Journal of Sport Science Technology and Physical Activities
ISSN : 1112-4032
eISSN 2543-3776

Volume N°: 20/ Issue N°: 2
December 2023
P: 01/14

The Effect of a Kinetic Training Program Based on Kids Athletics in the Development of bodily-kinesthetic intelligence in Children Aged 11-12 Years

Okba lahmar[1] ; faycal gasmi[2]

[1] Mohamed-Chérif Messaadia University - Souk Ahras o.lahmar@univ-soukahras.dz
[2] Larbi Tebessi University- Tebessa faycalgasmi@gmail.com
Laboratoire sciences des activites physiques sportives et sante publique Setif University 02

ARTICLE INFORMATION
Original Research Paper
Received : 15/01/2023
Accepted : 06/04/2023
Published: 01/12/2023

Keywords :
bodily-kinesthetic intelligence, kids Athletics , Athletics

Auteur correspondant : **Okba lahmar**,
e-mail: o.lahmar@univ-soukahras.dz

Abstract

The current research aims to highlight the effect of a kinetic training program based on children's athletics or what is known as Kids Athletics in the development of bodily-kinesthetic intelligence, where the researcher used the experimental approach on a sample of 30 children chosen by the intentional method. To collect data, we used a set of tests that aim to measure the study indicator, and it was processed and analyzed to conclude that the motor training program based on kids Athletics had an impact on the development of bodily-kinesthetic intelligence. Based on what the researcher has reached, he recommends paying attention to psychological phenomena in training programs, especially bodily-kinesthetic intelligence in childhood.

1. Introduction

In recent years, sport has been an important factor in daily life, as it has become a pole that attracts a large number of practitioners. The goal of each one of them differs. Some of them set their sights on achieving results in various competitions and contests as the sport of athletics, which is among the most popular sports at the present time, and this is due to the constant joy and enjoyment it provides for the followers of this sport, which is witnessing constant and continuous development.

The practice of kids athletics in various structures, whether in open spaces and in the open air or in halls, helps in developing motor and physical abilities which leads to strengthening the child's body so that these abilities are considered the backbone for practicing various sports activities in all age groups with all its specialties, whether it is jumping, throwing, running, because the child needs coordination, speed and accuracy exercises in most competitions(Hussein, 2012).

Undoubtedly, the childhood stage is one of the most fertile stages in developing and refining motor and skill abilities, and the child in this period is characterized by his rapid learning of various skills, especially when setting the motor goal, so that the child at this stage has the ability to link the various basic movements such as crossing the barrier and long jumping from running(Muhammad, 2011).

The theory of « multiple intelligences » appeared in the late seventies by the psychologist Howard Gardner, where he believes that practice and the environment surrounding the individual have an impact on the development of multiple intelligence.

Considering athletics a diversified sport that allows its practitioners to use all parts of the body to perform fine motor skills, during which the senses and limbs are compatible, and some physical attributes are used for coordination, speed, strength, balance, and accuracy, as well as mental skills such as perception and assessment of the situation, and this is what bodily-kinesthetic intelligence requires (Aisa et al., 2020)

The bodily-kinesthetic intelligence is represented as a biological ability or a developing dynamic energy, which is the result of the interaction of bodily and kinetic formations and environmental conditions, and it means the individual's ability to monitor, and control his body through Using his natural senses in the form of moving his parts in difficult circumstances, and the ability to use the body as a whole faster, or the ability to adapt sensory-motor or possessing knowledge and experiences through movement or skill(Najim & Hamid, 2020).

The compatibility between the mind and the body is the way to reaching athletic achievement, as the interest of many researchers in the field of sports has increased in psychological studies, by knowing the factors and variables affecting the training process, where he focused on the applied side of his theories and principles. Keevart stresses the importance of completing various motor programs and teaching, and developing the basic movements of the various skills of field and track's games, starting from childhood.

