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C O N T E N T S

Articles and Statements

| | |
|---|-----|
| The School Environment and its Relation with the Quality of Teaching Physical Education M. Bensabeur, H.M. Benkazdali, H. Benssikadour, M. Sebbane, A. Laroua, A. Belkadi, O. Benbernou, J. Gleyse | 130 |
| The Effect of Kids Athletic Using the Cooperative Strategy to Improve Physical and Motor Skills among Students in Primary Education Habib Bensikaddou, Mohammed Sebbane&Touati Ahmed Benklaouz | 137 |
| Comparison the Anthropometric and Physical Fitness Characteristics of Rasht City Semiprofessional Soccer and Futsal Players Sajjad Karimi, Zahra Hojjati, Ali Shamsi | 146 |
| Comparative Estimation of Physical Development and Functional State of the Cardiovascular System of Athletes Engaged in Cyclic and Acyclic Sports Aiman E. Konkabaeva, Beybitgul A. Kanafina, Aizhan T. Bugembaeva, Aiman S. Sarsembaeva | 151 |
| Professional Competence Requirements: the Views of Several Physical and Sports Education Teachers (Case in Mostaganem Province, Algeria) A. Laroua, M. Sebbane, J. Gleyse, M. Bensabeur, H.M. Benkazdali, A. Belkadi, O. Benbernou | 156 |

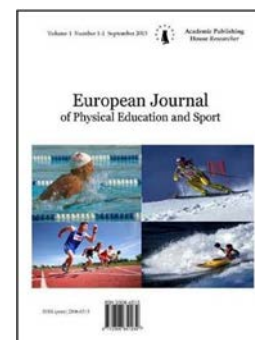
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Articles and Statements

The School Environment and its Relation with the Quality of Teaching Physical Education

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Abstract

This study aims to explore the nature of the relationship between the quality of education of the PE and the school environment that revolves around the Sports and Physical Education lesson in high schools of the province of Mostaganem (Algeria). To achieve the objectives of this study, two questionnaires were designed. The first on the school environment and the second on the quality of education. A sample of 71 teachers spread across all high schools in the province of Mostaganem voluntarily took part in this study. The results showed a significant effect between the school environment and the quality of teaching physical education. This result allows to predict the quality of the teaching of physical education in high school requires a supportive school environment to meet the expectations and requirements of the discipline.

Keywords: school environment, quality of education, physical education.

Introduction

Algerian Educational system have known encouraging reforms beginning of the last decade in order to recognize the deficiencies caused the low level of education, these reforms were to update and accelerate the learning process quality to advance education forward, which dealt with the educational system as a whole amendment and development components, and ran it to focus on learner in basis as the educational process axis, and the professor who is one of the most prominent elements in the educational success of the system, as well as the provision of facilities and equipment pedagogical and means necessary for this operation, but despite these reforms, which touched into the educational system and the efforts being made in the field of education in general, and the field physical education, in particular, the achievement of the quality of teaching

physical education of the teacher in the present situation is still far away, the follower of the case of physical education notes that it do not achieve all the goals that was written for her, and felt from the outset that there is a contradiction in the configuration between philosophy of what is required to achieve and what is present, and this is what we have observed through the field internship we've made in our academic courses and our friction with professors of physical education and sports at the level of some of the high schools on the one hand, and on the other hand the direct personal stating note of the researcher to some high schools in Mostaganem Province, shown that the school environment material which embraces the subject of physical education and sports are still immune to developments in education, which calls into question the extent to which the quality of teaching physical education of the professor under these physical school environment, by virtue of the quality of teaching requires the actual application of the approach competencies in the field and activating the means of technology and employ modern methods and teaching methods fit with the reality of school materials.

Faced with this conflict between what is needed and what is found, we will try through this research addressed to a set of principles and rules in modern education, because we realize that the process of teaching the physical education success coupled with the extent of the teaching quality of the professor through the possession of a set of competencies and gestures professional that qualify for it, and its interaction with other key factors which are the program and pupils and physical environment, including content of the sports fields pedagogical and means necessary for the Activity of physical education and sports exercise, and all these factors interfere together to influence each other share on the quality of the teaching of this article, positively or negatively, and We have been asking the following questions:

1. What level of teaching physical education and sports quality for the sample search?
2. What is the nature of the relationship existing between the school environment and the quality of teaching physical education and sports at the educational institutions of the research sample?

2. Methods

2-1-Participant: The research sample included 71 of 102 professors or by 70%, professor of physical education distribute at high schools in Mostaganem Province, for the academic year 2014/2015.

2-2- Statistical means: percentages, averages, standard deviation, Pearson correlation coefficient, Ka 2 test.

2-3- Variable Search Tools: In order to achieve the objectives of this study we build two questioner to measure research variables (school environment – quality of teaching)

1. Configuration sincerity premise manner internal consistency: the researcher using the configuration sincerity premise manner internal consistency on a sample scoping study strength of 22 professor of physical education in secondary education of Mostaganem state, where we calculate the expense of the correlation coefficient between each phrase and dimension to which it belongs, and the dimensions and axes to which they belong, and between each axis and the questionnaire as a whole, have the results of the analysis showed that all correlation coefficients were statistically significant only three phrases from each tool came is a function to be later removed from the instruments, ranging correlation coefficient for the tool own questionnaire to the school environment between 0.429 as the lowest value and 0.910 as the highest value, As for the second tool has ranged between 0.424 and 0.935, the tool to become finalized carrying 41 words to form the school environment and 72 words to form the quality of teaching, and we have used in the analysis of the results and discharged Likert system triple to form the school environment and Quintet For the quality of teaching form.

2-4. The stability of the questionnaire: the researcher apply tools and re-applied with interval between the two phases was estimated at 10 days while maintaining the same variables (the same teachers, the same high school, same time) and that was a sample scoping study estimated at 22 professor, and the results of the two applications after statistical treatment calculates the Pearson correlation coefficient as follows:

Table 1: Illustrates the coefficients of correlation of axes degree and total degree of tools and coefficient of stability

| Statistical study | questionner axes | honesty coefficient | stability coefficient | sample size | t tabular | degree of freedom | statistical significance at the 0.05 |
|-------------------------|-------------------|---------------------|-----------------------|-------------|-----------|-------------------|--------------------------------------|
| School environment | school buildings | 0.91 | 0.84 | 22 | 0.423 | 20 | significant |
| | Sports stadiums | 0.92 | 0.90 | | | | significant |
| | Means pedagogical | 0.75 | 0.88 | | | | significant |
| The quality of teaching | Planning | 0.91 | 0.80 | | | | significant |
| | Implementation | 0.93 | 0.83 | | | | significant |
| | Evaluation | 0.71 | 0.82 | | | | significant |

3. Results

3.1 What is the level quality of teaching physical education at of research sample average?

The first axis: Lesson planning

Table 2: shows the levels and frequencies, percentages and Ka 2 to the axis of the lesson planning

| Dimensions | Levels | Duplicates | the percentages | K2 calculated | K 2 tabular | degrees of freedom | Statistical significance at 0.01 | |
|--|---------|------------|-----------------|---------------|-------------|--------------------|----------------------------------|-------------|
| lesson preparation and to identify its goals | good | 24 | %34 | 28.92 | 09.21 | 02 | significant | |
| | average | 42 | %59 | | | | | |
| | Low | 05 | %07 | | | | | |
| preparation pedagogical methods and the creation of dedicated teaching place | good | 41 | %58 | 31.21 | | | | significant |
| | average | 27 | %38 | | | | | |
| | Low | 03 | %04 | | | | | |
| determine the characteristics of the students and their needs | good | 45 | %63 | 39.06 | | | | significant |
| | average | 24 | %34 | | | | | |
| | Low | 02 | %03 | | | | | |

The second axis: the quality of the implementation of the lesson:

Table 3: shows the levels and frequencies, percentages and Ka 2 to the axis of the implementation of the lesson

| Dimensions | levels | duplicates | the percentages | K2 calculated | K2 spreadsheet | degrees of freedom | Statistical significance at 0.01 |
|--|---------|------------|-----------------|---------------|----------------|--------------------|----------------------------------|
| a good show and good presentation for the lesson | good | 19 | %27 | 42.27 | | | Significant |
| | average | 48 | %67 | | | | |
| | Low | 04 | %06 | | | | |

| | | | | | | | | | | | | | |
|---|---------|----|-----|-------|-------------|-----------|--------------------|-----------|--------------------|-----------|--------------------|-----------|--------------------|
| to encourage good and to raise motivation to learn | good | 37 | %52 | 30.28 | 9.21 | 02 | Significant | | | | | | |
| | average | 32 | %45 | | | | | | | | | | |
| | Low | 02 | %03 | | | | | | | | | | |
| good use of teaching methods and techniques appropriate | good | 17 | %24 | 51.50 | | | 9.21 | 02 | Significant | | | | |
| | average | 51 | %72 | | | | | | | | | | |
| | Low | 03 | %04 | | | | | | | | | | |
| good use pedagogical methods and technology education | good | 28 | %40 | 30.11 | | | | | 9.21 | 02 | Significant | | |
| | average | 40 | %56 | | | | | | | | | | |
| | Low | 03 | %04 | | | | | | | | | | |
| Section good management and control in time | good | 33 | %46 | 32.91 | | | | | | | 9.21 | 02 | Significant |
| | average | 37 | %52 | | | | | | | | | | |
| | Low | 01 | %02 | | | | | | | | | | |

The third axis: the quality of the lesson evaluation

Table 4: shows the levels and frequencies, percentages and Ka 2 to the axis of the lesson evaluation

| Axe | Levels | redundancy | the percentage | Ka2 calculated | Ka2 spreadsheet | degree of freedom | level of significance | Statistical significance at the 0.05 |
|-------------------|---------|------------|----------------|----------------|-----------------|-------------------|-----------------------|--------------------------------------|
| Lesson Evaluation | good | 28 | 39 | 33.31 | 9.21 | 02 | 0.01 | Significant |
| | average | 41 | 58 | | | | | |
| | low | 02 | 03 | | | | | |

3-2 what is the nature of the relationship existing between the school environment and the quality of teaching physical education at the level of the educational institutions of the research sample?

Researcher deliberately make sure this relationship by calculating the Pearson correlation coefficient between the results of the forms, where the results were as follows

Table 5: shows the results of correlation between the school environment and the professors quality of teaching physical education

| Axes | The value of the correlation coefficient between the school environment and the quality of teaching | the sample | correlation coefficient "R" size of table | degree of freedom n -2 | relationship type | statistical significance at 0.05 |
|-------------------------|---|------------|---|------------------------|-------------------|----------------------------------|
| School environment | 0.424 | 71 | 0.322 | 69 | positive | Significant |
| The quality of teaching | | | | | | |

Discussion

Through results Entries in the tables No. (3), (4), (05) above, we conclude:

- That the majority of professors remains their performance use of the component layout lesson during the teaching process as good to moderate in some cases, where the majority of their answers for the benefit of the average degree regarding the preparation of the lesson and identify its goals and this by 59 %, with respect to the preparation of pedagogical methods and identify students characteristics and the analysis of their needs were most of their answers for the benefit of a good degree by 58 % 63 %, respectively.

- The majority of professors remains their use performance element implementation of the lesson during the teaching process moderately, the data dump results have shown that the majority of their answers have not reached a good level, and signed within the intermediate level, for teaching practices represented by the following dimensions in descending order as follows: the use of roads and methods of teaching occasion, the good and the presentation of the study, the use of pedagogical methods and technology education, section management and control at the time, and this proportion 72.67 % 0.56 % 0.52 % respectively, while given a greater percentage of answers professors after the promotion and raise the motivation of pupils to learn good degree of 52 %.

