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Effect of Group Learning with Primary Education Students

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Abstract

The purpose of this research is to examine group learning and its impact on achieving knowledge for primary school students. In this quasi-experimental study, data were collected from 221 students, with 111 students in an experimental group (who were influenced to learn through cooperative learning strategies) and 110 students in a control group (who learned under normal conditions). The total number of teachers was 50 from both groups. SPSS statistical package was used in this research with the following parameters: median, standard deviation, t-test, and correlation. Students achievement tests were conducted in both groups both prior to and following the experimental process in order to see the effects on students' achievements. The results of the analysis have shown that cooperative learning strategies have a significant effect on student achievement in learning. This has been proven through differences seen in the final success of students in the control and experimental groups, which showed significant statistical value in favor of the experimental group. This research also provides information on the effects of the implementation of group work in teaching, which resulted in higher student achievement based on engagement, and the educational and professional background of teachers as a potential factor in attracting students to active cooperative learning. Based on these results, implications point to the insufficient dedication of teachers during the group learning process.

Keywords: Collaboration, group learning strategies, students, teachers.



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Introduction

Efforts to analyze transformations from the multiannual experiences of traditional into contemporary schooling, and in particular the implementation of group work in schools continue in society today. Prior to 2002, there was no tradition of specialized university teacher training in Kosovo; with most faculties offering a 3-year undergraduate course which means that some teachers may significantly lack knowledge on contemporary teaching methodologies (EU-SWAP, 2009).

Through changes in the education system and the integration of educational reform, as in other countries, Kosovo is also aiming at a new approach. This especially involves collaborative learning, with teaching and learning methods and strategies whereby students actively participate in the learning process (BEP, 2012).

Important contributions to the professional development of teachers in post-conflict Kosovo were provided by the European Union, UNICEF, Save the Children, CIDA, KEC etc. by organizing initial and advanced training sessions for teachers within the framework of preprimary and elementary institutions, and with a primary objective of active and collaborative learning (working in groups and pairs) (KEC, 2010). The effectiveness of the implementation of teaching working in groups, in line with its specific features, depends largely on the acquisition of new contemporary teaching methodologies and their skills during its practical implementation.

Organization of the teaching process, through various collaborative techniques, brought a freshness and creativity to the work of the teachers, and emphasized the active role of students in collaborative learning, problem resolution, and self-initiated learning etc. This continues to be a challenge in Kosovan society because, to be successfully implemented, this activity can be seen as quite complex for some teachers and therefore such changes within schools cannot be made to happen very quickly.

In contemporary school research, it is well-known that learning through group work requires new teaching arrangements in order that students can build their knowledge actively through interacting with others and by performing activities in multidimensional forms.

Need for research

In the Kosovan faculties which educate preservice teachers, students now study in groups as a sociological form of working, however, it is mostly studied theoretically and little importance is afforded to its implementation. Practical applications would help in successful implementation in practice once qualified, so that teachers could later successfully utilize skills in their classrooms. More precisely, "to make changes to school, it is not enough to only introduce teaching strategies to teachers in workshops-seminars, because learning is a very complex activity, changing teaching methods requires their understanding" (Nuredini, 2012, p. 2).

When we look at the problem, based on familiarity and personal experiences with students, teachers and parents, as well as various reactions presented in the published literature, it shows many failures during the implementation of the teaching process in groups, due in part to a lack of attention paid to this area.

In today's schools, it is clear that learning through group work is and should be part of the teaching process in order to overcome the traditional status quo; however, effective dissemination requires the implementation of work in groups along with all its required competencies with the goal to increase student learning.

Therefore, in order to clarify the current situation; to see whether this form of work is being adopted and implemented successfully in our schools, we need to analyze student achievements and knowledge, and to examine the learning process where learning is developed through group work.

Literature Review

Group work, especially collaborative work, is perceived as a powerful teaching activity where the core element is working alongside others in a group. On the other hand, group work can be considered as merely a number of students working together, who may or may not interact (Woolfolk, 2011). Teamwork implies students working together as a group or team for a common goal (Westergaard, 2009). Group effectiveness can be achieved when students share ideas with each other, allowing them to participate in the planning process, assessing one another's personality features and reflecting a positive attitude towards group work (Gerlach, 2002). Another alternative point of view is that when children work together, they can come up with problem-solving ideas, and also understand concepts that would not have been possible if they had worked alone (Baines, Blatchford, & Chowne, 2007). On the other hand, student interactions occur at different levels of intensity at various stages during the evolution of a group (Glassman, 2009). In a review of 90 years of research in this area, Johnson et al. (1998) found that the process of cooperation improves learning outcomes more than individual work (as cited in Marzano, 2006).

