Schwarz, 1995; Schwarz et al., 2000; Howe et al., 2007; Schwarz & Linchevski, 2007; Howe, 2010). As the task they are solving together is above their individual competencies, starting with the same (possibly wrong) answer significantly lowers the possibility that partners will develop new understandings or skills through the joint activity (Tudge, 1992). In addition to this, it is necessary that partners critically consider expressed ideas, i.e. enrol in the argumentative exchange (Schwarz et al., 2000; Howe et al., 2007). This is in line with the idea about the importance of socio-cognitive conflict, introduced by Doise and colleagues (Doise, Mugny & Perret-Clermont, 1975). Developing further Piaget's idea about cognitive conflict as a factor of individual development (Piaget, 1995), Doise and colleagues argued that what develops during a social activity, at the level of interaction, leads toward individual cognitive reorganization. Thereby, the new understanding develops through the process of articulation, confrontation and coordination of actions. This means that the process of sharing is efficient no matter if the starting ideas are right or wrong (Light & Perret-Clermont, 1989; Kuhn et al., 1997), i.e. if the position of one partner is developmentally advanced or not. However, it is not enough that socio-cognitive conflict occurs, but it needs to be resolved. For that reason, argumentative discussion is one of the main factors of new skills/knowledge development (Tudge, 1992; Schwarz et al., 2000; Limon, 2001; according to Schwarz & Linchevski, 2007; Light & Littleton, 2004; Schwarz & Linchevski, 2007; Schwarz et al., 2008; Asterhan & Schwarz, 2009; Howe, 2010; Muller Mirza et al., 2009).

In this paper, argumentation is considered as a dialogical activity during which the partners try to increase or decrease the acceptability of expressed ideas (Walton, 2006). It is based on the establishment of specific relations among discussed ideas and other sources of knowledge, which affect epistemological status of expressed ideas (Baker, 2002). Argumentation, thus, should not be considered only as a result of interaction, but as a process of negotiation (Kuhn et al., 1997; Arcidiacono & Perret-Clermont, 2009, 2010). Given the definition of argumentation we have just mentioned, it is clear why participation in argumentative discussion leads towards the (co)construction of new knowledge and competencies: interactions including argumentation put specific pressure on partners to precisely define their ideas (Baker, 2002), elaborate it and justify, which secures their engagement in different cognitive operations on the content they are working on. However, whether the partners will enrol or not in the process of negotiation depends on many different factors, such as the age of participants (i.e. level of cognitive and social development, cf. Muller Mirza et al., 2009), the way they understand the goal of the interaction or interpret the instruction (Grossen, 1994; Sorsana, 2008; Tartas & Perret-Clermont, 2008), different personal characteristics such as self-esteem (Tudge, Winterhoff & Hogan, 1996; according to Tartas & Perret-Clermont, 2008). Since the participation in argumentative exchanges depends on cognitive and social maturity (social and cognitive decentration, generalisation ability, cf. Muller Mirza et al., 2009), the use of argumentation at early ages is not stable and depends on contextual factors as well. For example, results of previous research reveal that children from 5 to 14 years old manage to participate in a more competent way in

argumentative discussions with an adult who is familiar to them than with a peer (according to Muller Mirza et al., 2009). This is in line with studies revealing how the competence to solve some problem relates to social factors, showing that by the complexity of the task the importance of contextual factors children rely on significantly increases (Siegal, 1991; according to Krstić & Baucal, 2003). Having in mind the importance of argumentative discussions for learning and development through peer interactions, these results open the issue of the effectiveness of symmetrical peer interactions at early ages. It also recalls the importance of detailed understanding of the way the context within children work together and the meanings they attribute to it support or limit their activity and opportunities for learning (Light & Littleton, 2004). Although there is a huge number of studies exploring the effects of different factors on the learning process and joint work achievements (Ames & Murray, 1982; Cohen, 1994; Schwarz et al, 2000; Fernández et al, 2001; Barron, 2003; Schwarz & Linchevski, 2007; Tartas & Perret-Clermont, 2008; Buđevac, 2013), all we know about this issue so far suggests that the process and effects of social interactions are somewhat unpredictable, which highlights its complexity and the need for further explorations. Numerous studies of symmetrical peer interaction show that even when the starting level of knowledge (or relevant skills development) and the instruction are equal, the process of task solving and the effects of the joint work could be very different (Salomon & Globerson, 1989; Barron, 2000; Hogan, Natasi & Pressley, 2000; Webb, Zuniga & Welner, 2001; Barron, 2003). This is exactly why it is often affirmed that it is not essential to put children to work together, but it is necessary to create the opportunities that certain learning processes are activated (Cohen, 1994; according to Barron, 2003; Littleton & Mercer, 2010).

