

The effects of collaborative method in traditional dances teaching and space orientation of 9-12 years old children

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Abstract

The purpose of this research was to evaluate the impact of the collaborative method on the learning two Greek traditional dances (Kalamatianos and Zonaradikos) and space orientation ability, in children. The participants were 89 children aged 9-12 years (MO = 10,3 =. 22), of which 55 were girls and 34 boys, that had no prior experience on dance. The participants were randomly divided into two groups, the experimental (n = 43) that followed the collaborative teaching method and the control group (n=46) that followed the teacher-oriented which adopted the order style teaching. The intervention program lasted 8 weeks. The frequency of the courses was 2 lessons per week, lasting 45. As far as the measurement process is concerned, 3 measurements were made: initial (before teaching started), final (8 weeks after) and retention to determine the learning (one week after the final measurement, without being taught dance). For the evaluation of the dance performance in Greek traditional dances the scale of scheduled criteria (Roubrika) of Pitsi, Diggelidis and Filippou, (2013), was used. This instrument contains eight criteria (recognition of dance, response to rhythmic pattern, timing, sequence of dance steps, direction of shape, dance hold, posture/position of the body, quality of dance characteristics and expressiveness). The gradient of the criteria was on a 5-grade scale, (1-not acceptable, 2-marginally acceptable, 3-moderately acceptable, 4-very good and 5excellent). In addition, the orientation ability was evaluated with the Witeba-Test of Spatial Orientation of the Temple, Williams, and Bateman, (1979). Analysis of variance with repeated measures, showed that there was group and measurement interaction, but also main effect for the overall performance of the Kalamatianos and Zonaradikos dances. In terms of space orientation there was not group and measurement interaction, nor main effect of the group, but main effect of the measurement which means that both groups improved in space orientation, but without significance differences. In conclusion, it is recommended that teachers should use the collaborative method for teaching and learning traditional dances.

Keywords: Collaborative method; Traditional dances; Performance; Space orientation.

1 Introduction

According to Plato, dance is an ideal means of education, since it combines the cultivation of the soul through music and the cultivation of the body through motion, which is why it was recommended to both pregnant women and children from Infancy (Mouratidis, 2000). The Greek traditional dance is a kind of physical activity that contributes to the physical and mental health of the dancers (Zisis, Giannis, Bouyousi, Pollatou, & Michalopoulou, 2014).

Serbezis (1995) proved that the most suitable age to start the children to be taught dances as complete ensembles is that of 9-11 years. In a survey of Koshland, Wilson,

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and Wittaker (2004) the dance was used with great success in tackling school violence and aggression, improving emotions, internal stimulation and improving the image for themselves. It also states that at the age of 10, complex brain commands are assimilated, the audiovisual perception develops, and the child can make precise judgements about objects that move around the space, and the development of the global perception of individual movements.

Moreover, at the age of 9-10, children have a well-defined perception of the laterality and gain kinesthetic integration in 11-12 years. Finally, in 9-12 years there are no gender differences in perception ability. Watson et al. (1991), studied gender differences in space orientation in relation to throwing and save objects. The differences found were large, with men being better than women. However, in another survey the results obtained from measurements made on the space orientation ability are confusing (Lawton, & Morrin, 1999).

In the international bibliography there are many definitions for collaborative learning. According to Johnson, Johnson, and Holubec, (1998) "Collaborative Learning is the organization of classroom in small groups with the aim of creative collaboration of pupils to maximize their own learning, as well as the learning of other members of the group". Through collaborative learning there is no competitiveness, since members of a group work together to achieve the goal and for the good of the group.

