

Effectiveness of Cooperative-Mastery Learning Method on Basketball Skills and Moral Reasoning at Physical Education Lessons

Abeer Mostafa

*Curriculum and Teaching Method
Department, Faculty of physical Education, Minia University, Egypt*

The purpose of this study was to determine the effectiveness of cooperative -mastery learning of a ten-week on basketball skills and moral reasoning at physical education lessons in (30) prep school female students. The sample were randomly divided into experimental (n=15) and control (n=15) groups. At the beginning and end of the study performance, tests and the Moral Judgment Test were applied. The results revealed that the experimental group exhibited statistically greater learning and mastery basketball skills and moral reasoning compared to the control group. These findings indicate that the cooperative-mastery learning model should be considered when teaching students to successfully psychomotor skills and to promotion moral reasoning.

Key words: cooperative-mastery learning, moral reasoning

Introduction

Classrooms are complex systems where many factors influence student learning (Lampert, 2002). Instructional method employed by teachers is one of the most important factors.

According to Bloom (1976), the mastery learning method constitutes a powerful way of providing students with feedback correctives. These feedback correctives serve to adapt the instruction to individual student needs, thus enabling each learner to reach mastery level. Numerous field studies (e.g., Guskey & Pigott, 1988; Kulik, Kulik, & Bangert-Drowns, 1990) have demonstrated the effectiveness of the mastery learning method on academic performance as measured by criterion-referenced and teacher-made tests. Other studies (e.g., Mevarech & Werner, 1985; Soled, 1986) have shown

that the positive effects of this method extend to higher cognitive processes.

The cooperative learning method can also facilitate learning. According to Mevarech and Susak (1993), studies in social cognition suggest that cognitive functions emerge at the social level before the individual level. Vygotsky (1978) indicates that acquisition of concepts and higher cognitive processes can occur through oral communication with others. Studies by Sharan (1980) and Slavin (1983) show cooperative learning to be especially useful in developing higher cognitive processes, and Mevarech and Susak (1993) point out that cooperative learning motivates many students by fostering active participation.

Based on study and theory such as that described above, Bloom (1984) calls for cooperative and mastery methods to be combined to enhance

various cognitive outcomes. Studies by Mevarech (1985, 1991) and Slavin and Karweit (1984) have demonstrated the effectiveness of the cooperative-mastery learning method in promoting academic achievement in mathematics. Another study by Mevarech and Susak (1993) directly compared the effects of cooperative learning, mastery learning, cooperative-mastery learning. Results indicated that the students in the cooperative-mastery learning and mastery learning groups scored higher than the cooperative learning group on measures of higher order thinking skills and originality. In addition, the cooperative-mastery learning method was the most effective treatment for promoting originality, while the mastery learning method yielded the highest scores in flexibility and fluency.

Empirical studies have shown the positive effects of combining cooperative and mastery learning methods on mathematics achievement, but little is known, at present, about the effects of cooperative-mastery learning in other student areas or on other cognitive outcomes.

Student's moral development is defined – in many countries – as one of the educational goals in the PE curriculum in school grades. At the same time play and participation in physical activities are settings which could support a child's moral development (Marcoen, 1999). It is assumed that physical education has an essential role in this sense, because it represents a context where many of the student– student and student–teacher social interactions occur (Bailey, 2006). Shields and Bredemeier (1995) describes the context of physical education as the most significant for the

moral development. However, the promotion of moral development through PE sports has only in recent decades been the subject of empirical study (Gibbons et al., 1995; Miller et al., 1997). Hedstrom and Gould (2004) have reviewed the studies on the contribution of school physical education and sport to the moral and social development of the students. They have concluded that the results of studies are positive, for the most part, concerning the modifications in moral motivation, such as attitude towards fair play, inter-human relations in sport, and personal responsibility.

According to Laurence Kohlberg's theory, moral development is part of cognitive development. Kohlberg proposed a model based on three levels of moral development that a child goes through: pre-conventional, conventional and post-conventional. Each of these levels includes two separate stages. In each stage the child is called upon to think about, perceive and solve moral dilemmas in different ways regarding issues of good or bad behavior. In order to behave morally, an individual must have a cognitive capacity to make moral judgments, while the ability of moral judgment is defined as 'the capacity to make decisions and judgments which are moral (i.e., based on internal principles) and to act in accordance with such judgments' (Kohlberg, 1964). Furthermore, concepts such as sportspersonship, fair play, empathy, social responsibility, role taking and pro-social behaviors are related to morality. We will describe these concepts briefly, in order to understand the theoretical background of the present study.

