The leadership strategy of the teachers of physical education and sports and its relation to the level of creative thinking among middle school pupils: a field study in some middle schools of the province of Boumerdes (Algeria)

الاستراتيجية القيادية لمعلمي التربية البدنية والرياضة وعلاقتها بمستوى التفكير الإبداعي لدى تلاميذ المرحلة الإعدادية: دراسة ميدانية في بعض المدارس المتوسطة بولاية بومرداس (الجزائر)

La stratégie de leadership des professeurs d'éducation physique et sportive et sa relation avec le niveau de pensée créative des collégiens: enquête au niveau des collèges de la province de Boumerdes (Algérie)

Dr. Chérifi Amin
Univercity of Algiers 3

Dr. Benamara Abdelhafid
University of Algiers 2

Submission date: 12-11-2019 -**Acceptance date:**28-04-2022

Publication date: 31-07-2022

ملخص

تهدف الدراسة إلى معرفة العلاقة بين السلوك القيادي لأستاذ التربية البدنية والرياضية ومستوى التفكير الابتكاري عند تلاميذ المرحلة المتوسطة، ومعرفة السلوك القيادي المسيطر عند أساتذة التربية البدنية والرياضية في المرحلة المتوسطة، وتحديد مستوى التفكير ألابتكاري لدى تلاميذ المرحلة المتوسطة. وأهم النتائج المتحصل عليها هي:

- الأسلوب القيادي لأستاذ التربية البدنية والرياضية في المرحلة المتوسطة هو الأسلوب التدريبي.
- قلة استخدام الأسلوب الأوتوقراطي لدى الأساتذة.
- مستوى التفكير الابتكاري في المرحلة المتوسطة والذي يختلف باختلاف الفروق الفردية.

الكلمات الدالة: الأسلوب القيادي؛ أستاذ التربية البدنية والرياضية؛ التفكير الابتكاري؛ تلاميذ الطور المتوسط.

Abstract

The study aimed to find out the relationship between the leadership behavior of the professor of Physical Education and Sports and the level of innovative thinking at the middle school students, and to know the dominant leadership behavior of

professors of physical education and sports in the middle stage, in addition to determining the level of innovative thinking among middle school pupils. The most important results that we have reached are:

- The leadership method of the professor of physical education and sports in the middle school stage is the training method.
- Lack of use autocratic style among professors.
- The level of innovative thinking at the intermediate stage, which varies depending on individual differences.

Keywords: leadership style; physical and sports education; professor of physical education and sports; innovative thinking; middle stage pupils.

Résumé

L'étude vise à déterminer la relation entre le comportement de leadership du professeur d'éducation physique et sportive et le niveau de pensée novatrice parmi les élèves du cycle moyen, et à connaître le comportement de leadership dominant chez ces enseignants et à déterminer le niveau de pensée novatrice parmi leurs élèves. Les principaux résultats obtenus sont:

- La méthode d'entraînement est la principale méthode utilisée par les enseignants d'éducation physique et sportive au stade intermédiaire.
- Manque d'utilisation du style autocratique des enseignants.
- Le niveau de pensée innovante au stade intermédiaire, qui varie en fonction des différences individuelles.

Mots-clés: style de leadership; professeur d'éducation physique et sportive; pensée novatrice; collégiens.

Introduction

Modern life today and the rapid changes and transformations witnessed in all sectors of life pose the problem of the qualitative human, or the human who acquires the best competencies and mental abilities that enable him to adapt and familiarize himself to the positions of modernity and modern life. This is especially that education, not long ago, was a process of transferring lifestyles from one generation to another.

Today's learners do not learn how to work, how to think, how to analyse, discuss and extract information and knowledge. They do not learn how to use their thinking to understand the problems they face in order to take decisions. In a word, they do not learn how to be innovative thinkers, the quality which has become today the condition of excellence, leadership and creativity.

The thinking process occupies a large place in the school work. Through the teaching and learning process, young people's thinking can be developed through different methods. It should be recognized that the best learners' gain is regular scientific thinking, based on watchful observation. In fact, the evolution of science and the advancement of civilization that we see today in our various ways of life are due to the scientific way of thinking.

Although most teachers need to choose the leadership strategy that suits their pupils to face their complex educational and pedagogical problems, especially at the present time, which requires supporting and strengthening positive attitudes towards innovative thinking, often due to the lack of proficient professors.

