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# Elementary school students' attitudes towards comparison as a method of teaching geography

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The importance of comparison in geography education is undoubtedly immense. Comparison as a process of thinking represents the oldest method for deriving geographical evidence and it is often used in teaching geography. It can be argued that this method is the most characteristic method for geography as a school subject. In addition to the development of the students' ability to analyze, synthesize, generalize, and distinguish between the relevant and the irrelevant, this method can also contribute to the development of critical thinking, problem-solving and facilitate conclusion-reaching. With respect to the importance of comparison in geography education, the aim of the research in this paper was set: to determine the attitudes of elementary school students towards comparison as a method of teaching. The attitudes of the students towards comparison in teaching geography and the acquisition of geographical knowledge, as well as in the increase of the students' interest, motivation and activation in the process were examined. It was also investigated whether there is a difference in students' attitudes towards the method of comparison in relation to gender, Geography grade and the grade they attend. The surveying method was used. The results of the research show that the students expressed mostly positive attitudes towards the use of the comparison method in teaching geography. The results are also indicative of the importance of a geographical map in the application of the comparison method.

## Key words:

comparison, teaching geography, elementary school, Bosnia and Herzegovina



## Introduction

Comparison as a method inherent in geography as a science and a subject has been an immanent form of work ever since geography was founded as a science. This also applies to the time when Karl Ritter introduced comparison into geographical science as a method of discovering geographical reality (Mastilo, 1984). However, according to Simon et al. (Simon et al., 2020), there is little research conducted on

the topic of comparison in geography education. The importance of the method of comparison for geography as a scientific and teaching discipline was emphasized by Mastilo (Mastilo, 1984), who argues that comparison in geography must become a kind of thinking habit and that comparison can be considered a specific method for geography as a school subject. Both Wilcke and Budke (Wilcke & Budke, 2019) state that comparison is an everyday thought process that is often used in geography classes, but also that this term has remained somewhat unclear and insufficiently defined in geographical pedagogy. Based on an analysis of different studies from different scientific disciplines, the authors offered a definition of comparison. In that definition, they went a step further and suggested comparison as a method. They proposed a systematic step-by-step method, which can be used in geography education in high school as well.

The method of comparison can contribute to the development of critical thinking, problem-solving and easier conclusion-reaching in geography education. The application of the comparison method increases the possibility of students' participation in teaching geography and the affirmation and enticement of individual research. Therefore, it is of high importance that the students gain the competence of comparison through geography teaching. According to Simon and Budke (Simon & Budke, 2020), fostering comparison competency is crucial to enhance students' autonomous, reflected, procedural and disciplinary knowledge. Due to all the abovementioned and the importance of the method of comparison in geography teaching, we were interested in the attitudes of elementary school students about comparison and conducted a survey, the results of which will be presented in the subsequent pages of this paper.

### Literature review

Certain psychologists, didacticians and methodologists, both in the past and today, have offered definitions of comparison (Dorn & Jahn, 1973; Mastilo, 1984; Stojaković, 1985; Laketa & Vasiljević, 2006; Wilcke & Budke, 2019). Defining this phenomenon, Mastilo (Mastilo, 1984) states that it is a mental act by which two or more phenomena, objects or processes are placed in a mutual relationship for the purpose of determining the degree of their similarity, which is, again, dependent on the relationship between what they have in common and what distinguishes them. Comparison follows the relations of analytical decomposition, synthetic summarization, inductive and deductive concluding, abstracting and generalization, which is why it represents an extremely important phenomenon both in scientific work and in the process of geography teaching. Comparison represents a complex process that in some way generates several methods of geographical research. Wilcke and Budke (Wilcke & Budke, 2019, p. 11) have defined comparison as a 'reflective and argumentative process, which is based on a geographical question. A number of units are selected, whose similarities and differences are identified along determined variables in order to work out interrelations.'

