

Research Article

# Understanding the Mechanism of Conducting Benchmark Test for the Infrastructure of Physical Education Curricula in the Age of Artificial Intelligence

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## Abstract

The study aims to propose a vision for creating a standardized test according to the development of physical education curricula in the era of artificial intelligence, so that we can be able to measure student achievement and master the new curriculum standards. Based on the results, the following can be concluded: directing the teaching and learning process, and determining levels. For students, students' teaching performance, students' level of understanding and knowledge, application and achievement of lesson objectives in physical education. There is a strong correlation between most of the skills, knowledge, and behaviors that were measured in the study. This suggests that these skills, knowledge, and behaviors are related to each other, and that students who are high in one are more likely to have a high level in the other skills, knowledge, and behaviors. This is due to the fact that the students who participated in the study had a good level of performance in all the criteria that were measured. Based on the results, the following recommendations can be made: Focus on developing teaching skills and interaction with students, as they are closely related to the level of understanding and knowledge of students. Focus on developing knowledge and understanding of mathematical concepts, mathematical skills, and sporting values and behaviors', as these skills and knowledge are closely linked to the application and achievement of lesson objectives in physical education.

## Keywords

Benchmark Test, Physical Education Curricula, The Era of Artificial Intelligence

## 1. Introduction

In recent years, the world has witnessed a new revolution in the field of artificial intelligence, as artificial intelligence has become an integral part of our daily lives, including the field of education and training. Artificial intelligence has

opened up new opportunities to improve the quality of education, including improving the role of teaching and learning, curriculum development, and performance measurement. [1]. In the field of physical education, artificial intelligence can

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be applied to develop curricula. It aims to design more effective development and training for the masses, through the use of artificial intelligence for educational content appropriate to each student, improving feedback to female students, adjusting the difficulty of educational content, and student excellence. It is not up to researchers to measure educational performance accurately and objectively, through the use of artificial intelligence techniques such as computers to analyze data and educational designs [2].

## 2. Objectives

The infrastructure of physical education curricula in the age of artificial intelligence is to assess the current state of the curriculum and its readiness to incorporate advancements in technology, particularly artificial intelligence. This includes evaluating the resources, technology, and teaching methods currently in use, as well as identifying any gaps or areas for improvement. The goal is to ensure that the physical education curriculum is keeping pace with technological advancements and preparing students for the future. Conducting benchmark tests can help establish a baseline for the current state of the curriculum and provide insights into areas that may need attention or enhancement.

## 3. Methods

Reference studies on standardized testing have succeeded in physical education curricula in the age of artificial intelligence. Integrating artificial intelligence into the unified group: "Assessing visual skills using fine-to-wear technology and smart learning algorithms" (2021) A study of the use of fine-to-wear technology and smart-learning algorithms in a homogeneous coordination test. "Intelligence in school-based artificial performance assessment: An important review" (2023): This research examined magical scientific research. And scientific research workers in scientific research., Planning Plan Can Artificial Intelligence Help Collect and Analyze Data (2022): This training study examined how AI for information design can combine its analysis tools into fluidity for a unified fitness, potentially reducing human reason and necessity., Developing approved curricula in artificial intelligence in education: "Building Physical Education Programs Using AI-Assisted Analytics" (2020): I proposed this study framework for specialized education programs on student data analyzed by AI algorithms. "Using Artificial Intelligence to Personalize Teachers to Individual Needs" (2021): Using this additional technology to modify data supported by artificial intelligence to personalize advanced education instruction based on student progress and learning styles., "Technology on the Menu" (2023): This study came about how tools from artificial intelligence and educational data develop the most effective and attractive education curricula for fitness., Taking into account animals

for artificial intelligence in education evaluation" (2022): This environmental pollution has been solved by using artificial intelligence in unified education, such as university and student privacy. (2023) This topic discusses the future problem of artificial intelligence on both unified control and the development of educational curricula in comprehensive education. "Research Agenda" (2021): This study proposed a research agenda on the effectiveness of education programs based on artificial intelligence compared to traditional methods. In addition, Consider exploring resources from organizations such as the National Association for Sport Science and Education (NASPE) and the International Council on Fitness for the Science of Sport and Education (ICSSPE) to get their updates and perspectives on AI in education. Investigate case studies of schools or programs ranging from prototype solutions to artificial intelligence in pedagogy to standardized tests. The specific reference studies you choose depend on your research focus and your interests. Remember to evaluate lessons with all the results, special results, and careful reviews for informed results.

Study procedures: Field of study: Studying the mechanism of the standardized work test based on physical education curricula in the age of artificial intelligence, so that it is easy to measure student demand and master the new curriculum standards, teaching and pedagogical methodology, and master the levels of ambitions, review previous literature on the subject of the study, and that To determine the framework of consideration with which the study will begin, and to begin the experimentation phase by using the stages of follicular protein on research innovations from third-stage students at the College of Physical Education, Al-Mustaqbal University in Iraq, consisting of (30) students through the curricula subject used in teaching through the first part. From the study, the applied and step-by-step field was in the period from (1-1-2023/1-1-2024) in the rest of the College of Education and Sports Sciences during the future. Survey data and scientific studies were collected and statistical analysis was used in Rome to reach the results and discuss them. Reference scientific studies.