Sportspersonship concerns understanding and valuing the rules, rituals, and traditions of sports and activities and distinguishing between good and bad practices in those activities. Fair play means not just playing by rules, but also respecting others, participating always with the right spirit and attitude, valuing equal opportunity and behaving with responsibility towards a teammate or a player (Siedentop et al., 2004). The concept of empathy refers to emotional role taking, while role taking is characterized as 'the ability to understand a person's thoughts, feelings, motives, and intentions and to assume his or her perspective'. Pro-social behavior is any altruistic behavior, whose primary motive is the maintenance and the increase of other people's well-being (Marcoen, 1999). Social responsibility is communicating with people in a manner that enables and ennobles them, rather than demeans them: honoring other students' right, dignity, and worth; cooperating, or working together toward common goals; negotiating problems and conflicts successfully; and creating opportunities for others (Morris, 2003). Finally, the term moral reasoning is the ability to systematically think through a moral problem taking into consideration one's own values and beliefs while weighing them against what others and society values and believes (Lumpkin et. al., 1994).

A common point in all the studies mentioned was that they tried to address the issue of supporting moral development by using techniques based on Kohlberg's structural-developmental theory and Bandura's social learning theory. However, during the

interventions the researchers did not focus on the implementation of a specific teaching style (Mosston and Ashworth, 2002). Specifically, it seems possible that the cooperative-mastery learning method could positively affect the moral development of students due to interactions between students. However, to date there is no study which examines the effects of the cooperative-mastery learning method on moral development.

These study lack (both in implementation of cooperative-mastery learning method in PE classes or in moral development), combined with the fact that nowadays many disruptive phenomena such as competition, inequality between sexes, violence towards classmates are being observed in the schools (Rhea & Lantz, 2004), made the present study necessary. More specifically, the main purpose of the study was to determine the effectiveness of cooperative-mastery learning method on learning some basketball skills and promoting moral reasoning. Specifically, the hypothesis was examined.

Method

The present study was based on and utilized both the structural-developmental theory and the social learning theory. According to these theories the development of moral behavior is connected to social interaction (Bandura, 1977; Kohlberg, 1984; Telama, 1999) and for that reasons the cooperative-mastery learning method was utilized in the design of the study. In order to employ the cooperative-mastery learning method, Jigsaw II was followed. A Jigsaw approach was selected, because

it has been flexible in its application, all learners working in small groups must understand that mutual trust is required in this approach. Every learner in the group becomes an expert on the topic studied and contributes by helping his/her classmates. The name Jigsaw reflects a metaphor that means putting all the pieces a puzzle together to see the whole Picture. A jigsaw classroom is highly structured. Interdependence is necessary. It is the element of "required" interdependence among students which makes this a unique learning method, and it is this interdependence that encourages the students to take an active part in their learning. Becoming a teacher, each student becomes a valuable resource for the others. Learning from each other gradually decreases the need to try to outperform each other because one student's learning enhances the performance of the other students instead of inhibiting it, as is usually the case in most competitive, teacher-oriented classrooms (Gömleksiz, 2007).

Another element of the design of the study was the effort to create motivational and morality climate during PE lessons by cooperative-mastery learning settings. A cooperative-mastery learning settings may helps students to obtain more positive experiences through their participation in physical activities to becoming more responsible and more cooperative and by reducing unsportsmanlike behaviors, and promotes cooperation, positive interdependence and social interaction between students (see Bandura, 1977; Kohlberg, 1984; Miller et al., 1997; Dyson, et. al., 2010). In other words it

promotes all those elements which support an individual's moral reasoning.