The child's basic movements are the origin of motor skill development for all sports disciplines. Its size is based on the area of motor gain that the child acquired at this stage, and between the childhood stage and the stage of sports techniques, there is a transitional stage called the skill barrier, and if the child does not have the opportunity to acquire it, he cannot go beyond this stage and finds it difficult in motor creativity(Muhammad, 2011).

Bassam and Suha's study on the effect of using strategies of bodily-kinesthetic intelligence and social intelligence in the development of multiple intelligences among fifth-grade students in Jordan was confirmes and in which it aimed to highlight the effect of using the motor program based on physical intelligence in the development of multiple intelligences among school students in Amman, and the sample included 70 male and female students from the fifth grade ; where the researcher reached the contribution of the motor program based on physical intelligence in the development of multiple intelligences among fifth-grade students in Amman(Mismar & Edlibi, 2020).

Esraa and Ahmed's study also indicates the relationship between identifying talents in sports, bodily-kinesthetic intelligence, and physical self-esteem among children aged 8-10 years.

A significant relationship was found between participants' perceptions of bodily-kinesthetic intelligence, physical self-esteem and ability selection criteria. In addition, there was a statistically significant relationship between bodily-kinesthetic intelligence and physical self-esteem for children, and there were no statistically significant differences in the gender variable in the research(Soy & Pekel, 2020).

Ali Hamad also dealt with a study on the percentage of the contribution of bodily-kinesthetic intelligence and mental alertness to scoring tests for children of the Football Academy players. The researcher concluded from his study that there is a significant positive relationship between bodily-

kinesthetic intelligence and mental alertness among the players of the Sports Academy. The football academy players also possess a high level of physical and motor intelligence(Samirali, 2021). And the scientific gap for the subject of our study was represented in the fact that the researcher supervised the youth groups of the School of Athletics, where he noticed a psychological phenomenon that needs a precise and objective description to treat it, which is represented in the motor bodily-kinesthetic intelligence, and this prompted us to ask the following question: "Does a motor training program based on "kids athletics " have an effect on the development of bodily-kinesthetic intelligence?

1.1. Literature Review

(Brahimi et al., 2020) study :

« The effect of a proposed motor program for the development of multiple intelligences among primary school students. »

- Examine whether the proposed motor program had an impact on the development of multiple intelligences among primary school students.
- Highlighting the statistically significant differences between the pre and post test in favor of the post test in the bodily -kinesthetic intelligence dimension.
- Showing statistically significant differences between the pre and post test in favor of the post test in the spatial-visual intelligence dimension .

The researcher used the experimental approach due to the presence of an experimental variable that the researcher controls, which is the motor program. The study sample included 15 students from the total study population. The researcher also used a set of tests, which are the ball rolling test between two lines, the non-repeated movements test, in addition to the ball throwing test on the basket, and the transition between numbered circles test. Moreover, The researcher concluded that there are statistically significant differences between the pre and post test in favor of the post test in the bodily -kinesthetic intelligence dimension.

The results of the study also showed that there were statistically significant differences between the pre and post test in favor of the post test in the spatial-visual intelligence dimension

(Abhaydev et al., 2020)study :

The effect of the kids athletics program of the International Athletics Federation on the psychology and motor abilities of children in middle school. »

The study aimed to highlight the effects of the kids athletics program for a period of 12 weeks on the psychomotor and psychological fitness abilities of

children who do not exercise in school, where the researcher used the experimental method in his study, the study sample consisted of 40 students (between the ages of 10 and 14 years) divided into two groups, An experimental group and a control group, each containing 20 students. The study tests consisted of the sitting and reaching test, the standing broad jump and the standing broad jump test as well. And one of the most important results reached is that the study shows that kids athletics, recommended by the International Athletics Federation, can be considered effective, and the researcher concluded that there are statistically significant differences in favor of the post-test for the dimension of psychological abilities.