Taking into account these results about the importance of exchange of different ideas and its discussion for joint learning, in a previous study (Buđevac, 2011) we have analysed the conversations of seven-year-olds while reading together. Having in mind that children of that age still find challenging to establish and regulate a joint work, the aim was to identify different conversational paths in which children manage to reach a convergence of opinions. Analysing 45 sequences[4] in which children did not start the conversation from the same point of view (they either started from different points of view or one standpoint remained unstated), we were interested to understand how the process of negotiation unfolds, thus what children take as relevant reasons to accept or do not accept the other's point of view and how do they manage to persuade the partner to accept their ideas. We have found several ways in which the starting divergence in opinions is resolved. Apart from the others, we have found ten sequences in which the convergence of opinions was reached as the result of argumentation use. Having in mind the importance of its use for the construction of new knowledge and individual development on one side, as well as developmental characteristics of seven-year-olds on the other, it is very relevant to deepen the understanding of the way children of this age use it as a conversational tool. For that reason, this paper analyses sequences in which one or both children use argumentation while reading together. Our aim is to look at the function of the argumentation in solving tasks but also on its role in regulation of social relations among partners. Since argumentation is defined as a dialogical activity, engagement in argumentative dialogue should not only influence the acceptability of expressed standpoints, but can also have an impact on the way the joint activity is performed.

The study design

The study was conducted in two phases – individual pre-test and dyadic interaction two weeks after. In the first phase 149 children were tested by

4 Here, *sequence* refers to the overall dialogue concerning a single task.

reading comprehension items. All items (41 in total) were taken from the books *Language schools 1* and *Language schools 4*[5]. These books are used in some schools in Serbia as student books, but it was checked and confirmed in advance that they are not in use in two schools participating in this study. For the purpose of pre-test, tasks were grouped, so each child was tested by 10-12 items. The presentation of the tasks was balanced – each item was seen by the randomly selected children and the items were combined in groups according to their difficulty. Solving the tasks in the pre-test phase did not take more than 45 minutes.

According to pre-test results, we have selected pairs of children and tasks for the interactional phase. Children were grouped according to the following criteria: each pair consisted of children of the same gender (half of the pairs were boy-boy and half girl-girl), coming from the same class (so that they know each other), with identical score from the pre-test phase (symmetrical peer interaction). The sample for the interactional phase included 16 pairs of children. For each pair we have selected five tasks that were a bit above their performances on pre-test according to their positions at the reading competence scale (Buđevac & Baucal, 2014). Other criteria that was followed was to select tasks that were not seen by selected children in the pre-test phase.

During the interactional phase each child was firstly asked to solve selected tasks individually and immediately after to participate in a joint work on the same tasks with another child. The instruction that they received was to discuss and try to reach an agreement about the correct solution of each task. All the interactions were video recorded and transcribed[6].

5 Језичке школице 1, Radni listovi za srpski jezik sa zadacima različitih nivoa težine, Kreativni centar, Beograd, 2007.

Језичке школице 4, Radni listovi za srpski jezik sa zadacima različitih nivoa težine, Kreativni centar, Beograd, 2008.

6 The system of transcription we have used is elaborated by Jefferson (2004). The description of all symbols used in this paper can be found in Appendix 1.

Corpus of data

The complete corpus of collected data consists of 90 sequences (16 pairs; 5 different tasks per pair). Continuing previous work (Buđevac, 2011) in which we have analysed only the sequences where children started the discussion from different points of view about the possible answer or one standpoint remained unstated, for this study we made a more deep analysis on the sequences in which the divergence of opinions was resolved by the use of argumentation. We have found and analysed 10 sequences with these characteristics.