Participants

The sample consisted of (30) female students from 7th grade schoolgirls at Elminia prep school in Upper Egypt, for the academic year 2012/2013 second semester. The study sample was selected randomly, and divided into two homogeneity groups (Experimental and Control) as (n = 15) for each group. The following criteria were selected to define the inter-group differences: (1) Gender (female); (2) Group (schoolgirls); (3) Age (C group 12.57, ± 0.34 years; E group 12.39, ± 0.32 years); (4) Somatic parameters: body mass (C group 42.20, ± 2.73 kg; E group 41.73, ± 3.28 kg), body height (C group 1.46, ± 6.12 m; E group 1.45, ± 6.75 m); (5) IQ Cattell test (C group 43.00, ± 4.80 ; E group 42.33, ± 4.71 point) ; (6) basketball skill tests according the AAHPERD test (Hopkins et al., 1984): passing test, Dribbling skill test, spot shooting. (7) Moral reasoning test. The necessary statistical methods were applied to investigate reliability and validity of tests and level of significance was accepted as $p < 0.05$. No significant differences between the two groups (in the above criteria) were observed, which confirmed the similar the two groups of their moral and motor potential at the onset of the study.

Instruments

Performance tests: To measure learning and mastery basketball skills was designed evaluation forms. evaluation forms included aspects of learning in each skill (Keeping the ball, Receiving the ball, Chest pass, Bounce pass, dribbling skill, Free- throw skill, Peaceful Shooting skill), and Included

procedures and test conditions for each skill, the total score of each skill was set (5) degrees. According to the opinions of experts in the areas of training and teaching of basketball were evaluation forms designed. Non parametric Mann-Whitney test was used to determine validity of evaluation forms, ($u=0$), ($z=-3.13$), ($p=0.002$) for all skills. The test-retest reliability for evaluation forms was ranged between ($r=0.86^*$; $r=0.96$). All participants subjected to assess the performance of basketball skills (pre –post test) by a panel of three teachers of physical education at school (their experience not less than 7 years) in according to the evaluation forms. The final score in each skill was calculated through the average the three referees degrees.

Moral reasoning test: All students were evaluated with the illustrated Moral reasoning test for children (Abdel-Fattah, d.t.). The Moral reasoning test is a reliable ($r=.87^*$) and valid tool for measuring moral reasoning in the sport context (according to experts in the field of sports psychology at Faculty of Physical Education). Non parametric Mann-Whitney test was used to determine validity of the Moral reasoning test, ($u=0$), ($z=-3.36$), ($p=0.000$).

Moral reasoning Test is derived from the original test of moral judgments, consists of twenty stories, which include five moral judgments areas, fit for children from the age of (4-13). In Moral reasoning Test the Child confronts two moral dilemmas–stories and must express whether he/she approves or disapproves of a string of arguments in favor of or against the prescribed behavior in each story. Child must choose (multiple choices) the response that is consistent with his\her moral reasoning, So that the child is

given one degree for mature response in contrast zero for immature response.

Higher scores reflect a more consistent use of moral principles that can be universally applied (i.e., applied in all cases). Principles are daily guidelines that we all develop, based on our personal value and belief structure that can be consistent with universal principles such respect for private property, respect for the truth, and respect for others. These principles are generally an ideal, something that we strive toward (Abdel-Fattah, d.t.).

All students were tested (pre – post test) as a group. Each student was given a copy of the moral reasoning test and asked to complete the demographic information concerning name, gender, age. For consistency in test administration, test instructions were read to students. Students were told that no right or wrong answers existed for each scenario and were asked to independently read the scenarios and mark each question with their personal feelings or beliefs.

Procedures

An experimental design was used in current study including experiment-control group pre-and-post test model. All students were administered a pretest, posttest, on basketball skills and on moral reasoning test. Control group was taught the traditional teaching method, while the experimental group was taught with cooperative mastery learning method. The intervention lasted ten weeks. Students in the two groups received PE lesson one time per week (90m.) for a total of 10 lessons. Detailed, assigned one lesson for each skill, except free- throw and Peaceful shooting two lessons. The cooperative-mastery learning method in a current study was combined the two treatment conditions (Jigsaw II method conditions and mastery learning conditions). The

cooperative-mastery learning setting is consisted of the following specific elements that were included in each lesson:

- 1- Clear instructional objectives: The lessons are arranged into small discrete subunits of learning called tasks to allow close monitoring of student understanding. Clear instructional objectives should be clear for each subunit.
- 2- Task card: Each task of the lesson is presented on a task card. The task card includes an accurate description of the skill and pictorial educational activities, also contains educational goals. It should be noted that each lesson includes three tasks.
- 3- Main teams: Students are randomly divided into five small permanent heterogeneous groups of three students. Each student is assigned to learn one task.
- 4- Expert teams: each student from main team joins other students assigned to the same task to form a smaller group of three students. These groups, called "groups of experts" try to make other students understand the subject.
- 5- Practice time and task cards: The task cards are presented for expert teams. Students are allowed to consult for learn the task, including a description of the exercises. Students will then collective practice these tasks for an allotted time.
- 6- Members of the expert teams come back to the main teams and teach their tasks, which learned in expert teams, to their classmates. All students should work hard to complete tasks in the allotted time. After each trial, the observer (teacher student) would give a 'thumbs up' for a correct performance or a 'thumbs down' for an incorrect performance accompanied by feedback indicating which aspects of learning were absent or inappropriate.
- 7- The roles are exchanged within main team to teach all tasks.

Students work hard together to achieve the defined goal.

- 8- During each task teacher monitored the performance of individual group members, gave corrective feedback as needed. Those Students who performed below a preset mastery level (of 80% accuracy) on a performance test, end-of-task, received remediation from the other children on their cooperative team and were required to re-take the test.
- 9- During teaching in order to support the moral reasoning, efforts were made to de-emphasize competition, while emphasis was put on self-betterment, collective learning and the contentment of the students. Also, there was dedicated time for discussion to support sportsmanlike behavior.

A common group goal, positive interdependence, and individual accountability - three critical features of cooperative learning as described by Slavin (1990) and Johnson and Johnson (1994) -were present in each lesson. Group goal and positive interdependence require that students believe they are responsible for their own learning and the learning of other members in their group, individual accountability require that each student demonstrate mastery of the assigned work. Social skills involve students communicating and working effectively with other students. To achieve this end were employed following: the investigator monitored groups and reminded students to acknowledge, recognize, and praise each other's contributions. Students received specific instructions on how to cooperate (i.e. how to give and receive help) while learning in small groups.

All two treatment conditions (control and experiment group) were identical in terms of objectives, basic curriculum material (activities), allocated learning time, and schedule of

instruction. Only the instructional methodology differed between the two groups. Because the investigator served as a teacher in this study, experimenter bias represented a potential threat to experimental validity. Several steps were taken to minimize this threat. First, all PE lessons and instructions for experimental group treatment conditions were scripted in detail by the investigator. In all, ten scripted lessons were written and implemented. They clarify the general sequence and components of the ten lessons, each lesson includes three instructional tasks (designed for expert teams 1, 2, 3), second, as mentioned earlier, the performance tests were scored by three judges. Finally, moral reasoning test had high reliability and it is valid tool.

Data analysis

The dependent samples t-test was used to determine the differences within each group, pre-posttest. The

independent samples t-test was used to determine the differences between the two (control and experimental) groups post- and posttest. Statistical analysis was conducted under SPSS version 17 Package statistical program, and the level of significance was set at $p < 0.05$. Cohen's d effect size for independent samples was used. The following equation was used and calculated by statistics calculator's website.

$$d = \frac{|\bar{x}_1 - \bar{x}_2|}{\sqrt{(\sigma_1^2 + \sigma_2^2)/2}}$$

It is worth mentioning that the effect size allows us to measure the magnitude of mean differences between groups. *With Cohen's d , remember that: $d = 0.2$, small effect; $d = 0.5$, medium effect; $d = 0.8$, large effect. So, our d of 3.14 would be a very large effect size (Cohen, 1988).*

Table 1 Pre- and Post- tests for the Experimental Group ($n=15$)

Variables	Pre		post		T Value	Mastery level (%)
	M	±SD	M	±SD		
Keeping the ball test	1.4	±0.63	4.73	±0.46	17.84*	%100
Receiving the ball test	1.07	±0.70	4.60	±0.51	21.38*	%100
Chest pass test	1.13	±0.74	4.53	±0.64	20.82*	%93.3
Bounce pass test	1.07	±0.80	4.67	±0.62	16.84*	%93.3
Dribbling test	1.20	±1.01	4.47	±0.74	17.98*	%86.7
Free-throw test	1.00	±1.07	4.40	±0.63	15.90*	%93.3
Peaceful Shot test	0.93	±1.10	4.17	±0.59	18.47*	%86.7
Moral reasoning test	6.13	±1.68	10.33	±1.35	24.06*	-