Such research has revealed that the process of cooperation in the classroom increases remembering of a subject by students. In addition, the more time spent in groups, the more positive the attitudes of students have been found to be. Therefore, the cooperation process functions in the promotion of a whole range of achievements in learning, especially in emphasizing academic achievements, student behavior, and the memorizing of a subject. Group work allows for fully-fledged socialization in learning and an opportunity for better life-planning, and by exposing intellectual aspects of engagement in group work it enables students to discover scientific truths that influence their intellectual and social formation (Nuredini, 2012).

Today, development of constructivist points of view, according to Webb and Palincsar (1966), has sparked "a great interest in situations in which elaboration, interpretation, explanation and argumentation are integral to group activity and in which learning is supported by other individuals" (as cited in Woolfolk, 2011, p. 324). One of the theoretical perspectives on how students can learn by interacting with others is based on Vygotsky's constructivist social views, where children learn from interaction with friends so that they can complete tasks which they otherwise could not do on their own. Additionally, higher mental processes are developed through *negotiation and social interaction*, therefore cooperation is if considerable value in the learning process (Gillies & Ashman, 2003).

Also, particular attention should be given to the group learning process in the classroom, where teachers think about how they can help students reflect on what they have learned through written reflection, discussion and mutual questioning among students (Silver, Strong, & Perini, 2007). Effective Classroom Learning Strategies include students in a

variety of interactive practices and are intertwined in more than one category of student activity such as: collaborative learning, encouraging discussion, or graphical presentation of information (Musai, 2003).

Relationships within the group are best when students are encouraged to respect the opinion of the other members, contributing to the group's success, and sharing any difficulties they have when they are encountered (Lara & Repáraz, 2005).

In the problem-solving process, students require other habits too, such as listening to each other and working together as a group. Therefore, interactive learning cultivates certain values in students, with the aim of them being used in everyday life (Musai, 2003).

Collaborative learning may be developed at any time when students work together, even for out-of-class situations such as homework (Education Broadcasting Corporation, 2004).

The discussion network is a strategy designed to involve all students in a form of active participation through classroom discussions. The task during the course of discussion may require students to answer certain questions, or to react to a theory, concept, or information they are required to present (Downing, 2011). In this regard, studies show that small-group working is characterized by dialogue, debate, discussion, the exchange of ideas, reflection, interactivity and independent work, and is therefore considered effective as, except for increasing motivation and student responsibility, they also influence the full development of intellectual and internal independence according to the method of division into groups.

Methodology

This research includes a sample of primary education students and teachers with one control group and one experimental group. The study is considered quasi-experimental because the action of the experimental factor (collaborative teaching strategies) was stimulated. With the aim of identifying the phenomenon, the focus of the study was on issues such as the cooperation of students within the working group, group learning, to what degree does cooperation increase student interest in learning, what are the predominate relationships between students, the use of teaching techniques/strategies, and the professional preparation of the teachers.

A total of 221 students participated in the survey, with 111 forming the experimental group and 110 students in a control group. The students involved in the research were all from the fifth grade (V), attending schools in urban and rural environments throughout Kosovo. Also, the number of teachers involved in the research totaled 50 from both groups (control and experimental) and were from the same schools as the participant students.

The research was conducted in the subject of natural sciences and spread across a total of eight classes, with four classes as the control group and four as the experimental group (see Table 1).

| Primary school | Location | Control | Experimental | Number of |
|----------------|-----------|---------------|---------------|--------------|
| | Location | group classes | group classes | students |
| Ismail Qemali | Prishtine | 1 | 2 | 89 |
| Ibrahim Fehmiu | Prizren | | 1 | 21 |
| Shkendija | Hajvali | 2 | | 64 |
| Pandeli Sotiri | Obiliq | 1 | | 21 |
| SHMU II | Vushtrri | | 1 | 26 |
| Total | 5 Schools | 4 Classes | 4 Classes | 221 Students |

In Pristina, from the "Ismail Qemali" primary school, the total number of participating students was 89, with 25 in the control group from class V/3 and 64 students in the experimental group, of which 32 were from class V/6 and 32 from V/1. In Prizren, from the "Ibrahim Fehmiu" primary school, 21 students from class V/2 participated in the experimental group. In Vushtrri, from the "SHMU II" primary school, there was an experimental group with 26 students from class V/4. Meanwhile, a total of 110 students were included in the control group. The section surveyed at the "Ismail Qemali" primary school was as previously mentioned, while at the "Shkëndija" primary school in Hajvali, a total of 64 students were included, with 32 students from class V/2 and 32 students from V/3. While at the "Pandeli Sotiri" primary school in Obiliq, 21 students from class V/2 participated in the experimental group.