Results

By analysing sequences of interaction in which a divergence of opinions was resolved as a result of the use of argumentation, there are several insights that shed the light on the way seven-year-olds produce argumentation and respond to it while working on tasks above their individual competencies. In particular, we can say that there is a pattern of argumentation use which is repeated through almost all the interactions, i.e. that some characteristics of the argumentative dialogues are salient. Firstly, there is only one sequence in which we found that the convergence of opinions was resolved after the use of counter-argument by one partner; in all the other cases, one or both partners tried to persuade the partner to accept their opinion only by elaborating why that opinion should be accepted (one-sided argumentation). Taking into consideration that the process of decentation is still not over at the age of seven (Piaget, 1995), it is expected that children face the difficulties in taking into consideration the other's point of view, which makes the use of counter-arguments difficult. Secondly, there is no co-construction of argumentation, as it is the case in interactions of older participants, but in all the cases one child formulates the argument and the other responds to it (mostly by accepting). Due to the lack of possibility to take the perspective of the part-

ner, children usually do not manage to finely adapt their interventions to their partner's ideas. The only child that managed to do that is the one producing counter-arguments during the interaction. As this sequence is specific within the corpus of analysed data – it contains several characteristics of interaction found at the older ages which are taken as relevant for the development of new knowledge through joint work (Schwarz et al., 2000) – we will present it and analyse it in details. Finally, analysing argumentative dialogues we have found that its effect in most of the cases (9 out of 10) is that the convergence of opinions was grasped. That is exactly what is expected as that is the main function of argumentation by its definition – to increase or decrease the acceptability of expressed ideas (Walton, 2006). However, in one case apart from grasping the joint solution of the task, the result of argumentation use was also the change in social positioning within the interaction (see the excerpt 3 and its analysis). Taking the perspective that argumentation is dialogically embedded (Kuhn et al., 1997; Walton, 2006; Arcidiacono & Perret-Clermont, 2009, 2010), this example is relevant for the understanding of how it can influence the way a joint work is done.

In the following section we present the analysis of three excerpts. We will start with an excerpt that represents the most common way in which the argumentation use leads toward the acceptance of the partner's opinion in seven-year-olds dialogues. After that we will present two examples that are "not typical" – one as an example of counter-argument use and the other where we found the effect of argumentation not only in convergence of opinions, but also in social positioning. At the beginning of each excerpt, we will present the task on which children work together, the transcription of the dialogue and then the analysis.

Excerpt 1

TIMETABLE

This is the I_2 class' timetable in one primary school. Read it carefully and answer the following questions.

	I_2 TIMETABLE				
	MONDAY	TUESDAY	WEDNESDAY	THURSDAY	FRIDAY
1.	Mathematics	Serbian language	Mathematics	Serbian language	Physical exercise
2.	Serbian language	The world around us	Religious education	Mathematics	English language
3.	Physical exercise	Mathematics	Physical exercise	Art	Serbian language
4.	Music	Civil education	Serbian language	The world around us	Mathematics

What is RIGHT and what is WRONG according to the timetable?

On Wednesdays the class I_2 attends Mathematics course.	RIGHT	WRONG
On Fridays the class I_2 has got three classes.	RIGHT	WRONG
During the second class on Mondays, the class I_2 attends the Serbian language course.	RIGHT	WRONG
During the last class on Fridays, the class I_2 attends the Mathematics course.	RIGHT	WRONG

Participants: experimenter (Exp); Petar (a boy, 7 years, 5 months); Ivan (a boy, 7 years, 8 months)

According to their pre-test scores children are categorised as low-level readers. During the individual work in the second phase, both children gave wrong answers on this task.

The following excerpt is a part of the final conversation around this task. Before that children worked on the task without sharing and discussing ideas about possible answer, but Ivan circled the first two answers on his own, and then Petar circled the last one again without consulting the partner. After they finished, they started the conversation with the experimenter in order to explain their answers.

81. Petar: that is [wrong] ((refers to the second sentence in the table: "On Fridays the class I_2 has got three classes."))
Petar: to je [netačno] ((referira na drugu rečenicu iz tabele: "Petkom I_2 ima tri časa."))

