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*Original article*

## CONTRIBUTION OF STEP BY STEP PEDAGOGY TO INCREASING GROUP COHESION

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### Abstract

*Objective.* Research found that for a good functioning of the instructive and educational process not only the teacher-student interaction is important but also the interaction among students. Many social psychology studies have highlighted the importance of the effectiveness of interaction among students for the learning process. In the traditional school, there is no emphasis placed on student cooperation, but modern pedagogy concluded that in many cases a good student-student relationship can improve the cognitive area. A united class is a favorable environment for the student, giving him/her confidence, feeling of worthiness, and freedom for the expression of the student's personality. In a class, we can appreciate and understand the dynamics of student relationships by observing the collaboration between the students during classes, when solving a task. A benefit in terms of optimizing the training process emerges if the teacher knows who are the marginalized students within the group.

The implementation of some elements of the Step by Step method can determine the increase of the cohesion within the group of students in physical education and sports lessons, by workshops.

This paper investigates social structures, measuring the attraction and rejection that occurs among students, after applying the Step by Step methods and after applying traditional methods.

*Methods.* To understand the dynamics of student relations, we used the socio-metric test research method, initiated by J. L. Moreno. Students were asked to name 3 colleagues in the order of preference, and then in the order of rejection, starting from certain given situations.

*Results.* The results of this article, related to the dynamics of student relations, provide a new opportunity to achieve an appropriate teaching-learning environment.

*Conclusions.* The conclusions of our study reveal new perspectives in addressing the physical education and sports lessons by increasing the cohesion within the group of students.

*Key Words:* physical education and sports, group dynamics, Step-by-Step, modern pedagogy.

### Introduction

Both the motor and socio-emotional development are among the objectives of physical education and sports. They are co-dependent and are used to facilitate the development of a group. School classes offer a social experience that will influence the life skills of the students. The classroom environment will also remain an interesting concept in understanding how the art of teaching and learning takes place.

Children interact with their colleagues on a regular basis and they also establish friendships with some of their peers. At school, these relationships promote joint activities of academic and non-academic nature. While developing these friendships

at school, children become aware of the wider hierarchy in terms of social status existing in the classroom: popular children and less popular children. Popularity plays a significant role in establishing the social status in a school setting.

Some studies claim that there is a link between academic performance and social status. A marginalized student may not be as motivated as a popular student to actively participate in the class activities.

In a classroom we can assess and understand the dynamics of student relationships by observing the collaboration between them during the lessons, when solving a task. By using the Step by Step alternative

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pedagogy, with the help of workshops during the physical education and sports lesson, it is possible to increase the motivation for active and creative participation in a student's own training, while decreasing the number of marginalized students.

The social network has been developed by Kurt Lewin, Jacob Moreno, and Fritz Heider in the 1930s and is still a topic of research. They set up a research centre that analysed the social perception and group structure (Scott, 2013).

Establishing positive social relationships is considered a particularly important aspect of well-being. The need for affluent relationships with people, the need for affiliation to a group is also presented in Maslow's well-known human needs pyramid (Maslow, 1943). A new theory, the theory of self-determination (Ryan, Deci, 2000), also proposes the need for social contact as essential for personal growth, integrity and psychological health. The quality of relationships among group members ultimately affects the social climate, which in turn affects the functioning of a group (Jostad, Sibthorp & Paisley, 2013).

A commonly used tool for the assessment of preferential relationships is the sociometric technique, developed by Moreno (Predoiu, 2018). This technique highlights the structure of the group, asking members to mention which colleagues they like the best.

The purpose of this test is to investigate social structures, measuring the attractions and rejections that exist between individuals within a group (Moreno, 1960; Shaw, Gorely, Corban, 2005). M. Niculescu (2002) describes the conditions necessary in order to apply the sociometric test: the members of the investigated group have to know each other well; the confidentiality of the data will be ensured (the answers will not be communicated to colleagues); questions will refer to well-defined situations; preferences will be expressed in terms of a hierarchy (the number of choices and rejections may be limited or not).

The sociometric status is often considered a reflection of a child's social competence understood as their ability to engage successfully in interactions, relationships and groups (Rubin, Bukowski, Parker, 2006).