(CENGİZ & PULUR, 2008) study :

« The effect of 12-week football training on the development of bodily-kinesthetic intelligence of children aged 8-10 years. »

The study aimed to highlight the effects of regular football training as an effective environmental factor in the development of bodily-kinesthetic intelligence for children, and to ascertain the effect of a 12-week football training program on developing bodily-kinesthetic intelligence for children of the age group of 08-10 years, and to know the differences between the post-tests of the two control, and experimental groups. The researcher adopted the experimental method due to its suitability to the nature of the study, and the study population consisted of third and fourth grade students from Ankara district schools who belong to the Ankara Sports Club and Genclerbirligi Sports Club.

The study sample was divided into two groups, experimental and control. The Gardner multiple intelligence test for children was adopted, and the data were processed using the statistical package for social sciences program for statistical analysis of the data. In his study, the researcher concluded that there are statistically significant differences in the areas of bodily-kinesthetic intelligence for students in favor of the experimental group for the dimensional measurement. He also emphasized that these students have a good balance between mind and body, in parallel with the conclusion that the 12-week football training, which was identified in the research, leads to a positive development in the field of bodily-kinesthetic intelligence.

1. 2. Commenting on previousstudies

We reviewed a group of previous studies that are related to our current study, which showed that the study "The Effect of a Kinetic Training Program

Based on "kids Athletics in the Development of bodily-kinesthetic Intelligence" has shown the following:

The previous studies differ among themselves in terms of the dimensions and variables that were focused on by each study, and from this standpoint of the previous studies, we took a clear idea about our study ; to come up with new data that serve the sport of athletics in the state of Biskra, in addition to opening the way for new ideas for future studies. The previous studies that were discussed in the framework of our research, the researcher concluded several points, the most important of which are:

- The previous studies had a great impact in forming the foundations and a comprehensive perception of the subject under study, which contributed to the formulation and control of the problematic and hypotheses of the study accurately.
- In terms of the methodological framework of the study in determining the methodology and the study tool.
- Benefiting from the results reached, as well as the suggestions and recommendations of the current study, with the aim of reaching results that are in line with the objectives of the study, and looking for opportunities for future studies in the same study variables.

1. 3. General Hypothesis

The motor training program based on " kids Athletics " had an impact on the development of bodily-kinesthetic intelligence .

1. 4. Objectives of the study

- Highlighting the statistical differences between the pre and post measurement of the control group for the bodily-kinesthetic intelligence dimension.
- Knowing the statistical differences between the pre and post measurement of the experimental group for the bodily-kinesthetic intelligence dimension.
- Showing statistically significant differences between the control group and the experimental group in the dimensional measurement of bodily-kinesthetic intelligence.

2. Method and Materials

2.1 - Keywords in the study:

bodily-kinesthetic intelligence: It is a biological ability or a dynamic, developing energy, which is the result of the interaction of bodily and kinetic formations and environmental conditions. It means the individual's ability to optimally use his body and movements, and individuals with high bodily-kinesthetic intelligence can apply various motor skills and

coordinated rhythmic movements with high fluidity, and are characterized by coordination, flexibility, balance, and speed (Bozkuş et al., 2014).

Athletics: according to(D, 1993) is a group of physical exercises aimed at the harmonious development of human physical and mental capabilities, and it is one of the oldest types of sports. It includes multiple branches such as walking, running, jumping, jumping, throwing, and pushing. They were all known under the name of "Atlética" art.

kids Athletics: It is a set of games dedicated to children's sports activities. It aims to satisfy children's interests in motor activities, presenting the basics of sports' movement in the form of games. It is a sport for children that is conducted individually or in groups in the form of competitions so that children are trained to compete in fun games. The equipment used in athletics for children is not similar to athletics for adults, but it adapts to the characteristics and development of the child, so that it is easier for children to implement every movement included in basic sports movements such as relay rings, javelin throw for children (turbo) and hurdles and jumps (Hindriani et al., 2018).