- The majority of professors remains their use for the Performing element Lesson evaluation moderately and large in some cases, the results showed that most of the answers professors of physical education and sports given the average degree and this by 58 %.

And for significant differences between the answers, the researcher used the Ka2 Test, reaching all Ka 2 values calculated for these axes greater than the tabular value estimated at 9.21 when the degree of freedom 2 and the level of significance 0.01, and this means there is a statistically significant difference between the professors answers differences.

Based on the foregoing, it is clear to us that lesson planning component was the most exercise when professors of physical education and sports in terms of the level of performance so take its course towards good, compared to the two elements implementation and evaluation of the lesson, who were less exercise when education professors of physical and sporting terms of the level of performance which focused on degree average, and this guide the teachers answers, and it is to say that the level quality of teaching physical education and sports at secondary school from teachers point of view was average on the whole, they agree this result with the findings of a study (Kubaisi 2010, p. 15), which referred to that there is a decline in the quality of teaching, and also agree in general features with the findings of each of the study (Taleb A. 2011, p. 184) which indicated that there is a lack of professor of physical education and sports competencies professional familiarity, and study (Osman, page 13) which indicated that a weakness in the performance of professors linked to the poverty of the physical environment, the consequent weakness in academic achievement.

Researcher attributed reason for this, perhaps to the lack of professor of physical education and sports of competencies professional familiarity and gestures which may be due to some teachers did not receive good education in their course of study, as well as perhaps the none means activation of modern technology in the process of teaching for some educational units that included its well going and the dependence on traditional teaching styles that are based on direct instruction, and not deferrals of teaching methods developed with the approach competencies which are based on problem-solving style programs, was also due to the failure to the teachers observe for individual differences among students and the lack of interest in providing feedback to them, and not following evaluation methods which are based on self-evaluation of students, lack of diversification in the media evaluation overall between applied and theoretical exams, was also due to the poor school environment conditions and climate in high school that suffer from a lack of financial means and of the lack of means, equipment, sports stadiums, as well as the lack of news article from books and magazines in the field of specialization, as we pointed out above, in addition to time devoted to the subject of physical education and sports, which offset overcrowding in the number of pupils at the district level probably inadequate for the use of a professor of physical education and sports some of the alternatives available from the activities and strategies of evaluation teaching and means through share time, not to mention the lack of inspectors of physical education and sports, which affects negatively on the quality of the teaching of physical education and sports, whether guiding visits or training sessions that can be a major supportive extends to professor of physical education and sports of all that is new about this activity, and

improves their modern teaching techniques , it was also due to the low level of job satisfaction resulting perhaps from low salaries and lack of incentives for promotions system as evidenced by the entry in strikes during this school year.

Through the reading of the results recorded in the table (6) above it's clear to us the following:

- The "R." correlation coefficient between the school environment and the quality of teaching physical education and sports was 0.424, largest of the tabular value of the estimated value of 0.232 at a degree of freedom 69 and the significance level 0.05, this means the presence of relational positive statistically significant relationship between the school environment and the quality of teaching physical education and sports, and so the researcher explains that the more appropriate and effective school environment include all material components of typical buildings and stadiums and arenas, sports halls and pedagogical means and toilets, as well as lighting and ventilation, and various other sources of learning, to achieve quality of teaching physical education and sports, in the sense that the school environment It has a direct impact on professor teaching practice of physical education and sports, so as to facilitate his employ all of his knowledge, information and competencies process both been associated with, including planning, implementation, and evaluation of the lesson or other necessary skills that make it able to provide quality education distinguished by greater use of playgrounds and means , organizing more care and precision of lessons, feedback more specifically, the diversity of the largest and follow the best of the activities, a greater ability to analyze student needs, higher than the activity and the amount allocated to the learning educational time levels, the economy in time and effort, use of more than one way and style of teaching, and this is what we recognize the fact that the teaching of physical education and sports quality with Professor mainly depend on the appropriate school environment material surrounding it, and this result consistent came with what indicated by each of the study (Sheikh 2011, p. 13) that the quality of teaching influenced by all the school environment elements , and as far as the quality requirements in each of these factors is available to the extent that the quality of teaching, and study (Al-mokrin 2005, p. 6) which indicated through which many researchers and those interested in education confirmed in experimental studies on the effect of the physical school environment through the school building to the collection school pupils on the one hand, and on the performance of the teacher with respect to the employment of teaching methods, and their interaction with the students on the other hand as the study of (Martin, 2002), also confirms the results of a study (Ayoub 2008, p. 181) to provide various physical capabilities of hardware and sports equipment and tools and means of pedagogy in terms of quantity and quality, helping professor of physical education and sports to create the right pedagogical atmosphere for the implementation and completion of the various phases of the courses, and facilitate his educational conduct quotas and the application of the various stages of the study plan in the selected time process and more effectively by controlling the teaching positions for pupils and thus achieve educational goals ruler in the program for physical education and sports, and adds in the same context (Tantawi 2011, p. 116) that the educational method used by the teacher to improve teaching and raise the effectiveness and deepen the degree of learners take advantage of it.

Conclusion

The quality of the teaching of physical education at the level of the average for the whole sample at the level of high schools in Mostaganem state, as we have drawn that there is relational positive statistically significant relationship between the school environment and the quality of teaching physical education.

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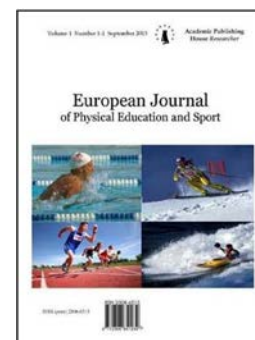
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The Effect of Kids Athletic Using the Cooperative Strategy to Improve Physical and Motor Skills among Students in Primary Education

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Abstract

The aim of this experimental study is to determine the effect of the practice of the cooperation strategy with a new concept that is the Kids' Athletics and their contribution to the improvement of teaching conditions in lesson of Physical Education and Sports in primary school, and the improvement of sports performance among students of the primary school in the long jump(m), shot put(m) , sprint 50 m (s) and endurance racing 1000 m (s) .for the very best practices that promote a higher level of participation among all students in physical education. This last is designed to give children the pleasure of playing athletics, to discover the sprinting, endurance running, jumping, throwing. Two groups of boys aged (age 9.75 ± 0.35 years) are participated. The experimental and control group each one of them (n=20).The results and according to the research variables characterized by significant differences ($*p \leq 0.05$). , And this thanks to the use teacher the cooperative learning techniques in physical education will encourage a higher level of participation among many students in the activities of the kids' athletics that improve the physical performance of students and their relationships better than traditional teaching through command style (Mosston & Ashworth, 2002).

Keywords: kids athletics, cooperative strategy, physical and motor skills.

Introduction

According to the primary programs, the Sports and Physical Education teacher must rely on physical practices, sport existing in society. This leads the teacher to develop teaching and learning strategies to make choices, like content choices on which it will focus, learning modes, grouping forms, input modes in the activity as whether to manage the heterogeneity of students (Jenkinson, Naughton ,& Benson 2013;Memmert & harvest,2008), also increase their practice time, improve physical and motor skills, optimize the use of available facilities, the teacher is necessarily faced with the collective organization in his class, so this may need, under certain conditions, contribute to the optimization of learning through various engine effective forms of interaction, while meeting the need and joy of movement of the child. To achieve the desired results, however, kids' athletics is designed to bring excitement into playing Athletics, especially during physical education lessons at school through the implementation of cooperation strategy.

New events and innovative organization will enable children to discover basic activities like sprinting, endurance running, jumping, throwing, putting in just about any place. Previous research has shown that the games-based exercise intervention played a pivotal role in these

beneficial changes in physical abilities and athletic performance (Houston-Wilson et al. 1997; Armstrong, 1992). This concept meets the needs of Pupils by providing appropriate activities, educational and fun. For this practice the objectives are clearly identified for all participants:

In terms of access to health and a satisfactory motor integration heritage, successful in different social groups access to a field of culture and personal fulfillment through pleasure practice so Students work in the same small group throughout the extended length curriculum/season and are given responsibility for teaching each other skills within a cooperative group structure. However, the reader is referred to several reviews on these topics for more in-depth discussion of these mechanisms (Putnam, 1998; Dyson, 2002). With this framework in mind we can look at specific situations that the cooperative learning strategy is a teaching technique the most convenient, used in other academic modules. However, it is not until recently that studies have begun to unlock the benefits of this method of teaching in the field of physical education, particularly desirable in several sports. This unique teaching strategy is to give teachers the ability to improve physical qualities and motor students and self-expression and social interaction. Every person enjoys encouraging and helping one another (Hannon and Ratliff 2004; Riewald, 2003). In this regard, "Cooperative learning is an instructional method where students work together in small groups to master the content of a lesson, these students are more willing to participate and even show enthusiasm about challenging tasks when they are engaged in learning activities with supportive cooperative groups" (Willis, 2007, p.4). A number of studies in the pedagogy domain (Alexander & Luckman, 2001; Carlson & Hastie, 1997; Grant, 1992) have reported the positive effect that Sport Education has on student enthusiasm for physical. In this regard, programmes may be efficacious for the health and fitness of children. Thus, previous research has shown that only 42% of 6- to 11-year-old children obtain the recommended 60 min per day of moderate-to-vigorous physical activity (Troiano et al., 2008). Furthermore, (Sebire, Jago, Fox, Edwards, & Thompson, 2013), interventions should be designed to optimize children's enjoyment of physical activity. In this study, we hypothesize that the practice of cooperative strategy through kids' athletics lead to better measures for the health and fitness. In this regard, it should be emphasized that Cooperative learning challenges students to work closely with one another to accomplish tasks (Dyson & Rubin, 2003; Lund, & Tannehill, 2005). With a sense of importance to sports, performance comes the desire to participate with a group. This participation in athletics children results in effective learning for the group and the individual. "Students most involved in the working group also performed well outside their groups, which was a reflection of higher individual test scores and course evaluations" (Brady & Tsay, 2010, p.85). Some roles or responsibilities granted to members of the group used to develop a sense of belonging to the group, as well as an opportunity for everyone to be a part of equality in this process. Students are responsible not only for learning the material, but also for helping their group-mates learn. In this regard, students sometimes learn more during the exchanges with some of their comrades during the exchanges with the teacher because they will then allow you to enter in a duel and they prohibit dialectical relationship with the teacher (Quay, & Peters, 2009).

However, it is also important to consider that talent development begins much earlier than that. Hence, specialists are encouraged to focus on Pre-Talent Detection Talent Development, which occurs through the means in school environments (Krasilshchikov, 2011; Müller, 2002). In this regard; several studies have been conducted to measure the success of cooperative learning as a teaching Basic strategy regarding physical abilities and skills (Johnson & Johnson, 1999). Nevertheless, indeed this teacher himself will set up the conditions for students to exchange. This raises the question of the organization of this interaction.

Methods

Ethics

To date, little research in this domain has been conducted with students of primary school age as a target population. In that regard the current study was conducted in the city mostaganem. The students were briefed on the objectives of the practice of kids' athletics. In this research, we have the learning together technique used in implementing cooperative strategy learning and the traditional teaching method for determining the activity of kids' athletics.

Design

This study is an experimental design, and due to the fact that the sample was randomly, selected included Experimental sample received (cooperative learning strategy in Kids' Athletics) and a control sample received the traditional method in physical education.

