

Influence of a Game-Based Educational Program on the Enhancement of Coordination and Equilibrium in Algerian Elementary Schools Beginner Soccer Teams

Ameur Ameur Housseyn¹, Messelte Lakhder², Zerf Mohammed³,

Universities mostaganem. housseyn.ameur@univ-mosta.dz

² Universities mostaganem, messalitieps@hotmail.fr

³ Universities mostagenem, biomeca.zerf@outlook.com

Received: 08/07/2025 Accepted: 31/10/2025 Published: 30/11/2025

Abstract:

This study aims to identify the impact of game-based educational programs on developing compatibility and Balance in Algerian Elementary Schools Beginner Soccer Teams. The study sample included 60 Algerian Beginner Football Schools, divided into two equal groups: 30 Beginner Football Schools as an experimental group compared with 30 as a control group. The experimental group uses an educational program that consists of 12 training sessions, distributed at a rate of two sessions per week. In contrast, the control group follows a traditional program without any games. To test the proposed program, we used two tests for each ability tested in this study. Analyze statistics was based on arithmetic mean, standard deviation, and the T-test. We found that the proposed educational program can enhance compatibility and both static and dynamic Balance in Beginner Football Schools. From that, we recommend our coach's PE teachers including game-based educational programs to increase the compatibility and Balance among Algerian Elementary Beginner Soccer Teams.

KEY WORDS : Program, Games, Compatibility, Balance, Beginner Soccer Teams

المخلص:

تهدف هذه الدراسة إلى تحديد تأثير البرامج التعليمية القائمة على الألعاب على تنمية التوافق والتوازن في فرق كرة القدم للمبتدئين بالمدارس الابتدائية الجزائرية. شملت عينة الدراسة 60 مدرسة جزائرية لكرة القدم للمبتدئين، مقسمة إلى مجموعتين متساويتين: 30 مدرسة كرة قدم للمبتدئين كمجموعة تجريبية مقارنة بـ 30 مدرسة كمجموعة ضابطة. تستخدم المجموعة التجريبية برنامجًا تعليميًا يتكون من 12 جلسة تدريبية، موزعة بمعدل جلستين في الأسبوع. في المقابل، تتبع المجموعة الضابطة برنامجًا تقليديًا بدون أي ألعاب. لاختبار البرنامج المقترح، استخدمنا اختبارين لكل قدرة تم اختبارها في هذه الدراسة. استند تحليل الإحصاءات على المتوسط الحسابي والانحراف المعياري واختبار T. وجدنا أن البرنامج التعليمي المقترح يمكن أن يعزز التوافق والتوازن الثابت والديناميكي في مدارس كرة القدم للمبتدئين. من ذلك، نوصي معلمي التربية البدنية لمدرسين بتضمين برامج تعليمية قائمة على الألعاب لزيادة التوافق والتوازن بين مدارس كرة القدم للمبتدئين.

* Corresponding author.

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الكلمات المفتاحية: البرنامج، الألعاب، التوافق، التوازن، فرق كرة القدم للمبتدئين

1-Introduction:

Education today is one of the most critical advanced sciences that are concerned with forming a good individual serving himself and his community (UNESCO, 2015), education in the field of sports takes care of the personality of the individual, and this development of all aspects psychological, social, spiritual and physical, so clearly shows the critical role played by the share of physical education and sports in this context by educating and providing the child with various skills the motor experiences (Richard Bailey, 2006)are accompanied by a structured physical and mental effort in an activity that is in line with the needs of the student as he grows (Bukvić Z. et al, 2021).

Sport in general is an important aspect of public education, which attracted special attention because of its essential and effective role in the education of young people toward the creation of good citizens who have the status of excellence, especially in the various activities of athletics, the latter, which is one of the most essential activities of physical education and the basic and valuable sports forms to raise the efficiency and health and physical capacity of the individual. (Reguig,M,Zerf,M&Bouabdellah,SBA, 2019) .

Admit that Physical education and sports in the school is one of the sciences of academic subjects like other sciences. Still, they differ from them because it works to give students motor experiences through the teaching process. Thus, physical activity in its new educational form, its systems and rules, and its multiple colors have become an important field and a strong element, providing the student with the broad motor skills to keep up with his age (Djahida H-M & Karima B-R, 2016).