2.2. The survey experiment:

The survey study is the first step that helps the researcher in giving an overview of the field study aspects of his research, as it enables him to identify:

- Knowing the obstacles and difficulties that appear, as well as the errors that the researcher encounters during the main experiment.
- Standing on the organizational aspects and managing the movement tests on the ground.
- Ensure the validity of the devices and tools used.

2.3. Participants

Our research community includes a group of athletics clubs for the state of Biskra ، We have chosen the study sample by the purposive method, represented by 30 athletes (class U13) from Fayez Biskra Athletics Club in Biskra State.

2.4. Research Methodology

In his study, the researcher used the experimental approach by designing the two equal groups to suit the nature of the study.

2.5. Materials

Cross jump test. According to(Charles et al., 2006)

- The aim of the test : to measure the neuromuscular compatibility of the feet and perception.
- Equipment used: cross jumping mat, whistle, timer, paper and recording pen.
- Performance method: The child stands in the middle of the rug at the 0 mark, and when he hears the beep, he moves between the four squares, so that each time he returns to zero for 15 seconds.
-Recording method: The number of transitions between squares is recorded, provided that the child respects the applicable arrangement, and when violating this, the calculation is re-calculated within 15 seconds.

Pole vault test. According to (Charles et al., 2006)

- The aim of the test: to measure the motor perception and compatibility between hanging, flight, and landing.
- Tools' used: soft ground, whistle, short stick, rings numbered from 01 to 08, paper and recording pen.
- Performance method: The child rises from the ground and jumps with the pole forward over the rings placed on the soft floor, arranged from 1 to 8.
- Recording method: The child is recorded in the episode in which he falls, so that the order of the episodes is longitudinal from 1 to 8, and each episode is marked with a point.

Non-repetitive movements test. According to (Brahimi et al., 2020)

- The aim of the test : to measure motor creativity.
- Tools' used: whistle, colored adhesive tape, paper, and recording pen.
- Performance method: The child stands on the starting line and moves between two lines (their distance is 08 meters, separated by a distance of 1.5 meters) towards the marks drawn on the two lines (08 marks).
- Recording method: The number of transfers in which no repetitions were recorded is calculated.

2.6. Design and Procedure

The training program was built at a rate of 18 training units based on a set of exercises used in athletics activities for children at a rate of 3 sessions per week, the time of each session is estimated at 60.

The spatial field : the 18th February's complex.

Time field : 09/30/2022 to 11/11/2022.

The human field: athletes of Faez Biskra club (11-12 years old).

2.7. Statistical Analysis

After the application stage, the data obtained from the tests until the study that met the answer were dumped into the computer for the purpose of

analyzing and processing them through the SPSS program for human sciences.

3. Results

Table 1. **Shows the results of the control group in the pre and post measurement :**

TEST	N	prior measurement		post measurement		T	SIG	D F	(a)
		AM	S	AM	S				
Cross Hop	15	8.73	2.46	8.93	2.81	-0.642	0.531	14	0.05
Non-repetitive movements		7.53	1.95	7.86	1.30	-1.099	0.290		
pole flying		3.73	0.70	2.66	0.72	0.323	0.751		

Through the results of Table N° 01, we note that the control group in the pre-square test had an arithmetic mean of (8.73) with a standard deviation of (2.46), while this group achieved in the post-test the arithmetic mean of (8.93) and a standard deviation of (2.81) ; as for the « t » value, it was (-0.642) at the significant value sig (0.531), and the value was (0.531 > 0.05).

In the non-repetitive movements test - the control group achieved in the pre-test an arithmetic mean of (7.53) and a standard deviation of (1.95), while this group achieved in the post-test the arithmetic mean of (7.86) and a standard deviation of (1.30) ; as for the « t » value, it was (-1.099) at the significant value sing (0.290), and the value was (0.290 > 0.05).