Statistical analysis

To produce an objective judgment on the effectiveness of using the strategy of cooperative education as an independent variable. We reached the statistical results of our research, which was carried out using SPSS v.20. For data of central tendency and dispersion measures, in physical capacity and athletic performance in the same context, we used also:

Independent-Samples T Test for comparing the average of two case groups (the control sample and experimental sample). (Cortina & Nouri, 2000)

Participants

People who participated in this research are two groups of boys. These groups were formed from four classes of fifth grade physical education totaling approximately forty boys (9-10 years), (mean±SD: age 9.75±0.35 years) participated in the current study, the choice of these students was due to the fact that not having any prior knowledge or experience in the kids' athletics program. As School were randomly selected from a greater sample located in West of Algeria after, the permissions were obtained from the administration of the Department Education for the province of Oran sector.

The sample of the study uniformly distributed over two groups: the experimental sample (n=20) and one control sample (n=20)

Instruments

To collect the data in a way that was beneficial to the research, The research team used a series of field tests combine the racing activities, run, jump which can influence the final results regarding their physical capacity and athletic performance in scheduled athletic disciplines according to their ages and experience (50 m sprint crouch start 1 kg shot put, long jump, 1000m endurance race) (Algerian Athletics Federation [FAA], 2008).Proposals of new events for kids' athletics:

during the period of experimentation, children thoroughly experience the varied forms of athletic movements and that they benefit from a comprehensive physical education. According to nine events recommended:

- Sprint/Hurdles Shuttle Relay.
- Progressive Endurance Race.
- Pole Long Jumping.
- Precision Long Jump
- Overhead Backward Throwing.
- Rotational Throwing.

Procedure and Task

The study took place during the second quarter of the school year 2014-2015. The students received instruction about working in cooperative groups and practiced before the study began. Student achievement was measured through curriculum based assessment instruments designed by the teacher. The assessments were quantitatively compare. Step-by-step procedures are used to present, practice. Some regulate interaction between pairs, some are best for teamwork, and others involve the entire class. We performed the first tests on the research sample. The experimental group students achieved a Cooperative strategy in practice kids' athletics for 45 min, and the average of two times a week for twelve weeks. While the control sample practiced sport in the session as usual with their teacher through command style (Mosston & Ashworth, 2002). Subsequently, participants underwent the final test the research team suggests that early application of Cooperative strategy in kids' athletics were taken into account the following:

Must take into account the offering to children fun motor experiences that would motivate them best. For example, athletics can be presented as a test by interesting team. In addition, physical requirements of each test should not be too high to allow every child access to it then gradually gain greater efficiency. The tests must be easily affordable and easily achievable. (Gozzoli, & Locatelli, 2006).

Results

The final results showed that there are statistically significant differences at (0,05) in all variables in this study .and These differences are in favor of the experimental sample which has practiced the strategy of cooperation in kids' athletics. Therefore, accept the research hypothesis.

Table I: Descriptive statistics for control group and experiment group
(mean \pm SD and Std. Error)

| Group Statistics | | Pret-test | | | | Post-test | | |
|------------------|--------------------|-----------|----------------|-----------------|------|----------------|-----------------|------|
| group | N | Mean | Std. Deviation | Std. Error Mean | Mean | Std. Deviation | Std. Error Mean | |
| endurance | contol group | 20 | 249.62 | 14.51 | 3 | 246.42 | 14.03 | 2.9 |
| race | experimental group | 20 | 250.87 | 14.9 | 3.08 | 235.29* | 13.64 | 2.82 |
| 1000m | contol group | 20 | 2.63 | 0.33 | 0.11 | 2.82 | 0.37 | 0.12 |
| long jump | experimental group | 20 | 2.6 | 0.28 | 0.1 | 3.14* | 0.37 | 0.12 |
| shot.put. | contol group | 20 | 7.12 | 0.67 | 0.18 | 7.4 | 0.77 | 0.2 |
| 1KG | experimental group | 20 | 7.09 | 0.66 | 0.18 | 7.95* | 0.6 | 0.16 |
| sprint.50M | contol group | 20 | 9.41 | 0.55 | 0.15 | 9.28 | 0.55 | 0.15 |
| | experimental group | 20 | 9.38 | 0.64 | 0.17 | 8.79* | 0.43 | 0.13 |

The evaluations were conducted in two sessions (pret test - post test):

The experimentation period lasted a total of twelve weeks. Its purpose was study the contribution of a form of academic practice it's about the practice Kids athletics in lesson of Physical Education and Sports in primary school. In addition, improving sports performance in the long jump competition and shot put, the speed of 50 m and 1000 m race. It also recommended the need to facilitate the selection criteria the opportunity to give all participants to win and bring out the talent, And thanks to the long-term pre-conceived strategy in terms of procedure and selection steps. So make available human skills and resources needed in order to attend the gifted children in athletic children to produce future champions in athletics. In this context recreation and sport activities have an obvious positive link to excellent physical growth in children through the development of gross motor skills (running, jumping and other use of large muscles), strength and endurance (Lyle Sanderson, 1989). context recreation and sport activities have an obvious positive link to excellent physical growth in children through the development of gross motor skills (running, jumping and other use of large muscles), strength and endurance (Lyle Sanderson, 1989).

Table II: Independent sample t-test comparisons between experimental and control sample (*p \leq 0.05)

| Levene's Test for Equality of Variances | | | | t-test for Equality of Means | | | | | | |
|---|---------------------|------|------|------------------------------|----|-----------------|-----------------|-----------------------|---|-------|
| | | F | Sig. | t | df | Sig. (2-tailed) | Mean Difference | Std. Error Difference | 95% Confidence Interval of the Difference | |
| | | | | | | | | | Lower | Upper |
| Pret-test | sprint.50M (s) | 0.10 | 0.76 | 0.22 | 38 | 0.83 | 0.03 | 0.16 | -0.28 | 0.35 |
| | shot.put.1KG (m) | 0.01 | 0.95 | 0.18 | 38 | 0.86 | 0.03 | 0.18 | -0.33 | 0.39 |
| | long.jump (m) | 0.34 | 0.56 | 0.53 | 38 | 0.60 | 0.04 | 0.07 | -0.11 | 0.19 |
| | .endurance.race (s) | 0.02 | 0.90 | 0.30 | 38 | 0.77 | -1.25 | 4.23 | -9.77 | 7.27 |

| | | | | | | | | | | |
|-----------|---------------------|------|------|-------|----|------|-------|------|-------|-------|
| Post-test | sprint.50M (s) | 3.51 | 0.07 | 3.8* | 38 | 0.00 | 0.49 | 0.13 | 0.23 | 0.75 |
| | shot.put.1KG (m) | 0.35 | 0.56 | 2.97* | 38 | 0.01 | -0.55 | 0.18 | -0.92 | -0.18 |
| | long.jump (m) | 0.01 | 0.92 | 3.35* | 38 | 0.00 | -0.31 | 0.09 | -0.50 | -0.12 |
| | .endurance.race (s) | 0.02 | 0.88 | 2.8* | 38 | 0.01 | 11.13 | 3.98 | 3.11 | 19.14 |

This part consists of findings and comments about these findings. In this study, we used descriptive statistics.

The data were analyzed by spss program and are presented as mean and standard error; and independent sample t-test results are shown in Table 2 Which indicates the independent sample t-test .analysis results of the Research groups pre-test and post-test, which students took in order for the researcher to assess their approaches to the general Kids' Athletics class before and after they were exposed to either the cooperative or the traditional teaching method.

We can see that there is no big difference in all variables in this research where the results were, respectively between research groups for the variable 50m sprint ($t = 0.22$; $p = 0.83$), shot.put.1KG ($t = 0.18$; $p = 0.86$), long. Jump ($t = 0.53$; $p = 0.6$), endurance race ($t = 0.3$; $p = 0.77$).the experience and the students in the control group. but when posttest average grades are examined in sprint 50m test, we see that there is a large statistical difference ($t = 3.8$; $p = 0.00$) between the experimental group was exposed to cooperative learning strategy (Technical learn together) and the control group was exposed to the method of learning traditional .

The same results recorded (significant difference ($P < 0.05$) from baseline) as shown in Table I; 1 kg launch weight ($t = 2.97$; $p = 0.01$), long jump ($t = 3.35$; $p = 0.00$), 1000 m endurance race ($t = 2.8$; $p = 0.01$).

Discussion

The present study has demonstrated that, the students encourage and support each other, take responsibility for their own learning and on the other, and to evaluate the progress made by the group. The basic elements are positive interdependence, equality of opportunity, and individual responsibility, Simultaneous Interaction, and Equal Participation. It should be noted that this is the first study to utilize a kids' athletics. In this context, the main objective of our research was focused on the measure of sporting student performance for those using cooperative learning structures as a teaching base active strategy and compare its success with those using traditional teaching method. For each evaluation of the hypothesis that the use of cooperative learning structures would result in a higher yield has been proven. The results are consistent with previous studies comparing other cooperative learning methods (Slavin, 1991; Johnson & Johnson, 2000; bizo, 2006). it is reasonable that the enjoyment of students during practice of the kids' athletics during intervention, as it was designed in this study, contributed to the adherence to the practice of physical and sports activities with a higher level in terms of regimented and creativity. Previous research has confirmed that Sport Education promoted team affiliation, enhanced relationships among team members in this context the teacher facilitates this process by helping students with their decision-making for choice of practices, which must be inclusive for all members in the small group structure (Grant, 1992; Whipp, Taggart, & Jackson 2012). So on the experimental field work, the research team suggests that this strategy, the students work together to learn and are responsible for their teammates' learning as well as their own However, Koka, Hein (2003) stated that the sport education model would seem to have some features (working in small teams, giving feedback to each other, positive interdependence) similar to those in cooperative learning. We recorded that the intervention was effective in the physical aspect and athletic performance in and athletics performance However, The teacher assists the groups as they go about the unit, learning at their own pace while practicing various skills. This simple technique, along with peer assessment and encouragement throughout the unit, has been proven to create an atmosphere that promotes higher levels of participation. "Teacher researchers must be wary of the lure of quick-fix strategies and patient enough to avoid the pitfalls of basing actions on premature analysis". (Mills, 2011, p.125). Lafont et al. (2007) "made solid connections between cooperative learning and the positive pro-social benefits achieved. Data from these studies leads to The cooperative Learning

format led to development of motor skills because students gave advice to each other and specific feedback” (Lafont et al., 2007, p.95). Cooperative learning is not only an approach was to an activity or two throughout a school year, and it should rather be pedagogical approach that is implemented with other models to provide your students best curriculum possible. However, “in this study teachers need to use more of an educational approach through their content units, and students must be engaged in many types of learning tasks in the curriculum of physical education in school” (Gurvitch & Metzler, 2010, p.32). On the other hand, give students a program that is easy to their social needs, and at the same time makes the most students, is treated as the target of physical educator. The research has indicated that cooperative Learning techniques provide an enormous opportunity for participation. These occasions for increased participation, provides our students with many educational benefits. A peer-centered pedagogy promotes academic achievement and builds positive Cooperative relationships (Sapon, 1994; Slater et al., 2005; Prichard & Bizo, 2006; Ensergueix, & Lafont 2001).