Some researchers have associated social relationships with group performance. (Clemente, Martins, Wong, Kalamaras, Mendes, 2015; Lin, Lai, 2013). Grund (2012) analysed different social structures and their relationship with the performance of the team. The results of a football team have been

used as an experimental basis to measure performance, and this has been supplemented with information about the group structure (understanding, cohesion, etc.). Studies have shown that success in the game has a strong relationship with the players' relationships, as cooperation contributed to better performance.

Sociomatrices have also been used in education. Many have studied the influence of the group in education (Roberts, 2008). For example, Dombrovskis, Guseva and Capulis (2014) used sociograms to analyse the interpersonal relationships of the students in sports lessons.

It has been shown that the level of acceptance and rejection among students also influences academic success (Bierman, 2004). Rejection seems to play an important role in student achievement and motivation, because students who are rejected by their peers often displayed learning difficulties. In line with the above findings, Yugar and Shapiro (2001) reported that students who were perceived negatively by their peers were also assessed by their teacher as facing academic and social difficulties.

In this light, the positive relationship between high intellectual abilities and popularity (Meijs, Cillensen, Scholte, Segers, Spijkerman, 2010; Van Rossem, Vermande, 2004) is clearly highlighted.

Moreno's most notable achievement was the development of a sociogram, a graph that provides a visual representation of the relationships between social phenomena such as people, organizations, or communities. Sociograms (Drahota, Dewey, 2008) have been particularly useful for analysing the group dynamics, allowing group comparisons and studying the repercussions of the technique deployed by a moderator (or instructor).

The purpose of this article is to highlight the preferential relationships between students in order to find out whether the change in the teaching technique, by implementing the Step by Step pedagogy, can influence the cohesion of the group, thus increasing their motivation to participate in physical education and sports lessons.

## Methods

In order to understand the dynamics of the student relations, we applied the sociometric test initiated by J.L. Moreno in four grades: grades IV- A and B were the experimental groups (Step-by-Step method of teaching), and grades IV- C and E were the control groups (the traditional teaching method), comprising a total of 127 students.

Students were asked to list 3 colleagues in the order of their preferences and then in the order of rejection, considering some given situations:

Q1. Who do they want to team up with for sports, games, physical education and sports classes?;

Q2. Who would they like to be the leaders of the class?;

Q3. Who would they want to work with on a project?

The first student chosen received +3 points, the second +2 points, and the third +1 point, and the first rejected student received -3 points, the second -2 points, and the third -1 point.

The sociometric test was applied twice, with an initial phase (at the beginning of the school year - September 2017) and a final phase (at the end of the school year - June 2018), on all students enrolled in the research study, in order to understand the dynamics of student relationships. In the initial phase we endeavoured to find out their preferences, and in the final phase, we wanted to find out if the initial preferences remained the same, and also whether the change of the teaching technique, by implementing

the Step by Step pedagogy, had any influence on the group cohesion.

The experimental and control groups had situations 1, 2, 3 and covered 6 items with open questions.

Of the sociometric test indicators, we will present the social status index (Is).

A positive outcome in terms of optimizing the training process is to make the teacher aware who are the students marginalized by the group.

### Results

Starting from the idea of increasing the motivation of students regarding the change of the teaching technique by implementing the Step by Step pedagogy in physical education and sports lessons, which can also influence the cohesion of the group, we will present the results of our research.

The sociomatrix reveals that in the first experimental group (table 1), following the implementation of the principles and characteristics of the Step by Step program, the social status index changed significantly in the following items:

Students with social acceptance index 0 (Is)	Q1.		Q2.		Q3.	
	Initial	Final	Initial	Final	Initial	Final
	3	0	10	9	9	4

As far as the second experimental group is concerned (table 2), after the realization of the sociomatrix, we noticed that after the implementation of the principles and characteristics of the Step by

Step program, the social status index has changed significantly in some items:

Students with social acceptance index 0 (Is)	Q1.		Q2.		Q3.	
	Initial	Final	Initial	Final	Initial	Final
	4	0	9	9	4	3

Also, after the realization of the sociomatrix (table 3), we observed that in the first control group, where the traditional teaching system was used, the social status index has not changed much, but quite

the opposite, more students have been rejected, within some items:

Students with social acceptance	Q1.		Q2.		Q3.	
	Initial	Final	Initial	Final	Initial	Final
	1	1	1	2	3	2



index 0 (Is)						
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As far as the second control group is concerned, after the sociomatrix was drafted (table 4), we realized that following the use of the traditional

teaching system, the social status index has not changed much, but on the contrary, more students have been rejected, within some items:

**Table 4.** The second control group

Students with social acceptance index 0 (Is)	Q1.		Q2.		Q3.	
	Initial	Final	Initial	Final	Initial	Final
	7	13	8	5	6	6

**Conclusions**

After applying the sociometric test, we were able to understand the dynamics of student relationships.