82. Ivan: [that one]
Ivan: [tu sad]

83. Exp: mhm
Exp: mhm

84. Ivan: *class two::* (.) no during the last class (.)*on fridays class two attends mathematics course* (.) wrong
Ivan: prvo dva:: (.) ne petkom prvo dva ima (.) poslednji ča:s matematiku (.) netačno

85. Exp: mhm (.) how do you [know]
Exp: mhm (.) kako [znate]

86. Petar: [that is] MATHEMATICS ((points at the paper)) (.) they attend (.) on fridays mathematics course is during the last class ((looks at Ivan))
Petar: [to je] MATEMATIKA ((pokazuje prstom na papir)) (.) imaju (.) petkom je matematika poslednji ča::s ((gleda u Ivana))

87. Ivan: ((looks at the paper)) (1.0) ((smiles)) right ((looks at the Exp))
Ivan: ((gleda u papir)) (1.0) ((osmehne se)) tačno ((pogleda u Exp))

During the conversation with the experimenter Petar realized that previously they made a mistake. He is supporting his new answer by referring to the text – saying what is written and pointing at the proper place in the table (line 86).

Having in mind the question we have already posed in the introduction about the effectiveness of symmetrical peer interaction at the ages before the process of decentration is over, it is very important to emphasize that in this case children started from two wrong answers on the task and finished with the right one. However, it is also relevant that this insight is not the result of the joint work, sharing ideas and co-construction of arguments within interaction, as it is described in studies with older children (Schwarz et al., 2000). In this dialogue, the correct answer is the result of an individual insight during the dialogue with researcher, based on a metacognitive question *How do you know?*. On the other hand, the other child was sensitive to the argument provided by the partner and accepted the proposed answer.

Excerpt 2

This conversation is the only example of the use of two-sided argumentation that we have found in the corpus of data – one child uses an argument to support his own point of view, but also contradicts to other's opinion by the use of a counter-argument. Although this is not rare at the older ages, it seems that is still not common for seven years olds.

THE THIEF

Three children saw the thief who stole the book from the shop.

The first child saw that the thief has moustaches. The second child saw that the thief has glasses, and the third one saw that the thief is balding.

Find the thief among the pictures.

Circle the letter bellow the picture of thief.

A **B** **V** **G** **D**

Participants: Dule (boy, 8 years, 2 months), Marko (boy, 7 years, 11 months), experimenter (Exp).

According to pre-test results, both boys were categorized as middle level readers. During the individual work on this task, Dule solved the task and Marko did not.

Here we present the complete conversation around the task.

1. Dule: ə (0.5) you are going to read ((looks at Marko))
Dule: ə (0.5) a ti ćeš da čitaš ((gleda u Marka))

2. Marko: ok ((nods))
Marko: dobro ((klima glavom))

3. Dule: let's (.) read
Dule: ajde (.) da čitaš

4. Marko: *three children saw the thief who s (.) s stole the book from the shop (.) the first child saw ə (.) that the thief has moustaches (1.0) the second child saw that the thief has glasses and the third one saw that the thief (.) is b (.) al (.) ding (.) find the thief among the pictures (.) circle the letter before the picture of thief*
Marko: troje dece je videlo lopova koji je u (.) u ukrao knjigu iz prodavnice (.) prvo dete je videlo ə (.) da lopov ima brkove (1.0) drugo dete je videlo da lopov nosi naočare a treće dete je videlo da l je lopov (.) pb (.) brbo (.) bćelav (.) pronađi lopova na slici (.) zaokruži slovo ispred slike lopova

5. Dule: ((circles the answer g)) here it is (1.5) we have circled (.) now the next ((starts turning the next page, but Marko stops him))
Dule: ((zaokružuje odgovor pod g)) eto ga (1.5) zaokružili smo (.) sad drugo ((kreće da okrene stranu))

6. Marko: it is (.) there are two more (.) read
Marko: to ti je (.) imaju još dva pročitaj

7. Dule: m?
Dule: m?

8. Marko: three children saw [the thief]

Marko: troje troje dece je videlo [lopova]

