EFFECTS OF AN INTERVENTION STRATEGY AIMING TO IMPROVE PUPILS’ SOCIAL BEHAVIOUR DURING PHYSICAL EDUCATION LESSONS

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Abstract: The objective of the research project was to assess the effectiveness of a specially designed Strategy which aimed to improve pupils’ social behaviour (using as criteria groups’ social climate). This strategy was designed to be delivered at the same time as the designated PE curriculum and to be used as a method of delivery. It was hypothesised that the social behaviour would progress more within groups attending the Strategy than in groups that experienced the lessons in the usual way. Five groups of between fourteen and seventeen boys attended the lessons in which the Strategy was introduced through PE lessons during a period of one school year. There were also five control matched groups that did not experience the Strategy in their PE lessons. Using the questionnaire technique, the social behaviour within the groups was assessed at the beginning and at the end of the school year. A Mann-Whitney, non-parametric test showed that the difference between the progress of experimental and matched control groups was significant. This led to the conclusion that the Strategy was effective in improving pupils’ social behaviour. The fact could be seen as social development of boys who attended PE lessons in which this was implemented.

Keywords: physical education, social behaviour, strategy, group.

1. Introduction

More and more PE enthusiasts are convinced that, due to its particularities, PE is capable of not only contributing to pupils’ physical health but also to enhancing their social development.

There are voices stressing that sport does influence youth behaviour but not only in a desirable way (Balint, 1996; Lee, 1986; Holdevici and Vasilescu, 1988; Serban, 1987). Wandzilak (1985) recalls other investigators (Kistler, 1957; Richardson, 1962; Bovyer, 1968; Allison, 1981) who have also concluded that athletes were less “sportsmanlike” than their nonathletic counterparts.

There are though many more authors who reported enhancement of pupils’ social development during PE and sport activities. McHugh (1995) enumerates some of the benefits associated with

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physical education activity such as: learning to depend on one another, enhancing self esteem, developing self confidence and building a sense of teamwork and responsibility. Tomme and Wendt (1993, p.66) consider that “When implemented carefully, co-operative activities in physical education can convey ideals such as honesty, respect, for others’ rights and feelings, concern for others and self discipline”. Laker (1996) tried to influence the co-operation of pupils. Cooperation in his opinion, includes teamwork, helping each other, trust, sharing group success, decision making. He was also concerned to influence sportsmanship, which includes: fair play, honesty, peer support and competitiveness. Individual aspects which involve: self esteem, creativity, determination, confidence, independence, hard work, leadership, initiative and Attitudes, which involve: “enthusiasm, participation, engagement, humour” (Laker, 1996, p.19).

It was tried to find out ways of improving pupils’ social behaviour. Glynn (1985) suggests that there are four aspects of learning which can facilitate social development 1. The learner should have the opportunity to initiate as well as to react. 2. Activity should be shared between skilled and less skilled pupils who have a positive social relationship. 3. These should be reciprocity, through which each participant modifies the behaviour of the other. 4. The needs to the feedback to the learner. Topping (1988) enumerated three main ways of structuring the teaching and learning process:

1. Co-operative, where if one pupil achieves, others achieve also.
2. Competitive, where if one achieves, others do not.
3. Individualistic, where if one achieves, others are less affected or not at all. He suggests that if social education is to be an overt aim, the first kind of environment, a (co-operative environment) offers the greatest likelihood for its achievement. Mc Hugh (1995) considers that paying attention, asking, listening, offering supportive words are very important activities which clearly can have an influence on pupil’s social development.

In order to use the best methods to enhance pupils’ social behaviour it was tried to understand the phenomenon which underpins it. Social learning theorists consider that environmental cues influence behaviour through modelling and reinforcement. Therefore exposure to role modelling and reinforcement from influential agents, such as peers, teachers and parents could convey toward socially acceptable behaviours. The structural developmental theory asserts that environmental cues and the individual’s continual mental restructuring of social interactions systematically derive new cognitive processes. The moral development could be enhanced by cues in the educational environment which create a temporary cognitive disequilibrium.

There is also the need to understand better such issues whether there is a the transfer of positive behaviours into “real” life, to find out the period of time these effects may last. We also know very little about how PE and sport influence and shape youth’s moral values.

There appeared a trend to change the focus from improving the physical to using PE and Sport for improving social, moral, affective or behavioural development of pupils. There are many voices arguing that
it is possible to work at the same time on both aspects. This is the case for this research which tried to verify the effects of an intervention Strategy which was implemented alongside the PE curriculum over a period of one school year.