Care and attention to the re-qualification is not only to qualify teachers scientifically in their disciplines, but also to expand the development of leadership and pedagogical excellence and their impact on the personality of the pupil and his thinking motivation for the processes of creativity and innovation; in spite of the enormity of the special responsibility that lies with him with regard to achieving the development and integration of the personality of the pupil in all his dimensions, especially the mental ones.

In light of this, it is our belief that the leadership behaviour of the teacher reflects on his performance within the class, whether with his pupils or his material or whoever deals with him. This leads to an impact on the pupils and their thinking in particular.

The leadership strategy of the teacher of physical education and sports is the main factor in the success or failure of individual leadership of his group, due to his decisive action in influencing the behaviour of members of his group, and in creating the right and effective atmosphere both in school and outside.

In this regard, Ted (1965) points out that "it is the competent leader who takes the responsibility of managing the work and leading the workers in order to achieve the objectives fixed" (Ted, 1965, p. 23).

Teachers of physical education and sports are often described as firm and rigorous and are sometimes portrayed as models of virtue and morality. The role and personality of the teacher also shows his ability to lead through leadership behaviour that he possesses to achieve effective leadership. Talking about the effectiveness of sports leadership calls for devoting different goals in order to achieve them on the one hand; and to reach the creation of real interaction between the teacher and his students and

between students among themselves, as a basis to development of good relations and cohesion of the group, on the other hand.

Hence, this study aims to the emergence of leadership behaviour for the teachers of physical education and sports and the level of innovative thinking among pupils. Therefore, we chose to conduct this study on a sensitive and important middle school level, in an attempt to uncover the reality and the relationship between the leadership behaviour of the teacher and the level of innovative thinking among pupils at this stage. On this basis the main question arises as follows:

- Does the leadership strategy of the teacher of physical education and sports have an impact on the level of innovative thinking among of middle school pupils?

Hence, we ask a number of sub-questions as follow:

- What is the dominant leadership strategy of teachers of physical education and sports in the middle school?
- What is the level of innovative thinking among middle school pupils?
- Is there a positive correlation between the dominant leadership behaviour of the teachers of physical education and sports and the level of innovative thinking among middle school pupils?

1. Research hypotheses:

Proceeding from the research problem, we can formulate the hypothesis as follows: The main hypothesis:

- The leadership strategy of the teacher of physical education and sports has an impact on the level of innovative thinking among pupils of middle schools.

Sub-hypothesis:

- The existence of a social leadership behaviour controlling the teacher of physical education and sports in the middle school stage.
- High level of innovative thinking among middle school pupils.
- There is a strong positive correlation between the dominant leadership behaviour among the teachers of physical education and sports and the level of innovative thinking among the pupils of middle school.

2. Research Methodology

The correct approach test depends on the nature of the problem itself and the response and relevance of the subject matter. In this topic, we chose to use the descriptive method of study, as this approach examines the

phenomenon as it is in the present, and then analyses and deduces it to derive its significance, develop indicators and build future predictions. It also has a special place in the field of psychological and educational research.

2.1 Research community

Regarding the large number of the 98 middle schools located in the province of Boumerdes, we have selected a middle school from each of the nine districts of this province. This brings the number of 1137 pupils in the fourth year of the middle education (males and females), who are officially enrolled in the middle education certificate examination. They are spread over the nine selected middle schools, according to the data obtained from the Department of Examinations and Schooling of Boumerdes during the 2013/2014 academic year. Our choice for this province takes into account the opportunities available in it to perform the study, and the fact that our university workplace is located in the same province.

2.2 Research Sample

We took 10% of the number of pupils from each middle school to form a sample of 115 pupils. The following table (01) shows the sample of the research in all the details.

2.3 Research factors

2.3.1 Time factor

The study extends almost from October 2017 to April 2018 where the two measures were applied in January 2018.

2.3.2 Space factor

Our study focused on the territory of the province of Boumerdes, where the study included the nine districts of the said province.

2.4 Tools used in the study

The researcher used the following measures in his study:

- Leadership strategy Scale.
- Innovative Thinking Scale.

2.5 Method of Statistical Analysis and Processing

- Calculate the Pearson correlation coefficient, to study the relationship between the axes of the leadership scale and the scale as a whole (honesty).
- Calculation of stability coefficient.
- Calculate the average and standard deviation to identify the degrees of differences between the test axes.

- Calculate Ca 2 to indicate differences between iterations.