9. **Dule: [well yes] I know (.) I read it ((turns the page)) [I was doing it]**
   Dule: [da pa] znam (.) pročito sam ((okreće stranu)) [to sam ja radio]
10. **Marko: [but you have everything] you have everything (.) all of this that I told you ((turns the page back)) this you (.) look**
    Marko: [pa sve moraš] sve moraš (.) ovo sve što sam ti rekao ((okreće nazad stranu)) ovo si (.) gle
11. **Dule: what**
    Dule: šta
12. **Marko: and thi:s ((points at the picture a)) and this ((points at the picture v))**
    Marko: i o:vog ((pokazuje rukom na papir)) i ovo kako se zove ((pokazuje rukom na papir))
13. **Dule: [well I know]**
    Dule: [pa znam]
14. **Marko: [and him] (.) her and these two ((having in mind the picture Dule has already circled as well as other two which he proposed to be circled))**
    Marko: [i njega] (.) nju i njih dvojicu ((misli na sliku koju je Dule već zaokružio i druge dve koje, prema njegovom mišljenju, treba takođe da budu zaokružene))
15. **Dule: yes (.) well ye::s**
    Dule: da (.) pa da::
16. **Marko: well circle these ((referring to pictures a and v))**
    Marko: pa te zaokruži ((misli na slike a i v))
17. **Dule: this one does not have the moustaches ((points at the paper)) this one has the glasses ((points at the paper)) this one is balding ((points at the paper))**
    Dule: ovaj nema brkove ((pokazuje na sliku)) ovaj ima naočare ((pokazuje na sliku)) ovaj je ćelav ((pokazuje na sliku))
18. **Marko: ((looking what Dule is pointing at)) well he said (1.0) ə**
    Marko: ((gleda šta Dule pokazuje)) pa rekao je (1.0) ə
19. **Dule: well this one is ((points at the paper))**
    Dule: pa ovaj je ((pokazuje na sliku))
20. **Marko: the second child saw that the thief has glasses**
    Marko: drugo dete je videlo da lopov nosi naočare
21. **Dule: well this one has glasses (0.5) and this one has glasses and the thir third and the second child saw that he has mous[taches]**
    Dule: pa ovaj nosi naočare (0.5) i ovaj nosi naočare a tr a drugo de a drugo dete je videlo da ima brk[ove]
22. **Marko: [yes]**
    Marko: [da]
23. **Dule: this with moustaches and this one without**
    Dule: ovaj sa brkovima a ovaj bez
24. **Marko: ((turns the page; smiles))**

Marko: ((okreće stranicu; osmehuje se))

Firstly, this is the only excerpt in which two-sided argumentation is used among seven-year-olds. Then, this conversation is specific because one child managed to adjust his actions to the other child's needs. As we can see in the transcript, Dule circled one picture without any discussion with the partner and wanted to move to the next task (turn 5). After the other child expressed a disagreement (turn 6) and said that apart from that one they should circle two more pictures (turns 10, 12, 14 and 16), Dule offers both argument as a support of his previous choice and counter-arguments by which he showed that the two additional pictures mentioned by Marko do not fit with the description given in the

text (turns 17, 21 and 23). Looking at each of Dule's turns, he was building an elaboration of his standpoint gradually, as he was invited by the partner to do so. This is in line with the idea that argumentation is a dialogical process of co-construction, rather than a result of the interaction itself (Kuhn et al., 1997; Arcidiacono & Perret-Clermont, 2009, 2010). However, it is expected that this kind of intervention is rare at the age of seven due to the lack of cognitive and social competencies necessary for taking into consideration the perspective of others (Piaget, 1995; Muller Mirza et al., 2009). Yet, this excerpt shows that in some occasions seven-year-olds can co-construct arguments within interaction as well as that the use of counter-argument can lead towards the change of the other's opinion.

Excerpt 3

This example is particularly relevant from the perspective of argumentation use as it shows how argumentation can lead not only toward the acceptance of some points of view, but also toward the change of the way the joint activity is performed.

In the case of this excerpt, the task children were solving together was the same as the task presented in the first excerpt.

Participants: Milan (boy, 7 years, 3 months), Jovan (boy, 7 years, 5 months), experimenter (Exp).

According to pre-test results both children were categorised as a low level readers. During the individual phase, Jovan managed to solve the task correctly, but Milan did not.