*Statistically significant difference, $p < 0.05$

Results

Table (1) shows pre-post measurements for the experimental group. There were significant differences between pre-post measurements on performance tests (Keeping, Receiving, Chest pass, Counter pass, dribbling, free-throw, Peaceful Shot) ($t = 17.84, 21.38, 20.82, 16.84, 17.98, 15.90, 18.47,$

respectively, $p < .05$) and on moral reasoning test ($t = 24.06, p < .05$). Also table (1) contains the percentage of students, within experimental group, scoring at mastery level (80% correct) on pre-posttest. Posttest percentages ranged from (86.7% to 100%) for the cooperative-mastery learning group. these finding indicates the cooperative-mastery learning sittings reduced the

variation in students' performance achievement levels.

Table 2 Pre- and Post- tests for the Control Group (n=15)

Variables	Pre		post		T Value	Mastery level (%)
	M	±SD	M	±SD		
Keeping the ball test	1.53	±0.74	4.07	±0.88	19.00*	%80
Receiving the ball test	1.27	±0.88	3.80	±1.21	11.77*	%73.3
Chest pass test	1.20	±0.86	3.47	±1.30	9.93*	%66.7
Bounce pass test	1.13	±0.83	3.60	±1.24	11.46*	%60
Dribbling test	1.40	±1.06	3.40	±1.41	8.37*	%66.7
Free-throw test	1.07	±1.09	3.20	±1.32	16.00*	%46.7
Peaceful Shot test	1.00	±1.13	3.03	±1.37	8.10*	%46.7
Moral reasoning test	6.47	±1.81	7.20	±2.04	4.78*	-

*Statistically significant difference, $p < 0.05$

Table (2) shows pre-post measurements for the control group. There were significant differences between pre-post measurement on performance tests (Keeping, Receiving, Chest pass, Counter pass, dribbling, free-throw, Peaceful Shot) (19, 11.77, 9.93, 11.46, 8.37, 16, 8.10, respectively, $p < .05$) and on moral reasoning test ($T = 4.78$, $p < .05$). Also table (2) contains

the percentage of students, within control group, scoring at mastery level (80% correct) on pre-posttest. Posttest percentages ranged from (46.7% to 80%) for the traditional method group. these finding indicates the traditional method did not meet the needs of majority of students; also, the variation in students' achievement levels was very wide.

Table 3 Post- and Post- tests for the experimental and control Groups (n=30)

Variables	E. group		C. group		T Value	Size (d)
	M	±SD	M	±SD		
Keeping the ball test	4.73	±0.46	4.07	±0.88	2.59*	0.94
Receiving the ball test	4.60	±0.51	3.80	±1.21	2.37*	2.05
Chest pass test	4.53	±0.64	3.47	±1.30	2.85*	1.30
Bounce pass test	4.67	±0.62	3.60	±1.24	2.98*	1.09
Dribbling test	4.47	±0.74	3.40	±1.40	2.60*	0.96
Free-throw test	4.40	±0.63	3.20	±1.32	3.17*	1.60
Peaceful Shot test	4.17	±0.59	3.03	±1.37	2.95*	1.08
Moral reasoning test	10.33	±1.35	7.20	±2.04	4.96*	1.81

*Statistically significant difference, $p < 0.05$

Table (3) shows the post measurements for the experimental groups versus the post measurements for the control group, reveals that the experimental group scored significantly better than the control on performance tests (Keeping, Receiving, Chest pass, Counter pass, dribbling, free-throw, Peaceful Shot) ($t = 2.59, 2.37, 2.85, 2.98, 2.60, 3.17, 2.95$, respectively, $p < .05$) and on moral reasoning test ($T = 4.96$,

$P < .05$). This finding indicates superiority students of the experimental group in learning and mastering the basketball skills Compared with students of the control group and also in moral reasoning. And also indicates the need to emphasis on employment cooperative-mastery learning style during the PE lesson plans. Also table (3) contains the effect size of cooperative- mastery learning methods

versus traditional method on learning and mastery basketball skills (Keeping, Receiving, Chest pass, Counter pass, dribbling, free-throw, Peaceful Shot) (EZ = 0.94, 2.05, 1.30, 1.09, 0.96, 1.60, 1.08, respectively), and on promoting