In a study case with an experimental and controlling group, we have to investigate the initial state of success that should be approximately identical (Muzhiç, 2004) in order to see the action of the experimental factor. In the case of the current study, the choice of subject was based on the student success criteria, and the study included those classes which had approximately identical levels of success at the beginning of the 2016-2017 academic school year.

The experimental group students and teachers were informed in detail about the treatment's requirements (experimental factor – cooperative teaching strategies) at the beginning of the school year, and these were consequently followed through several stages by the end of the year. All necessary materials (cooperative teaching strategies) were provided to the experimental group's teachers, and these were also verbally presented to them by the researchers. Meanwhile, the students and teachers in the control group conducted their class teaching according to their usual conditions.

The following data collection tools were employed in this study: questionnaire for students and teachers, discussions held with students and teachers, and classroom visits during teaching hours.

IBM'S Statistical Package for Social Science (SPSS) was used in the analysis of the study with the following parameters: average, standard deviation, *t*-test, and correlation.

Research question: Does the group learning increase students' knowledge?

Research hypothesis: Collaborative teaching strategies have an increasing student knowledge through constant cooperation of the teachers and students, higher student knowledge may be achieved.

Results

For the question: "How much do the students work with each other during group work?" the teacher's results were as follows. From the teacher's answers in the control group (see Table 2), 64% considered that the students cooperated fully in their group work, while 36% stated average, and no teachers reported none.

Table 2. Control group students working with each other

| | <u> </u> | |
|---------|--------------|-----|
| Claims | Participants | % |
| Fully | 16 | 64 |
| Average | 9 | 36 |
| None | 0 | 0 |
| Total | 25 | 100 |

Whereas, Table 3 reports on the experimental group's results, with 76% of the teachers having considered stated fully, 24% average, and zero reported none.

Table 3. Experimental group students working with each other

| | <u> </u> | |
|---------|--------------|-----|
| Claims | Participants | % |
| Fully | 19 | 76 |
| Average | 6 | 24 |
| Little | 0 | 0 |
| None | 0 | 0 |
| Total | 25 | 100 |

In Table 4, 88% of the experimental group's teachers fully considered that the students' interests in learning increased, while 12% answered average, and no teachers selected none.

Table 4. Experimental group learning – students' interests in learning increases

| Claims | Participants | % |
|---------|--------------|-----|
| Fully | 22 | 88 |
| Average | 3 | 12 |
| None | 0 | 0 |
| Total | 25 | 100 |

Meanwhile, for the control group, Table 5 shows that 44% of the teachers *fully* considered that the students' interests in learning increased, with 56% of teachers having selected *average*, and no teachers selected *none*.

Table 5. Control group learning – students' interest in learning increases

| | Control Group | |
|---------|---------------|-----|
| Claims | participants | % |
| Fully | 11 | 44 |
| Average | 14 | 56 |
| None | 0 | 0 |
| Total | 25 | 100 |

| Sti | udents, | t-Test | | | | |
|---------------------------------------|---------|----------|-----|------|----|-----|
| | n | М | SD | t | df | р |
| How much do the students cooperate | | | | | | |
| during group work? | | | | | | |
| Control group | 25 | 1.281.36 | .45 | 59 | 48 | .24 |
| Experimental group | 25 | | .48 | | | |
| Do you think group learning increases | | | | | | |
| the student's interest in learning? | | | | | | |
| Control group | 25 | 1.56 | .50 | 3.63 | 48 | .00 |
| Experimental group | 25 | 1 12 | 33 | | | |

Table 6. Increased interest in learning during group work and cooperation between

Table 6 shows that there was a significant difference found between the control group (M = 1.28, SD = .45) and the experimental group (M = 1.36, SD = .48) in their perceptions of how much students collaborated during their group work (t(48) = -.59, p = .24).