Following the interpretation of the sociomatrix, we noticed that in the experimental group, where the principles and particularities of the Step by Step program were used, the social status index changed significantly within some items, while in the control group where the traditional system of teaching was used, the social status index has not changed much, but quite the opposite, and we deduced that more students have been rejected.

Also, the sociomatrix helped us understand that during the physical education and sports lessons, students team up with those with whom they are friends and have some sporting performances, while during other activities, such as accomplishing a

**References**

Bierman K. L., Peer rejection: Developmental processes and intervention strategies. New York: Guilford Press, 2004.

Clemente F. M., Martins F.M.L., Kalamaras D., Wong D.P., & Mendes R.S., General network analysis of national soccer teams in FIFA World Cup 2014. *International Journal of Performance Analysis in Sport*, 2015, 15(1), 80–96.

Dombrovskis V., Guseva S., Capulis S., Cooperation and Learning Effectiveness of First Graders during Sports Lessons. *Procedia Soc. Behav. Sci.*, 2014, 112, 124–132.

Drahota A., Dewey A., The sociogram: A useful tool in the analysis of focus groups. *Nurs.* 2008, Res. 57, 293–297.

Grund T.U., Network structure and team performance: The case of English Premier League soccer teams. *Social Networks*, 2012, 34(4), 682–690.

Jostad J., Sibthorp J., Paisley K., Understanding groups in outdoor adventure education through

project, students with good school results are most likely chosen.

The use of Step-by-Step alternative pedagogy workshops in physical education and sports classes can help us build a much better group cohesion because it requires work with different people from one lesson to another and helping each other, so that the motivation of the marginalized people increases considerably. Also, since each student will be the leader of a workshop during the school year, he / she gains confidence in his / her abilities while also gaining a favourable social status.

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social network analysis, *Australian Journal of Outdoor Education*, 2013, 17(1), 17-31.

Lin J.W., Lai Y.C., Online formative assessments with social network awareness. *Computers & Education*, 2013, 66(1), 40–53.

Maslow A. H., A theory of human motivation. *Psychological review* 1943, 50 (4), 370.

Meijs N., Cillensen, A.H.N., Scholte R.H.J., Segers, E., Spijkerman, R., Social intelligence and academic achievement as predictors of adolescent popularity. *Journal of Youth and Adolescence*, 2010, 39(1), 62-72.

Moreno J. L., *The Sociometry Reader*, Glencoe, IL: The Free Press. 1960.

Niculescu M., *Metodologia Cercetării Științifice în educație fizică și sport*, Bucharest: ANEFS, 2002, 337.

Predoiu R., *În mintea campionilor*, Bucharest: Discobolul, 2018, 62.

Roberts S., Using practitioner research to investigate the role of the teacher in encouraging student interaction within group work. *Nurse Educ. Today*, 2008, 28, 85–92.



- Rubin K.H., Bukowski W.M., Parker J.G., Peer interactions, relationships and groups. In N. Eisenberg, W. Damon y R. M. Lerner (Eds.), Handbook of Child Psychology: Vol. 3. Social, emotional, and personality development (6th ed., 571-645). New York: Wiley. 2006.
- Ryan R. M., Deci E. L., Self-determination theory and the facilitation of intrinsic motivation, social development, and well-being. American psychologist, 2000, 55 (1), 68.
- Scott J., Social network analysis (3rd ed.), Thousand Oaks, CA: Sage Publications, 2013.
- Shaw D., Gorely T., Corban R., Sport & Exercise Psychology, Taylor & Francis Group, New York, 2005, 225.
- Van Rossem, R., Vermande M.M., Classroom roles and school adjustment. Social Psychology Quarterly, 2004, 67(4), 396-411.
- Yugar, J. M., Shapiro E. S., Elementary children's school friendships: a comparison of peer assessment methodologies. School Psychology Review, 2001, 30, 568-586.
- Zettergren P., School adjustment in adolescence for previously rejected, average, and popular children. British Journal of Educational Psychology, 2003, 73, 207-221.