1. **Milan: ((looks at the exp)) I know it by heart**
   Milan: ((gleda u exp)) znam napamet
2. **Exp: mhm (.) well explain to jovan agree together**
   Exp: mhm (.) pa objasni jovanu dogovorite se zajedno
3. **Milan: ((looks at the paper)) [this ye:s]**
   Milan: ((gleda u papir)) [ovo pod da:]
4. **Jovan: [wait wait] it is not yes**
   Jovan: [čekaj čekaj] (.) nije pod da
5. **Milan: yes yes yes no (1.0) this is yes**
   Milan: da da da ne (1.0) ovo je da
6. **Jovan: it is not**
   Jovan: nije
7. **Milan: ((circles))**
   Milan: ((zaokružuje))
8. **Jovan: ((reads the task very quietly)) ( )**
   Jovan: ((veoma tiho se čuje da čita zadatak)) ( )
9. **Milan: let's this ((points at the next task))**
   Milan: ajd ovo ((pokazuje na sledeći zadatak))
10. **Jovan: ((whispers)) *during the sec second class attends the Serbian language course* ((looks at the table; points at the table)) (6.0) e: (.) but this is ri::ght (.) because you see that they attend the serbian language course ((points at the table)) during the second class**
    Jovan: ((šapatom)) ima dr drugi čas srpski ((gleda u tabelu, pokazuje prstom na tabelu)) (6.0) e: (.) pa ovo je tačno:: (.) pošto vidiš da je drugi čas ((pokazuje prstom na tabelu)) srpski jezik
11. **Milan: ((looks at the paper; smiles)) ah ((affirmative))**
    Milan: ((gleda u papir; osmehuje se)) ah ((potvrdno))
12. **Jovan: this is right**
    Jovan: ovo je tačno
13. **Milan: ((erases the answer which he has written before))**
    Milan: ((briše odgovor koji je prethodno napisao))
14. **Jovan: only this wrong ((points at the paper)) that is right (.) right**

and (.) circle that (1.0) circle that
Jovan: samo ovo netačno ((pokazuje na papir)) to je tačno (.) tačno i (.) to zaokruži (1.0) to zaokruži

15. **Milan: ((circles)) and this?**
Milan: ((zaokružuje)) a ovo?
16. **Jovan: ((looks at the table)) this (.) this i:s (1.0) this is right**
Jovan: ((gleda u tabelu)) ovo (.) ovo je: (1.0) ovo je tačno
17. **Milan: ((circles))**
Milan: ((zaokružuje))

The dialogue starts with the expression of two different points of view – firstly Milan gives his opinion (turns 3 and 5) and then Jovan rejects it (turns 4 and 6). However, Milan decides to circle the answer in accordance with his opinion, without discussing it with the partner (turn 7). By doing it he shows that he does not intend to discuss about the answer on this task with the other child. Additionally, he expressed the intention to move to the next task (turn 9), again showing that from his perspective the solving of this task is over. However, Jovan continues to follow his own idea – he reads the table, finds the proper information and uses it as a support of his standpoint (turn 10). What is especially interesting about this excerpt is that by offering the argument in support of his standpoint, Jovan manages not only to persuade the peer to accept his clam, but also to position himself as a relevant partner in the conversation whose opinion should be taken into account. This change is visible from turns 7, 9, 15 and 17 – firstly Milan circles the answer without consulting the partner and tries to move to the next task and, after Jovan's elaboration including argumentation, he asks him for the opinion about the other answers within the same task and follows his suggestion.

Discussion and conclusions

The aim of the presented analysis was to shed the light on the way seven-year-olds produce and understand argumentation while working together. The relevance of this topic ensues from several conclusions of previous studies. From one side, argumentative dialogues are considered as inevitable from the perspective of learning through joint problem solving (Mercer, 2000; Fernández et al., 2001; Mercer & Littleton, 2007; Schwarz & Linchevski, 2007; Schwarz et al., 2008; Howe, 2010; Littleton & Mercer, 2010). Studies revealed that argumentative dialogues offer more opportunities for learning than other types of dialogues (such as *disputational* or *cumulative* – Mercer, 2000) with more robust developmental changes (Schwarz et al., 2000; Asterhan & Schwarz, 2009). On the other side, looking at the developmental preconditions necessary to engage in argumentative discussion and sustain it (social and cognitive decentration; generalisation ability), one can question if seven-year-olds could construct argumentation when they are not supported by the context, i.e. when they cannot rely on contextual factors (such as when they participate in spontaneous, everyday conversation, cf. Muller Mirza et al., 2009). In other words, although we know that children start enrolling in argumentative discussions early in their lives, much before the age of seven (Arcidiacono & Bova, 2013; Pontecorvo & Arcidiacono, 2014), data from experimental research in the educational context show that the use of argumentation at this age still is not stable and depends on contextual factors (Muller Mirza et al., 2009).