Also, there was no significant difference found between the control group (M = 1.56; SD = .50) and the experimental group (M = 1.12, SD = .33) in their perceptions of how much learning through groups increased the interest of students to learn (t(48) = 3.63, p = .00).

For the question, "Which teaching techniques do you apply during group work?", the teachers in the control group (see Figure 1) stated that 32% of them apply the Cluster technique, 25% apply the "I Know, I Want to Know, I Learned" technique, 16% use Brainstorming, 12% use the DRTA technique, and 16% use a two-part Diary.

Meanwhile, findings from the experimental group showed 36% of the teachers use the Cluster technique, 24% use "I Know, I Want to Know, I Learned," and for both Brainstorming and the two-part Diary, the value reported by the teachers was 16%, which for Brainstorming was identical to the control group, while for the DRTA technique, the experimental group reported a lower value of 8% compared to 12% in the control group.

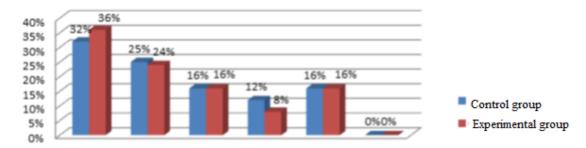


Figure 1. Learning techniques applied during group work in natural sciences

For the teachers' answers to the question, "What are the predominant relationships between students during group work?", Table 7 shows that for the control group, 40% of the teachers stated *collaborative*, 28% *competitive*, 28% *critical*, but only 4% stated *constructive*.

| Table 7. Predominant | relationships | within control | l group during | roup working |
|------------------------|------------------|-------------------|--------------------|----------------|
| iable 7: I readminiant | . i Ciationsinp. | VVICINIII CONTINO | i gioup uui iiig j | SI OUD WOLKING |

| Claims | Participants | % |
|---------------|--------------|-----|
| Collaborative | 10 | 40 |
| Competitive | 7 | 28 |
| Constructive | 1 | 4 |
| Critical | 7 | 28 |
| Total | 25 | 100 |

Meanwhile, for the experimental group, 48% stated *collaborative*, 16% *competitive*, 12% *constructive*, and 24% stated *critical* (see Table 8).

Table 8. Predominant relationships within experimental group during group working

| Claims | Participants | % |
|---------------|--------------|-----|
| Collaborative | 12 | 48 |
| Competitive | 4 | 16 |
| Constructive | 3 | 12 |
| Critical | 6 | 24 |
| Total | 25 | 100 |

With regards to the teachers' educational background, of the 25 teachers in the experimental group, 68% stated *faculty*, while 32% of stated *Pedagogical High School* (PHS) (see Table 9).

Table 9. Experimental group teacher education level

| Education Level | Participants | % |
|-----------------|--------------|-----|
| PHS | 8 | 32 |
| Faculty | 17 | 68 |
| Total | 25 | 100 |

Meanwhile, in the control group, of the 25 teachers, 64% stated *faculty*, while 36% of them stated *PHS* (see Table 10).

Table 10. Control group teacher education level

| Education Level Participants % | | | | |
|--------------------------------|----|-----|--|--|
| PHS | 9 | 36 | | |
| Faculty | 16 | 64 | | |
| Total | 25 | 100 | | |

Table 11. Student interest in learning, and student cooperation during group work, t-Test by teachers' education level

| | n | Μ | SD | t | df | p |
|---|----|------|-----|-------|----|-----|
| How much does the group learning | | | | | | |
| increase students interest in learning? | | | | | | |
| PHS | 17 | 1.00 | .00 | -4.16 | 48 | .00 |
| Faculty | 33 | 1.51 | .50 | | | |
| How much do the students cooperate | | | | | | |
| during group work? | | | | | | |
| PHS | 17 | 1.00 | .00 | -3.91 | 48 | .00 |
| Faculty | 33 | 1.48 | .50 | | | |

There was a significant difference found between teachers from *PHS* (M = 1.00; SD = .00) and those who graduated from a *faculty* (M = 1.51, SD = .50), in their perceptions on how group work increases the interest of students to learn (t(48) = -4.16, p = .00).

Also, there was a significant difference found between teachers from *PHS* (M = 1.00, SD = .00) and those teachers having gained a BA from a *faculty* (M = 1.48, SD = .50), in their perceptions of how much students collaborate during their work in groups (t(48) = -3.91, p = .00).