In order to better understand the context in which this Strategy was carried out, the main features of the Romanian PE Curriculum (1991) are presented.

**Structure:**
- **Key stage 1.**
  - Primary, 4 years, (7-10 years), 3 lessons of 50 min. a week.
- **Key stage 2.**
  - Secondary, 4 years, (11-14 years), 2 lessons of 50 min. a week.
- **Key stage 3.**
  - High school, 4 years, (15-18 years), 2 lessons of 50 min. a week.

**Objectives for Key stage 3 (high school)**

**General objectives**
- Learning and refining key movement abilities.
- Adopting an appropriate posture of the body in static and dynamic activities.
- Development of cardiovascular system and muscular strength.
- Development of articulations mobility and muscular elasticity.
- Increasing effort capacity of the body (cardiac and respiratory systems).
- Maintaining an optimal body weight.
- Creating moments when pupils are encouraged to self-guide, self-assess and offer assistance to their colleagues.

**Motor objectives**
- Developing general speed.
- Developing general co-ordination.
- Developing stamina.
- Developing muscular power.

**Objectives regarding sports skills**
- **Athletic activities.**
  - Learning and refining basic athletic elements.
  - Improving speed running technique.
  - Improving long distance running technique.
  - Improving long jump technique.
  - Learning shot put technique.
- **Gymnastic activities.**
  - Acrobatics and vaults.
  - Dance.
  - Sport games.

Learning and practicing two of the following: football, basketball, volleyball, handball.

This brief presentation shows that the Romanian curriculum has many similarities with the British curriculum.

**2. The content of the intervention Strategy**

The overall objective of the intervention Strategy used in the research project was to enhance the social behaviour within PE groups. In order to attain this objective the following steps were used. These steps are written below as they were presented to the teacher implementing the intervention strategy.

1. **Transforming the group into a team.**

   **How to create the team?**

   A school class is, certainly, a group already built. The suggestion is to split the class in two groups: girls and boys.

   So the suggestion is that two groups of boys (coming from different classes) take part together in the physical education lessons. (This often happens in large schools in Romania, the girls from the
same classes performing physical education lessons together with another teacher.)

The pupils must be told that they form two groups and all activities will be further carried on following this structure. This must be respected whatever the number of pupils. They need to be given the consciousness of being seen and treated as group. Even when performing individual activities, group members should be aware of their belonging to their group.

The relationship between the two groups is encouraged to be sometimes competitive, and sometimes collaborative but never hostile. The actual goal is to transform each group into a team.

2. Performing co-operative tasks, sometimes in a competitive context.

How to organise co-operative tasks?

Games activities stipulated by the National Curriculum at high school level (football, handball, basketball, volleyball) can be carried on in such a way that members of the group constitute only one team.

Individual activities stipulated by National Curriculum such as gymnastics and athletics offer the possibility to treat the individuals together in a group context. If there are tasks regarding initiation in some psychomotoric skills, the members are suggested to help each other to perform better because at the end of activity their marks would be summarised to obtain the group’s mark. This may be organised with “long jump”. Here the individual performance contributes to the group performance by summarising the performance obtained by each member of the team.

As the National Curriculum stipulates, athletics activities must be present in almost all physical education lessons. In order to contribute to pupils’ social development they may be organised as team activities. For example, speed running contests between the two groups, long jump contests and shot put competition. Some activities such as long jump and speed running are already known as sport skills and they may be used in order to improve skills and hence performance. Others, like shot put, have to be learnt at this stage. Even though athletics is an individual sport, it may be organised as a team activity.

The following way to organise the learning activity as a co-operative task is suggested: simply announce at the beginning of activity that the two groups would be compared at the end of the lesson, taking into account the sum of their performance. This encourages individuals to feel as though they belong to the group. The members of the team should try to help each other and they should be stimulated to communicate. The activity should encourage such qualities as responsibility, involvement, communication, co-operation, initiative and so forth.

3. Encouraging members to organise themselves

How should pupils be encouraged to organise themselves?

As mentioned before, pupils should be given the feeling that they are a well organised group. They should be told that a well organised group has a leader (or many leaders, one for each specific activity), each member of a group should have specific roles, (idea provider, conflict solver, organiser and so forth), the group should have specific goals, the group should have its specific norms respected by its members.
After discussing these with each group, the teacher should suggest to pupils that after one or two weeks they should present the structure of the group, the roles within the group, the rules which govern the group, the leader, or leaders for certain activities. They should be asked to establish a “conduct code” which is to govern the relationships between group members.

