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Developing variable swimming technique skills among Iraqi schoolchildren during physical education courses

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Abstract---Variable education technology is now more prevalent in Iraq's higher education institutions, notably in physical education courses. The rise in the number of unwell people living in society stands out among the numerous unfavorable phenomena. Another is the decrease in physical activity brought on by technological development, which impacts people's capacity to improve their overall physical functionality and ability to develop their physical qualities. And physical health is the most valuable resource in any state, including Iraq. Thus it is crucial to find answers to the problems with physical education that affect students of all ages, especially young children. The project aims to develop and evaluate a method for teaching swimming to Iraqi kids in physical education classes while they are learning various skills. We selected several strategies to design a methodology for teaching swimming to Iraqi children in physical education classes. The approach used to categorize the study's results on the extent to which, among Iraqi students in the experimental and control groups, the essential physical features necessary for developing a variable capacity in teaching swimming had formed. The results were interpreted differently for each method. According to the results of the control study, we saw an overall improvement in the level of formation of the fundamental physical

qualities required for the development of a variable skill when teaching swimming among Iraqi students in the experimental group, as well as an improvement in their functional state, which suggests that the methodology developed for the development of a variable skill in of Iraqi students when learning to swim in physical terms is effective.

Keywords---Iraqi, swimming technique, physical education, physical health.

Introduction

Physical education is now regarded as the most accessible and all-encompassing way to improve the health of students of all ages. It also serves as a vehicle for students to express themselves, which helps to prevent the emergence of various types of aberrations and asocial aspects. In Iraq's higher education institutions, particularly physical education classrooms, variable education technology has become increasingly common. The lack of a swimming pool on many institutions' material and technical bases explains this phenomenon, even though swimming is an essential life skill that students should develop. Many physical culture instructors prefer to focus on developing a variable talent in the latter group of students to create this skill among Iraqi pupils (Verbitsky 2017). As a result, a variable skill in teaching swimming to Iraqi kids involves the development of all the physical qualities that are crucial for them in swimming and their capacity to perform specific technical aspects of this sport in various changing settings.

Problem statement

At the current stage of social development, there is a trend for people to be more interested in leading healthy lives. This is exemplified, among other things, by how much more critical people give to physical culture in their daily lives, making it an essential component of living. However, there are also several negative phenomena, the most prominent of which is the rise in the number of ill people (approximately 50% of the population suffers from chronic illnesses that have a negative impact on quality of life), followed by physical inactivity (a decline in motor activity as a result of progress), which in turn affects people's level of physical development as well as the overall functionality of their bodies (Valery Falkov 2017). And the primary value and asset of any state, including Iraq, is physical health, which establishes the significance of finding solutions to the physical education issues facing students of all ages, particularly students. In this regard, it is essential in contemporary settings to carefully assess the shift in the significance of physical culture and sports in the lives of current students and to take steps to increase it, such as by enhancing the variable motor actions of students in a variety of sports (Vasiliev,& Nikitsky 2013).

Aim of the study

The study's objective is to create and assess a technique for teaching swimming to Iraqi children in physical education classrooms while developing a variable skill. Therefore, we primarily concentrate on the following two key objectives:

1. To study the method of forming a variable skill among Iraqi students when teaching swimming in physical education classes.
2. Currently, the experimental work on forming a variable skill among Iraqi students when teaching swimming in physical education classes is organized and content.

Research Question

Two main research-based questions depend on the study's goals and objectives. The following are the research questions:

1. How can learn the technique aid Iraqi students, in developing a range of skills when teaching swimming in physical education classes?
2. How can the experimental work's content be organized so that Iraqi kids who are taught to swim in physical education classes develop a variety of skills?