With regards to the question, "Do students interact with each other during group work?", for the control group, Table 12 shows that 53.6% of students *always* interact with each other, 23.6% *very often*, and 22.7% stated *several times*.

Table 12. Control group student interaction during group work

| Claims | Participants | % |
|---------------|--------------|-------|
| Never | 0 | 0.0 |
| Several times | 25 | 22.7 |
| Very often | 26 | 23.6 |
| Always | 59 | 53.6 |
| Total | 110 | 100.0 |

However, in the results shown in Table 13 for the experimental group, 73.9% of the students consider that there is *always* cooperation between students, while 18% stated *very often*, and 18.1% said *several times*. Notably, the category of *never* was not selected by any student.

Table 13. Experimental group student interaction during group work

| Claims | Participants | % |
|---------------|--------------|-------|
| Never | 0 | 0.0 |
| Several times | 9 | 8.1 |
| Very often | 20 | 18.0 |
| Always | 82 | 73.9 |
| Total | 110 | 100.0 |

Table 14. Group work implementations, student co-operation, satisfaction with work results, and achievement of learning goals, t-Test by group type

| | n | M | SD | t | df | р |
|---|-----|------|-----|--------|-----|------|
| How often is group work implemented? | | | | | | |
| Control group | 110 | 2.92 | .75 | 6.96 | 219 | .84 |
| Experimental group | 111 | 2.26 | .64 | | | |
| How much do group members cooperate? | | | | | | |
| Control group | 110 | 3.31 | .82 | -7,585 | 109 | .000 |
| Experimental group | 111 | 3.66 | .62 | | | |
| How much are group members satisfied with work results? | | | | | | |
| Control group | 110 | 2.13 | .66 | 12.76 | 219 | .00 |
| Experimental group | 111 | 1.18 | .40 | | | |
| Do you think learning goals are achieved? | | | | | | |

| | n | М | SD | t | df | р |
|--------------------|-----|------|-----|-------|-----|-----|
| Control group | 110 | 1.42 | .49 | -1.34 | 219 | .01 |
| Experimental group | 111 | 1.51 | .55 | | | |

There was no significant difference found between the control group (M = 2.92, SD = .75) and the experimental group (M = 2.26, SD = .64), in their perceptions on how often group work was implemented (t(48) = -.6.96, p = .84).

There was a significant difference found between the control group (M = 3.31, SD = .82) and the experimental group (M = 3.66, SD = .48), in their perceptions on how group members cooperate (t(109) = -.7,585, p = .00).

There was no significant difference found between the control group (M = 2.13; SD = .66) and the experimental group (M = 1.18, SD = .40), in their perceptions on their satisfaction with group work results (t(219) = 12.76, p = .00).

There was a significant difference found between the control group (M = 1.42, SD = .49) and the experimental group (M = 1.51, 64), in their perceptions of learning goals having been achieved (t(48) = -1.34, p = .01).

Table 15. Group work implementations, student cooperation, satisfaction with work results, and purpose of learning, t-Test by gender

| and purpose or lear | illing, t | - rest by | genuei | | | |
|--|-----------|-----------|--------|--------|-----|-----|
| | n | Μ | SD | t | df | p |
| How often work is group work | | | | | | |
| implemented? | | | | | | |
| Male | 119 | 2.19 | .65 | -9.82 | 219 | .08 |
| Female | 102 | 3.05 | .63 | | | |
| How much do students cooperate during group work? | | | | | | |
| Male | 119 | 2.72 | .70 | -18.32 | 218 | .00 |
| Female | 102 | 4.00 | .00 | | | |
| How much are students satisfied with work results? | | | | | | |
| Male | 119 | 1.39 | .49 | -6.12 | 219 | .00 |
| Female | 102 | 1.95 | .83 | | | |
| Do you think learning goals are achieved? | 440 | 1.01 | 00 | 44.40 | 240 | 70 |
| Male | 119 | 1.01 | .09 | -41.12 | 219 | .73 |
| Female | 102 | 2.00 | .24 | | | |

There was a significant difference found between females (M = 3.05, SD = .63) and males (M = 2.19, SD = .65), in their perceptions on how often group work was implemented (t(48) = -9.82, p = .08).