From the analysed corpus of data we have observed that in some cases seven-year-olds use argumentation as a conversational tool when they are faced with the difference in opinions during a joint work. In addition, they appear sensitive to argumentation, thus they react on arguments offered by the partner, wherein we have observed two different effects of argumentation use: (1) the acceptance of the standpoint supported by the argument; (2) the change in the way the joint activity is unfolding (from individual to joint work). Although very rare, the second effect shows that seven-year-olds recognize argumentation as a powerful tool which they use as an indi-

cator that the partners' opinion should be taken into account and as an incentive for rethinking the task solution. Also, it reveals that, in their view, there is a potential benefit of collaboration comparing to individual work. Another indicator of the way seven-year-olds understand the role of argumentation is the fact that argumentation always appears as a result of expressed difference in opinions. In our sample, there are no examples in which a child claims something and immediately offers an argument to support the claim. Although from the perspective of pragma-dialectical theory approach to argumentation (Zarefsky, 1995; van Eemeren et al., 1996) argumentation appears as a result of the need to justify a standpoint, which actually happens when we are faced with a difference of opinions, it is not the only reason to use argumentation. Analysing the interaction among older children (ten-year-olds) we have found examples in which they express the claim together with an argument that supports it, even before partner expresses doubt or contradicts to it (Buđevac, 2013). Therefore, this regularity found in the corpus of data of seven-year-olds interaction can be taken as an indicator of the difficulty to anticipate that the other child can have a different point of view (Piaget, 1995). In continuity with this, we have not found examples in which both children express standpoints and arguments in support to it. We have found always the same pattern, namely that when one child provides an argument for the standpoint it is accepted by the other (even if it is not always correct). The fact that in all cases we presented the "joint work" starts by circling the answer that a child finds appropriate, without discussing it with the partner, can be taken as an additional sign of the difficulty to take the position of the other (Piaget, 1995). This is related to another finding regarding argumentation use – seven-year-olds usually do not manage to offer two-sided argumentation while talking about the task solutions. We have found only one example in which a child showed the ability to decentrate and to present to a partner why the proposed answer was not correct and at the same time why the one he proposed should be accepted.

Although our findings show that developmental preconditions necessary for engagement in argumentative dialogues are not completely fulfilled at the age of seven, it is very important to organize joint work through peer interaction also with children of that age. Even if learning process through this kind of activity could be to some extend interrupted or delayed, we can say that it opens the possibility for children to gain experience necessary for the joint work. This kind of practice should be taken as an important preparatory step for the future learning through peer interaction. In addition, to some extent it also provides opportunities for children to build a new understanding of the task solution. Also, as they are still facing difficulties in coordinating different perspectives, offering argumentation pro and contra some standpoints and collaborating with a peer it is important to provide some scaffolding (Wood et al., 1976) in order to sustain their joint work and increase the developmental potential of this kind of activity. This scaffolding can be provided directly by the teacher who could intervene in situations when he/she perceives that children cannot take into account some important aspects of a task or others' points of view. In addition, as building a collaboration and sharing thoughts with a partner before the decision about the proper answer appear as particularly demanding at this age, teachers should provide some additional guiding about the "rules" of the joint work and try to secure its unfolding. In other words, we suggest that joint work at this age, although it does not fully support learning of the content aimed by the tasks, offers other educationally relevant benefits. Namely, it creates the space for the children to gradually appropriate skills necessary for the collaborative work which are still not fully developed at the age of seven (such as coordinating one's own activity with the partner's, taking into account other's point of view, negotiating about possible solutions of the task), thus it can serve as some kind of a scaffolding during the preparatory steps for the future learning through peer interaction.