Especially for the first stages of study, which is one of the priorities of those who are in charge of the educational process through which the personality is formed from all aspects of intellectual, physical and emotional (Magna Manjareeka, Sitikantha Nanda, Jayanti Mishra, Soumya Mishra, 2015).

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A proactive step appreciated by the President of the Republic through specialized teachers of education physical and sport at the primary level in the Algerian educational system (Richard Bailey, 2006).

Supported by classroom physical activities and team activities to discover sporting talents (Blanche Ndlovu & al., 2023) through different types of sports activities (Zerf Mohammed & Mohamed Hadjar Kherfane, 2020) that each kid is looking for according to (Muratori LM, Lamberg EM, Quinn L, Duff SV, 2013) and (Blanche Ndlovu & all, 2023).

Admit that the training of physical education and sports with specialized teachers at the primary level is new in the Algerian educational system, applied by the Ministry of Education recently by recruit teachers in the primary education level starting in the academic year 2023/2024 in the implementation of the instructions of the President of the Republic after the Council of Ministers held on April 16, 2023.

As well as the education lesson depends on several theories and different methods to achieve the educational goals ruled. Small games or semi-sports games are among these important educational methods. Supported in this study by game play. In witch the child is inclined to play where he finds a way to express himself and empty his energy and various motor and psychological inhibitors, and satisfy his needs for amusement, fun and pleasure, and this requires the professor to make optimal use of this rush toward play and use it in the development of the physical fitness of the child by exploiting the optimal use of games (Richard Bailey, 2006).

Play plays a significant role in childhood for teachers through various activities, which enable them to learn different types of exploratory and motor activities that are the basis of development (Blanche Ndlovu & al., 2023).

Physical activity is a means of general education through which different types of sports activities are carried out to form the individual physically, the latter working to develop motor harmony and Balance (Zerf Mohammed & Mohamed Hadjar Kherfane, 2020).

Integrating all functional body systems in performing motor duties precisely, quickly and humanely has transformed the good compatibility that each person is looking for (Muratori LM, Lamberg EM, Quinn L, Duff SV, 2013).

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Balance is the body's ability to keep its internal state relatively stable as the human body regulates, for example, its internal concentrations of hydrogen and calcium, which is vital for this stage (Blanche Ndlovu & all, 2023).

This is what led us to address this study, i.e. the development of some physical qualities starting from a game-based educational program to stimulate primary students (6-9 years) in an interesting template and away from complex exercises.

After several interviews with the principals of the primary teacher about the physical education and sports in the primary stage and after the questionnaire conducted by the student researcher directed to the professors of physical education and sports to value research on the reality enjoyed by the class and the availability of possibilities and pedagogical means and the curriculum of the material and its importance in achieving the goals, the increasing amount of leisure time for this group also requires us to provide sports programs for everyone (Zerf Mohammed & Mohamed Hadjar Kherfane, 2020).

Sports activity is an integral part of students within educational institutions.

2- General objective of the study:

To pay attention to some physical qualities in the age group, we asked the following general question: Does the proposed academic program develop physical qualities (compatibility and Balance) in elementary students?

3- Procedural definition of the concepts mentioned in the research:

To address the research problem, the researchers followed the experimental method as the best approach suitable for the nature of the research and the problem presented for access.

2- the research community:

The research community consists of the students of the district of 01 for the primary stage of the municipality of Ben Dawud, which consists of 05 schools where the number of students was 2000

3. Sample of research:

The students included the fourth year of primary school, and the number of 60 represented 20% of the total number of students in the fourth year of the province and taken from two different sections of the same professor distributed on:

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Experimental sample: 20 male and 10 female students with the same number as the 01st education class.

Control sample: 20 male and 10 female students with the same number as the 02nd education class.

4- Proposed learning program:

The proposed educational program, which was based on scientific foundations and was characterized by a high degree of stability taking into account all aspects related to the sample and characteristics of the age of 9-11 years, it took into account the characteristics of this stage in terms of growth and development in the physical, psychological or social aspect so that the educational units based on games that help in the motor construction of the child in this sensitive stage, especially in the two physical characteristics targeted.