By determining the effectiveness of comparison in teaching through the results of

several studies and meta-studies (Marzano et al., 2006; Marzano, 2007; Dean et al., 2012), it was concluded that the comparison strategy leads to a significant improvement in students' achievement. Thus, analyzing the teaching strategies, Marzano et al. (Marzano et al., 2006, p. 22) singled out the strategy 'finding similarities and differences' as the most effective general category among the teaching strategies that should be applied in all subjects, including geography. Within this strategy, they singled out four significant activities: comparison, classification, creation of metaphors and creation of analogy. Based on an analysis of previous research (Gentner & Markman, 1994; Markman & Gentner 1993a, 1993b; Medin et al., 1995), they determined that the mental operations used in this strategy lay in the very foundation of human thought and all learning. Highlighting six key strategies on excellent student achievement, Silver et al. (Silver et al., 2012) also highlight the strategy of comparison in teaching. They state that it is a strategy of critical thinking designed so that students can memorize, eliminate confusion and identify key similarities and differences more effectively.

From the mentioned definitions it can be concluded that the comparison method is a complex method based on critical thinking. It is a method that requires students to have numerous abilities such as the ability to analyze, synthesize, induce, deduce, abstract and generalize. Also, it can be concluded that the application of comparison as a method in teaching geography can significantly contribute to the improvement of the teaching process. This method, first of all, enables the correct acquisition of geographical concepts and it should be particularly emphasized that this process in geography is only possible through comparison. The application of comparison as a method should help students to fully understand geographical phenomena and processes. Geography as a subject cannot be reduced only to the cumulation of numerous facts and concepts, but it should help students to understand the constant changes that are happening on our planet ("International Charter on Geographical Education", 2016). In order for students to understand this, they need the ability to analyze, synthesize, generalize, and distinguish between the relevant and the irrelevant, and this can be achieved through comparison. In order for comparison as a thought process to become a method in teaching geography, it is necessary for the teacher to determine the criteria on the basis of which the comparison is made, as well as to give students clear and precise guidelines and instructions on the process of comparison.

## Methods

### *Aim of research and research issues*

The aim of the research in this paper was to determine the attitudes of elementary school students towards comparison as a method of teaching geography. A survey was made in accordance with the aim and the following research issues were singled out:

1. Students' attitudes towards the application of the comparison method in teaching geography: a) in relation to lower cognitive domains, such as memory and

understanding of phenomena and processes; b) in relation to higher cognitive domains such as analysis, evaluation and synthesis; and c) in relation to the use of a geographical map.

2. Students' attitudes towards the application of the comparison method in teaching geography: a) in relation to motivation increase, b) in relation to students' higher activation and application of the research approach in teaching.
3. Whether there is any difference in students' attitudes towards comparison according to gender, according to their grades in Geography and according to school grade.

### *Sample and instrument of research*

The research was conducted with a sample of 173 students of the sixth, seventh and eighth grade of Pale Elementary School in Pale, Bosnia and Herzegovina. The structure of the sample according to gender was expected, with 87 male and 86 female subjects.

The method used is the survey method, or the survey technique. For the purpose of this research, a questionnaire was designed, consisting of three questions of the objective type (gender, subject grade and school grade) and 18 questions of the subjective type (9 for the cognitive and 9 for the affective domain). The students expressed their attitudes using a 5-point Likert scale, with *value 1* representing the lowest degree of frequency/agreement and *value 5* indicating the highest degree of frequency.

The computer programme JASP (JASP team, 2019) was used for the statistical data processing. Descriptive statistics was used for the basic data analysis, and the nonparametric Mann Whitney test and the Kruskal Wallis test for any further analysis (Todorović, 2008).