In the pole vault test, the control group achieved in the pre-test an arithmetic mean of (3.73) and a standard deviation of (0.70), while this group achieved in the post-test the arithmetic mean of (2.66) and a standard deviation of (0.72) ; as for the t value, it was (0.323 at the significant value sing (0.751), and the value was (0.751 > 0.05).

Therefore, there are no statistically significant differences between the pre and post test of the control group in the pole vault's test, the squares test, and the non-repetitive movements' test.

Table 2. **Shows the results of the experimental group in the pre and post measurement :**

TEST	N	prior measurement		post measurement		T	SIG	D F	(a)
		AM	S	AM	S				
Cross Hop	15	10.4	3.22	17.6	4.16	-17.32	0.001	14	0.05
Non-repetitive movements		8.53	2.32	12.2	2.60	-9.727	0.001		
pole flying		2.73	0.70	4.26	0.79	-11.50	0.001		

Through our reading of the outputs of Table (02) in the squares test, the experimental group achieved in the pre-test an arithmetic mean of (10.40) and a standard deviation of (3.22), while this group achieved in the post-test arithmetic average of (17.66) and a standard deviation of (4.16) ; as for the « t » value was (-17.327) at the significant value sing (0.001), and the value was (0.001 < 0.05).
In the test of non-repetitive movements, the experimental group achieved in the pre-test an arithmetic mean of (8.53) and a standard deviation of (2.32), while this group achieved in the post-test arithmetic average of (12.26), and a standard deviation of (2.60) ; as for the « t » value was (-9.727) at the significant value sing (0.001), and the value was (0.001 < 0.05).
In the pole vault test, the experimental group achieved in the pre-test an arithmetic mean of (2.73) and a standard deviation of (0.70), while this group achieved in the post-test arithmetic average of (4.26), and a standard deviation of (0.79), while the « t » value was (-11.500) at the significant value sing (0.001), and the value was (0.001 < 0.05).
Consequently, there are statistically significant differences between the pre and post test of the experimental group, and the differences were in favor of the post test in the pole vault. In addition to that, there are statistically significant differences between the pre and post test of the experimental group, and the differences were in favor of the post test in the pole vault test, the squares test, and the non-repetitive movements test.

***Table 3*. Shows the results of the post measurement between the experimental group and the control group :**

TEST	N	The control group		the experimental group		T	SIG	D F	(a)
		AM	S	AM	S				
Cross Hop	30	8.93	2.81	17.6	4.16	-6.724	0.001	28	0.05
Non-repetitive movements		7.86.8	1.30	12.26	2.60	-5.853	0.001		
pole flying		2.66	0.72	4.26	0.79	-5.749	0.001		

Through our reading of the outputs of Table (03) in the squares test, the control group achieved in the post-test an arithmetic mean of (8.93), and a standard deviation of (2.81). In the post test, the experimental group achieved an arithmetic mean of (17.66) and a standard deviation of (4.16), while the t value was (-6.724) at the significant value sig (0.001), and the value was (0.001 < 0.05). As a result, there are statistically significant differences between the control group and the experimental group in the

post test, and the differences were in favor of the experimental group in the squares test.

As for the non-repetitive movements test, the control group achieved in the post test an arithmetic mean of (7.86) and a standard deviation of (1.30), In the post test, the experimental group achieved an arithmetic mean of (12.26) and a standard deviation of (2.60) ; as for the « t » value was (-5.853) at the significant value sig (0.001), and the value was (0.001 < 0.05).

Therefore, there are statistically significant différences between the control group and the experimental group in the post-test, and the differences were in favor of the experimental group in the non-repetitive movements test.

As for the pole vault test, the control group achieved in the post test an arithmetic mean of (2.66) and a standard deviation of (0.72). In the post test, the experimental group achieved an arithmetic mean of (4.26), and a standard deviation of (0.79) ; as for the « t » value was (-5.749) at the significant value sig (0.001) and the value was (0.001 < 0.05). Consequently, there are statistically significant differences between the control group and the expérimental group in the post test, and the differences were in favor of the expérimental group in the pole vault test.