Application of the proposed program: *After the identification of the experimental and control samples, and the conduct of the tribal tests, and through the mentioned steps of building the proposed units, the researchers summarized the units as follows:*

Each proposed unit lasts one hour, so this stage contains competitive games that the child likes and are aimed at developing some harmonic abilities, including compatibility. Balance and reaction speed: these games take 25 minutes to 30 minutes so that the pupils are divided into two teams that determine the winner at the end of each unit to push the students to work more.

4- The methodological procedures used in the study:

4-1 Method and tools: To address the research problem, the researchers followed the experimental method as the best approach suitable for the nature of the research and the problem presented for access.

- **The scientific foundations of the tool:** To address the problem, we use physical tests to measure the impacts of the programs proposed.

Physical tests used:

We applied the following tests to the sample:

For	Motor	coordination	test:
1-	Jump rope test	(Hasanein Mohamed Sobhi,	1999).
-	The test aims to measure the coordination between the eye and the upper	and	lower limbs.
-	Tools: Take a rope 60.96 cm long and mark two knots on the rope 30.48	cm	apart.

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- Performance specifications: The tester holds the rope from the specified places, jumps over the rope so that it passes in front of and below the feet, and repeats this action five times.
- How to record the results: The tester receives one point for each correct attempt, meaning they will ultimately score 5 points.
- Instructions for implementation:
 - *Attempting to adapt after observing the model by the teacher.
 - *Focus on the exercise at the starting signal and take the appropriate position for it.
 - *Jumping over the rope and through the hands.
 - *The landing should be on both feet together.
 - *Do not touch or loosen the rope while working.
 - *Maintain Balance and be careful not to fall while working.



Figure No. (01) represents the rope jumping test.

- 2- Numbered Circuits Test (Hassanein Mohamed Sobhi, 2000):
- The test aims to measure the coordination between the eye and the lower limbs.
 - Work tools: Eight circles are drawn on the ground, each with a diameter of 20 cm, and they are numbered along with a timer to measure time.
 - Performance specifications: The tester stands inside circle number 01, and at the start signal, they jump with both feet together to circle number 02, then to the remaining circles in numerical order up to 08,

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and the task is completed in the shortest possible time.

-How to record the results: The time the tester takes to move from circle 01 to 08 is recorded.

Execution instructions:

Providing a model and giving the student a chance to adapt.

*Alert the lab to execute quickly without stopping work.

*Jumping with both legs while using the hands according to the circle numbering.

*The work must be completed by the end of 08 circles.

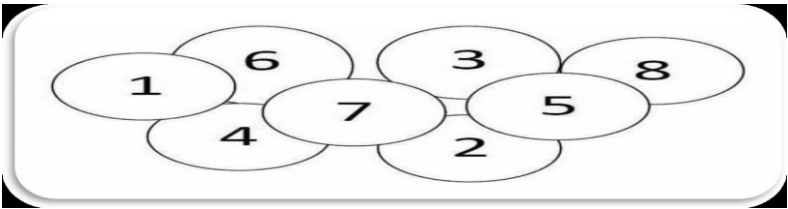


Figure No. (02): Numbered Circuits Test

For Balance:

1-Transition test over the marks (Hassanein Mohamed Sobhi, 2004):

-The purpose of the test: To measure the ability to maintain Balance while in motion.

- Work tools: ten circles in a straight line forming a broken line. Stopwatch. Coloured adhesive tape. Colored chalk. Measuring tape.

-Performance specifications:

The tester stands on the starting mark with the right foot, then jumps to stand on mark number 01 with the ball of the left foot (ensuring the mark is entirely covered by the foot). They try to maintain this position for the longest possible time, up to a maximum of 5 seconds, and so on until they reach mark number 10 using the same method, noting to change the landing foot with each jump and that the distance between the marks is 30 cm.

-How to record the results: The tester is awarded 10 points for each jump attempt. Five points are given when the jump is performed correctly, requiring the landing to be on the ball of the foot, completely covering the mark on the ground. The other five points are

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awarded for each jump where the tester can jump again after landing in this manner, resulting in a total score of 10/10.