The data and results we obtained by presenting the measurements to the pupils requires their presentation and analysis by releasing them with statistical processing. In this chapter, we compiled the results obtained and produced them using the Statistical Package for Social Science program and EXCEL, to validate the pre-set hypotheses.

3. Analysis of results

3.1 Presentation and analysis of the first hypothesis

Results related to the answer to the first question: Which is the dominant leadership strategy of the teachers of physical education and sports in the middle stage?

To validate the hypothesis that estimate that there is a dominant social leadership strategy for the teachers of physical education and sports in the middle stage, we used the arithmetic means, standard deviations, total degrees and percentages on the axes of the leadership strategy among the study sample.

Table (1): Arithmetic average, Standard Deviations, Total Degrees and Percentages of on the axes of the leadership strategy

Leadership strategy =115

Rank	Statistics Domain	Arithmetic Average	Standard deviation	Total degrees	Percentage
1	Training strategy	52,21	8,787	5925	%38,49
2	Democratic strategy	27,97	4,951	3217	%20,90
3	Social strategy	26,41	5,932	3037	%19,73
4	Compensation strategy	17,36	2,95	1996	%12,97
5	Autocratic strategy	10,6	3,063	1219	%7,92
The total score of the scale		130,55	25.683	15394	%100

Figure (01): Graphical columns showing the arithmetic average of the axes of the leadership strategy scale

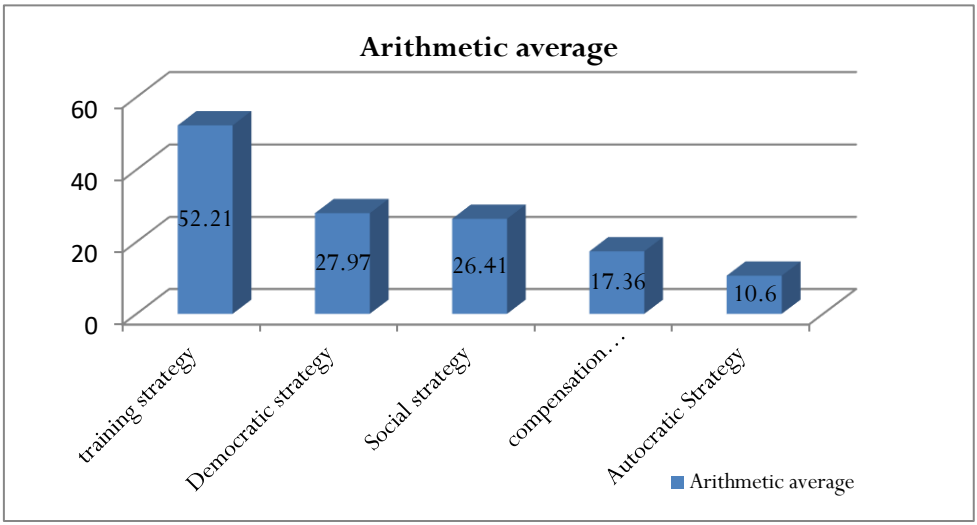


Table (1) and Figure (01) show the value of the arithmetic average, standard deviation and percentages of the leadership strategy axes. it reaches 52.21 in the training method, which is the highest arithmetic average by 38.49%, the second was the democratic strategy, where the average was 27.59 (20.9%), followed by the third, the social strategy with 26.41 (19.79%), followed by the fourth, the compensation strategy by 17.36 (12.97%), and at the last rank, comes the autocratic strategy with an average of 10.6 percent by 7.92%.

The results obtained can be attributed to the fact that the sample studied is the fourth-year pupils, who are about to take the Intermediate Certificate exam. This makes the teachers interested in the training work to achieve the best results in the final exam. Besides the use of the democratic and social strategies, because the changes in the educational process in recent years called for the satisfaction of the teachers on the performance of the pupils as a partner in the educational process, which led to away from the use of the autocratic method as it occupies the lowest rank and lowest grade. Through the aforementioned results, it can be said that the hypothesis that says there is a social leadership strategy dominating the teachers of physical education and sports in the middle schools has not been achieved as it becomes clear to us that the most dominant method is the training method.

3.2 Presentation and analysis of the second hypothesis

Results related to the answer to the second question: What is the level of innovative thinking among middle school pupils?