Conclusion

Physical education in school not only contributes to the good of all fitness and good health of students, but also helps young to perform performance and better understand physical activity, with positive impact throughout life.. However, inherent in the concept ,physical activity is a prime contributor to children’s healthy development (Malina et al., 2004; Kirk, D. 2005) .and there appear to be long-term benefits from the childhood physical activeness extending into adult life (Jones et al., 1998).in this context previous studies in the field of teaching strategies (Baliukevicius & Macário, 2006; Camire Trudel, 2010.; Millis,2010), have lent some support to the teacher so that he facilitates this process by helping students in their decision making in choosing practices that must be inclusive for all members of the small group structure. This organizational structure of education has many similarities with the contextual features of a task climate involved. That and also confirmed by the study of (Treasury & Roberts,2001) It concluded that although not designed to be prescriptive in its implementation, the Sport Education model has key organizational structures that differentiate it from the traditional teacher-led physical education curricular model. However, the cooperation strategy has been used throughout history in all aspects of our lives. Therefore, it follows that cooperative learning groups in schools would be used as a teaching method, of fostering positive student interactions. The primary objective when using cooperative learning is that all students are contributing to goal achievement. Student engagement allows for a higher level of participation within the class. It is also recognized that Cooperative learning methods are a way to limit these undesirable experiences. By using cooperative learning as a way to boost self-esteem and to foster an encouraging environment (Ward, Wilkinson, Graser,& Prusak , 2008). In addition, physical education provides knowledge and transferable skills such as team spirit, fair play, respect grows, the body and the social awareness, and provides general understanding of the "rules of the game" that students can easily use in situations of life. In the same desired in terms of warranty a creative practice in physical education and sport in order to discover early talent, with this framework in mind, so cooperative learning has been found to be a successful teaching strategy at all levels, Taking care of young talents has become an important task since officials believe strongly that it is an essential basis for any athletic success. Traditionally, children when they play seek for cooperative situations that allow them to compare themselves with each other. Kids' Athletics, with its variety of events, provides an excellent opportunity for this type of interaction. In view of the foregoing, we have concluded that the educational multilateral practices in the Kids' Athletics system is often seen as a solution for the comprehensive development of students. Besides the obvious health related benefits, physical activities help unfolding natural development potential in children. They get used to exploit their motor abilities in variable situations and intensities. On the basis of the above information, it can be said that an exemplary teacher not only is an expert in his or her core academic area, but has a strong foundation and use of differentiated instructional principles. This could very helpful in bridging physical activities with sports practices among children. Active involvement of children into Physical Education and Sports can benefit as well. Quite rewarding influence of recreational physical activities could be expected in relation to talent identification. In this context, according to any child who has a natural development of his physical abilities is entitled for a chance to become a champion (Claude Armand, & CLOTET, 2003;Buns, 2011).With this framework in mind, we will

make some recommendations to assist the teacher sport and physical education in all of its educational interventions:

Training teachers to active teaching a motivated teaching that encourages and reinforces the interest of the student. Train teachers in the new educational intervention strategies. The teacher also provides the student with instruments to fund its experiences, by optimizing the knowledge of the results of its action (simple, concrete success criteria, feedback, formative evaluation or trainer). With the obtained results as well as field observations, it was found that cooperative learning techniques in physical education through the kids' athletics will encourage a higher level of participation of many students. In the same context the cooperative strategy allows him to develop the sense of effort and perseverance and it allows students to get to know better and know other; it provides a favorable context for education in responsibility and autonomy by allowing students to put into action the fundamental moral and social values such as respect for collective rules or respect for oneself and for others. Therefore, we issue our conclusion that recreational training in a cooperative school climate through the practice of kids' athletics could not only serve the health-related purposes but can also be beneficial for children to prepare for tests and procedures talent identification practiced in different sports that they would be exposed to different age. Future research should assess coping at multiple points in a given cooperative situations in order to test the application contribution of cooperative learning strategy in the development of physical qualities, psychomotor, cognitive and social skills in students, also its relationship between the practice of kids' athletics and academic performance(force in implementing the four pillars of education: learn to know, learn to do, learn to be, and learn to live together.) depending on the nature of discipline. In spite of these limitations, this research provides hopeful, theoretically based sport-specific coping instruments for the assessment of students coping strategies cooperation in kids' athletics. Despite the convenience of using self-report instruments in coping research, a thorough understanding of athletes' coping actions will necessitate the use of various research methodologies. also , the Future research should examine more teaching strategies that increase the degree of autonomy to the students during the practice various physical and sports activities and thus ensure the conditions for creative practice, allowing early screening of young talent, Considering the primary school a reservoir of future champions. Also , the future research should examine more teaching strategies that increase the degree of autonomy to the students during the practice various physical and sports activities and thus ensure the conditions for creative practice, allowing early screening of young talent, Considering the primary school a reservoir of future champions. Furthermore, future research should also to take the following considerations:

- propose children a motivating athletics
- propose children accessible Athletics
- propose children a trainer athletics
- Make athletics the most practiced individual discipline the world in the school environment.

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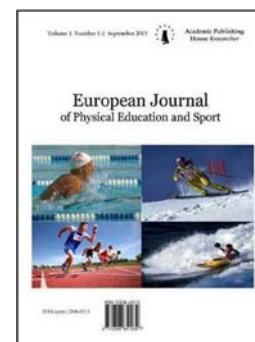
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Comparison the Anthropometric and Physical Fitness Characteristics of Rasht City Semiprofessional Soccer and Futsal Players

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Abstract

The purpose of this study was to comparison anthropometric and physical fitness characteristics of semiprofessional Rasht city soccer and futsal players. The research was conducted on a sample of 102 subjects divided in two groups: 47 futsal players (65.60 ± 11.43 kg, 169.91 ± 5.70 cm) and 55 soccer players (67.84 ± 8.39 kg, 175.91 ± 6.02 cm). Anthropometric indices including: height, weight, lean body mass (LBM), body fat percent (BF %), body mass index (BMI), hip Thigh, leg and waist circumferences, sitting height and lower limb length, were measured. Physical fitness including: aerobic power, explosive power, speed, agility and flexibility were measured. The result showed that there were significant differences between soccer and futsal players in stature, sitting height, LBM, Thigh and leg circumferences, aerobic and explosive power, 10 and 30 meters speed and agility ($P \leq 0.05$). In conclusion, Anthropometric differences may be effect on technical, tactical and roles of players in special situation. It is important for coaches and trainers to concentrate on the variables those are specific for improvement the performance and success in soccer and futsal.

Keywords: soccer, futsal, physical fitness, anthropometric characteristics.

Introduction

Despite the fact that soccer is one of the most popular sports today, interest in futsal slowly starts to grow and therefore its popularity too. Futsal techniques are very similar to soccer's. Nevertheless, focus of the researchers to object of scientific differences is curious. Up to date much more studies have been conducted in soccer than in futsal. It is particularly interesting that only a few studies exist which deals with the comparison of players in soccer and futsal despite the fact that they are very related (Milanovic et al. 2011). Soccer and futsal are sports modalities with their own characteristics, in which there is a complex variety of factors that can influence the performance of a team. Sport science has contributed in a significant and decisive way, related to each sport, evaluating its characteristics, physical and motor requirements, athletes' profiles improving and developing more efficient training methods, which aim at achieving better performance and results (Matos et al. 2008). Futsal is a high intensity, intermittent sport which acceleration and short sprints (usually with duration of 1 to 4 seconds) are performed at maximal or almost maximal intensity, interspersed by brief recovery periods (activities of low intensity or

pauses). The game may last a relatively long period of time (75 - 80 minutes) (Berdejo-del-Fresno et al. 2012). What the soccer and futsal have in common is that they represent an intermittent high - intensity activity which is based on not only anaerobic but also aerobic capacity of players (Milanovic et al. 2011). The intensity of physical activity during the futsal competition is almost 90% of the maximum heart rate (Barbero-Alvarez et al. 2008) and it is higher to compare with match intensity in soccer that is lower and ranged from 80 to 90 % of maximum heart rate (Reilly 1994). Milanovich et al (2011) reported that futsal and soccer players differ in the intensity exertion during the game but there were no differences in the motor activities such as agility. Matos et al (2008) showed in their study that 10m speed test results were different between the two groups, with better results for the futsal athletes. High intensity starts are happened more frequently in futsal to compare with soccer.

The anthropometric and body compositions of athletes have been the subject of many investigations as many researches have hypothesized that trained athletes might be expected to exhibit structural and functional characteristics that are specifically favorable for their specific sport (Popovic et al. 2013). Such information is useful to determine possible differences or similarities, and perfect planning for coaches, managers and players. Thus, the purpose of this study was to comparison anthropometric and physical fitness characteristics of Rasht city semiprofessional soccer and futsal players.

Methods

The research was conducted on a sample of 102 subjects divided in two groups: 55 soccer players (17.35 ± 0.799 years, 67.84 ± 8.39 kg, 175.91 ± 6.02 cm) and 47 futsal players (16.4 ± 1.056 years, 65.60 ± 1.43 kg, 169.91 ± 5.70). The players were in the soccer and futsal teams in Rasht city who regularly have participated in provincial and national composition in 2014. They were selected in simple random method from 200 players. Stature, Thigh, leg, hip and waist circumference, sitting height, and lower limb length were measured using a tape meter. Body weight (using a Camerie Scale), BF% and LBM (using Saehan caliper) were measured in a same time.

Physical fitness factors including: aerobic power (1 mile test), explosive power (vertical jump test), speed (sprints 10 and 30 meters tests), agility (Illinois test) and flexibility (sit and reach test) were measured in two groups. Statistical analyses were performed using SPSS. The level of significance established in this study was in $p \leq 0.05$. Differences in the characteristics between the soccer and futsal players were analyzed using independent sample t tests.

Table 1: Anthropometric measurement methods

| index | Method Measure | instrument |
|---------------------|---|------------|
| Stature | Measurement the maximum distance from the floor to the highest point on the head | Tape meter |
| Sitting height | This dimension is pertinent to the establishment of proper overhead clearances for seated persons | Tape meter |
| Thigh circumference | Point tape mid thigh girth | Tape meter |
| Waist circumference | Point 3cm to the right of and 1cm below the midpoint of the umbilicus | Tape meter |
| Hip circumference | At maximum protrusion of gluteal muscles | Tape meter |
| Leg circumference | Place tape at widest section of calf | Tape meter |

| | | |
|-------------------|---|------------|
| Lower limb length | Point anterior superior iliac spine than malleolus bone | Tape meter |
| BF% | Chest, abdomen, and thigh skinfold (Jackson Polak nomogram) | caliper |

Results

The finding showed that in the indices of waist and hip circumference, lower limb length, weight, BF % and BMI there were no significant differences between two groups ($p \geq 0.05$). Also, the results indicated that there were significant differences in stature, sitting height, LBM, leg and thigh circumference between soccer and futsal players ($p \leq 0.05$) (Table 2).

The finding showed that in the indices of aerobic and anaerobic power, sprint 10 and 30 meters and agility, there were significant differences between two groups ($p \leq 0.05$). There was no significant difference in flexibility between groups ($p \geq 0.05$) (Table 3).