During physical education lessons, they may be asked to organise themselves when starting a match or a contest. This requires initiative, communication, responsibility, cooperation and may be a formal recognition of their group structure and power.

The idea is to get them to organise into a structure for different activities they accomplish together in school and outside.

During the physical education lessons, the teacher should make use of the group and respect the organisational structure, its decisions and its roles.

The teacher must know the structure, conduct code, roles and make sure that they are morally acceptable, and consistent with school norms. Also using his/her knowledge and experience, the teacher can help pupils to improve knowledge of rules and codes, by discussing these.

4. Offering opportunities to perform successful activities

How to organise successful activities?

Physical education activities give plenty of opportunities to challenge the teams’ capacities and resources. There are two major categories of tasks:

i. Problem solving tasks, when the team applies its intelligence, power, creativity, cooperativeness, boldness and other skills, in order to resolve the task within limits of time and material resources. In this case, satisfaction occurs from the perception of overcoming the difficulties

ii. Competitive tasks, when a team applies its own resources to defeat the opposite team. In this case satisfaction occurs from perception of the group value against others. In this particular case, of course, only one of the two teams would achieve success and the other team would achieve failure hence divisive tendencies may occur.

It is suggested that at the beginning of the school year teachers should use mostly problem solving tasks in which all teams may be successful. Later, when the group’s cohesiveness is strengthened, the teacher may use more often competitive activities. There are two reasons for this:

a. The diversity of activities may lead to situations when, in turn, one or another of the teams may win. The teacher must organise such activities in order to permit equal opportunities for the two teams to achieve success.

b. Losing is part of life and dealing with failure is an attitude which must be learned. It is a wonderful opportunity to teach the team to form an appropriate attitude toward failure. These situations are good opportunities to test relationships between members and to build confidence. Here the teacher’s ability to deal with groups, to manifest intelligence, creativity, insight, empathy is of maximum importance.

5. Encouraging pupils to organise activities independently

How to encourage to organise activities independently?

Teachers may offer examples of ways to organise such activities by highlighting the steps they follow during organising school events.
Teachers may ask pupils themselves to name the steps required in organising for example a football match. The teacher may ask somebody to name the steps and ask others to correct him if wrong. (This may stimulate participation).

Teachers may let pupils organise themselves, observe them and then, at the end of activity, analyse their activity by giving them feedback.

The teacher may ask teams, as a challenge, how many independent activities they have organised. Praising the team which demonstrates initiative and commitment is a good means to encourage such activity.

The teacher may suggest to teams that they organise activities such as collecting waste materials, protecting a forest or cleaning their pitch.

The teacher may encourage teams to act in such a way even in other activities.

These activities have plenty of implications concerning social learning which develops with high cohesiveness and the fact that a team is competent to organise independent activities is the sign of social maturity.

This intervention Strategy was designed to intensify social interactions between group members, to enhance communication, to create the awareness of being part of a group and from here to learn the responsibilities related to this. It also provides the opportunity to pupils to rehearse different social roles within the group, to learn the advantages and the disadvantages of working within a group, to give pupils the chance to establish their own behavioural rules within their group, to obey these rules and to use them to be respected by peers, and others. Such experiences as those enumerated above are taking place within groups regardless teacher’s intentions. The point is that the teachers should foresee the social outcome of every activity he/she designs. Teachers should not only be able to recognise the social impact of the activity on the group but also to be able to organise PE activities in such a way so that the positive outcomes to prevail. This is what the Strategy intends to promote.

3. The Research

Methods

Participants:
In order to test the hypothesis, 154 boys, aged between 14-15 years, were used as subject of the research. They came from ten classes of high school level and formed ten groups; five experimental groups and five control groups.

Procedures

Taking as background the “Annual Thematic Plan” * the implementation of the Intervention Strategy was designed.

The first step was the teacher to read and understand the instructions concerning the way the Strategy had to be carried out.

The initial assessment was made by questioning teachers from different disciplines, through the use of Lykert- type scale, on group’s social climate.

It was used a ten point scale because it provided numeric values as scores and because it is closer to the marking system used in Romania (1 to 10 points scale). The questionnaires were applied to the teachers from different subject disciplines who worked with those classes. The assumption was that each teacher was well able to assess the groups due to their experience and due to the fact that they worked with those pupils regularly. The
ten teachers were asked to express their opinion concerning the social climate of each group. This was asked at the beginning of school year and at the end of school year. Two hundred questionnaires were used. Each group’s mark, concerning social climate, represents the mean of the marks given by the teachers. Each group obtained an initial mark, at the beginning of the school year and a final mark at the end. In order to appreciate whether the difference between initial and final questionnaires results was significant a “t” test related was used.