Literature review

Over the past 60 years, Iraq's physical education system has seen considerable changes, and at the same time, its evolution may be divided into different periods (Bartosh & Vladivostok 2017). Particularly between 1917 and 1926, when the first schools in Baghdad started operating, and physical education started being taught in primary and secondary schools, the first foundations for the growth of the sports movement in Iraq were laid. Football and athletics are the sports that have experienced the fastest growth throughout this time. According to Bakulina, Bakulina, and Volobuev (2019), 1926 to 1938 are the formative years of physical education. During this time, the number of growing sports increased (thanks to the growth of gymnastics, etc.), and many teaching resources were released. According to Vasiliev and Nikitsky (2013), physical education actively developed between 1938 and 1958, which is also the period during which it was made a requirement for admission to higher education institutions in Iraq. However, from 1959 to 1968, due to political and economic upheavals, the physical education system started to disintegrate, and its reconstruction only started in the 1980s (Ashmarin, 2014). (Ashmarin, 2014). Physical education is now stagnating in the state. Therefore, physical education teachers are looking for new means and methods to overcome this phenomenon, including by improving the pedagogical technologies of teaching physical education in higher educational institutions (Andrianov 2014).

The current stage of the society's development can be distinguished by the significant reformation of Iraqi society based on the values of democratization and humanization. This calls for a critical understanding of the state of the educational system in Iraq and a complete assessment of all educational facilities,

including physical education. At this time, it is essential to address the challenge of modernizing the theoretical and methodological approaches to students' physical development in light of the potential and circumstances of higher educational institutions (Alexandrova2016). Due to the lack of educational organizations that can teach children to swim in designated pools, developing a technique for constructing a variable skill in students while teaching them to swim in physical education courses comes to the fore in particular. A few of the many variables that affect the decision of which technique is most effective at a given moment include the capacity to master the movements of various swimming styles with the same skill, the ability to choose the proper type of breathing, the power to predict the type, direction, and content of the necessary technical swimming skill, etc. (Tomsk2017). Iraqi students are also taught skills in physical education classes, which are essential since students may use them in various settings outside the classroom (Vaytsehovsky 2014).

We conducted an experimental investigation using the University of Baghdad as a base. 50 University of Baghdad students aged 17 to 22 studying there for one to four years participated in the study. They were split into experimental and control groups (25 people each). The goal of the testing effort is to design and validate a system for teaching swimming to Iraqi children in physical education classes to acquire various skills. The three-part structure that was previously described set apart the pedagogical experiment. The author's method of developing a variable talent among Iraqi students during learning to swim in physical education classes was tested. We tried to comply with the following mandatory determinants to obtain the most objective results: creating equal conditions for diagnosing all students, considering diagnostics' effects when testing, and the anonymity of diagnostic examinations. The outcomes of evaluating the development of the fundamental physical attributes required for the development of a flexible skill when teaching swimming to Iraqi students in the experimental and control groups, as well as the overall state of their organisms, were examined and systematized (Aganyants, Berdichevskaya, &Trembach 2015).

Methodology

We chose several techniques to construct a methodology for developing a variable skill among Iraqi students when teaching swimming in physical education classes. Let's examine them more thoroughly.

Analysis of scientific and literary sources on the research topic

During the project's initial phase, we conducted a thorough investigation of the scientific literature on the issues surrounding the development of a variable skill when teaching swimming to Iraqi children in physical education classes. The following inquiries were given special attention:

- Teaching pupils to swim in physical education programs requires a variable skill level.
- Techniques for teaching swimming to Iraqi students in physical education classes to develop various skills.

Pedagogical observations

The dynamics of the level of physical development required for the development of a variable skill in teaching swimming among Iraqi students were evaluated throughout the process of pedagogical observation, which was carried out during each physical culture class (Barchukov, 2019).

Testing of physical qualities

These exams were designed to assess the degree to which the primary physical attributes—namely, speed, general and specific endurance, and strength abilities—had been developed to develop a changeable skill when teaching swimming. We used the findings of the respondents passing the following tests to diagnose, which were done before and after testing the author's approach of generating a variable skill in pupils when teaching them to swim:

Students were instructed to run a 100-meter race in order to gauge their speed

The results were interpreted as follows:

- Students who traveled the distance in 16 seconds or more were shown to have less developed speed ability.
- For pupils who completed the distance in between 14.5 and 15.9 seconds, the average level of development of their speed abilities was noted.
- A high development of speed abilities was recorded among students who covered the distance in 14.4 seconds or less.

Students were also requested to run a distance from a slight hill to gauge their running speed

The findings were explained as follows:

- Students who completed the distance in 9.4 seconds or more showed a low level of development of their speed ability.
- Students who completed the course in the range of 8.5 to 9.3 seconds had average progress in their speed abilities.
- Students who completed the course in 8.4 seconds or fewer showed a high level of improvement in their speed abilities.