Execution instructions:

- Giving attempts to adapt after implementation models.
- Jump upwards and then forward with the foot next to the circle.
- Jump over the mark and try to hold the position for a maximum of 5 seconds.
- Continuity in work until the end.

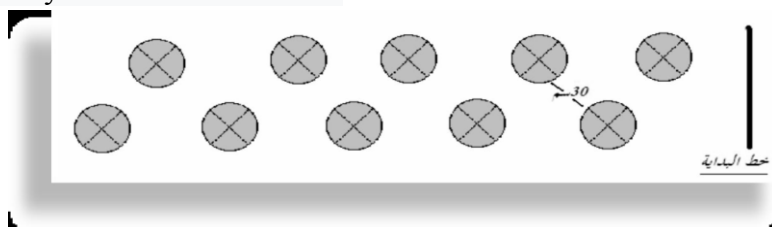


Figure No. (03): Test of Transition Over Markers

2- Test of standing foot (Ibrahim Marwan Abdel Majid, 1999):

- Purpose of the test: Measuring static Balance when the subject stands on the ground on the ball of the foot.
- Tools: Stopwatch, designated work area.
- Performance specifications: The tester assumes a standing position on one foot, preferably the take-off foot, then places the other (free) foot on the inner side of the knee of the standing leg. The hands are placed in the middle, and upon receiving the signal, the tester lifts the heel off the ground and maintains Balance for the longest possible time without moving the toes of the foot from their position or touching the heel to the ground.
- How to record the results: The best time is calculated from three attempts, starting from the moment the heel lifts off the ground until performance errors and loss of Balance occur.

Execution instructions:

Standing upright and looking forward.

The man adjusted the worker before the execution.

- Do not move your hands or make movements to maintain Balance.
- Not changing the man during work.
- There is no specific duration for the work.

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Figure No. (04): Toe Stand Test

- Statistical tools. Mean and standard deviations (SD) were obtained based on descriptive statistics, and between-group differences at baseline were compared using independent t-test analyses. To compare within-group performance differences between pre-intervention and post-intervention periods, paired t-tests were conducted

4-2 Presentation and Analysis of Results:

2-1 Motor compatibility tests:

2.1-1. the rope test:

Table 01 Shows the results of the pre-test rope test between the control and experimental

The table shows the equivalence and homogeneity of the sample before the program implementation.

Table 02: Shows the results of pre and post-test in rope test of the control group

Variables / Tests	control group	Upper	Lower	Mean	SD	"T" Calculated	"T" tabular	Sig. (0.05)
Pre-test	25	04	01	2.36	0.69	3.98	1.71	significant
Post-test		04	02	3.04	0.54			

The table shows the improvement of the control sample.

Table 03: Shows the results of pre and post-test in rope test of experimental group

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Variables Tests	Experimental group	Upper	Lower	Mean	SD	"T" Calculated	"T" tabular	Sig. (0.05)
Pre-test	30	04	01	2.48	0.73	6.60	1.71	significant
Post-test		05	02	4.24	0.66			

The table shows the effect of the implemented program in improving the experimental sample.

2.1-2. Numbered Circuits Test:

Table 04 shows the post-test results in numbered circuit tests between the control and experimental groups.

Variables Tests	samples	Upper	Lower	Mean	SD	"T" Calculated	"T" tabular	Sig. (0.05)
Control	30	19	11	14.36	1.71	1.35	1.67	insignificant
Experimental		20	11	15.20	1.74			

The table shows the equivalence and homogeneity of the sample before the program implementation.

Table 05: Shows the results of the pre and post-test numbered circuit test of the control group

Variables Tests	control group	Upper	Lower	Mean	SD	"T" Calculated	"T" tabular	Sig. (0.05)
Pre-test	30	19	11	14.36	1.71	1.97	1.71	significant
Post-test		20	08	12.92	3.11			

The table shows the improvement of the control sample.

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Table 06 shows the results of the pre and post-test in the numbered circuit test of the experimental group

Variables Tests	experimental group	Upper	Lower	Mean	SD	"T" Calculated	"T" tabular	Sig. (0.05)
Pre-test	30	20	11	15.20	1.74	14.95	1.71	significant
Post-test		10	06	08.16	0.96			

The table shows the effect of the implemented program in improving the experimental sample.