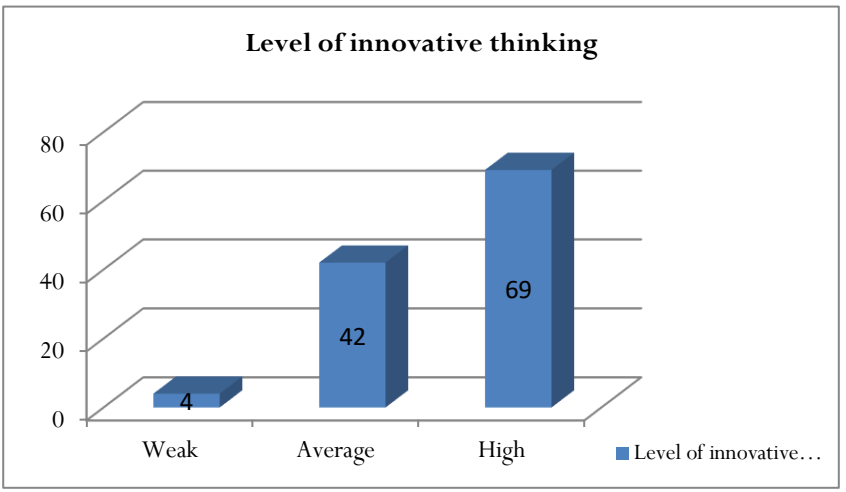
To validate the hypothesis that the level of innovative thinking is high among middle school pupils, we used "k-squared" (k^2) to indicate the differences between the iterations, and we got the following results as shown in table (2):

Table (2) shows the level of innovative thinking

Statistical statement		Level of innovative thinking			Value of K^2	Scheduled Value of K^2	Degree of freedom	Significance level
		weak	average	high				
Response of the sample	Repeat	4	42	69	56,13	5,99	2	0,05
	percentage	3,48%	36,51%	60 %				

Statistical statement at the significance level 0.05.

Figure (02): Columns showing the level of innovative thinking



In Table 11 and Figure 02, we note that 60% of the research sample has a high level of innovative thinking, while 36.51% is limited to medium

innovative thinking. We also note that only 3.48% have weak innovative thinking. The calculated K^2 for the three levels is 56.13 at 0.05.

From the results obtained, we see that there are statistically significant differences in the levels of innovative thinking, as it is generally high and can be attributed to several reasons, including the various leadership positions of the teacher as noted here above, as teachers avoid the autocratic strategy, and adopt training, democracy and social strategy. In addition, they use modern methods and approaches in teaching that put the student in the centre of the educational issue and give him the freedom to deal with and adapt to it. Meanwhile, the role of the teacher is limited to stimulation, guidance and encouragement, which afford him many experiences in the methods of dealing with new events, and hence, his ability to think creatively increases as a result of multiple learning situations.

According to James 1997, Bachiri Benattia pointed out in his letter that: "The general characteristics of a person who has a high innovative capacity tend to be proactive, and trying to confront complex tasks and enjoy this. This will only be possible if the teachers of physical education and sports are characterized by appropriate patterns and methods to accept students' new ideas and give them the opportunity to demonstrate their innovative abilities. This could be achieved by affording to these teachers a high degree of flexibility in dealing (Ben Attia, 2010, p. 192). From the previous results, we conclude that the hypothesis of the high level of innovative thinking of pupils has been achieved.

3.3 Presentation and analysis of the third hypothesis:

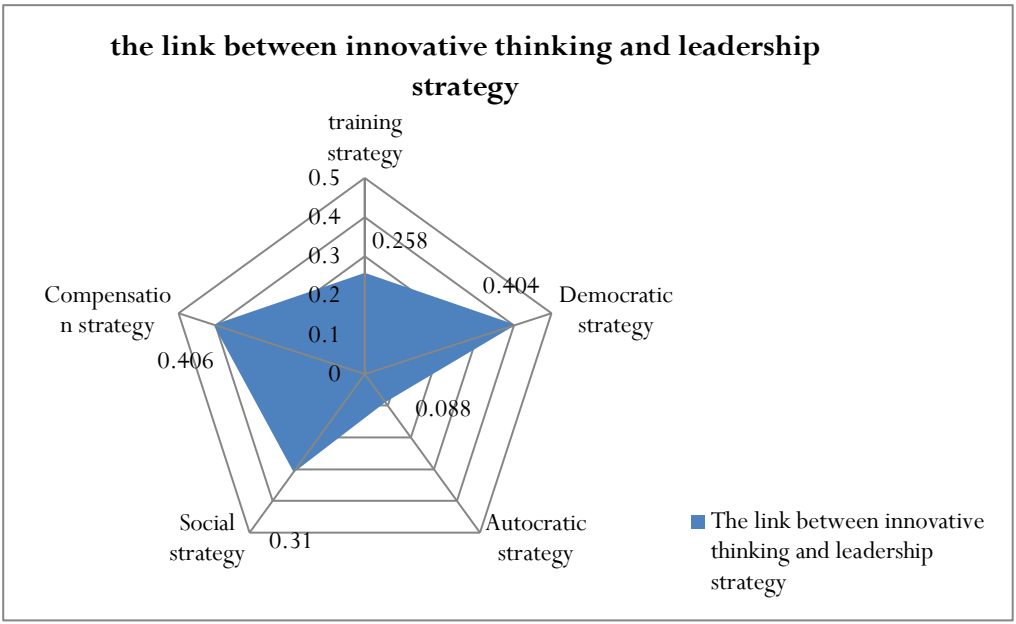
Results related to the answer of the third question:
Is there a strong positive correlation between the dominant leadership behaviour of the teacher of physical education and sports and the level of innovative thinking among pupils of middle schools?