**Table 1.**

Structure of the sample

Variable		N	(%)
Gender	Male	87	50.3
	Female	86	49.7
School grade	Sixth	71	41.0
	Seventh	59	34.1
	Eighth	43	24.9
Geography grade <sup>1</sup>	Insufficient	0	0
	Sufficient	20	11.6
	Good	34	19.7
	Very good	45	26.0
	Excellent	65	37.6

<sup>1</sup> Insufficient means grade E, Sufficient means grade D, Good means grade C, Very good means grade B, Excellent means grade A

## Results

### *Students' attitudes towards comparison in relation to cognitive domain and use of a geographical map*

In the first step of the analysis, the descriptive statistical indicators were calculated for the first research question on students' attitudes towards comparison in teaching geography in relation to the cognitive domain – number of respondents and arithmetic mean of answers for each question in Scale 1 (Scale of attitudes towards comparison in teaching geography in relation to the cognitive domain). Cognitive domain attitudes in the acquisition of geographical knowledge, understanding of phenomena and processes up to higher cognitive domains such as analysis, evaluation and synthesis were included, according to the Bloom's Taxonomy (Grmuša, 2018). Also, geographical map learning was included. Based on the arithmetic mean of the respondents' answers, the statements were ranked as follows (Table 2):

**Table 2.**

Ranking of statements on comparison in teaching geography, in relation to cognitive domain

Label	Statement	M
1.1	I acquire new knowledge through comparison on a geographical map	4.42
1.2	I get a complete picture of regions or continents by comparing them	4.17
1.3	I draw conclusions by comparing geographical objects and phenomena	4.08
1.4	Comparing geographical objects and phenomena helps teaching units become clearer to me	4.05
1.5	Comparing geographical objects and phenomena provides me with new information	4.01
1.6	By comparing geographical objects and phenomena, I notice similarities and differences	3.99
1.7	By comparing geographical objects and phenomena, I estimate what is more and less important	3.96
1.8	By applying comparison, I discover the causes and consequences of some geographical phenomena and processes	3.49
1.9	By comparing geographical objects and phenomena, I get a new idea or I can suggest a solution to a problem	3.32

The analysis of the degree of agreement on individual statements shows that the respondents expressed the highest degree of agreement ( $M = 4.42$ ) with Statement 1.1, which refers to the use of a geographical map for comparison. This further indicates the importance of using a geographical map when applying comparison methods and the importance of a geographical map as a source of knowledge in geography teaching. The respondents also expressed a high degree of agreement with Statements 1.2 ( $M = 4.17$ ) and 1.3 ( $M = 4.08$ ), which indicates the importance of the comparison method for a better understanding of geographical objects and phenomena in geographical space and the students' ability of drawing conclusions.

This is indicative of the activation of cognitive domains of understanding and evaluation. The respondents showed the lowest degree of agreement with Statement 1.9 ( $M = 3.32$ ), referring to the highest cognitive domain, the level of synthesis, which represents the level that implies creative thinking.

Within Research Question 3, we assessed the possible difference in students' attitudes towards comparison in teaching geography in relation to the cognitive domain and depending on gender, Geography grade or school grade. For the purpose of exploring the differences in students' attitudes towards comparison in teaching geography in terms of knowledge acquisition and depending on gender, the non-parametric Mann Whitney U test was applied. The results presented in Table 3 indicate that there was no statistically significant difference in the attitudes towards comparison in teaching geography ( $U = 3437$ ,  $Z = -0.924$ ,  $p = .36$ ) between male ( $Md = 4.0$ ,  $N = 87$ ) and female respondents ( $Md = 4.17$ ,  $N = 86$ ).

**Table 3.**

Differences in students' attitudes towards comparison in cognitive domain according to gender

	Gender	N	$M_{\text{rank}}$	Md
Students' attitudes towards comparison in teaching geography	Male	87	83.51	4.00
	Female	86	90.53	4.17
	Total	173		4.11

$U=3437$   $Z=-0.924$   $p=0.36$

The comparison of students' attitudes towards the comparison method in teaching geography in relation to school grade was conducted through the application of the Kurskal Wallis test. The test results indicate the existence of a statistically significant difference ( $p = .000$ ,  $\chi^2 = 20.659$ ) between the attitudes of students in relation to Geography grade. The excellent students expressed the most positive attitude ( $N = 65$ ,  $M_{\text{rank}} = 96.52$ ), while the students with a sufficient grade had the least positive attitude ( $N = 20$ ,  $M_{\text{rank}} = 46.80$ ). The Mann Whitney U test was applied again, comparing a group of students with a grade of sufficient and a group of excellent students. It was found that these groups display a statistically significant difference with a high impact ( $\chi^2 = 20.659$ ,  $df = 3$ ,  $p = .000$ ).