Our findings support the suggestion from ARISCHO MARDIANSYAH& al (2024) that both boys and girls showed similar improvement in coordination and sideways jumping. Similarly, the study suggests that teachers should incorporate game-based methods to create fun and effective learning environments for physical education. This study's results support using these methods to promote early talent development and ensure effective learning (ARISCHO M, SYAHRIAL B & SYAFRUDDIN S, 2024).

2-2 Balance tests:

2-2-1. Transition test above the marks:

Table 07 shows the results of the tribal test in the transition test above the marks of the control and experimental groups.

Variables Tests	samples	Upper	Lower	Mean	SD	"T" Calculated	"T" tabular	Sig. (0.05)
Control group	30	07	03	4.92	0.82	0.40	1.67	insignificant
Experimental group		07	03	4.80	0.86			

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The table shows the equivalence and homogeneity of the sample before the program implementation.

Table 08 shows the pre and post-test results in the transition test above the marks for the control group.

Variables / Tests	Control group	Upper	Lower	Mean	SD	"T" Calculated	"T" tabular	Sig. (0.05)
Pre-test	30	07	03	4.92	0.82	2.00	1.71	significant
Post-test		08	03	5.40	1.13			

The table shows the improvement of the control sample.

Table number 09 Shows the results of the pre and post-test in the transition test above the marks for the experimental group

Variables / Tests	Experimental group	Upper	Lower	Mean	SD	"T" Calculated	"T" tabular	Sig. (0.05)
Pre-test	30	07	03	4.80	0.86	10.41	1.71	significant
Post-test		10	06	8.16	1.10			

The table shows the effect of the implemented program in improving the experimental sample.

2-2-2. Standing foot test:

Table 10: Shows results in pre-test in standing foot test between the control and experimental

Variables / Tests	samples	Upper	Lower	Mean	SD	"T" Calculated	"T" tabular	Sig. (0.05)
Control	30	49	32	38.75	3.52	1.26	1.67	insignificant
Experimental		49	28	37.04	4.12			

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The table shows the equivalence and homogeneity of the sample before the program implementation.
Table 11 shows the results of the control group's pre and post-test standing foot test.

Variables/ Tests	control group	Upper	Lower	Mean	SD	"T" Calculated	"T" tabular	Sig. (0.05)
Pre-test	30	49	32	38.75	3.52	1.90	1.71	significant
Post-test		47	33	40.48	3.45			

The table shows the improvement of the control sample.
Table 12: Shows the results of the pre and post-test standing foot test for the experimental group

Variables/ Tests	Experimental group	Upper	Lower	Mean	SD	"T" Calculated	"T" tabular	Sig. (0.05)
Pre-test	30	49	28	37.04	4.12	20.75	1.71	significant
Post-test		102	57	82.24	10.31			

The table shows the effect of the implemented program in improving the experimental sample.
Our findings align with the recommendations of ARISCHO MARDIA NSYAH al. (2024), which stated that both boys and girls demonstrated similar improvements in Balance and jumping ability. Furthermore, the results of their research suggest that educators should implement game-based methodologies to cultivate engaging and adequate learning settings that promote practical pedagogical strategies, facilitate the early development of talent, and ensure proficient learning within the field of physical education. The findings of this study are supported by the outcomes obtained from the experimental group (ARISCHO M, SYAHRIAL B & SYAFRUDDIN S, 2024).

4-3 Discussion and interpretation of the results:

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Based on pre-tests used in this study tables (1-4-7 and 10), we note that there are no statistically significant differences between the two groups in the motor compatibility or balance test compared to the post-test. All paired t-tests have substantial benefits for the experimental group. In contrast, the control sample did not register significant moral progress compared to the experimental sample. See The researchers credit the remarkable improvement in the experimental sample to the specific program's focus on Balance, coordination, and dynamic games for the eyes, hands, feet, and whole body. Confirmed by (Betker AL, Szturm T, Moussavi ZK, Nett C., 2006) via exercise program using video games encouraged participants to increase their training duration and focus.