Educational rights and sports sciences are raised in many Brazilian abstracts. The abstract discusses the first comprehensive test of breeding equipment, which aims to improve test efficiency and increase space [3]. The second summary of the psychometric profit-taking of data surveys and uses of personal data for sports education at the summer airport. [4]. The third summary refers to various topics related to physiological functions, biomechanics, and physiology. [5]. The fourth summary provides an overview of the current situation of education and sports in Italy, including basic concepts and perspectives for new and secondary schools. [6]. The fifth summary explores the role of sport in combining complexes and its inclusion in school curricula Standard [7]. Quality in education has been conducted in various studies. One study is a dynamic teacher measurement tool that highlighted a national, valuable, and distinguished teacher based on gender com-

petency, grade, and work period. Another study used the [8]. PT-Graduation Questionnaire (PT-GQ) and comprehensive performance standards for teaching education, focusing on curriculum sectors consistent with accreditation standards. [9]. We conducted a study in India examining the cooperation of education teachers on seven criteria to recommend measuring the percentage of contributions to these communities [10]. A study compared the academic environment of special educa-

tion programs to medical education programs using the US Medical Colleges (GQ) DG Survey, [11]. In addition, the use of the Team Error Scoring System (BESS) test for physical fitness training, specifically for fifth-grade children [12]. These studies provide insights into the measurement of education programs, direct laboratories, and student experiences in these programs. Test form. Your test format will depend on your goals and expectations for the test.

**Table 1.** A questionnaire on model creation model in a large way (voluntary performance - actually amateur knowledge - applying lesson objectives in physical education).

Question	Grade (1-5)	Arithmetic mean	Elastic deflection	Importance ratio	Correlation ratio
Teaching skills					
Did the teacher provide instructions clearly and understandably?	5	3.9	0.7	0.8	
The teacher used a variety of teaching methods.	5	4.2	0.4	0.7	0.07
students with interaction teacher Effective?	5	4.4	0.2	0.6	
understanding and Knowledge					
Did the teacher demonstrate a good understanding of mathematical concepts?	5	4.6	0.3	0.7	
The teacher demonstrated a good understanding of mathematical skills.	5	4.8	0.2	0.6	0.07
The teacher demonstrated a good understanding of sports values and behaviors.	5	4.9	0.1	0.5	
student the with Interaction					
Encourage the teacher to discuss lessons.	5	4.7	0.3	0.7	
ideas useful provide teacher the Did?	5	5.0	0.0	0.5	0.07
Please respect and appreciate the teacher.	5	5.0	0.0	0.5	
knowledge student of understanding of Level					
What are the definitions of the following mathematical concepts?	4.8	0.3	0.7	0.7	
What are examples of the following mathematical concepts?	4.9	0.2	0.6	0.6	0.07
How do the following special mathematical concepts relate?	5.0	0.0	0.5	0.5	
skills mathematical of understanding and Knowledge					
What are the steps needed for the following mathematical skill?	4.7	0.3	0.7	0.6	
What is a common problem to address when performing the following sports skills?	4.8	0.2	0.6	0.5	0.07
How can the performance of the following sports skill be improved?	4.9	0.1	0.5	0.7	
behaviours and values sporting of understanding and Knowledge					
What are mathematical values?	4.9	0.2	0.6	0.7	
How can sports values be promoted in school?	5.0	0.0	0.5	0.6	0.07
behaviors sports positive are What?	5.0	0.0	0.5	0.5	
An application aimed at a lesson in physical education					
activities sports in Participation				0.7	

Question	Grade (1-5)	Arithmetic mean	Elastic deflection	Importance ratio	Correlation ratio
How involved is the student in mathematical sciences?	4.8	0.3	0.7	0.7	0.07
Does the student put enough effort into sports activities?	4.9	0.2	0.6	0.6	
Adhere to the required rules					
Does the student adhere to sports rules?	4.9	0.2	0.6	0.6	0.07
Does he respect students and administrators?	5.0	0.0	0.5	0.5	
Educational matters					
Student educational success of the lesson?	4.9	0.2	0.6	0.7	
What are the strengths and weaknesses of the student's performance?	4.8	0.3	0.7	0.5	0.07

## 4. Results

This was done through Table 1, Diagram (1) Consensus Agreement Diversity compatibility can be calculated using the following formula:  $t = (\sum (x - \bar{x})(y - \bar{y})) / (n * s_x * s_y)$  Where: t: Correlation fit elastic deflection of the first variable sy: elastic divergence of the second variable Driving results, the conclusion is the following: University activity: There is a strong relationship between teaching skills, knowledge and understanding, and interaction with the student Student level of understanding, knowledge and understanding of skills, knowledge and understanding of sporting values and behaviors, participation in sporting activities Commitment to the basic rules, educational issues for the lesson, where the harmonic correlation reached (0.07), which indicates that there is a strong correlation.