Discussion

At the end of the study, the experimental group showed statistically better scores on basketball skills performance and on moral reasoning than the control group, which means that the cooperative-mastery learning had positively affected the participants' basketball skills performance and on participants' moral reasoning. More specifically, it seems that the combination of the cooperative learning and mastery learning promotes participants' performance in PE lessons and promotes moral development in prep school students. The percentage of students at mastery level (80% correct) on pretest, posttest ranged from (86.7% to 100%) for the cooperative-mastery learning group and from (46.7% to 80%) for the control learning group. Thus, the cooperative-mastery learning group clearly outperformed control group in promoting content mastery. Not surprisingly, the superiority of the cooperative-mastery learning method in promoting basketball skills and moral reasoning was especially evident in the results the effect size post-posttest, effect size were ranged between large and very large effect.

Bloom (1984) suggests that cooperative and mastery learning methods be combined to promote cognitive performances. The effectiveness of this combined approach has been evinced in studies by Mevarech (1985, 1991), Slavin and

the moral reasoning (EZ = 1.81). The results indicate the cooperative-mastery learning method more effectiveness on learning and mastery basketball skills and on promoting the moral reasoning than traditional method.

Karweit (1984), and Mevarech and Susak (1993). The results of the present study are in agreement with the findings of the aforementioned studies, lending further support to Bloom's suggestion. Overall, the cooperative-mastery learning method appears to produce a higher level of learning and mastery basketball skills than traditional method.

Possible explanations for the results of this study can be found in the literature. As noted by Mevarech and Susak (1993), cooperative learning and mastery learning are derived from different approaches but seem to complement each other. Through its small-group setting, cooperative learning provides a natural situation to communicate (Sharan, 1980), mastery learning provides systematic diagnosis of each student's performance and corrective feedback to each student so that every student can master the learning (Mevarech and Susak, 1993).

In studies related specifically to implementation of cooperative learning in P.E. demonstrate their effectiveness in: (a) improving social skills and interpersonal relationships (Barba, 2010; Goudas & Magotsiou, 2009); (b) improving behavior in classrooms (Barrett, 2005). Barrett (2005) and Gröben (2005) contend that motor performance can be developed, promoted and modified as students communicate with each other. Through social learning situations in the form of group discussions, students can operate

at achieve significantly higher motor skill achievement than they can individually.

Edwards (1988) reported that students who were taught skills by using mastery learning techniques performed better than nonmastery learners. Metzler (1984) showed that students in mastery classes benefitted more from higher intervals of Academic Learning Time-Physical Education (ALT-PE) than did those in traditional classes.

Thus, we can say that by combining cooperative and mastery learning methods, teachers can take advantage of the strengths while overcoming the weaknesses of each individual method. Teachers' attention to elements of mastery learning, especially corrective feedback, may have been vitally important to maximizing individual students' success on performance basketball skills in this study.

The data collected from this study indicate that the cooperative-mastery learning model should be considered when teaching students to successfully psychomotor skills. Cooperative-mastery participants were superior to control group on all basketball skills performed in isolation. They were the group to show steady improvement from pretest to posttest on all skills. The traditional participants actually demonstrated more gains in skill performance from pretest to posttest. Not surprisingly, because of presence of the teacher as an essential element in the educational process.

Greater achievement gains by the cooperative-mastery students on skills may be due to several factors

inherent in the combining cooperative and mastery learning process. First, individualized feedback, Students receive knowledge about the results of their performance following each test, along with a prescription of corrective activities, each time a test is given. Second, corrective activities also increase the practice time for each skill. In Bloom's (1976) group-paced model, new skills are not taught until sufficient numbers of students can perform present tasks. Thus, low-aptitude students receive more time and help to successfully learn skills. Group cohesiveness and teamwork are enhanced when students help each other to reach specified performance criteria. Low-skilled students do not feel alienated from the group.

As Figley (1984) support social interaction, and particularly collective interaction, plays an important role in moral development. One basic principle to guide educational action in moral development is to maintain a psychological climate that is warm and accepting, with numerous opportunities for students to participate in the educational process. Also Kohlberg stressed the necessity of participation as well as of mutuality in role taking for developing a sociomoral perspective. As data of the present study showed, the cooperative-mastery learning method, since it achieves participation, Positive interdependence and intense interaction between students, ensures in great measure the promotion of moral judgments which correspond to superior developmental levels.