Emphasized by Pin, T.W (2019) via the close connection between development of Balance and cognitive abilities (Pin, T.W, 2019). Particularly when we integrate visuospatial cognitive activities with balance training, as noted by (Szturm, T., & al, 2022).

This in turn improved subjects' dynamic balance control because of its features in line with the characteristics of the age stage, especially from the motivational side, to reach the satisfaction of the child's tendencies and reach the objectives established for the development of Balance and other related qualities according to (Blanche Ndlovu & al, 2023) at this age according to (Kouassah Nadir, 2018).

This is in line with what Evridiki Zachopoulou & al., "The most important manifestation of motor growth is compatibility, which includes Balance, rhythm, and speed of movement (Evridiki Z, Aggeliki T & Vassiliki D, 2004).

As the games selected within the proposed program contain different situations in terms of implementation and means where the students get used to the sensation and adaptation and high bonding between the eye and the rest of the other parties, where he stressed " Tamas " states that the kinetic correlation between movements within a specific rhythm leads to the development of the body's motor speed through the movement of the body as a whole or in the movements of the upper limbs (MAAMRI Moussa, IDIRI Yanis& IFOURAH Hocine, 2022).

The researchers also believe that the development of compatibility is due to the effectiveness of the use of exercises at a lower speed than the maximum and according to the specific times and repetitions of

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each group has had an impact in this development as well as the development of neuromuscular compatibility through the effectiveness of exercise fitness and this is consistent with what Eirini Nikolaou, " the more compatible the contraction of muscles is, the better the speed can be achieved (Eirini Nikolaou, 2024).

Our findings align with the suggestions of ARISCHO MARDIANSYAH& al (2024) that the enhancement of coordination, lateral Balance and jumping abilities exhibited similar patterns in both male and female participants.

Additionally, the results of their research suggest that educators should employ game-based methods to cultivate pleasurable and effective learning settings that uphold pragmatic pedagogical strategies, promote early talent cultivation, and guarantee successful learning within the physical education realm, as evidenced by the outcomes attained by the experimental group in this study (ARISCHO M, SYAHRIAL B & SYAFRUDDIN S, 2024)

Conclusion:

The principle of compatibility and Balance is crucial in children's learning, and any disruptions to this can have a negative impact on their ability to learn. According to the findings of this study, it can be inferred that specific movement games contribute to enhancing compatibility and both static and dynamic Balance in Algerian primary school students. Conversely, physical education classes that do not include a game-based education can still improve Balance and coordination, but not as effectively as the games included in the current study program. Back up the findings of the experimental group. Our research shows that the proposed educational program can enhance compatibility and both static and dynamic Balance in Beginner Football Schools. From that, we recommend our coach's PE teachers including game-based educational programs to increase the compatibility and Balance among Algerian Elementary Beginner Soccer Teams.

Citations:

ARISCHO M, SYAHRIAL B & SYAFRUDDIN S. (2024). Effect of game-based motor coordination (GBMC) on enhancing positive experiences for early talent development in primary school. *Journal of Physical Education and Sport*, 24(8), 2025-2032. doi:10.7752/jpes.2024.08224

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Betker AL, Szturm T, Moussavi ZK, Nett C. (2006). Video game-based exercises for balance rehabilitation: a single-subject design. *Arch Phys Med Rehabil*, 87(8), 1141-9. doi:10.1016/j.apmr.2006.04.010

Blanche Ndlovu & all. (2023). Impact of play-based learning on the development of children in mobile early childhood care and education centres: Practitioners' perspectives. *International Journal of Research in Business and Social Science (2147-4478)*, 12(3), 432-440.

doi:10.20525/ijrbs.v12i3.2358

Bukvić Z. et al. (2021). The importance of physical activity for the development of motor skills of younger school-age children. *Medicinski podmladak* 72(2); 70(2), 34-3. doi:10.5937/mp72-31878

Djahida H-M & Karima B-R. (2016). Epidemiological Study: Research of Urolithiasis in Those with Metabolic Syndrome in Western of Algeria. *International Journal of Prevention and Treatment*, 5(3), 39-45.