Table 2: Anthropometric characteristics of subjects

| Variable | Soccer Mean \pm SD | Futsal Mean \pm SD | P |
|------------------------|-------------------------|-------------------------|--------|
| Stature (cm) | 175.91 \pm 6.02 | 169.91 \pm 5.70 | 0.000* |
| Sitting height (cm) | 89.87 \pm 4.53 | 87.79 \pm 5.25 | 0.034* |
| Weight (kg) | 67.84 \pm 8.39 | 65.60 \pm 11.43 | 0.258 |
| Waist girth (cm) | 74.29 \pm 11.59 | 73.30 \pm 8.33 | 0.626 |
| Hip girth (cm) | 90.53 \pm 4.37 | 100.21 \pm 89.97 | 0.427 |
| Leg girth (cm) | 37.04 \pm 2.35 | 35.87 \pm 3.19 | 0.037* |
| Thigh girth (cm) | 52.31 \pm 4.06 | 50.38 \pm 4.66 | 0.028* |
| Lower limb length (cm) | 90.98 \pm 6.64 | 91 \pm 3.89 | 0.987 |
| BF% | 4.95 \pm 1.93 | 5.68 \pm 3.50 | 0.185 |
| LBM (kg) | 64.37 \pm 7.57 | 60.28 \pm 8.44 | 0.011* |

*significant differences

Table 3: Physical fitness characteristics of subjects

| variable | Soccer Mean \pm SD | Futsal Mean \pm SD | P |
|--------------------------|-------------------------|-------------------------|--------|
| Aerobic power (ml/k/min) | 57.42 \pm 4.35 | 52.77 \pm 3.95 | 0.000* |
| Explosive power (cm) | 39.4 \pm 5.45 | 43.36 \pm 4.35 | 0.001* |
| Agility (s) | 19 \pm 0.76 | 17.21 \pm 0.97 | 0.000* |
| 30m speed (s) | 4.40 \pm 0.19 | 4.98 \pm 0.18 | 0.000* |
| 10m speed(s) | 2.26 \pm 0.26 | 2.13 \pm 0.17 | 0.003* |
| Flexibility(cm) | 37.69 \pm 5.05 | 37 \pm 5.63 | 0.515 |

*significant differences

Discussion

The purpose of this study was to compare anthropometric and physical fitness characteristics of Rasht city semiprofessional soccer and futsal players. Findings showed that there was a significant differences in height between soccer (175.91 \pm 6.02) and futsal (169.91 \pm 5.70 cm) players (P= 0.000). Findings showed that there was a significant difference in sitting height between soccer and futsal players (P=0.034). In fact soccer players were taller than futsal players. We did not find any significant differences in low limb length between soccer and futsal players. Reilly et al (2000) reported that the mean height of Soccer players posts. The mean heights were including: goalkeepers=184 \pm 2, defenders =177 \pm 1, midfield = 173 \pm 1 and forward 172 \pm 2 cm and the goalkeepers and defenders were significantly higher than midfields and forwards (P= 0.001).

It seems, in soccer, the tall players might be used as a target player for high balls, whereas the short players may prefer to run for balls deep into the opponent's defense. It is necessary to have tall goalkeepers and defenders to perform successfully in the air battles during the game whereas height is not a determining factor for the wingers. In fact, since these players try to advance the ball with a high speed, their shorter height can be advantageous to defeat the center - backs. Since a short height keeps the center of gravity closer to the ground and futsal player should perform their tasks with high speed and agility, so it seems intermediate height is better for them.

The present study showed that there were significant differences between soccer and futsal in leg and thigh circumference. Leg muscle strength is related to muscle size. It seems, during a soccer and futsal game, every player performs several dynamic movements (headers, cuttings, tackling, sprint, kicks), which require a very high level of muscle strength.

The weight of soccer players was higher than the futsal players but it was not significant ($P= 0.258$). Results showed that there was no significant difference in BF% between groups. In the present study mean BMI of soccer and futsal players were $22.47 \pm 2.21 \text{ kg/m}^2$ and $22.43 \pm 3.18 \text{ kg/m}^2$ respectively. $P= 0.937$). LBM was significantly higher in soccer players to compare with futsal players ($P= 0.011$).

One of the main aspects of physiological fitness in soccer is body composition. This point is important in the terms of game particularly for the players who have excess fat (Reilly 2005). Furthermore, the amount of body fat increases with age. Other cases that have an impact on body fat are diet, race and physical activity (Wilmore & Costil 2004). The differences between various soccer and futsal players are probably due to differences in the age, nutrition and the type of activity.

Findings showed that there was a significance difference between aerobic power of soccer and futsal players. Aerobic power in soccer players was significantly higher in soccer than futsal players ($P= 0.000$). The aerobic system is the main source of energy provision during soccer match or training and the average values of vo_2max for top - level soccer players tend to be high. While vo_2max values may be influenced by differences in standards of play, training regimes and the phase of season. A team with superior aerobic fitness would have the advantage, being able to play the game at a faster pace throughout (Ostojic, 2000). Aerobic power of the soccer and futsal players of this study was lower than the aerobic power of the elite players from other countries. Reilly et al (2000) stated that although vo_2max alone in soccer is not a success factor, but approximately, 60 ml o_2 per kg per minute is necessary for soccer. When vo_2max of soccer players are less than this value, their performance will likely fluctuate.

Futsal players have significant higher jump than soccer players. It seems, jumping to catch the ball in the air is an important skill in soccer players irrespective of playing position and allow for more powerful jumps, kicks, tackles, and sprints among other factors. Explosive power is essential to perform sprints, high intensity runs, and duel plays, all of which may contribute to the final result.

Findings showed that there is a not significance differences between flexibility in soccer and futsal players. The flexibility decreases with the age. During the adolescence, in result of the fast pubertal growth, considerable loss of this characteristic occurs. It is known, also, that athletes of soccer and futsal as result of the programs of force aiming the gesture of the kick tend to have considerable shortening of posterior thigh muscles, that promotes a loss of income and it incline the athletes to the muscular injuries (Bertolla et al 2007).

Our findings showed significance differences in sprint 10 meters and sprint 30 meters between soccer and futsal players. In fact futsal player were faster in 10 meters test and soccer players were faster in 30 meters test. Matos et al. (2008) describe in their research results that the mean sprint 10 meters of the in Minas Geris futsal player was $1.53 \pm 0.23 \text{ s}$ and Cruzeiro Esporte club was $1.79 \pm 0.07 \text{ s}$. These findings are in agreement with the findings of the present study. Speed in the soccer depends on prediction of game, reaction, reaction time choice and movements and etc. (Stolen et al. 2005). This problem has caused most of the coaches to do fast activities at the end of training, and to do various exercises with his players. The findings showed that there was significance difference in agility between soccer and futsal players. The results of research showed that mean agility (Illinois test) of soccer players was (19.0 ± 0.76) and futsal players $17.21 \pm 0.97\text{s}$. $P= 0.000$).

Other study results showed that the mean agility Iranian elite soccer players were included: goalkeeper= 15.77 ± 0.48 , fullback= 15.41 ± 0.82 , midfielder= 15.18 ± 0.73 , attackers= 15.37 ± 0.48 s. (Chaleh Chaleh et al. 2012). Milanovic et al. (2011) evaluate that the futsal and soccer players differ in the intensity exertion during the game but not in the motor activities such as agility. These findings are in disagreement with the findings of the present research. Agility is a very important component of both, futsal and soccer and it represents a common characteristic. Such reduced pitch dimensions and the frequent turnovers during futsal match requires from players fast decision - making and high sprint capabilities under pressure during attacking and defending phases of the game. Moreover, encouragement and competition between players during the test contributed to this finding. Soccer and futsal is a very complex sport, and ideal physique and physiology are not sufficient for excellence in soccer and futsal. It seems that players vary widely in body size. Thus, these parameters are not essential factors for success in soccer and futsal. Moreover, they might determine the playing positional role. Other components such as technique, tactics, and strategy of the coach play a key role in the final results. Profiling may be useful in a player's selection and development and for specific training programs. The coach may use this scientific information to avoid errors and to maximize the chance of preparing the team will. A scientific approach toward preparation for play when taking into consideration the players' physical fitness and anthropometric characteristics can nevertheless enhance the enjoyment of both players and spectators.

Conclusion

In conclusion, there were significant differences in the anthropometric and physical fitness measures between soccer and futsal team players in Rasht. Anthropometric differences may be effect on technical, tactical and roles of players in special situation. From a practical standpoint, this information is important for coaches and trainers to adjust training regimes and concentrate on the variables that are specific to improve performance and achieve success in soccer and futsal.

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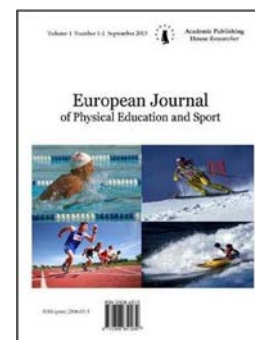
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Comparative Estimation of Physical Development and Functional State of the Cardiovascular System of Athletes Engaged in Cyclic and Acyclic Sports

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Abstract

The article presents the examination results of 44 students engaged in cyclic (athletics) and acyclic (wrestling, weightlifting) sports. We studied anthropometric characteristics, conducted Ruffier-Dickson test, defined weight and growth, Quetelet index and adaptive capacity of the cardiovascular system. The analysis of the above indicators was conducted. The study revealed a higher efficiency of the cardiovascular system in athletes engaged in cyclic sports compared to athletes in acyclic sports.

Keywords: students, athletes, adaptive capacity, cyclic and acyclic sports.

Introduction

Physical working capacity is one of the most important components of athletic success. This quality is also a determinant in many types of production activity, necessary in daily life, susceptible to trainings and indirectly reflecting the state of the physical development and health [1, 2, 3, 4]. Physical working capacity of a body is largely determined by capabilities of cardiovascular system, functional state of which affects all types of organism's activities. In their turn, sports training loads have a significant impact on the morphofunctional development of the circulatory apparatus, as well as the usefulness of the mechanisms of its regulation [5, 6, 7, 8, 9]. The focus of the training process is a major factor in the organization of the functioning of the circulatory apparatus [10, 11, 12, 13]. In this regard, the study of functional capabilities and physical working capacity of students, involved in various sports, is important. Objective of this research: to provide a comparative assessment of physical development and functional state of the cardiovascular system of athletes involved in cyclic and acyclic sports.

Materials and methods

The study involved 50 male students of average age 20 ± 2 years who were regularly engaged in cyclic and acyclic sports; the duration of participation in sports was ranging from 2 up to 5 years. Students were divided into groups according to the specific sport. The first group (n = 15) included students which were engaged in athletics. The second group consisted of wrestlers and weightlifters (n = 17). The last group consisted of students not involved in sports systemically (n = 18). To determine the level of physical development and features of CVS athletes while in rest were measured anthropometric measures - height (cm), weight (kg), chest circumference (WGC cm). Body mass index was calculated (Quetelet index, kg / m^2). Physical working capacity was evaluated by the index Ruffier-Dickson. Adaptation potential (AP) of cardiovascular system of students was calculated with the following formula:

$$AP = (0,011 \cdot HR + 0,014 \cdot SBP + 0,008 \cdot DBP + 0,014 \cdot A + 0,009 \cdot W - 0,009 \cdot H) - 0,27$$

Where HR – heart rate; SBP – systolic blood pressure; DBP – diastolic blood pressure; A – age; W – body weight (kg); H – height in cm.

Students' AP was evaluated according to the Table 1:

Table 1: The range of values of adaptation potential

| Satisfactory adaptation | Stress of adaptation mechanisms | Poor adaptation | Failure of adaptation |
|-------------------------|---------------------------------|--------------------|------------------------|
| 2,1 points and lower | 2,11 – 3,20 points | 3,21 – 4,30 points | 4,30 points and higher |

Statistical analysis was performed using Microsoft Excel.

Results and their discussion

Assessment of physical working capacity was carried out using physical loads, followed by the study of the speed of heart rate recovery, first of all, taking into account the standard reaction of the organism to the load: the reaction efficiency and fast recoverability.

A satisfactory physical working capacity of the body after carrying out Ruffier-Dickson test was not found at athletes, while in the control group it was found in 29% ($11 \pm 1,008$) (Figure 1). The average physical performance was found in 44% ($6 \pm 0,8$) of students engaged in cyclic sports and in 50% ($7 \pm 1,06$) of students engaged in acyclic sports while in the control group it was found in 59% ($8 \pm 1,15$). The good performance was observed in 56% ($4 \pm 0,7$) of athletes in cyclic sports and 50% ($3 \pm 1,16$) of athletes in the acyclic sports. In the control group, a good performance was found in 12% ($2 \pm 0,8$). Poor physical performance was not detected in any group.