To validate the hypothesis that there is a strong positive correlation between the dominant leadership behaviour of the teacher of physical education and sports and the level of innovative thinking among pupils in the middle school, we decided to use the "Pearson" correlation coefficient and we got the following results as shown in Table (3):

Table (3): The correlation coefficient between innovative thinking and the axes of leadership strategy

	Compensation strategy	Social strategy	Autocratic strategy	Democratic strategy	Training strategy	Significance level
Innovative thinking	0,406	0,31	0,088	0,404	0,258	0,01

Figure (03) shows the correlation coefficient between innovative thinking and the axes of leadership strategy.



We note that in Table (12) and Figure (03), the correlation coefficient reached the largest value of 0.406 at the compensation strategy for the significance level of 0.01, followed by 0.440 at the democratic strategy. Then comes the social strategy with 0.31, the training strategy with 0.2258, and finally the autocratic strategy with 0.088.

The results of the correlation coefficient obtained for all members of the sample show that there is a statistically significant relationship at the level of

0.01, between the dimensions of the leadership strategy and innovative thinking, with the exception of the autocratic strategy.

The existence of such a strong positive relationship between these dimensions and innovative thinking, with the exception of autocracy, can be attributed to what Nacer Eddine Charif pointed out that "in this authoritarian climate, blind obedience without discussion and lack of opinion disrupts the ability to produce, create and innovate." They depend entirely on the leader, and this climate does not provide enough room for the development of human relations between members of the group, and morale is reduced along with the lack of necessary human relations and social adjustment between them "(Nacer Eddine, 2007, p. 99).

From these results, it can be said that the hypothesis of the existence of a strong correlation in the positive direction between innovative thinking and the leadership strategy of the teachers of physical education and sports has been achieved.

3.4 Presentation and analysis of the general hypothesis

To verify the general hypothesis that the leadership strategy of the teachers of physical education and sports has an impact on the level of innovative thinking of middle school pupils, we return to the results of sub- hypotheses where the first hypothesis is not achieved while the second and third hypotheses are achieved. We conclude then that the general hypothesis is partially achieved.

From the above results, it can be concluded that:

- The leadership strategy for the teacher of physical education and sports in the middle schools is the training strategy.
- Lack of use of autocratic strategy among teachers.
- The level of innovative thinking in the middle schools is high and varies according to individual differences.
- The level of innovative thinking is influenced by the leadership strategy of the teacher since there is a strong relationship between them.
- The leadership strategy differs from a teacher to another.
- The use of appropriate leadership strategy helps pupils to recognize the cognitive dimensions of the practiced sport activity.

Conclusion

Research in innovative thinking is very difficult, because it is the highest mental ability and requires a more empirical than descriptive study to know all its merits. The current study is one of the studies that attempted to deal with this subject, in which we concluded that the general level of innovative thinking which can be influenced by the leadership strategy of the teacher of physical education and sports is the training strategy, and there is a positive correlation between this strategy and the level of innovative thinking of the pupils of the middle schools.

We also concluded that the innovative and creative individual does not agree with the authoritarian person, as he does not accept all the changes proposed for several reasons, including his ability to have a critical mind and independent judgment. Therefore, he resists the changes he deems pointless or inappropriate, and he introduces many new ideas, which leads to increase his acceptance by the group in which he is present; whereas, a dictator or closed individual holds on rigid instructions without having the slightest psychological or social openness to creativity, improvement and innovation.