doi:10.5923/j.ijpt.20160503.0

Eirini Nikolaou. (2024). FRESHMEN PRE-SERVICE EARLY YEARS TEACHER-STUDENTS' REFLECTIONS ON THE IMPLEMENTATION OF MUSICAL ACTIVITIES TO 4-YEAR-OLD CHILDREN. *European Journal of Education Studies*, 1-20. doi:10.46827/ejes.v11i9.5472

Evridiki Z, Aggeliki T & Vassiliki D. (2004). The effects of a developmentally appropriate music and movement program on motor performance. *Early Childhood Research Quarterly*, 19(4), 631-642.

doi:10.1016/j.ecresq.2004.10.005

Hasanein Mohamed Sobhi. (1999). *Performance Specifications*. Cairo: Dar Al-Fikr Al-Arabi.

Hassanein Mohamed Sobhi. (2000). *Measurement and Evaluation, First Edition*. Cairo: Dar Al-Fikr Al-Arabi,.

Hassanein Mohamed Sobhi. (2004). *Measurement and Evaluation in Physical and Sports Education*. Cairo: Dar Al-Fikr Al-Arabi.

Ibrahim Marwan Abdel Majid. (1999). *Scientific Foundations and Statistical Methods for Tests and Measurements in Physical Education and Sports*. Jordan: Amman.

Kouassah Nadir. (2018). The impact of a proposed educational program based on Balance and motor coordination on learning shooting in basketball: A field study for students from some middle schools in the state

Influence of a Game-Based Educational Program on the Enhancement of Coordination and Equilibrium in Algerian Elementary Schools Beginner Soccer Teams

Ameur Ameur Housseyn¹, Messelte Lakhder², Zerf Mohammed³

of Oum El Bouaghi (12-14 years old). *Posturology&Rehabilitation*

Journal.2015, 10(1), 192-207. Retrieved from

<https://asjp.cerist.dz/en/article/54130>

MAAMRI Moussa, IDIRI Yanis & IFOURAH Hocine. (2022). Le problème de l'obésité en Algérie : Évaluation et justification de l'intervention publique. *Revue Algérienne d'Economie de gestion* Vol. 16, N° : 2 (), 16(2), 236-254.

From <https://www.asjp.cerist.dz/en/article/212176>

Magna Manjareeka, Sitikantha Nanda, Jayanti Mishra, Soumya Mishra. (2015). Correlation between anthropometry and lipid profile in healthy subjects of Eastern India. *J Midlife Health.*, 6(4), 164–168.

doi:10.4103/0976-7800.172302

Muratori LM, Lamberg EM, Quinn L, Duff SV. (2013). Applying principles of motor learning and control to upper extremity rehabilitation. *J Hand Ther*, 26(2), 94-102. doi:10.1016/j.jht.2012.12.007

Pin, T.W. (2019). Active computer play on Balance and postural control for children with cerebral palsy: A systematic review. *Gait Posture*, 73, 126–139. doi:<https://doi.org/10.1016/j.gaitpost.2019.07.122>

Reguig, M, Zerf, M & Bouabdellah, SBA. (2019). Algerian Sport High School as Comprehensive Approach for Improving Public Education System. *Acta Facultatis Educationis Physicae Universitatis Comenianae*, 59, 69-78.

doi:10.2478/afepuc-2019-0006

Richard Bailey. (2006). Physical education and sport in schools: a review of benefits and outcomes. *J Sch Health*, 76(8), 397-401. doi:10.1111/j.1746-1561.2006.00132.x

Szturm, T., & al. (2022). Game-Based Dual-Task Exercise Program for Children with Cerebral Palsy: Blending Balance, Visuomotor and Cognitive Training: Feasibility Randomized Control Trial. *Sensors*, 22(3), 761.

doi:<https://doi.org/10.3390/s22030761>

UNESCO. (2015). *Rethinking education: towards a global common good?*

UNESCO. doi:<https://doi.org/10.54675/MDZL5552>

Zerf Mohammed & Mohamed Hadjar Kherfane. (2020). Balance as a postural key component (core) for establishing physical state in school program reports. *Quality in Sport*, 6(2), 28. doi:10.12775/QS.2020.009