Another definition from Dyson (2002) states that collaborative learning is a form of learning based on the group's effort in order to achieve a specific goal. Collaborative learning also means that pupils and teachers are actively involved in the educational process. As shown by the results, the program of teaching Greek dances utilizing the collaborative method as a method of teaching was effective since it was found on the one hand active reduction of hostile inappropriate adaptive social attitudes and, on the other hand, an increase in the appropriate social attitudes of members of the experimental group. The results of this research, however, contradict those of Eldar, (2008) and Malinauskas and Emeljanovas, (2013) according to which students show higher levels of social skills than students. Calamoneri, Dunagan, and McCarthy-Brown (2020) suggested that collaborative method, make students to be active citizens in the world in which they wish to live. Collaboration is inherently part of many dance pedagogies, dance practices, and dance careers, which is why dance students are frequently required to work and learn together in the dance studio and classroom (Schupp, 2015). Thinking Together as a pedagogy of collaboration that highlights principles of responsible citizenship, knowledge cocreation marks a particular claim of inclusivity and accessibility; it is made by the community for the community. Knowledge must have accessibility and a usefulness in dialogue with society, which is a broader spectrum than the community from which the knowledge emerged. Through this accessibility, knowledge becomes fluid across communities, and there is an ongoing process of approaching meaning through continual exchange. Dance practice and dance education can contribute to discourses on knowledge creation through collaboration and do it in ways that affirm responsible citizenship via the body, illuminating bodying and communication as transformative (Mulvihill, 2018). She suggested that collaboration skills learned in dance-making contexts are transferable to other contexts; to learn collaboration is to learn vital skills of responsible citizenship.

Review of the literature found that there is not enough research in Greece related to the learning of traditional dances using the collaborative method, on the other hand, there are no surveys to consider the learning of traditional dances with the collaborative



method in children aged 9-12 years. It was therefore considered appropriate to explore the above parameters. So, the aim of this study was to evaluate the impact of the collaborative method on the learning of traditional dances (Kalamatianos and Zonaradikos) and space orientation ability, in children aged of 9-12. These dances were chosen because they are considered relatively easy and are taught first to beginners.

2 Method

2.1 Participants

The participants were 89 children aged 9-12 years (MO = 10.3 = .22), of which 55 (61.,80%) were girls and 34 (38.20%) were boys. They were randomly divided in two groups, with a basic constraint, to have no prior experience on dance. One group was the experimental (n = 43) that followed the collaborative teaching method and the other the control group (n = 46) which followed the typical teaching. Parents were requested to give written permission to allow their children to participate in the program after having been briefed on the aim of the research and receiving the assurance that the results of the study will be strictly used only for educational and scientific purposes.

2.2 Procedure

The intervention program lasted for eight (8) weeks. In total, the experimental group attended 16 lessons (2 per week, lasting 45 for 8 weeks), concerning the learning of traditional dances through the collaborative method of teaching. The method used was that of group assignment or team working. The participants were divided into heterogeneous four-member groups of mixed performance and gender (Kanakis, 2001). During the program, the PE teacher played a supervising and encouraging role, eager to resolve any issue, should it occur, and giving assignments such as the collection of information on a dance such as Kalamatianos or Zonaradikos (where it was danced, social characteristics of the era, famous Kalamatianos songs etc.). After the demonstration of some new steps by a skillful local dancer, a member of each group is assigned to help the rest of the members improve their performance. By the fourth lesson, each pair of groups was united into one and in the last two lessons the whole experimental group was united in one team, according to the teaching method suggested by Kanakis (2011). The result was the general improvement of the majority of the participants. During the process, the students were also encouraged to draw pictures inspired by the dance they were taught.

The control group was taught the same dances at the same period along with the experimental group. However, the method that was applied was teacher-oriented which adopted the order style (Serbezis, 2012) since it underlined only the kinetic form of dances. Similar dances were chosen from the Greek National Curriculum and the local group's repertoire namely Kalamatianos and Zonaradikos.

2.3 Instrument

For the evaluation of the dance performance in Greek traditional dances, the scale of scheduled criteria (Roubrika) of Pitsi, Diggelidis and Filippou, (2013) was used, in which the evaluation of the respective criterion was made separately and cumulatively in the overall performance. The eight criteria of Roubrika were used in the present investigation because of the age of the children.

Also, the space orientation was evaluated with the "Witeba-Test of Spatial Orientation" by the Temple, Williams, and Bateman, (1979). Participants were invited to walk along the straight line of 6m with closed eyes and stop with the examiner's motto,



once they reach the vertical line in order to gauge the deviation from the straight line. Each participant performed 5 attempts where the overall performance of each was the average of its deviations from the straight line.