4. Discussion

4.1 Discussion and interpretation of the first hypothesis's results:

There are no statistically significant differences between the pre and post measurement of the control group for bodily-kinesthetic intelligence. In the light of the test results that were presented in Table 01, which resulted in the statistical treatment at the level of significance 0.05 for the test (squares, non-repetitive movements, and pole vault), it was found that there were no statistically significant differences ; This is due to they are not being subjected to the training program prepared by the researcher and to the nature of the classical exercises that the control group was trained on, and this is consistent with the study of (Didem Gulcin) and the study of (KEMEC, 2016)and the study of(Putra & Bafirman, 2020).

4.2 Discussion and interpretation of the second hypothesis's results:

There are statistically significant differences between the pre and post measurement in favor of the post measurement of the experimental group for the bodily-kinesthetic intelligence. In the light of the test results that were presented in Table 02, which resulted in the statistical treatment at the level of significance 0.05 for the test (squares, non-repetitive movements, and pole vault), it was found that there were statistically significant

differences in favor of the post-measurement ; This is due to the impact of a kinetic training program based on kids athletics in the development of bodily-kinesthetic intelligence, as it contains exercises of perception, mental-muscular coordination, and neuro-motor coordination.

This is consistent with the study of (Najim & Hamid, 2020) that bodily-kinesthetic intelligence has an important role in the learning process and basic skills training. Moreover, the results are also consistent with the study (Brahimi et al., 2020) of the positive impact of the proposed motor program in the development of multiple intelligences.

4.3 Discussion and interpretation of the thirdhypothesis'sresults :

There are statistically significant differences between the control group and the experimental group in favor of the experimental group in the post-measurement of bodily-kinesthetic intelligence. Through the test results that were reached in Table 03, which show the statistical treatment at the level of significance 0.05 that there exist a statistically significant differences between the control and experimental groups in favor of the experimental group in the post-measurement, which recorded positive results in bodily-kinesthetic intelligence tests. This is consistent with the study (ErmİŞ et al., 2012)that the level of bodily-kinesthetic intelligence in sports secondary schools is higher than in private secondary schools. It also agrees with the(Koçak, 2019) study, which found that the level of participation in sports supports the attitude towards sports, and the development of bodily-kinesthetic intelligence. Likewise, as positive attitude towards sports increases, so bodily kinesthetic intelligence does.

5. Conclusion

There are statistically significant differences between the pre and post measurement in favor of the post measurement of the experimental group for the bodily-kinesthetic intelligence .

There are statistically significant differences between the control group and the experimental group in favor of the experimental group in the post-measurement of bodily-kinesthetic intelligence .

The motor training program based on athletics for children has a positive impact on the development of bodily-kinesthetic intelligence.

6. Suggestions and recommendations:

The need for paying attention to the proposed training program for the development of bodily-kinesthetic intelligence.

Paying attention to the development of the different psychological skills of this age group in general, and bodily-kinesthetic intelligence in particular, by using kids athletics.

The need for including various athletics programs for kids in the physical education curricula for primary schools.

Preparing programs for the development of various multiple intelligences.

References

Abhaydev, C. S., Bhukar, J., & Thapa, R. K. (2020). Effects of iaaf kid's athletics programme on psychological and motor abilities of sedentary school going children. Physical Education Theory and Methodology, 20(4), 234–241. https://doi.org/10.17309/tmfv.2020.4.06

Aisa, B., Berbakh, & Chraiat. (2020). A Comparative Study of Bodily-kinestheticIntelligence's LevelbetweenAthletic and Non-athleticPupils of School Sport in Primary Schools. journal of Sport Science Technology and Physical Activities, 17(01), 349–364.