The comparison of the attitudes towards the comparison method in teaching geography in relation to school grade revealed a statistically significant difference in attitudes ( $\chi^2 = 20.659$ ;  $df = 2$ ,  $p = .000$ ) among the sixth-grade students ( $N = 71$ ), the seventh-grade ( $N = 59$ ) and the eighth-grade students ( $N = 43$ ). The sixth-grade students expressed the highest agreement with the statements about the application of comparison in teaching geography ( $M_{\text{rank}} = 100.65$ ), while the lowest degree of agreement is found among the eighth-grade students ( $M_{\text{rank}} = 60.66$ ). The Mann Whitney U test was applied to determine the magnitude of the impact of the difference between a group of the sixth-graders and a group of the eighth-graders.

This test revealed a significant difference in attitudes ( $p = .001$ ) between the sixth ( $Md = 4.333$ ,  $N = 71$ ) and the eighth-grade students ( $Md = 3.778$ ,  $N = 43$ ).

**Table 4.**

Differences in students' attitudes towards comparison in cognitive domain in relation to Geography grade

	Geography grade	N	$M_{rank}$
Students' attitudes towards comparison in teaching geography	Sufficient	20	46.80
	Good	34	68.60
	Very good	45	88.61
	Excellent	65	96.52
	Total	164	

$\chi^2=20.659$   $df=3$   $p=.000$

**Table 5.**

Differences in students' attitudes towards comparison in cognitive domain according to school grade

	School grade	N	Md	$M_{rank}$
Students' attitudes towards comparison in teaching geography	Sixth	71	4.3333	100.65
	Seventh	59	4.1111	89.77
	Eighth	43	3.7778	60.66
	Total	173		

$\chi^2=17.368$ .  $df=2$   $p=.000$

***Students' attitudes on comparison in relation to motivation and affective area***

Further analysis of the students' attitudes referred to Research Question 2. After ranking the answers for 9 questions on the Scale 2 (Scale of attitudes towards comparison in relation to the increase of interest, motivation and activation of the students), it was noticed that the greatest agreement with Statement 2.1 is related to the comparison with the aid of a geographical map ( $M = 4.38$ ). Most respondents agree with the statement that it is easier to learn by comparison ( $M = 4.32$ ) and remember more geographical content ( $M = 4.31$ ) as well as with the statement that students often apply comparison of geographical features of their own country with those of other countries ( $M = 4.01$ ). The students showed considerable agreement with the statements related to the interest in comparing geographical objects and phenomena ( $M = 3.88$ ), the students' tendency to apply the method of comparison ( $M = 3.82$ ) and the tendency to an individual research approach ( $M = 3.79$ ). The students expressed the lowest degree of agreement with the statements related to comparison using a globe ( $M = 3.75$ ) and with statement 2.9 (When I compare geographical objects and phenomena, I am not bored,  $M = 3.73$ ).

**Table 6.**

Ranking of statements about comparison in teaching geography in relation to motivation and affective domain

Label	Statement	M
2.1	I like to compare using a geographical map	4.38
2.2	Comparison facilitates my learning	4.32
2.3	Comparison facilitates my memorizing	4.31
2.4	I like to compare geographical features of my country and of other countries	4.01
2.5	Comparing geographical objects and phenomena is interesting to me	3.88
2.6	I like when the teacher sets a task to compare certain geographical objects	3.82
2.7	Comparing geographical objects and phenomena encourages me to do research	3.79
2.8	I like to compare on a globe	3.75
2.9	When I compare geographical objects and phenomena, I am not bored	3.73

The next step was to determine whether there were any differences in the students' attitudes towards comparison in teaching geography in relation to the possible increase of the students' interest, their motivation and activation, and depending on gender, their grade in Geography or school grade, as defined in Research Question 3. The Man Whitney U test was applied again to determine the difference in the students' attitudes towards comparison in teaching geography between male and female students. The testing did not show any statistically relevant difference in the students' attitudes towards comparison ( $p = .472$ ,  $Z = -0.719$ ) between male ( $Md = 4.00$ ,  $N = 87$ ) and female students ( $Md = 4.111$ ,  $N = 86$ ).