2.4 Statistics

For the analysis of data, descriptive statistics, t-test analysis for initial measurements, analysis of variance with repeated measurements (ANOVA Repeated Measures), and Post hoc Bonferroni analysis to find differences between groups were used. The SPSS 21 statistical package was used and the level of significance was set to p<.05.

3 Results

3.1 Initial measurements

T-test analysis for independent samples, no significant differences were found in the initial measurements, neither in the performance at the dances, nor in the space orientation between the two groups, which states that the participants of the groups prior to intervention started from the same level in terms of performance in dances, and also in the space orientation (Table 1).

| Groups | Experimental | | Control | | | | |
|-------------------|--------------|-------|---------|-------|------|------|--|
| | М | SD | Μ | SD | t | р | |
| Kalamatianos | 2.26 | .57 | 2.26 | .40 | .035 | .972 | |
| Zonaradikos | 1.84 | .48 | 1.96 | .65 | 924 | .358 | |
| Space orientation | 36.82 | 25.94 | 38.42 | 32.07 | 257 | .798 | |
| | | | | | | | |

Table 1. The participants' performance in the initial measurement

*p<0.05

3.2 The effect of the intervention on the participants' performance in the dance of Kalamatianos

The analysis of variance with repeated measurements showed that there was group and measurement interaction (F $_{(2.174)}$ = 168.47, η^2 =.66, p <. 01), main effect for the group (F $_{(1.87)}$ = 74.57, η^2 = .2462, p <. 01), and main effect of Measurement (F $_{(2.174)}$ = 379.21, η^2 =.813, p <. 01), for the overall performance of the Kalamatianos dance (sum of the individual criteria, but even the criteria). This is interpreted as the groups had significant differences between the three measurements in the overall performance of the dance (Table 2).

Table 2. The evaluation of the groups in the overall performance at the Kalamatianos dance, in the three measurements

| Groups | Ν | 1 st mea | asurement | 2nd measurement | | 3rd measurement | |
|--------------|----|---------------------|-----------|-----------------|-----|-----------------|-----|
| | | (pre) | | (post) | | (recenti | |
| Experimental | 43 | 2.26 | .57 | 4.09 | .81 | 4.05 | .55 |
| Control | 46 | 2.26 | .40 | 2.70 | .55 | 2.53 | .56 |
| Total | 89 | 2.26 | .49 | 3.37 | .97 | 3.27 | .94 |
| *p<0.05 | | | | | | | |

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> The Bonferroni analysis of multiple comparisons between the individual levels of the "measurement" factor showed that there were significant differences between the groups from the first to the second measurement (p < 0.05) and from the first to the third measurement (p < 0.05). Both groups showed improvement, with the experimental being better than the control group in the final, but also in the retention measurement.

3.3 The effect of the intervention on the participants' performance in the dance of Zonaradikos

The analysis of variance with repeated measurements showed that there was group and measurement interaction (F $_{(2.174)}$ = 98.78, η^2 = .532, p <. 01), main effect for the group (F $_{(1.87)}$ = 33.82, n² = .280, p <. 01), and main effect of Measurement (F $_{(2.174)}$ = 162.77, η^2 =.652, p <. 01), for the overall performance of the Zonaradikos dance (sum of the individual criteria, but even the criteria). This is interpreted as the groups had significant differences between the three measurements in the overall performance at the dance (Table 3).

| Groups | Ν | 1 st meas | 1 st measurement 2 nd measure | | surement | 3 rd measurement | | |
|--------------|----|----------------------|---|--------|----------|-----------------------------|-----|--|
| | | (pre) | | (post) | | (retentio | n) | |
| Experimental | 46 | 1.84 | .48 | 3.33 | .92 | 3.36 | .86 | |
| Control | 43 | 1.96 | .65 | 2.28 | .56 | 2.03 | .48 | |
| Total | 89 | 1.90 | .57 | 2.78 | .92 | 2.67 | .96 | |
| * 0.05 | | | | | | | | |

Table 3. The evaluation of the groups in the overall performance at the Zonaradikos dance, in the three measurements

*p<0.05

The Bonferroni analysis of multiple comparisons between the individual levels of the "measurement" factor showed that there were significant differences between the groups from the first to the second measurement (p < 0.05) and from the first to the third measurement (p < 0.05). Both groups showed improvement, with the experimental being better than the control group in the final, but also in the retention measurement.