The obtained data was collected, processed and used to establish the matched pairs (by ranking the groups). The experimental groups received the physical education lessons which were informed by the intervention Strategy alongside National Curriculum work. The control groups received the physical education lessons as the National Curriculum requires and without the Strategy.

The same Annual Thematic Plan resulting from the National Curriculum was used for both categories (control and experimental). Regarding the amount of time the teacher spent with implementing the Strategy, the teacher reported roughly between 5 and 10 minutes each lesson. This does not means that the time allotted for the lesson decreased by 5-10 minutes. There were moments, such as warming up, recovery and others, when the teacher approached the Strategy through talking, whilst pupils carried on moving or relaxing. At the same time not only those 5-10 minutes are influencing pupils’ thoughts. The researcher assumes that because of a different approach and because of different management of the lessons, the Strategy is influencing pupils during almost all of the lessons time and even between lessons. This amount of time is certainly impossible to be quantified and standardised.

Concerning the timetable and the facilities, similar conditions were allotted for both control and experimental groups. It can be assumed that the only important element that was different for control and experimental groups was the application or not of the Strategy.

The duration of the experiment was one school year. A number of 60 lessons had been allotted for Strategy implementation.

The final assessment was carried out following the same order and the same instructions as in the initial assessment.

Because of unpredictable events one of the pairs was eliminated from the experiment so that at the end there were only five pairs taken into account when analysing the data.

**Results**

The research illustrates the evolution of each group concerning the social behaviour and allows grasping the difference of evolution between control and experimental matched groups. It should be remembered that following questionnaire’s results each group was allotted a mark between 1 and 10 (representing the mean of teachers’ marks on group social climate). Mark 1 meaning that teachers perceived a very cold social climate, i.e. many unfriendly and hostile interactions between group’s members. Mark 10 meaning that the teachers had perceived a very warm social climate i.e. many friendly and kind interactions between groups’ members. Each group was assessed at the beginning and at the end of the school year. The difference between the marks obtained at the
beginning and the marks obtained at the end had given the progress concerning group’s social behaviour. According to this, the difference between groups’ social climate at the beginning and at the end of the school year was 3.9 points for group 1. In contrast, the difference between initial and final results was negative on group 8. This difference was not statistically significant (see figure 1). Looking at figure 1 it can be observed that for groups 2 and 6 the difference, between the initial and final results, was not statistically significant.

In order to assess the significance of the differences between the progress of control and experimental groups a non parametric test was used (Mann-Whitney). The difference was significant at the p < 0.025 level (one tailed).

Regarding groups’ results on Fitness Tests (figure 3) it can be seen that, similar to social behaviour, all groups had progressed. The higher progress was registered by group 1 (4.5 points) and the lowest by group 10 (2.2 points). The same Mann-Whitney test shows that the difference between the mean of the marks obtained by each group concerning the fitness tests was significant at the p > 0.1 level.

4. **Discussion**

Teachers considered that the group 1 had progressed more in terms of social climate (3.9 points) among all groups. Regarding the evolution of groups 2, 6 and 8 it can be seen that no statistical difference was grasped between initial and final results. Taking into account teachers’ opinions, it means that for those groups no change was perceived on groups’ social climate. This is a very serious problem that was also raised by Balint, (1996); Matei, (1981) and Muresan, (1980). They also found that school influence in a small amount pupils’ social behaviour. This constitutes evidence that an intervention strategy that aims to influence pupils’ social behaviour is a must.

At the same time it can be observed that all experimental groups’ progressed. The Mann-Whitney test shows that the chances that this higher progress of the experimental groups to be achieved by chance are less than 2.5%. This level of significance is acceptable for social sciences according to Muresan (1980), Sarantokos (1993). Taking into account the relatively small number of groups (10) involved in the experiment it can be stated that the significance level was quite important. Dorofte (1981) accepted as grounds for educational influences p <0.05 level. All these are grounds to conclude that the experimental groups had progressed more concerning group’s social climate comparing to matched control groups.

For avoiding biases resulting from teachers’ different personalities the same teacher was used for both experimental and control groups. This did not solve the problem entirely. Due to the fact that this teacher was deeply involved and enthusiastic in learning more on the Strategy, as she recognised, her teaching style had changed during the research. From teaching by command and teaching through practice she finished adopting more often a problem solving and reciprocal teaching style. It is assumed that this did not influence the research results because (as the researcher noticed) this was used with control and experimental groups as well. Concerning the timetable and the facilities, similar conditions were
allotted for both control and experimental groups. It can be assumed then that the only important element that was different for control and experimental groups was the application or not of the Strategy.