Flexion - an extension of the arms in emphasis on the uneven bars (endurance assessment)

- more than 26 times - a high level of endurance development.
- 20-25 times - the average level of endurance development.
- Nineteen times or less - a low level of endurance development.

Lifting against the crossbar with force (endurance assessment)

- more than 25 times, which indicates advanced endurance training.
- 15-24 times - the average level of endurance development.
- Fourteen times or less - a low level of endurance development.

Standing long jump (strength assessment)

- more than 170 cm - a high level of strength development;
- The typical level of strength development is between 150 and 169 cm;
- 149 cm or less - a low level of strength development.

In 30 seconds, press while supine (strength assessment)

- Forty or more times, which indicates significant strength development.
- The average rate of strength development is 20–39 times.
- Nineteen times or less - a low level of strength development.

Push-ups from the "grasshopper" position while supine (strength assessment)

- more than 30 times, which indicates significant strength growth.
- 15-30 times - the average level of strength development.
- A low degree of strength development is 14 or fewer times.

A functional state assessment of Iraqi students

A crucial phase of the study was determining the VLF and S.I. indicators for the level of the organisms' active status in Iraqi pupils. We evaluated the outcomes using the following metrics:

- Type I - S.I. is more significant than 100 conventional units, while VLF is more significant than 240 meters per second (squared). We can discuss the ideal condition for all regulatory systems in this situation.
- Type II - (VLF less than 240 m/s² squared, S.I. greater than 100 standard units). In this situation, we can refer to a clear overvoltage of all regulating systems.
- Type III - S.I. is less than 100 conventional units, but VLF is more prominent than 240 meters per second (squared). In this situation, we might discuss the cardiovascular system's ideal condition.
- Type IV - (VLF is more significant than 500 m/s²; S.I. is less than 25 conventional units.) We can discuss heart rhythm irregularities in this situation.

Pedagogical experiment

The three main phases of the performed pilot study were initial diagnostics, approval of the author's approach for developing a variable skill in Iraqi kids learning to swim in physical education classes, and routine diagnostics. We chose 50 student representatives for the study, who were randomly split into two groups

of 25. Only the first group of pupils, the experimental group, was used to test the technique.

Statistical research methods

The findings of the investigation into the degree to which Iraqi students in the experimental and control groups had the fundamental physical traits required to grow a variable ability in teaching swimming were grouped. The study's findings were processed both quantitatively and qualitatively.

Findings

When teaching swimming to Iraqi students in the experimental and control groups, we performed the primary diagnostics of the level of formation of the fundamental physical attributes required for the development of a variable skill. For each method, the results were interpreted differently. Based on the results of the control study, we observed an overall improvement in the level of formation of the fundamental physical qualities required for the development of a variable skill when teaching swimming among Iraqi students in the experimental group, as well as an optimization of their functional state, which suggests that the methodology developed for the development of a variable skill in of Iraqi students when learning to swim in physical terms is effective.

In light of the preceding, we may thus conclude that throughout the study's formative phase, we evaluated the methodology for developing a variable skill among Iraqi students when teaching swimming in physical education courses. It was put to the test for seven months with the pupils in the experimental group. Based on a controlled study, it was discovered that 40% of students in the experimental group have a high level, 56% have an average level, and 4% have a low level of development of the fundamental physical qualities required for the development of a variable skill when teaching swimming to Iraqi students—the development of the fundamental physical traits as are necessary for the learning of a changeable ability. A high level, an average level, and a low level of formation of the fundamental physical attributes required for the development of a variable power when learning to swim are found in the control group, respectively, in 44%, 36%, and 20% of the children. As a result, the experimental group's control stage saw an 8% increase in the number of pupils with a high level, an 8% increase in the number of respondents with an average level, and a 16% decrease in the number of respondents with a low level—establishment of the fundamental physical characteristics required for the growth of a flexible competence when learning to swim. Performance in the control group did not significantly improve.