In this study gave emphasis during the choice of tasks that constituted the teaching lessons as well as in their verbal comments to self-

betterment, collective learning and the contentment of the students' efforts, trying at the same time not to produce competition among students. The results of this study showed that the experimental group presented an improvement in the areas of the five moral judgments contained in the moral reasoning test more than the control group.

These results are in accordance with the results of following studies, which also examined the development of moral reasoning in PE classes (Gibbons, et. al., 1995; Gibbons et al., 1995). Generally, both the present study and the ones previously mentioned suggest that moral reasoning can be promoted through PE in combination with properly designed educational interventions. Furthermore, the positive effect of special designed intervention programmes on different dimensions of morality, such as the individual perceptions of 'fair play', sportsmanship, the students' knowledge, and affective changes, is supported by other detailed studies (e. g. DeBusk & Hellison, 1989).

Based on the overall results of this study, the combined use of cooperative and mastery learning methods within instructional

Conclusion

In conclusion, based on the present study, we might say that: a) cooperative learning is very useful method for mastery motor skills in PE lessons and for support moral reasoning, b) for support of moral development requires a systematic and careful planning of PE lessons, and b) moral reasoning development in PE is feasible without a need to deviate from the present curriculum. Further research on

experiences appears to be better than traditional method as a means for fostering basketball skills and moral reasoning.

Finally, choose the cooperative learning method in design of this study was a good choice, because it was primarily serves as the means of real interaction between students and because it incorporates characteristics that ensure the promotion of moral development. Specifically, the cooperative-mastery learning method offers opportunities to the students for positive interdependence require that students believe they are responsible for their own learning and the learning of other members in their group, also for observation, reinforcement of sportsmanlike behavior. Students work in subunits, communicate and work effectively with other students, provide feedback to each other, learn to obey the rules, praise each other's contributions, and have opportunities for discussing and solving problems. Furthermore, students learn social skills through cooperation and individual accountability, such as listening to others, waiting their turn and helping their schoolmates (see Bandura, 1977; Kohlberg, 1984; Mosston & Ashworth, 2002; Telama, 1999).

the application of the cooperative-mastery learning style, is needed. Additionally, the examination of students' moral reasoning during school games could possibly detect any different tendencies of moral behavior during the competition period. Moreover, Future studies would benefit from larger cell sizes allowing the exploration of possible school, gender, and grade-level effects.

Reference

- Abdel-Fattah F. (d.t.) Illustrated Moral Thinking Scale for Children, Instructions Guide, Al-Anglo, Cairo.
- Bandura, A. (1977) Social Learning Theory. Englewood Cliffs, NJ: Prentice Hall.
- Bailey, R. (2006). Physical education and sport in schools. A review of benefits and outcomes. *Journal of School Health*, 76(8), 397-401.
- Barba, J. J. (2010). Diferencias entre el aprendizaje cooperativo y la asignación de tareas en la Escuela Rural. Comparación de dos estudios de caso en una unidad didáctica de acrosport en Segundo ciclo de primaria. *Retos. Nuevas tendencias en Educación Física, Deporte y Recreación*, 18, 14-18. Retrieved from: http://retos.org/numero_18/RETOS18-3.pdf
- Barrett, T. (2005). Effects of cooperative learning on the performance of sixth-grade Physical Education students. *Journal of Teaching in Physical Education*, 24(1), 88-102.
- Bloom, B.S. (1976). Human characteristics and school learning. New York: McGraw Hill.
- Bloom, B.S. (1984). The 2 sigma problem: The search for methods of group instruction that are as effective as one-to-one tutoring. *Educational Researcher*, 13, 4-16.
- Cattel R. (2004). Cattel for the General Factor test, Intelligence Scale free from Cultural Impact, Second Scale, photo A and B, Prepared with Arabic photo by Abo-Hattab F. Sadeq A.; Al-Anglo Al- Misrya, Cairo.
- Cohen, J. (1988). *Statistical Power Analysis for the Behavioral Sciences* (2nd Edition). Hillsdale, NJ: Lawrence Earlbaum Associates.
- DeBusk, M. & Hellison, D. (1989) 'Implementing a Physical Education Self Responsibility Model for Delinquency-Prone Youth', *Journal of Teaching in Physical Education* 8: 104-12.
- Dyson, B. , Linehan, N. R. & Hastie, P. A. (2010). The ecology of cooperative learning in elementary Physical Education classes. *Journal of Teaching in Physical Education*, 29(2), 113-130.
- Edwards, R. (1988). The effects of performance standards on behavior patterns and motor skill achievement in children. *Journal of Teaching in Physical Education*, 7, 90-102.
- Figley, G.E. (1984) 'Moral Education through Physical Education', *Quest* 36: 89-101.
- Gibbons, L.S., Ebbeck, V. & Weiss, M.R. (1995) 'Fair Play for Kids: Effects on the Moral Development of Children in Physical Education', *Research Quarterly for Exercise and Sport* 3: 247-55.
- Gömleksiz, M. N. (2007). Effectiveness of cooperative learning (Jigsaw II) method in teaching English as a foreign language to engineering students (Case of Firat University, Turkey). *European Journal of Engineering Education*, 32, 613-625.
- Goudas, M. & Magotsiou, E. (2009). The effects of a cooperative Physical Education program on students' social skills. *Journal of Applied Sport Psychology*, 21 (3), 356-364. doi:10.1080/10413200903026058