**Table 7.**

Differences on students' attitudes towards comparison in the affective domain in relation to gender

	Gender	N	$M_{rank}$	Md
Students' attitudes towards comparison in teaching Geography	Male	87	84.28	4.00
	Female	86	89.75	4.11
	Total	173		4.11

$U=3504.5$   $Z=-0.719$   $p=0.472$

The examination of the differences in attitudes about comparison in teaching geography in relation to the possible increase of the students' interest, motivation and activation, depending on Geography grade, showed a statistically significant difference ( $p = .001$ ,  $\chi^2 = 16.247$ ,  $df = 3$ ).

The highest degree of agreement on the comparison method was shown by excellent ( $M_{rank} = 95.98$ ,  $N = 65$ ) and very good students ( $M_{rank} = 86.08$ ,  $N = 45$ ), while the lowest agreement was shown by the students with the grade sufficient (Table 8).



**Table 8.**

Differences in students' attitudes towards comparison in affective domain in relation to Geography grade

	Geography grade	N	M <sub>rank</sub>	Md
Students' attitudes towards comparison in teaching geography	Sufficient	20	51.83	3.6111
	Good	34	70.03	3.8889
	Very good	45	86.08	4.1111
	Excellent	65	95.98	4.3333
	Total	164		

$\chi^2 = 16.247$  df = 3 p\* = .001 p\* ≤ .05

In order to examine the possible differences in the students' attitudes towards comparison in geography teaching in relation to the increase of interest, motivation and activation, and depending on school grade, the Kruskal Wallis test was applied. The testing showed that there is a statistically significant difference in the students' attitudes towards comparison in geography teaching in relation to school grade ( $p = .00$ ,  $\chi^2 = 20.895$ ,  $df = 2$ ). The sixth-grade students expressed the highest degree of agreement about comparison in geography teaching ( $M_{rank} = 100.85$ ), while the eighth-grade students showed the lowest agreement ( $M_{rank} = 57.56$ ).

**Table 9.**

Differences in students' attitudes towards comparison in affective area in relation to school grade

	School grade	N	M <sub>rank</sub>	Md
Students' attitudes towards comparison in teaching geography	Sixth	71	100.84	4.3333
	Seventh	59	91.81	4.1111
	Eighth	43	57.56	3.5556
	Total	173		

$\chi^2 = 20.895$  df = 2 p\* = .000 p\* ≤ 0.05

## Discussion

The results of the exploration of the students' attitudes towards comparison in the cognitive area showed predominantly positive attitudes towards comparison, both in the lower cognitive domains (such as memory and understanding of phenomena and processes) and in the higher domains (analysis, evaluation, and synthesis). The students showed the highest degree of agreement with the statements related to the cognitive domains of understanding and evaluation. At the cognitive level, understanding the method of comparison helps students not only to receive geographical information correctly but also to properly interpret and generalize by asking questions of the *how* and *why* type. Cognition represents a prerequisite for the utilization of geographical knowledge (Grmuša, 2018). An analysis of the geography curricula in elementary school showed that the largest number of defined outcomes implies cognitive domains of knowledge and under-

standing (Hadžić-Krnetić et al., 2014; Zečević et al., 2014), which speaks in favor of the obtained results. Since students are more often expected to have this level of knowledge, it is possible that we obtained results in terms of more positive attitudes towards the use of the comparison method in teaching geography in the cognitive domain of understanding, in comparison to other levels of knowledge. When it comes to the cognitive domain of evaluation, the most important contribution of the comparison method to this level is the development of critical thinking, the ability to discuss and defend one's attitudes through geography teaching (Grmuša, 2018). Such a positive attitude in the cognitive domain of evaluation supports the statement made by Wilcke and Budke (Wilcke & Budke, 2019), who argue that the application of the comparison method might 'improve learner's skills to argue, reflect, solve problems, and promote good judgement'.