There was a significant difference found between females (M = 4.00, SD = .00) and males (M = 2.72, SD = .70), in their perceptions on how students cooperate in group work (t(218) = -18.32, p = .00).

There was a significant difference found between females (M = 1.95; SD = .83) and males (M = 1.39, SD = .49), in their perceptions on their satisfaction with group work results (t(219) = -6.12, p = .00).

There was a difference found between females (M = 2.00, SD = .24) and males (M = 1.01, SD = .09), in their perceptions on learning goals having been achieved (t(48) = .41.12, p = .73).

Table 16. Correlation between group work and student cooperation

| | 1 | 2 |
|---------------------------------|--------|---|
| 1. Group work implementation | = | |
| 2. Cooperation within the group | .692** | - |

There was a strong positive correlation found between group work implementation and cooperation within the group (r = .692, p < .01).

Table 17. Correlation between group member's results satisfaction and achievement of group work learning objectives

| | | 1 | 2 |
|----|--|--------|---|
| 1. | Group members' satisfaction with results | - | |
| 2. | Achievement of learning objectives | .414** | - |

There was a strong positive correlation found between achievement of group work objectives and group members' satisfaction results in the group (r = .414, p < .01).

The initial success and final success of the control and experimental group students was also measured. Of the 110 students in the control group, the initial success of the students was excellent for 29.1%, very good for 22.7%, good for 17.3%, sufficient for 18.2%, and 12.7% were insufficient (see Table 18).

Table 18. Control group student success – Initial State

| Table 10. Control gi | Table 10: Control group student success | | |
|----------------------|---|-------|--|
| Grade (success) | Participants | % | |
| 1 (insufficient) | 14 | 12.7 | |
| 2 sufficient) | 20 | 18.2 | |
| 3 (good) | 19 | 17.3 | |
| 4 (very good) | 25 | 22.7 | |
| 5 (excellent) | 32 | 29.1 | |
| Total | 110 | 100.0 | |

Whereas, the initial success of the experimental group students (see Table 19) shows that out of the 111 students, 29.7% showed excellent success, 24.3% were very good, 15.3% were good, 16.2% were sufficient, and 14.4% were found to be insufficient.

Table 19. Experimental group student success – Initial State

| Grade (success) | Participants | % |
|------------------|--------------|-------|
| 1 (insufficient) | 16 | 14.4 |
| 2 sufficient) | 18 | 16.2 |
| 3 (good) | 17 | 15.3 |
| 4 (very good) | 27 | 24.3 |
| 5 (excellent) | 33 | 29.7 |
| Total | 110 | 100.0 |

The final success results for the 110 students in the control group (see Table 20) reflected that 32.7% of the students achieved excellent, 20.9% were very good, 20% were good, 17.3% were sufficient, and 9.1% of the students achieved insufficient results.

Table 20. Control group student success – Final State

| | 1 4 5 1 5 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 | | | | |
|------------------|---|-------|--|--|--|
| Grade (success) | Participants | % | | | |
| 1 (insufficient) | 10 | 9.1 | | | |
| 2 sufficient) | 19 | 17.3 | | | |
| 3 (good) | 22 | 20.0 | | | |
| 4 (very good) | 23 | 20.9 | | | |
| 5 (excellent) | 36 | 32.7 | | | |
| Total | 110 | 100.0 | | | |
| | | | | | |

Table 21 reflects the final success of the 111 students in the experimental group, with 44.1% having excellent success, 37.8% were very good, 6.3% were good, 6.3% were sufficient, and 5.4% of the students were scored as insufficient.

Table 21. Experimental group student success – Final State

| Grade (success) | Participants | % |
|------------------|--------------|-------|
| 1 (insufficient) | 6 | 5.4 |
| 2 sufficient) | 7 | 6.3 |
| 3 (good) | 7 | 6.3 |
| 4 (very good) | 42 | 37.8 |
| 5 (excellent) | 49 | 44.1 |
| Total | 110 | 100.0 |

Table 22. Difference between initial success of control and experimental groups, t-Test

| | | | | 0 1/ | | |
|--------------------|-----|------|------|-------|-----|------|
| | n | М | SD | t | df | р |
| Control group | 110 | 3.37 | 1.40 | | | |
| | | | | 1,156 | 109 | 0.25 |
| Experimental group | 111 | 3.39 | 1.42 | | | |

There was no significant difference found between the initial success results of the control and experimental groups (t(109) = 1.156, p = .250).