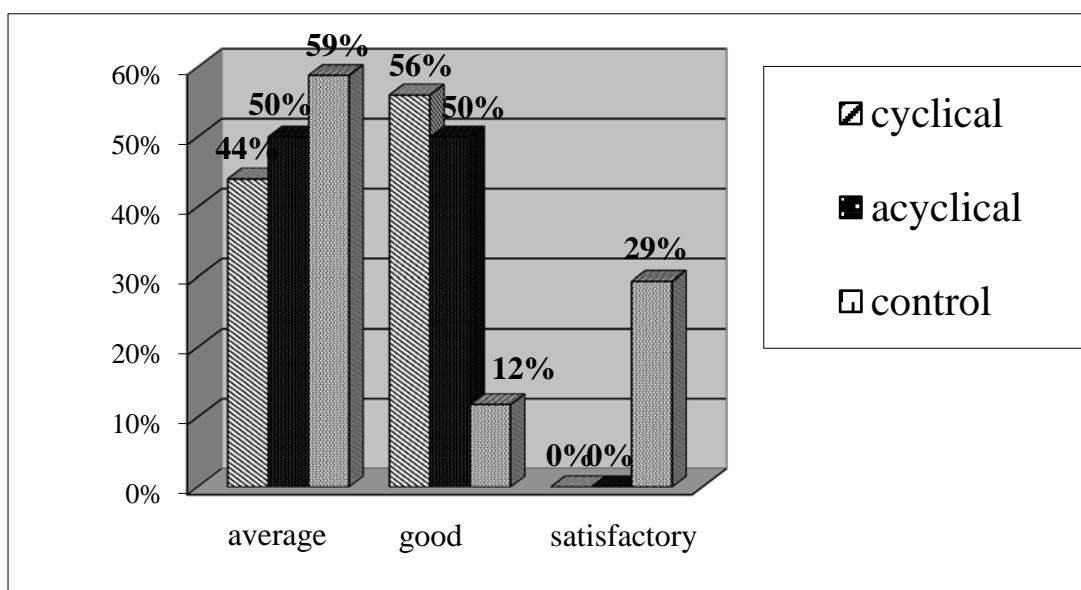


Figure 1. Index of physical working capacity (Ruffier-Dickson) of students engaged in cyclic and acyclic sports

Thus, satisfactory evaluation of physical working capacity by the Ruffier-Dickson index in the control group indicates insufficient level of adaptation reserves of the cardiovascular and respiratory systems what limits physical capabilities of students' bodies.

One of the important characteristics of the physical working capacity is to definition of the characteristics of the overall size, body proportions and the constitution. However, for an objective assessment of physical working capacity it is important to make a comparison of different anthropometric characteristics, and therefore we defined overall weight and growth rate (Quetelet index), which revealed differences in the physical development of students in the surveyed groups. Deficiency of weight in the control group was in 29% ($18,66 \pm 0,76$), and students involved in cyclic and acyclic sports were not found to have deficiency of weight (Figure 2). Normal weight was observed in all the students involved in cyclic sports, and was found in 100% ($21,6 \pm 0,76$), and in 75% of students engaged in acyclic sports ($22,4 \pm 1,21$). In the control group normal weight was recorded in 59% ($21,46 \pm 0,87$) of students. Overweight was detected in 25% ($27,01 \pm 1,57$) of students engaged in acyclic sports. In the control group overweight was observed in 12% ($25,66 \pm 0,82$) of students.

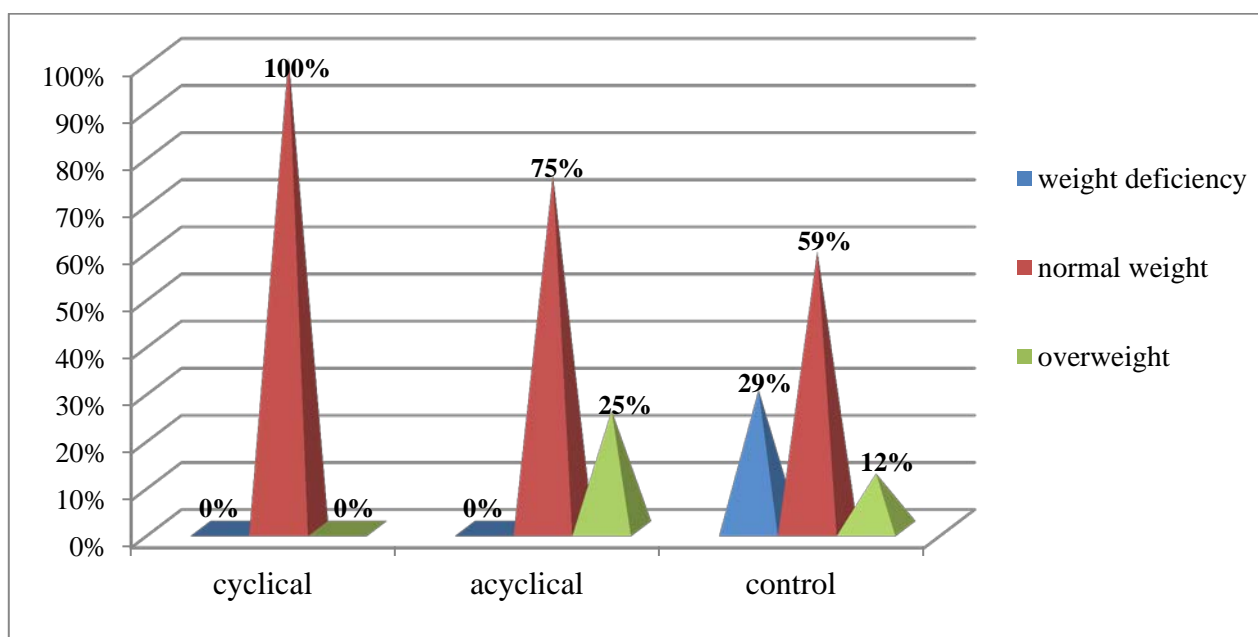


Figure 2. Index Quetelet indicators of students involved in different sports

Thus, anthropometric research has revealed a number of differences in physical development of athletes, depending on the type of physical loads. There were noted a higher rates of body mass at athletes involved in acyclical sports compared with a group of athletes involved in cyclical types. The found differences in the groups can be explained by anthropometric characteristics of athletes and specificity of selection athletes depending on sports. It is well known that high - static exercises, aimed at development of strength, contribute to an increase in muscle mass. In this regard, the wrestlers and weightlifters were found to have higher levels of body mass index. This caused a higher index of body weight as well as Quetelet Index at athletes involved in acyclic sports. Indicators of weight deficiency and overweight were observed at students in control group, what can testify malnutrition or weak development of muscles, either the threat of obesity.

At the students there were observed indicators of adaptive capacity of the circulatory system, which revealed a level of adaptive responses of the cardiovascular system to physical and mental stress.

Indicators of satisfactory adaptation were prevalent at 63% of athletes involved in cyclic sports (Fig. 3), while the percentage of athletes involved in acyclic sports was 13% less. Indicators with a satisfactory adaptation in the control group were observed at 71% of students. Stress of adaptation mechanisms was observed at 37% of the athletes in the cyclic species and 44% - in that of the acyclic sports and in control group they were found only at 29% of students.

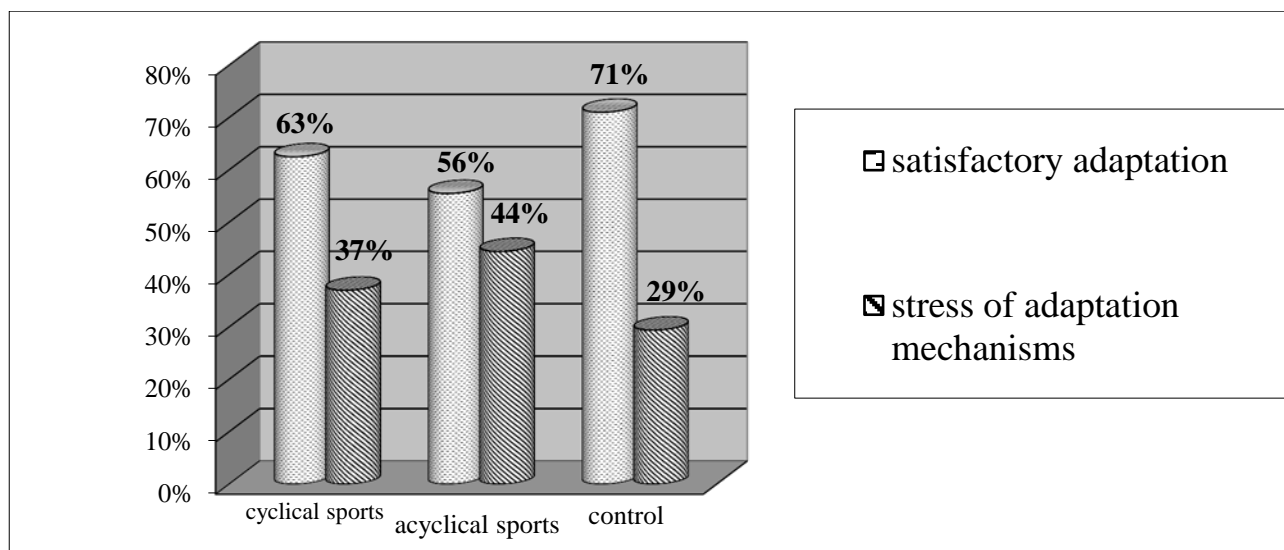


Figure 3. AC of cardio-vascular system of students involved in cyclical and acyclical sports

Thus, the state of the circulatory system at more than half of the athletes involved in acyclic and cyclic sports and the control group was assessed as satisfactory, which is evidence of satisfactory functioning of the students' organism. The stresses of adaptation mechanisms of the circulatory system were found at athletes of the first and the second groups, at 37 % and 44 % respectively, reflecting the reduction of existing functionality of the body. Such a state of adaptive responses is explained by intense physical and mental stress.

Conclusion

The results of our studies have shown that adaptation to physical stress depends on the focus of the training process and has its own specifics due to the type and intensity of physical loads. If the training process in cyclic sports is dominated with a combination of high dynamic and medium – static exercises, the training in acyclic types are dominated with exercises with mostly high-static loads and low-intensity dynamic, what as appears is a cause of a higher efficiency of the CVS at athletes involved in cyclic sports.

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УДК 612

Сравнительная оценка физического развития и функционального состояния сердечно-сосудистой системы у спортсменов, занимающихся циклическими и ациклическими видами спорта

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Аннотация. В статье представлены результаты обследования 44 студентов, занимающихся циклическими (легкая атлетика) и ациклическими (борьба, тяжелая атлетика) видами спорта. Были изучены антропометрические показатели, проведена проба Руфье-Диксона, определены весо-ростовой индекс Кетле и адаптационный потенциал сердечно-сосудистой системы. Проведен анализ вышеизложенных показателей. Выявлена более высокая эффективность работы сердечно-сосудистой системы у спортсменов, занимающихся циклическими видами спорта по сравнению со спортсменами в ациклических видах спорта.

Ключевые слова: студенты, спортсмены, адаптационный потенциал, ациклические и циклические виды спорта.

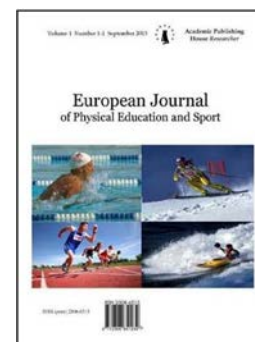
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Professional Competence Requirements: the Views of Several Physical and Sports Education Teachers (Case in Mostaganem Province, Algeria)

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Abstract

The purpose of this study was to identify the opinions of Physical and Sports Education (PSE) teachers regarding professional competence and the specific requirements of the work. A questionnaire was drawn up and sent to 85 PSE teachers in secondary schools based the Mostaganem “Wilaya” or Province in Algeria. The findings indicate that this group of teachers could not clearly define general or specific competence. However, they largely agreed that the teacher/coach plays a very important role in establishing the professional competence of trainees. Competence that is specific to PSE is described in studies as “how to apply competence by competence the approach to teaching PSE” and “knowing how to apply legislation”. None of the teachers responding cited a basic competence in the professional sphere, described in the literature: sound knowledge of legislation and administrative procedures. In addition, the findings show that the teachers are not satisfied with the training they received and that it does not enable them to reinvest their training in their professional role. From the opinions expressed by the population studied, their training does not encourage professionalism. This finding is also confirmed by research by Laroua et al (2014).