The Strategy’s design has similarities with other intervention strategies which produced significant social development. The first step of this Strategy—Transforming the group into a team—aims to create an emotionally safe PE environment. Balint (1996) and Hellion (1996) reported positive outcomes on pupils’ social development by creating such a safe environment. The second step of the Strategy—Offering opportunities to take part in co-operative activities—is congruent Glacas (1991) findings. She found that learning to collaborate by using co-operative games increases the importance of interpersonal skills. Similar results were reported by Mercier (1992) who stressed that co-operative learning helps the group to complete its task and built positive feelings within the group. The third step of the Strategy—Encouraging members to organise themselves their own group—is congruent with Sparks (1993) ideas. He suggests that teachers should promote good decision making skills by developing a sense of trust, while allowing pupils opportunities to make personal decisions. Positive influences on pupils’ social development were reported by Underwood and Williams (1991) who organised pupils’ experience during gymnastics lessons by giving the specific responsibility for helping each other to acquire physical skills. The fourth step of this Strategy—Encouraging pupils to organise independent activities—aimed to give to pupils the opportunity to interact more within their group. This has some similarities with Tomme and Wendt (1993) approach. They found that in order to improve pupils’ social behaviour it should be given to students enough time to understand and practice the aimed social behaviour. The fifth step of this Strategy—Offering opportunities for pupils to perform successful activities—has its routs in Social Learning theory which highlights the role of positive reinforcement in shaping or changing character.

Although there are many similarities with other intervention strategies which aimed to influence pupils’ social behaviour through PE and sport activities, this Strategy has its own particularities which, we think, makes it effective:

1. The Strategy is almost entirely based on group’s influence power. (The teacher should be aware that group’s influence is very strong but we have to make sure there is a positive influence.)
2. It encourages pupils to think, decide and act as members of a team. (The teacher should take into account though the social facilitation effect which might be strong but so could be the Ringelman effect)
3. It gives to the individual the opportunity to practice and test its own social abilities within the team. (As team’s composition is very stabile, practically during the whole school year)
4. Thanks to the Strategy’s design it could influence the pupils not only during PE lessons but long after. (As pupils are encouraged to organise themselves and carry out independent activities.)

The findings’ generalisability on this field is quite a problem as many researchers, because of organisational
problems, can not work on more than a few groups. Miller et al. (1997) used 30 students on 10 weeks sessions over a period of several years. Mercier (1992) carried out a research on five groups of students. Dumitrescu (1979) drew his conclusions using eight groups of students. In contrast, De Rette (1996) worked with a few hundred young but no data illustrating the outcome of his programme was published. Regarding this research it should be stressed that in spite of statistical results obtained on 10 groups the effectiveness of this strategy should be further verified. Whether the same results could be obtained by many teachers then it could be said that the Strategy worth being implemented alongside PE lessons as a method of improving pupils’ social behaviour.

Concerning the results on Fitness Tests the figures show that both, control and experimental groups, registered a progress. The control groups progress is just above experimental groups progress but the difference is not statistically significant (p> 0.1). This means that the difference is very likely to be determined by chance. The fact that the experimental and control groups had registered a similar evolution concerning the Fitness Tests, shows that the Strategy’s implementation did not impede the “physical education” process. This is a very important finding as there are voices (Mureşan, 1980; Chiriţă, 1983) expressing their concern for intervention strategies impeding PE lessons’ original aim.

5. Conclusions

The objective of this research, as stated in the introduction, was to assess whether implementing the Strategy alongside physical education lessons, could create greater progress in pupils’ social development.

In spite of the fact that the findings seem to confirm the experimental hypothesis, the author of this research is aware that groups’ social evolution is a very complex phenomenon and it is very difficult to assess which element determined what. Though, the questionnaires results showed that the groups attending the Strategy had progressed more than the other control groups. The findings also seem to confirm the fact that Strategy’s implementation did not have a negative impact on pupils’ progress regarding physical development. This was congruent with another assessment method which was used that was based on direct observation on groups’ social climate.

The groups which were used to carry out this experiment were representative of their age, sex and social level for the town schools population in Romania. The teacher that implemented this Strategy can be considered as being representative for town school teachers. However, because the Strategy was implemented by one teacher only and the number of groups was quite small the researcher considers that the most important implications of this research are:

- It suggested a solution to the very acute problem of young people’s social development.
- It offered strong arguments for expanding such research and also provided comparative data with further research.
- It opened new research fields for physical education in Romania.
Reference