Bozkuş, T., Erol, Z., Elçi, G., & Bozkuş, S. (2014). The Comparison of Multiple Intelligence Levels of 13 -16 Years Old Athlete and Non-Athlete Children. International Journal of Science Culture and Sport (IntJSCS), 2(4), 80–88. https://doi.org/10.14486/IJSCS212

Brahimi, A., M, D., & S, D. (2020). The impact of a proposed motor program on the development of multiple intelligences among primary school pupils. . Al-Jamie Journal, 05(01), 480–505.

CENGİZ, Ş. Ş., & PULUR, A. (2008). THE EFFECT OF 12-WEEK FOOTBALL TRAINING ON DEVELOPMENT OF BODİLY KİNESTHETİC AND MUSİCAL İNTELLİGENCE CHILDREN GROUPS 8-10 YEARS OLD. Niğde University Journal of Physical Education and Sport Sciences, 2(3), 165–173.

Charles, G., Simohamed, J., & El-Hebil, A. M. (2006). Educational models for children in athletics (I. A. Federation (ed.)).

D, N. (1993). Detailed Sports Encyclopedia (S. books House (ed.); 01 ed.). Beirut.

ErmİŞ, E., İMAMOĞLU, O., & ERİLLİ, N. A. (2012). THE EFFECT OF SPORTS ON THE BODILY-KINESTHETICS AND INTERPERSONAL MULTIPLE INTELLIGENCES SCORES OF UNIVERSITY STUDENTS. Journal of Sports and Performance Researches, 03(02), 23–29.

Hindriani, D., Sugiyanto, S., & Syafrial, S. (2018). Analisis Kemampuan Kids Athletics Pada Siswa Sekolah Dasar Di Kota Bengkulu. Kinestetik, 2(1), 23–31. https://doi.org/10.33369/jk.v2i1.9183

Hussein, F. T. (2012). The effect of using athletics competitions in developing some physical abilities for ages 11 - 12 ans. Journal of the Faculty of Physical Education, 24(03), 511–531.

KEMEC, D. G. (2016). Comparison of multiple intelligence fields of physical education and sports college students. Turkish Journal of Sport and Exercise, 18(1), 153–159. https://doi.org/10.15314/tjse.10358

Koçak, Ç. V. (2019). The relationship between attitude towards sports and bodily-kinesthetic intelligence in university students of sport science. Physical education of students, 23(3), 147–154. https://doi.org/10.15561/20755279.2019.0306

Mismar, B. A., & Edlibi, S. (2020). The impact of using physical-kinesthetic and social intelligence strategies on the development of multi-intelligences among fifth graders in Jordan. International Journal of Innovation, Creativity and Change (IJICC), 14(11), 259–277. https://www.ijicc.net/images/Vol_14/Iss_11/141116_Mismar_2020_E_R.pdf

Muhammad, S. K. (2011). No TitleThe effect of some general and special preliminary exercises on the development of some basic motor abilities and skills for field and track competitions for the stage (8-10 years). Assiut Journal of Science and Arts of Physical Education, 32(01), 92–123.

Najim, A. Q., & Hamid, N. N. (2020). The Body-motor intelligence and its relationship to some basic skills for young handball. Sports Culture, 11(2), 526–535.

Putra, R. N., & Bafirman. (2020). The impact of kids' athletics model on improving students' self-concepts. Jurnal SPORTIF: Jurnal Penelitian Pembelajaran, 06(01), 69–79.

Samirali, H. (2021). Percentage of the contribution of physical-kinesthetic intelligence and mental alertness to the scoring tests of the Sports Academy football players aged (14-16) years. Journal of Sport Science Technology and Physical Activities, 11(02), 407–425.

Soy, E., & Pekel, H. A. (2020). THE RELATIONSHIP BETWEEN TALENT IDENTIFICATION IN SPORTS AND KINESTHETIC INTELLIGENCE AND PHYSICAL SELF-ESTEEM IN CHILDREN AGED 8-10 YEARS. Aksaray University Journal of Sport and Health Researches ASUJSHR, 01(01), 10–24.