- Gröben, B. (2005). Kooperatives lernen im spiegel der unterrichtsforschung. *Sportpädagogik*, 6, 48-52.
- Guskey, T.R., and Pigott, T.D. (1988). Research on group-based mastery learning programs: A meta-analysis. *The Journal of Educational Research*, 81, 197-216.
- Hedstrom, R., & Gould, D. (2004). *Research in youth sport. Critical issues, status, summary of the existing literature*, Lansing MI: Michigan State University, Institute for the Study of Youth Sport.
- Hopkins, DR., Shick, J., & Plack, JJ. (1984). *Basketball for boys and girls. Skills test manual*. Reston, VA: American Alliance for Health, physical education, recreation and dance.
- Johnson, D.W., & Johnson, R.T. (1994). *Learning together and alone: Cooperative, competitive, and individualistic learning*. Boston: Allyn and Bacon.
- Kohlberg, L. (1964) 'Development of Moral Character and Moral Ideology', in M.L. Hoffman and L.W. Hofmann (eds) *Review of Child Development Research*, pp. 381–431. New York: Russel Sage Foundation.
- Kohlberg, L. (1984) *Essays on Moral Development, vol. 2, The Psychology of Moral Development: The Nature and Validity of Moral Stages*. New York: Harper & Row Publishers.
- Kulik, C.L., Kulik, J., & Bangert-Drowns, R.L. (1990). Effectiveness of mastery learning programs: A meta-analysis. *Review of Educational Research*, 60, 265-299
- Lampert, M. (2002). Appreciating the Complexity of Teaching and Learning in School: A Commentary on Cobb; Froman and Ansell; McClain; Saxe; Schliemann; and Sfard. *The Journal of the Learning Sciences*. 11 (2&3): 365-368.
- Lumpkin, A., Stoll, S.K. & Beller, J.M. (1994). *Sport Ethics: Applications for Fair Play*. St. Louis, MO: Mosby.
- Marcoen, A. (1999) 'Social Development', in Y.V.V. Auweele, F. Bakker, S. Biddle, M. Durand and R. Seiler (eds) *Psychology for Physical Educators*, 293–319. Champaign, IL: Human Kinetics.
- Mevarech, Z.R. (1985). The effects of cooperative mastery learning strategies on mathematics achievement. *The Journal of Educational Research*, 78, 372-378.
- Mevarech, Z.R. (1991). Learning mathematics in different "mastery" environments. *The Journal of Educational Research*, 84, 225-231.
- Mevarech, Z. R. & Susak, Z. (1993): Effects of learning with Cooperative-Mastery method on elementary students. *Journal of Educational Research*, 86, 197-205.
- Mevarech, Z.R., & Werner, S. (1985). Are mastery learning strategies beneficial for developing problem solving skills? *Higher Education*, 14, 425-432.
- Miller, S.T., Bredemeier, B.J. and Shields, D.L. (1997) 'Sociomoral Education through Physical Education with At-Risk Children', *Quest*49: 114–29.
- Morris, G.S.D. (2003) 'Social Responsibility through Physical Activity', in A. Laker (ed.) *The Future of Physical Education: Building a New Pedagogy*, 54–81. London and New York: Routledge.