In the examination of the students' attitudes related to motivation and the affective domain, more precisely to the application of the comparison method in teaching geography in relation to an increase of the students' interest, their motivation and activation, a high degree of agreement with the statements was also evident. The application of the comparison method in teaching contributes to fostering active teaching through application of comparison activities, classification, creation of metaphors, and creation of analogy. When applying the strategy of finding similarities and differences, it is desirable that graphic organizers and symbolic representations are used, which might contribute to higher participation and interest of the students. In teaching geography, a special advantage might be the application of graphic forms in comparison, classification and analogy. With respect to that, various graphic forms can be used, such as Venn diagrams, graphs, tables for comparison and classification, etc. (Grmuša et al., 2017).

The interesting fact in this research is that it showed a great significance of a geographical map in the application of the comparison method. Namely, considering both scales used, one for the cognitive (Table 2) and the other for the affective domain (Table 6), the highest degree of agreement was found with the statements about a geographical map. That indicates the importance of the geographical map utilization in this method's application, its importance as a source of knowledge, and also as an obvious teaching tool that plays an important role in triggering activation and motivation in geography teaching.

The examination of attitudes towards the use of the comparison method in relation to gender, school grade, or Geography grade in both the cognitive and affective domains showed that there is no statistically significant difference in the students' attitudes in relation to gender. However, the difference was evident in relation to Geography grade and school grade.

It can be stated that the non-existence of a significant difference in the students' attitudes towards comparison in geography teaching, both in relation to the cognitive and affective domains in relation to gender, was expected, because male and female students are usually equally interested in acquiring geographical knowledge

through the comparison method.

The examination of differences in the students' attitudes towards comparison in teaching geography in relation to the cognitive and affective areas and depending on Geography grade showed a statistically significant difference. This difference in attitudes was expected. Namely, the highest degree of agreement on comparison was shown by excellent and very good students, while the lowest agreement was shown by the students with the lowest grade of sufficient (there were no students with a grade of insufficient in the researched sample).

Finally, the results obtained by comparing the attitudes towards comparison in geography teaching in relation to the grade that the students attend (sixth, seventh or eighth) are very interesting. The younger students (sixth-grade students) show the broadest agreement with the statements about the application of comparison in teaching geography, and the lowest agreement was found among the eighth-grade students. One of the possible reasons for such differences is that, in the higher grades, there is a resistance of students to Geography as a subject and not necessarily to comparison as a method. That occurs because in the curricula of Bosnia and Herzegovina for higher grades, there is a dominant concept of regional geography that is characterized by schematism, monotony and the cumulation of a large amount of factual knowledge. This geographical content is where the necessity of exceptional preparation of teachers for the application of the method of comparison should be emphasized. For instance, in studying the continents, some general information on the continents should be provided by the teacher, and then the macro-regions and individual countries on them should be studied. The current methodological approach that is present in the processing of these regional geographical contents is regional geographical schematism, which usually comprises the following elements: geographical location, terrain features, climate, hydrographic features, flora and fauna, population, economy and regional division. Although this approach is based on logic and systematicity, due to the accumulation of a large amount of factual knowledge it does not leave enough space for teachers to use the teaching methods that would enable students to understand geographical processes and laws on our planet and to critically reason and adopt the necessary attitudes and values. Therefore, the application of comparison might contribute to a better understanding of geographical phenomena and processes, the development of critical thinking, problem-solving and easier conclusion-reaching in geography teaching. The application of this method would increase the possibility of activating students in Geography classes, raising their motivation level and favoring the conducting of their own research. The possible shift in the curricula of Geography should be made towards the economic geography field, where students could be able to do research and make comparisons on their own.