Keywords: competence, professional competence, PSE.

Introduction

Competence is defined in terms of “knowing how to act and react” and is not reduced to applying or carrying out rules, but goes beyond that which is stipulated (Le Boterf, 2001). The competent person knows how to choose, organise, and mobilise certain resources (knowledge, expertise, qualities, culture, documentary networks, expertise networks, etc.) in order to manage situations in professional practice (Le Boterf, 2002 a).

Training for a Master in PSE at the Physical and Sports Education Institute of Mostaganem, Algeria, has been carried out since 2004 through a programme set up by a committee specialising in teaching motor skills in physical education.

Several study courses are taught at the Institute: Sports Coaching “ES”, Human Movement and Motor Skills “MHM”, Adapted Physical Activity “APA”, and Sports and Health “SH”. In our study, interest focused on MHM training, which equates to training formerly known as “EPS” or PSE. This training gives students the possibility of entering the teaching profession and applying for a teaching post within the National Education system through a mark attributed following an interview and a review of their university file. The graduates are appointed as trainee teachers for a nominal three-year period. They must undertake a nine-month training programme in the difficulties that may be encountered in practice as a prerequisite to applying for a permanent post (CAPEPS). This training is an obligatory stage required by the State Administration.

In addition, the Mostaganem Province education management uses a form of nomenclature and classification of teachers relating to their number of years teaching experience and also to successfully passing an evaluation test before being allowed to move on from one status to another. Several teacher grades have been established: trainee, permanent teacher, principal teacher and coach. Coach is the highest grade and once attaining this level a teacher may apply for the position of inspector of the various subjects taught.

The new LMD system (Bachelor, Master, PhD.), was established at Mostaganem University over 10 years ago and training is available in Science and Techniques of Physical Activities for the teaching profession, replacing the earlier training programme in Physical and Sports Education.

Few educational courses in Algeria are concerned with results of training and the quality and the competence of teachers. For this reason, several research studies have been carried out since 2011 to examine the issue.

Theoretical research into the question of competence was carried out by Laroua et al. (2013), with the aim of identifying competence in the teaching of PSE while at the same time attempting to design a curriculum for competence specific to the profession in Algeria. Various recommendations resulting from this work extensively explored the professional competence required by a PSE teacher based on practical experience of the activity (situated action) in order to obtain more precise results more in line with actual practice. In order to obtain greater objectivity it was decided to interview those principally concerned in this area of education: experts, novices, and inspectors, in order to obtain a better understanding of practical competence and to draw up a grid of professional competence to meet the requirements for teaching PSE under standard conditions.

Methods and Means:

The method used to examine the professional competence required for the teaching of PSE is both descriptive and quantitative. The research study used closed and open-ended questions.

Participants

Eighty-five PSE teachers contributed to the research. This number was provided by the Mostaganem Province education authorities as being all teachers working mixed-sex secondary schools in Mostaganem Province in 2014. The categories of teachers represented included those under training having little experience thought to the most experienced holding the title of teaching coach.

Materials and Procedure

The questionnaire

PSE teachers completed a questionnaire concerning the notion of competence in PSE teaching. The questionnaire included tabular forms with open-ended and closed questions, as well as questions open-ended and closed at the same time. The questions were intended to provide answers to the central question of identifying skills specific to practical teaching.

In order to test the objectivity and reliability of the research tool the first questionnaire established included several questions relating directly to the issue. The questionnaire was then assessed by specialists from the profession who adjusted and amended the questions taking the observations of experts into account. To test its reliability, seven PSE teachers chosen at random completed the questionnaire twice at a week's interval. The same results were obtained both times, leading to the conclusion that the research tool had an acceptable level of objectivity and reliability.

Statistical Analysis

In the study attention focused on analysing the replies of the PSE teachers in relation to teaching PSE in situ. Replies were coded in a computer data base and processed by *Sphinx v5* software. The *results* were analysed using the comparison test of two percentages was used as well as the K^2 test.

Results and discussions

This part of the research study is devoted to analysing and discussing the findings obtained from replies. It throws light on the main observations from the research and analyses them within the framework of National Education in Algeria.

- Are you a teacher?

Teacher under training – Teacher in a Permanent Post – Coach in a Permanent Post

Table 1: shows the grade distribution of PSE teachers

| | Number of teachers | | |
|----------------|------------------------|--------------------|-----------------|
| | Teacher under training | Permanent teachers | Permanent Coach |
| N° of teachers | 12 | 64 | 9 |
| % | 14.12 | 75.29 | 10.59 |

Table No.1 indicates a greater number of teachers with a university degree and from Physical and Sports Education teacher training institutes, with the overall total of 85 for Mostaganem Province in 2014. These teachers had obtained the level of experience which enabled them to move on to a higher status. Only 12 were under training, 14.12 % of the group; 64 were PSE teachers in permanent posts, 75.29 % of the group in this study. In addition, we identified nine PSE teaching/coaches, 10.59 % of the group.

These findings show that the Mostaganem Province education administration uses a form of nomenclature and teacher classification based on their number of years' experience in education and also on the evaluation test necessary for advancing from one status to another (e.g. from the status of principal teacher to that of teaching/coach). The results also show that most of these PSE teachers hold a permanent post.

The evaluation test for holding a permanent post consists of establishing the standards for permanent post teachers responsible for the subject matter and teachers under training. The permanent teacher coordinates the subject matter with other colleagues in the establishment, as well as the examinations and planning of the various tasks. Newly recruited teachers under training, with a three-year contract, have to wait in order to take the CAPEPS examination within 9 months following their nomination, knowing that passing this test for a permanent post is essential after receiving their end-of-studies diploma organised by the education administration (training department).

This training is required by the State public service administration. Furthermore, during the study we observed that those teachers with the title of coach regularly work with subject matter inspectors, particularly in identifying and planning objectives for the training seminars organised regularly by the inspectors.

The status of coach can be obtained under certain conditions, which include the number of years spent teaching the subject as well as the result of the written test. The results also revealed that 72.41% of teachers have this type of professional experience in Mostaganem Province by comparison with experienced teachers having more than 10 years experience in education. In the latter case they comprise 25.28%.

Results vary between regions throughout the country. Research by A. Laroua (2011) shows that certain Provinces, such as Oran and Témouchent (in the west of the country) have older teachers with more than 10 years experience in teaching PSE. This difference in experience of pedagogical practice doubtless has an influence on the quality of teaching as well as on the level of competence attained by these "experts".

One question put to teachers was: how do you define the competence of a PSE teacher?

Table 2: showing competence definitions for a PSE teacher, according to the teachers themselves

| How do you define the competence of a PSE teacher? | | | | |
|--|----------|----------|----------------------------|----------------------------|
| Replies | R | % | K² (cal) | K² (tab) |
| Considerable stamina and moral capacity. | 3 | 3.45 | 21.42 | 18,31 |
| The ability to obtain objectives with a minimum of energy. | 1 | 1.15 | | |
| Great psychomotor and social abilities in individual and team disciplines. | 2 | 2.30 | | |
| All the concepts and knowledge required for preparing a teaching session. | 5 | 5.75 | | |
| The ability to prepare a PSE session in good conditions. | 12 | 13.79 | | |
| The ability to find appropriate solutions for problems faced by a teacher during sports practice. | 20 | 22.99 | | |
| Mastering TIC (information and communication technology). | 11 | 12.64 | | |
| The ability to deal with pupils and to transmit information. | 15 | 17.24 | | |
| The ability to carry out exercises and games correctly. | 12 | 13.79 | | |
| A sound theoretical and practical knowledge. | 2 | 2.30 | | |
| Cognitive, physical, and administrative competence | 4 | 4.60 | | |

Table N° 2 shows the range of replies from teachers on the definition of competence in PSE. Twenty teachers, 22.99%, define specific PSE competence as the ability to find appropriate solutions for problem situations faced by the teacher in a practical teaching situation. However, fifteen teachers, or 17.25%, have a different view: they emphasize sound control over the class and the way of transmitting information as a major competence element.

In addition, by combining two replies (TICE and knowledge of the activities), twenty-three teachers, 26.43%, define the competence specific to PSE as the ability to carry out exercises correctly and sound knowledge of TICE (information and communication technology in teaching). The others gave quite varied and less significant responses. A large group defined competence in PSE as prior knowledge of the concepts which facilitate the preparation of a teaching session, as well as sound theoretical knowledge and specific practice regarding PSE. The K² test shows that the calculated K² value (K²cal=21.42) is greater than the K² value of the Table (K² Tab=18.31) where the degree of freedom of scope (N-1) is 10, and the level of significance is 0.05. This finding is a statistically significant increase, which explains the large difference in favour of the answer giving the greatest number of choices.

The findings show how various definitions of competence are formulated in PSE. Each teacher suggested their own version where they defined competence specific to PSE drawn from their own professional experience. However, compared to the propositions generally found in the literature on the subject, their definitions are incomplete and do not take into account the basic elements that define competence in PSE.

In fact, most of the teachers said that competence in PSE is directly linked to the speed of assimilating environmental information in order to react to problem situations encountered during a PSE session. Good class control and the quality of message transmission during the session, underscoring the value of professional gestures such as the use of guidance gestures during a session and including verbal and non-verbal communication.

Authors such as N. Chomsky (1973) and G. Le Boterf (1999), D. Delignières, C. Garsault (1993), and M. de Montmollin (1984), as well as O. Reboul (1980), have put forward many definitions for competence. Beyond the specificity of each of these definitions, certain points of agreement emerge. Competence or skill is a stable quality, acquired by apprenticeship, resulting in a set or group of elements in dynamic interaction. Knowledge is programmed, which supposes a

power of action and/or understanding that can be applied to a category of actions relating to a common problem. In secondary school, skills “constitute knowledge allowing for a reaction appropriate to a situation, or a group of situations presented by the teacher”: they are cultural and methodological.

In every case, competence defines, in accordance with the regulations, the nature of the acquired knowledge: “apprenticeship in PSE leads to the acquisition of competence” (grade six programme, 1996).

Based on these definitions, it may be supposed that competence is the possibility of acting voluntarily and effectively in a range of situations. The aim of the PSE teacher is that the student acquires competence specific to PSE; the teacher observes the motor behaviour of the student and assists them in mobilising their motor, cognitive, emotional, and social resources.