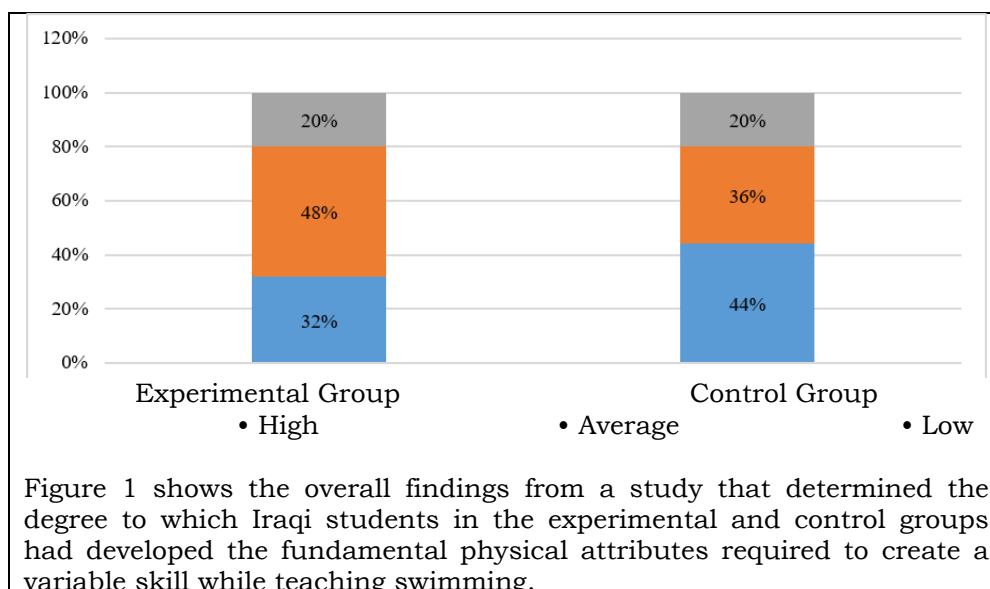
According to a controlled study of the general functioning of students in Iraq, 24% of the experimental group had a moderate predominance of the central circuit of the regulation (44% more than at the ascertaining stage); none of the students had a pronounced predominance of the central contour of the regulation (32% less than at the ascertaining stage); 24% had a moderate predominance of the autonomous regulation circuit (4% more than at the ascertaining stage). In contrast, after evaluating the functional state of Iraqi students in the control group, we discovered the following results: 52% of them have regulation systems

that are in their ideal state, 12% have regulation systems that are under stress, 24% have cardiovascular and respiratory systems that are in their ideal state, and 12% have cardiac arrhythmias. The outcomes of the pupils in the control group were unchanged.

Based on the results of the control study, we observed an overall improvement in the level of formation of the fundamental physical qualities required for the development of a variable skill when teaching swimming among Iraqi students in the experimental group, as well as an optimization of their functional state, which suggests that the methodology developed for the development of a variable skill in of Iraqi students when learning to swim in physical terms is effective. Generalized findings from the study determined the degree to which Iraqi students in the experimental and control groups had developed the fundamental physical attributes required to create a variable skill while teaching swimming.

Level	Experimental group		Control group	
	Chel	%	Chel	%
High	8	32	11	44
Average	12	48	9	36
Short	5	20	5	20

For clarity, the results obtained are shown in Figs. 1.



Based on the methodology and the objectives of the study, we can conclude that we have chosen a set of methods for the study, which included the analysis of literary sources (both Russian and Arabic) on the issue of developing a variable skill in physical education classes; theoretical methods, first and foremost, classification and comparison; methods for testing the fundamental physical qualities required for the development of a variable skill (speed, strength, endurance), methods for testing the varying skill itself, and methods for testing

the variable skill itself. The following exercises were chosen as the control and educational tests: long jump from a starting position, press and push-ups, flexion-extension of the arms, powerlifting on the crossbar, and 100-meter run (speed assessment) (strength assessment). In addition, a significant portion of the study involved determining the VLF and S.I. indicators for the Iraqi students' organisms to assess their level of a functional state. This assessment allowed us to conclude the respondents' level of regulation and the condition of their cardiovascular systems. The study's findings were processed both quantitatively and qualitatively.