3.4 The effect of intervention on space orientation

In terms of space orientation there was not group and measurement interaction (F (2.174) = 2.135, η^2 = .24, p <. 05), also there was no main effect of the group (F (1.87) = .209 η^2 =.002, p =. 649), also there was not main effect of the measurement (F $_{(2.174)}$ = 14.205 η^2 =.140, p =. 121), which means that both groups improved in space orientation, without having differences between them (Talbe 4).

Table 4. The evaluation of the groups in the three measurements in the space orientation

| Groups | Ν | 1 st measurement | | 2 nd measurement | | 3 rd measurement | |
|--------------|----|-----------------------------|-------|-----------------------------|-------|-----------------------------|-------|
| | | (pre) | | (post) | | (retention) | |
| Experimental | 43 | 36.82 | 25.94 | 34.09 | 24.99 | 32.16 | 24 |
| Control | 46 | 38.42 | 32.07 | 36.52 | 31.17 | 36.37 | 31.05 |
| Total | 89 | 37.65 | 29.12 | 35.35 | 28.22 | 34.34 | 27.8 |

*p<0.05

The Bonferroni analysis of multiple comparisons between the individual levels of the "measurement" factor showed that there were no statistically significant differences between the groups from the first to the second measurement (p > 0.05) and from the first to the third measurement (p > 0.05). Both groups showed improvement, but there were no differences between the groups.

4 Discussion

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The purpose of this research was to evaluate the impact of the collaborative method on the learning of traditional dances (Kalamatianos and Zonaradikos) and space orientation ability, in children aged of 9-12. The results showed that the participants of both groups learned the dance, but the participants of experimental group were better in the performance of two dances. The results of this investigation coincide with the results of the Dyson (2002) but they contradict with Eldar, (2008) and Malinauskas and Emeljanovas, (2013) results. The differentiation of the results of the present investigation in relation to the results of other surveys, may be due to different ages, since the sample of this research consisted of pupils aged 10-12 years, while others were 14-17 years old (Dyson, 2002).

As far as space orientation is concerned, participants of both groups have improved without having any differences between them. Possible because the space orientation is a genetically predetermined ability in every individual and a few changes can be made by practicing, or maybe more time of practice is needed for space orientation improvement. The results coincide with the Watson et al. (1991) however, they do not coincide with the findings of Lawton and Morrin (1999).

In conclusion, the collaborative method of practice helped participants to learn the Kalamatianos and Zonaradikos dances, as both groups showed improvement, with the experimental being better than the control group in the final, but also in the retention measurement. Still, both groups improved in space orientation, without having any differences between them.

Many researchers (Karkou, Fullarton, & Scarth, 2010; Kazela, 2009; Matsagouras, 2008; Kakana, 2008; Magotsiou & Goudas, 2007) propose the use of the collaborative method of learning in various activities such as dance, because trainees learn in a group, friendly, pleasant environment, open channels of communication with their co-workers, recognize the diversity, and socialized. They also take a role of leader, become independent and learn to help others. They realize that they can achieve the goals they set by working as a team, which is very important for their real life later. All of the above can prepare children to become emotionally healthy individuals and responsible citizens.

In conclusion, dance teachers should first understand the importance of collaborative method for improving dance performance and then they need to give students understanding the importance of this method. With regard to space orientation ability, which is very important for dance, more and more specialized practice is probably needed. In order to determine at what age, the differences are beginning to appear with the use of the collaborative method, more research should be applied to elementary and high school children. Also, in future investigations could be explored the impact of the collaborative method on the social skills improvement of the participating children. Finally, it is proposed in subsequent studies to explore the ways in which teachers develop the space orientation ability to children.