Table 23. Difference between final success of control and experimental groups, t-Test

| | | | | 0 1 / | | |
|--------------------|-----|------|------|--------|-----|------|
| | n | М | SD | t | df | р |
| Control group | 110 | 3.51 | 1.34 | | | |
| | | | | -9,156 | 109 | .000 |
| Experimental group | 111 | 4.09 | 1.11 | | | |

There was no significant difference found between the final success results of the control and experimental groups (t(109) = -9.156, p = .000).

Discussion and Conclusion

The purpose of this research was to understand the effect of group learning with primary school students. Our study related to *student cooperation* in group working, and the teachers' experimental group showed higher values of cooperation compared to teachers' control group (76% vs. 64%). Also, the students' experimental group reported higher values of cooperation compared to the control group (73.9% vs 53.6%). Results from another research study conducted with single experimental and control groups (Chatila & Husseiny, 2017) showed that cooperative learning also had a significant effect on students' achievement in the learning and practicing of scientific skills; however, no significant effect was found in the acquisition of new scientific skills.

In our observations, as well as in the issue of increasing the interest of students to learn through group working, the experimental group of teachers showed a higher value compared to the control group (88% vs 44%); however, we also came to this conclusion during conversations with the students who stated that very often they asked the teachers if they could sit in groups and work in groups because, according to them, they felt more free and benefitted more from cooperating with each other, and for those less-interested students, group work was reported as being more fun.

On the use of *new teaching techniques*, approximately half of the teachers used new techniques with the students; however, the experimental group of teachers, in the open section of the questionnaire related to use of other techniques, stated that they used both the Jiangsu technique and the group discussion network because they were encouraged to use cooperative teaching. In the findings of a study by Kibirige and Lehong (2016), their results showed that the experimental group outperformed the control group, suggesting that cooperative learning techniques enhanced learners' performance more than the traditional teaching approach. Also, data related to the *predominating relationships* found between students in our research, the experimental group of teachers were shown to have the highest value of cultivating collaborative relationships between students compared to the control group (48% vs. 40%). In relation to student cooperation, this study found it to be an influential factor in the effective implementation of group work.

As to *teacher education*, the study showed a ratio of 68% vs 64% for teachers with a faculty gained degree compared to those with a pedagogical high school diploma. However, following discussions with the teachers, it turns out to be challenging to implement a teaching class according to cooperative teaching strategies, despite the training they received to advance the usage of modern methodologies. This research also identified an insufficient level of commitment from teachers in applying teaching in group working conditions, which was expressed through discussions held with the students, and towards the greater engagement of teachers, seeking to change the way that teachers explain content and to be more understandable and appealing. This result showed that the teachers were often perceived to be keen only to lecture and not to pay attention to sociological forms of teaching. However, this diversification in the integration of contemporary methodologies was expressed by some of the teachers, especially those of the older generation, due to the fact that group work, as an organizational form requires a

considerable level of engagement, whilst teachers mostly accept the introduction of changes with some difficulty.

According to the results of this research study, a strong positive correlation was observed between the realization of group work and the level of cooperation within the group, and between the achievement of learning goals through group work and the results satisfaction of group members.

Finally, student achievement test results were found to show that final success results of the experimental group students had higher values when compared to the final success of the control group students (MA = 4.09; SD = 1.11 - vs - MA = 3.51; SD = 1:34).

This study also showed an increase in the control group's final results from the initial state, although this increase was less that for the experimental group.

Results in this research confirmed the impact of the experimental factor (cooperative learning strategy) with the experimental group students and teachers influenced to devote themselves to the effective implementation of group working. The t-test values for initial success of both groups showed that no significant statistical differences (t = 1,156; p = .250), while the final success values for both groups showed significant statistical differences (t = 9.156, p = .000). This enables us to conclude that the experimental factor program requirements influenced the teachers to devote and apply work in groups according to contemporary models that can be learned through group work; meaning that the students were influenced to increase their knowledge. In another study (Asha, 2016), the results of the student's achievement test showed significant statistical differences between the two groups, in favor of the experimental group.

Finally, the current study does not reflect any new alteration in the organization of teaching work in groups. However, the results of this study reflect the current status of learning in groups in today's Kosovan schools. The study suggests that educational institutions in Kosovo should observe whether or not new interactive approaches are being properly adopted and applied in practice by teachers, and that they are not applied just as a matter of formality.

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