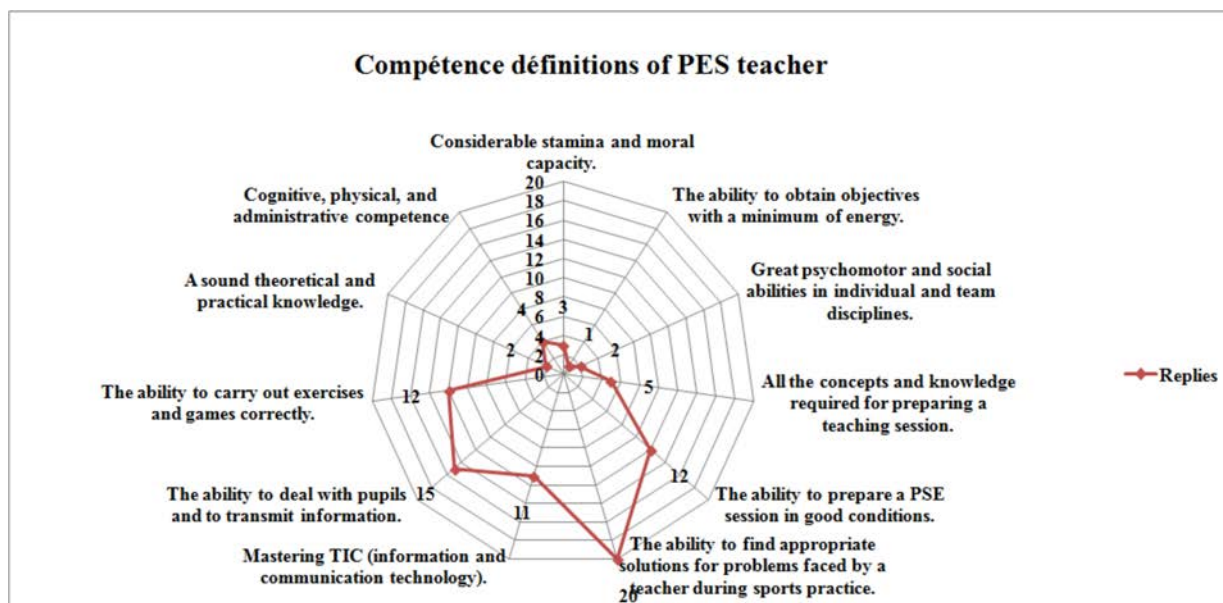


Figure 1. Describing the definitions of the competence necessary for a PSE teacher according to the teachers themselves.

According to you, what specialised competence is required for a PSE teacher?

Table 3: represents the specialised competence for a PSE teacher

| Specialised competence required for a PSE teacher, according to the teachers themselves. | | | | |
|---|-----------|--------------|----------------------------|----------------------------|
| competences | R | % | K² (cal) | K² (tab) |
| Simple, short explanation of exercises. | 8 | 9.20 | 27.04 | 26.30 |
| Good positioning and use of the area allocated to pupils. | 8 | 9.20 | | |
| Mastering TIC in education. | 8 | 9.20 | | |
| Mastering the science associated to each discipline taught. | 6 | 6.90 | | |
| A good relationship with colleagues and the administration. | 8 | 9.20 | | |
| Ability to apply legislation. | 10 | 11.49 | | |
| Ability to apply the approach by competence in PSE teaching. | 9 | 10.34 | | |
| Good use of teaching material. | 7 | 8.05 | | |

| | | | | |
|---|----------|-------------|--|--|
| The ability to teach efficiently. | 1 | 1.15 | | |
| Sports activity continues in the establishment. | 1 | 1.15 | | |
| Working methodically. | 3 | 3.45 | | |
| Being exemplary at work. | 1 | 1.15 | | |
| Sound mastery of teaching methods and styles. | 8 | 9.20 | | |
| Experience in PSE teaching. | 2 | 2.30 | | |
| Personally undertaking the physical activity. | 1 | 1.15 | | |
| Having a correct view of the physical activity during practice. | 1 | 1.15 | | |
| Being innovative at work. | 5 | 5.75 | | |

The findings in table 3 show how teachers perceive the specific competence that a PSE teacher should have. In fact, nineteen PSE teachers, 21.83 %, gave two answers which represent for them the key specialised competence in PSE. This is the sound application of legislative texts supplied by the Algerian Minister of National Education.

In fact, teachers must abide by them, firstly since they are a guide to preparing classes, and secondly they provide the definition, objectives and purpose of PSE. The legislation clearly details the competence that should be acquired by the pupil at each of the three levels taught at secondary school. Competence is evaluated at the end of each trimester (basic competence), each year (final competence), and at the end of the three years of study (definitive and final competence).

In these same legislative texts there are the apprenticeship objectives for each discipline taught (collective and individual) relative to each level of teaching, including the various evaluation stages. Class preparation is clearly explained, giving models of technical sheets. In principle, the PSE teacher may not change the competence and objectives as defined in the Ministry's official textbooks.

The second competence raised by the teachers was the ability to efficiently apply the approach by competence in PSE teaching. An earlier study (Bensikaddour et al, 2013) shows that this was far from being the case for the group studied. Teachers under training have enormous difficulties in designing problem situations and in assisting pupils to find sound solutions (*ibid.*).

Furthermore, in this study show two replies have the same score. Eight PSE teachers, 9.20% of the group, gave an answer considered pertinent in the literature on the subject. This is the competence relative to mastering PSE methods and styles. The work of Bensikaddour (1995), Atallah (2004), and Laroua (2009) match the findings of D. Banville (2004). They show that a great majority of teachers in Mostaganem Province, as in Western Algeria and Canada do not master all the various teaching methods available to them for a PSE session. Described among others by Muska & Ashworth (1994), translated by Cothranet (1999), are eleven teaching methods; Practice, Command, Guided Discovery, Reciprocity, Divergent Production, Inclusion, Self-verification, Convergent Discovery, Individual Programme, Self-teaching, and Pupil Initiative.

In the group taking part, a second group of sixteen PSE teachers, 18.40%, raised two types of competence specific to PSE: competence and professional gesture relative to teaching. They involve a simple short explanation of the exercises, and good positioning with good use of the area allocated to pupils.

The study by Laroua et al (2013) - whose purpose was to identify competence by using a grid for analysing professional gestures - has three major aspects: verbal gestures, non-verbal gestures, and positioning in the field. Findings show that the competence described by teachers was used during sessions in verbal teaching practices while adding other gestures such as voice modulation.

Eight teachers, 9.20%, mentioned mastering TICE in teaching PSE. This innovative finding, insofar as it was not cited in previous years, is today a teaching requirement. On the contrary, as TIC gradually invades all disciplines, a major change to references in professional competence is occurring with ever-increasing significance. Numerous research papers emphasize the complexity of analysing the teaching changes resulting from the integration of TIC (Levin, Ammon, 1996; Mangenot, 2000). In the framework of teacher training the complexity of such an analysis is amplified by the fact that it covers both training programmes in junior and secondary schools, where teachers under training are appointed.

In fact, in spite of integrating TIC in teaching programmes, teachers have difficulties adjusting. A recent study carried out in Mostaganem Province shows that 65.21% of teachers, particularly teachers under training, do not understand TIC in education (Laroua et al, 2013).

Furthermore, eight teachers, 9.20%, mention as competence a good relationship with colleagues and the administration. No reference is made of this competence in the literature. After having used the K^2 test, the value of K^2 calculated ($K^2_{cal}=27.04$) is greater than the value of K^2 in the tables ($K^2_{Tab}=26.30$) where the degree of scope (N-1) is 16, and the degree of significance is 0.05.

This result indicates a significant statistical value in favour of the most often mentioned answer.

Analysis of the findings shows that sound knowledge of legislation and legislative and administrative procedures is not mentioned. However, this competence theoretically enables the teacher to know their rights as well as their professional duties and responsibilities while referring to public function law N° 06-03 of 2006 and employment law. This is not surprising inasmuch as, during training in PSE, students on the Master degree course in Human Movement and Motor Skills say the curriculum made insufficient provision for learning about legislation (Benchehida, 2014).

Analysis of the curriculum established for the Master degree in MHM confirms this finding. Without a doubt, this has a negative effect on teachers under training, in particular during their first months after being recruited. An assessment made by the trade union Cnapeste in Mostaganem Province in 2012 confirmed that nearly 80 % of new teachers recruited in the education sector do not fully understand legislative aspects and are unable to intervene on an administrative question and exercise their rights. This is particularly so when seeking a solution to a particular problem or unexpected circumstance in the establishment. The education administration in Mostaganem often organises training sessions for newly recruited teachers on such subjects as psychology and educational methods as well as on legislation, but not to any depth. In fact, the most positive type of learning situation occurs when the teacher has a problem. Then the teacher must call on knowledge of legislation they acquired in training (Cnapeste, 2014).

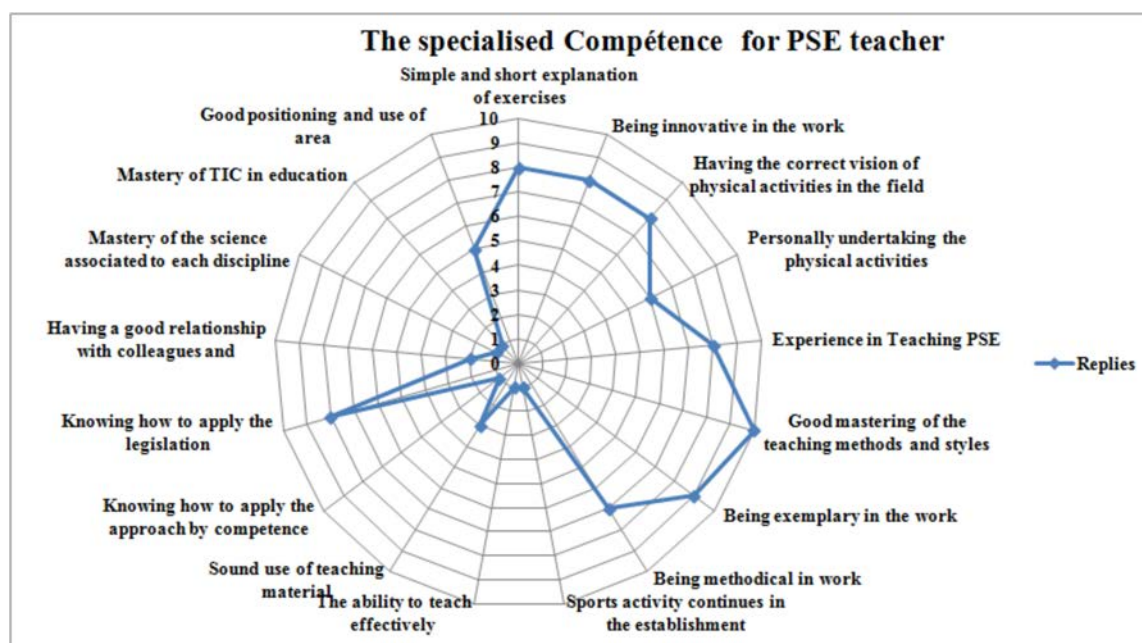


Figure 2. Showing the specialised competence that a PSE teacher should have, according to the teachers themselves

Conclusion

The findings of this study indicate that the notion of competence is still far from clearly defined. They show that 65 % of the teachers taking part cannot provide an accurate definition of competence, whether general or specific in relation to the literature on the subject.

Concerning the competence that a PSE teacher should have, several ideas have been formulated, such as “knowing how to apply the approach by competence in teaching PSE”, and “knowing how to apply the official legislation”.

On the contrary, none of the teachers taking part cited a basic competence considered fundamental to the profession in general and included in the literature on the subject: "sound understanding of legislation and administrative procedures". This has led teachers under training to encounter major difficulties in their establishments as has been identified in other research (Laroua et al. 2013). This issue was also explicitly stated by the PSE inspector during an open-ended interview for research purposes.

Another finding concerns the training at the Mostaganem PSE Institute. In terms of the programmes and the formal curriculum training does not take into account the imperatives encountered in the field by the professional PSE teacher as stated by the teachers themselves.

Finally, from the findings of this study, discord is apparent regarding competence defined by different status PSE teachers and the training programmes of the Mostaganem Province PSE Institute (programmes studied in the form of a subject analysis of contents). The results of this study, listing 23 notions of professional competence necessary for PSE teaching do not comply with the formal training curriculum of the Mostaganem PSE Institute.

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