References

- Calamoneri, T., Dunagan, C., & McCarthy-Brown, N. (2020). Ethical Dance Pedagogy. *Journal of Dance Education, 20*:2, 55-64. DOI: 10.1080/15290824.2019.1566607
- Dyson, B. (2002). The implementation of collaborative learning in an elementary physical education program. *Journal of Teaching in Physical Education*, 22 (1), σσ. 69-85.
- Eldar, E. (2008). Educating through the physical—behavioral interpretation. *Physical Education and Sport Pedagogy*, 13 (3), pp. 215-229.
- Johnson, D., Johnson, R., & Holubec, E. (1998). *Advanced collaborative learning.* Edin, MN: Interaction Book Combany.
- Kakana, D.M. (2008). Collaborative teaching and learning. Theoretical approaches and educational prospects. Thessaloniki. Kyriakides Bros plc.
- Karkou, V., Fullarton, A., & Scarth, S. (2010). Finding a Way Out of the Labyrinth through Dance Movement Psychotherapy: Collaborative Work in a Mental Health Promotion Programme for Secondary Schools. In: V. Karkou (ed): Arts Therapies in Schools: Research and Practice. (pp. 59-84). London. Jessica Kingsley.
- Kanakis, I. (2001). *Teaching learning organization to work groups.* Athens. Tipothito publications.
- Kazela, K. (2009). Collaborative teaching and learning in pre-school education. Theory and practical applications. Athens. Odysseus publications.
- Koshland, L., Wilson, J., & Wittaker, B. (2004). PEACE throught dance/movement: Evaluating a violence prevention program. *American Journal of Dance Therapy, 26*, pp. 69-90.
- Lawton, C.A., & Morrin, K.A. (1999). Gender differences in pointing accuracy in computer simulated 3D mazes. *Sex Roles, 40*, 73–92.
- Magotsiou, E., & Goudas, M. (2007). Collaborative Learning as a Vehicle of Enhancing Social Skills in Physical Education. *Inquiries in Sport & Physical Education,5*/1,8294. <u>http://www.pe.uth.gr/hape/images/stories/emag/vol5_1/hape180.pdf</u>
- Malinauskas, R., & Emeljanovas, A. (2013). Specificity of schoolchildren's social skills during physical education classes. *Croatian Journal of Education , 15*, pp. 51-68.
- Matsagouras E. (2008). Collaborative teaching and learning. Athens. Gregory.
- Mouratidis, I. (2000). *Physical education philosophy issues, introduction to philosophy.* Thessaloniki, Greece: Christodoulidis.

Mulvihill, J. A. (2018). COLLABORATION. *Journal of Dance Education, 18*:3, 112-119. DOI: 10.1080/15290824.2018.1481963

- Pitsi, A., Diggelidis, N., & Filippou, F. (2013). Construction of a scale of classified criteria (rubric) for the Evaluation of the Greek Traditional Dance. Validity and Reliability Check. *Inquires in Physical Education & Sports, 11* (2), pp. 79-98.
- Serbezis, B. (2012). *Method and teaching of dancing. Choice of teaching method.* Unpublished manuscript, Department of Physical Education and Sport Science, Democritus University of Thrace, Komotini, Greece.
- Sermpezis, V. (1995). Comparative study of methods of teaching Greek traditional dance in children aged 9-11 years. PhD Thesis.

Schupp, K. (2015). Teaching Collaborative Skills through Dance: Isolating the Parts to Strengthen the Whole. *Journal of Dance Education* 15(4):152-158. <u>DOI:</u> 10.1080/15290824.2015.1039643

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Temple, I. G., Williams, H. G., & Bateman, N. (1979). A test battery to assess intrasensory and intersensory development of young children. *Perceptual and Motor Skills*, *48*, pp. 643-659.

Watson, N.V., & Kimura, D. (1991). Notrivial sex differences in throwing and intercepting: relation to psychometrically-defined spatial functions. *Personality and Individual Differences*, *12*, 375-385.

Zisi, V., Giannis, A., Bouyousi, M., Pollatou, E., & Michalopouloy M. (2014). Systematic Participation in Traditional Dance or Exercise? Variations in The Quality of Life of People of Third Sun. *Inquires in Physical Education & Sports, 12 (1)*, pp. 1 - 8.