We have created and tested a system for developing a variable skill among Iraqi students when teaching swimming in physical education classes to address the first research-based question. This stage lasted for seven months. The University of Baghdad's curriculum was followed throughout classes. It's crucial to remember that this methodology was created by keeping in mind the critical tenets of system-activity and student-centered methods to maximize the effectiveness of productive work and the functioning of pupils (Bishaeva, 2012). To respond to the second research-based issue, we repeated diagnostic tests to determine the degree of formation of the fundamental physical attributes required for developing a variable skill when teaching swimming to Iraqi students in the experimental and control groups. As a result, we verified the efficacy of the methodology created for developing a variable skill in Iraqi students when teaching swimming in physical education classes, supporting the candidate's research premise (Bobrova, 2018).

Discussion

We conducted experimental work as part of the candidate's practical research at the University of Baghdad. 50 University of Baghdad students aged 17 to 22 studying there for one to four years participated in the study. They were split into experimental and control groups (25 people each). The goal of the testing effort is to design and validate a system for teaching swimming to Iraqi children in physical education classes to acquire various skills. The stages of the pedagogical experiment were ascertaining, forming, and controlling. The following conditions were modeled for each phase of the study: When teaching swimming to Iraqi students in the experimental and control groups, diagnostic techniques were chosen, and criteria were established to determine the degree of formation of the fundamental physical qualities required for the development of a variable skill, and all results were analyzed and systematized (Bulakh 2016).

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fundamental physical qualities required for the development of a variable skill, and all results were analyzed and systematized (Bulakh 2016).

The author's method, developed using modeling methods, is presented in this work for teaching Iraqi kids to swim in physical education classes. Its core is that during the educational process, the student not only physically retains specific actions and movements that must be performed when swimming but also, through panoramic perception, integrates all structural elements into a single system, leading to the formation of a specific performance model in his mind. He may apply a few technical skills in any situation, including swimming, in the future. In the created system for teaching swimming in physical education classes to Iraqi children, Burukhin (2019) identified this as a fundamental innovation. We conducted a diagnosis of the level of development of essential physical qualities (strength, speed, and endurance), as well as the functional state of the respondents before and after its testing, based on which a conclusion was made about the possibility of its application in the Iraqi students learning to swim in physical education classes, according to Bulgakova (2014).

Conclusion

To carry out the educational system's objectives, teachers and students of school age engage in variable learning, which is directly reflected in the selection of training programs' most effective formats, approaches, and contents in light of their potential for application in a variety of contexts. The technology used in this sort of education comprises various pedagogical techniques, unique instructional strategies, and teaching aids that allow instructors to customize instruction for each student while also considering their learning styles. It is based on system-activity and student-oriented learning theories, respectively. A complicated system, variable learning consists of blocks for the target, organizational content, and criteria-evaluative. The use of variable learning technology in the educational process with students in practically all disciplines has demonstrated relatively good efficacy over the past few years.

Developing various skills is done in accordance with the pedagogical principles of consciousness and activity, regularity and consistency, accessibility, visibility, and strength. The three basic categories of methods are verbal, visual, and practical, and the most popular ones are explanations and demonstrations. The methods of maximum, dynamic, non-limiting, and isometric efforts, "impact," and statistical methods, as well as circular training, are the most frequently used to increase students' strength capacities. A variety of workouts that have an impact on the various components of speed skills are used to develop speed. Iraqi pupils' endurance development is given special consideration in physical education sessions. Work focused on developing the capacity to carry out demanding tasks while feeling exhausted, move at varying speeds, and have a calm mental state. The methodology employed to create a variable skill must be appropriately selected to be effective.

Specific activities required for learning to swim modeled for Iraqi pupils. Young people must complete a particular sequence of exercises (at least 11 for each assignment) to solve these difficulties. These workouts are provided for 1 to 25

seconds with a specified level of discreteness to replicate the actual condition of swimming.

Recommendations

In summarizing the study's findings, it is significant to point out that a number of areas could benefit from additional investigation into the phenomenon of "Formation of Variable Skill in the Technique of Swimming in Students of Iraqi Students in Physical Education Classes." In particular, we intend to focus on ways to make the work on the development of a variable skill among students who participate in additional sports more effective in the future, as well as ways to take into account the age characteristics of students when choosing exercises and techniques within the framework of this methodology. Our additional research will be built around these recommendations.

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