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Appendix 1: Transcription symbols

[the point of overlap onset
] the point at which two overlapping utterances end
= there is no break or gap between the end of a prior and the start of a next piece of talk
(0.0) pause length (in seconds)
(.) very short pause (1/10 seconds)
: prolonging of sound
__ stressed syllable, part of the work or the whole word
( ) non-transcribing segment of talk
(( )) comments added by the transcriber in order to clarify some elements of the situation
Ə hesitation of the speaker
XXX the part of the talk that refers to children's reading of the task (in English translation)
XXX parts of the talk said by the high tone

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Улога аргументације у разумевању прочитаног текста кроз заједнички рад седмогодишњака

Према одређењу од којег у овом раду полазимо, аргументација је дијалошка активност током које партнери настоје да увећају или умање прихватљивост изнетих становишта. Она подразумева да учесници у интеракцији, кроз процес преговарања, успостављају специфичне везе између изнетих идеја и различитих извора знања, тежећи тако да убеде саговорника у то да одређено становиште прихвате или одбаце. Резултати низа истраживања која су се бавила учењем и развојем кроз вршњачку интеракцију показали су да је један од главних фактора од којег зависи да ли ће кроз заједнички рад доћи до развоја нових знања и/или компетенција управо то да ли ће се учесници упустити у аргументативни дијалог или не. Није, дакле, довољно да се током заједничке активности изнесу различита мишљења, већ је неопходно да се о њима дискутује и да се на основу ваљане аргументације донесе закључак о томе да ли неко од изнетих становишта треба прихватити или не. Истраживања су, такође, показала да постоје бројни фактори од којих зависи да ли ће се аргументација појавити у исказима саговорника или ће одлука бити донета на неки други начин (на пример, јер је једно дете доминантно). При томе, имајући у виду развојне предуслове који морају бити испуњени како би дете могло адекватно да

учествује у аргументативном дијалогу (способност когнитивне и социјалне децентрације, способност генерализације), налази истраживања показују да је аргументативно мишљење на узрасту од пет до седам година нестабилно и да зависи од низа контекстуалних фактора. Имајући у виду значај аргументације за учење и развој кроз вршњачку интеракцију, ови резултати отварају питање делотворности симетричне интеракције на ранијим узрастима (пре него што је процес децентрације завршен). Надовезујући се на претходно истраживање, кроз које смо видели да се аргументација спонтано појављује у дијалозима седмогодишњака док решавају задатке који испитују разумевање прочитаног текста, у овом истраживању нам је циљ да детаљно анализирамо аргументацију из тих дијалога, како бисмо разумели на који начин седмогодишњаци користе и разумеју аргументацију. Полазећи од ширег корпуса података (четрдесет пет секвенци дијалога), у анализу је ушло десет секвенци у којима је разлика у почетним становиштима разрешена навођењем аргумената од стране једног или оба детета.

Резултати су показали да на овом узрасту аргументација може имати два различита ефекта: (1) прихватање становишта које је аргументом поткрепљено; (2) промена у начину на који се заједничка активност одвија (од индивидуалног рада ка сарадњи). Иако веома редак, други ефекат указује да седмогодишњаци препознају аргументацију као показатељ да мишљење партнера треба узети у обзир приликом доношења одлуке. У складу са тим је други податак до којег смо дошли – аргументација се у анализираним дијалозима увек појављује након суочавања са различитим мишљењем. Нема, дакле, примера у којима дете износи мишљење и одмах га поткрепљује аргументима, што је случај у дијалозима старије деце. Овај резултат је у сагласности са сазнањима да деца овог узраста имају тешкоћу да антиципирају то да друго дете може имати различито мишљење од њиховог. С тим у вези, анализа је показала да седмогодишњаци готово уопште не износе контрааргументе за партнерово становиште, већ скоро искључиво аргументе којим поткрепљују своје становиште (једнострана аргументација).

Иако налази указују на то да учење кроз вршњачку интеракцију на овом узрасту још увек није сасвим делотворно услед неиспуњености потребних (социјалних и когнитивних) развојних предуслова код седмогодишњака, из њих такође следи да је и на овом узрасту важно организовати учење кроз заједнички рад. Другим речима, иако овај облик рада не подржава у потпуности учење садржаја на које се задаци односе, њихово заједничко решавање може имати друге ефекте који су значајни из перспективе учења и развоја. Конкретно, учење кроз вршњачку интеракцију омогућава деци да постепено овладавају вештинама које су неопходне за учење кроз заједничку активност, а још увек нису у потпуности развијене (попут координисања сопствене активности са активношћу вршњака, сагледавања туђег гледишта, вештина преговарања).

Кључне речи: аргументација, симетрична вршњачка интеракција, учење кроз интеракцију, читање.