Innovative thinking does not enlarge in a specific number of lessons or in one subject without the other, but it is imperative to pursue the practice of its development, and maintain it by dealing with leadership strategy that increase the level of innovation of pupils, and help them to show the types of creativity in all scientific, literary, artistic and sports fields.

A nation that possesses creative and innovative individuals, able to produce what is new in all disciplines, and able to assimilate changes and developments in science, technology, education and leadership, is classified among the leading nations. This urges us to preserve this resource by taking all measures that help the emergence of qualitative man through his innovations and creations and provide him with all the appropriate.

References

1. Afaf Abdel Karim, 1989. *Methods of Teaching in Physical Education and Sports*. Alexandria: The emergence of knowledge.
2. Ahmed Chaabane Mohamed Attia, 1984. *A practical study of the innovative capabilities of pupils of middle school*. Doctoral dissertation, unpublished. Faculty of Education, Alexandria University, Egypt.
3. Al-Khouli Amine Anouar, 1996. *Sports and Society*, National Cultural Council for Literature and Arts, Knowledge World Series, Kuwait.

4. Ben Si Kaddour Habib, 2008. *Determination of standard levels for the selection of young pupils (12-13) years in the quartet competition in athletics*. Doctoral dissertation, unpublished. Institute of Physical Education and Sports, Abdelhamid Ben Badis University, Mostaganem, Algeria.
5. Bohain Leon Yves, 1985. *Initiation to the race from 100 meters to 10 kilometers*. Paris, ed. Vigot.
6. Charif Nasr Eddine, 2007. *Managing human relations through the leadership strategy of the coach and its relationship to social cohesion of collective sports teams*. Doctoral dissertation, unpublished. Dali Brahim University, Institute of Physical and Physical Education Sidi Abdallah, Algeria, Algeria.
7. Debresse M., 1971. *Adolescence.* Paris: P.U.F.
8. Gilles C., 2006. *The training of speed*. Paris: Ed Cheron.
9. Hosni Abdel-Barr Asr, 1999. *Introduction to the thinking teaching and its improvement in the school curriculum*. Alexandria: Modern Arab Office.
10. Ibn Mansour Djamal Eddine Ibn Mokram, "The Tongue of the Arabs." Beirut: *Dar Sadir*, Volume IV, T 1.
11. Kais Nadji Abdel Djabbar, 1989. *The development of physical ability in school age*. College of Physical Education, Baghdad University, Iraq.
12. Missoum g., 1997. *The development of the child. Handbook of the sports educator*, Ed. Vigot.
13. Mohamed Al-Azhar Al-Sammak et al., 1980. *Fundamentals in Scientific Research*. Dar al-Hikma.
14. Mohamed Refaat Ramadan, 1994. *Fundamentals of Education and Psychology*. Egypt: Arab Thought House.
15. Mustafa Hussein Bahia, Ahmed Kamal Nasari, without mentioning history. *Leadership skills in the sports field in regard to modern trends*. Cairo: Anglo Egyptian Library.
16. Nicolas Perrieu, 1999. *Larousse, Grand dictionary of physiology*. Montreal, Quebec.
17. P. Malle, 1964. *Psychology of the adolescent*. Paris: Ed P.U.F.
18. Richard Courtay, 1986. *Training and athletic performance*. Paris: Edition, Amphora, Sport and Knowledge Collection.
19. Saad Galal. *Childhood and Adolescence*. Cairo: Dar al-Fikr al-Arabi, second edition.
20. Sane Fakher, 1988. *The Genius and the Gifted.Kuwait: Al-Arabi Magazine*, no. 121.
21. Sillamy, 1983. *Usual dictionary of psychology*. Paris: Ed Bordas

22. Tarek Abdel Raouf Amer, 2005. *Creativity (concept, methods, theories*). Egypt: Scientific Publishing House, 1st Floor.
23. Thill E., Thomas R., Caja J., 1993. *Manual of the Sports Educator*. Paris: Ed Vigot, 8th edition.
24. Weineck J., 1986. *Training Manual*. Paris: Ed Vigot.
25. Weineck J., 1992. *Biology of sport*. Translated by Robert Hands Shet. France: Ed Vigot.
26. Weineck J., 1994. *Manual of Training*, translated from German by Michel Portman, and Robert Handschuh. Paris: Ed Vigot, 3rd Ed.