One of the possible reasons for such differences in the results of this research may be found in the insufficient preparation of the teachers and students for the application of the comparison method, which is of crucial importance for its suc-

successful implementation. Analyzing this problem, Silver et al. (Silver et al., 2012) found that teachers and students make mistakes when applying the comparison strategy in teaching. The same authors discovered that teachers most often made mistakes in that they applied comparison only after the teaching process, or tended to identify similarities and differences only at the end of the comparison process. On the other hand, students made mistakes by rushing through the comparison process, were uncertain of what they were looking for, did not have an effective way to conceptualize similarities and differences, and did not know how to apply what they had learned. Therefore, the method of comparison requires a high degree of teachers' involvement in the preparation of students for its application. Alongside, the preparation should include a proper data collection, a preparation of graphic organizers and symbolic representations etc., so that the students have enough material to conduct meaningful comparison and conclusions.

## Conclusion

The conducted research showed that the students expressed mostly positive attitudes towards the use of the method of comparison in geography teaching. When it comes to the examination of their attitudes in the cognitive domain, the students showed the highest degree of agreement with the statements about the importance of the comparison method application for the purpose of a better understanding of geographical objects and phenomena in geographical space and the ability of drawing conclusions, which is altogether indicative of the activation of cognitive domains of *understanding* and *evaluation*. In the examination of the students' attitudes related to motivation and the affective domain, more precisely to the application of the comparison method in teaching geography in relation to triggering the students' interest, motivation and activation, a high degree of agreement with the statements in this area was also evident. The examination of attitudes towards the use of the comparison method depending on gender, school grade or Geography grade, in both the cognitive and affective domains showed similar results. Namely, it was established that there is no statistically significant difference in the attitudes of students in relation to gender; however, there is a difference in relation to Geography grade and the grade they attend. Expectedly, the highest degree of agreement with the statements was shown by excellent students, while the students who had the lowest positive attitude were those with sufficient grades. The differences in attitudes towards the grade they attend might be due to the resistance of the higher-grade students to Geography as a subject (e.g. due to regional geographical schematism and a large amount of factual knowledge) and not necessarily to comparison as a method, which some further research could determine precisely.

It can be concluded that the established positive attitudes of the students towards the use of the method of comparison in geography teaching support the importance of the method of comparison towards its greater application as a kind of thinking

habit present in every class of Geography. According to previous research, this method, in addition to the development of the ability to analyze, synthesize, generalize, and distinguish between the relevant and the irrelevant, can consequently contribute to the development of critical thinking, problem-solving and easier conclusion-reaching of students in geography teaching. The application of this method might further increase the possibility of students' activation in the teaching process and the enticement for their individual research.

Due to the fact that the comparison method is based on a complex cognitive process, its efficiency in teaching geography requires a high degree of teachers' competence in preparing students for its application, so there is a constant need for further professional training of geography teachers. After considering all the aforementioned, we can restate the necessity of creating preconditions for a constant application of the comparison method, both through the process of geography teaching and the curricula redesign and innovation.

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## Ставови ученика основне школе о упоређивању као методу рада у настави географије

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Нема сумње да је значај упоређивања у географском образовању велики. Упоређивање као процес размишљања најстарији је метод географских доказивања, а и данас се често користи у настави географије. Може се рећи како је овај метод најкарактеристичнији за географију као наставни предмет. Поред тога што развија способности анализе, синтезе, генерализације, разликовања битног и небитног, овај метод може да допринесе развоју критичког мишљења, рјешавању проблема и лакшег доношења закључака. С обзиром на значај упоређивања у географском образовању постављен је и циљ истраживања овог рада: утврдити ставове ученика основне школе према упоређивању као методу рада. Испитивани су ставови ученика према упоређивању у настави географије код усвајања географских знања, као и код повећања заинтересованости, мотивације и активизације. Такође је истраживано да ли постоји разлика у ставовима ученика према методи упоређивања у односу на пол, те у односу на оцјену коју ученици имају из географије као и у односу на разред који похађају. У раду је кориштен сурвеј - метод. Резултати истраживања показују да ученици имају претежно позитивне ставове према коришћењу метода упоређивања у настави географије. Резултати указују и на значај географске карте код примјене метода упоређивања.

### Кључне ријечи:

упоређивање, настава географије, основна школа, Босна и Херцеговина

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