## 5. Discussion and Conclusions

University student performance: There is a strong relationship between teaching skills and interaction with students, with the average correlation reaching 0.8. This means that students who have well-skilled teachers are more likely to interact with many people in a positive manner, which may improve their level of understanding and knowledge. There is a strong correlation between knowledge, understanding, and interaction with students, with correlation agreement reaching 0.7. This means that perceivers who demonstrate good and good knowledge and understanding are more likely to interact with many positives, which may improve their level of understanding. This requires study [11, 13].

Students' level of understanding: There is a strong correlation between knowledge and understanding of mathematical concepts and knowledge and understanding of mathematical skills, as the level of cooperation reached 0.7. This means

that shiners who enjoy a good gift of knowledge and understanding of mathematical concepts are more likely to enjoy a good gift of knowledge and understanding of mathematical skills. There is a strong correlation between knowledge and understanding of mathematical concepts and understanding of mathematical values and behaviors, with the size of the correlation reaching 0.7. This means that shiners who enjoy knowledge and understanding of mathematical concepts are more likely to enjoy knowledge and a good understanding of mathematical values and behaviors. This means studying both [3, 6].

The application aims to target the objectives of the lesson in physical education: There is a strong correlation between the participants in their commitment to adhering to the required rules, as a correlation agreement of 0.7 was reached. This means that students who participate in the application are more likely y than others to adhere to the mathematical rules. There is a strong correlation between the various elements in the various sciences of the lesson, as a correlation agreement of 0.7 was reached. This means that the students who participate in the application are more than their number for the educational sessions of the lesson. This means studying both [7, 8, 10]. There is a strong correlation between most of the skills, knowledge, and behaviors measured in the study. This suggests that these skills, knowledge, and behaviors are specific to older adults and that participants who appear conservative in New York are more likely to have diverse skills, knowledge, and other behaviors. This is due to the following students who participated in the study and stand out well from performance in all like those who were measured.

To control the results, the following recommendations can be made:

- 1) Focus on developing teaching and interaction skills, as both are interconnected and interact effectively and understand the student.
- 2) Focus on developing knowledge and understanding of mathematical concepts, skills, values, and sporting be-

haviors, as these skills and knowledge are linked to the purpose of the lesson in physical education.

- 3) Developing new programs for scholars to improve teaching skills and interaction with students.
- 4) Developing an educational curriculum in physical education to develop skills, knowledge, and behaviors, making them represent the objectives of the lesson.

Conducting additional studies and other factors that may affect the level of graduates and their level of understanding and knowledge.

## Conflicts of Interest

The authors declare no conflicts of interest.

## References

- [1] L. H. Al-Diwan, "The Basics of Design Teaching curriculum of physical education" Vol. 1 st ed. Dar Al-Basaer for Printing and Publishing.  
<https://www.researchgate.net/publication/365704505>
- [2] L. H. Al-Dewan, "Building and the application of a measure to evaluate the curriculum volleyball according to the overall quality from the standpoint of the teaching staff standards" Journal of Studies and Researches.
- [3] Asim Ghazi, M., Marzouk Fathy Marzouk, A., Mohamed Abouelfadel, B. (2023). The Effect of Augmented Reality (AR) on Improving the Educational Process for Some Basic Skills in Physical Education. *International Journal of Intelligent Information Systems*, 12(3), 49-53.  
<https://doi.org/10.11648/j.ijiis.20231203.12>
- [4] M. C.-M.-O.-J Jesús, "An áñisis psicomátrico de la Physical Education Season Survey en estudiantes españoles de educaci3n secundaria". <https://doi.org/10.25115/PSYE.V10>
- [5] Mohammed Asim Ghazi. (2022). An Analytical Method for Evaluating the Performance of the URA MAWASHI GERI Skill Using Time Series and Artificial Intelligence Techniques. *American Journal of Artificial Intelligence*, 6(2), 31-35.  
<https://doi.org/10.11648/j.ajai.20220602.11>
- [6] T. Jānis, "The Place of Physical Education and Sport in Education. Educational Philosophy and Theory",  
<https://doi.org/10.1080/00131857.2013.799320>
- [7] S. B. Suroto, "Web-based instruments for national competences of physical education teachers". *Jurnal Cakrawala Pendidikan*,  
<https://doi.org/10.21831/cp.v4i1i3.48911>
- [8] D.-J. R. Shauna, "Benchmarking in Academic Physical Therapy Using the PT-GQ™ Survey: Wave 2 Update With Application to Accreditation Reporting".. *Physical Therapy*,  
<https://doi.org/10.1093/ptj/pzac067>
- [9] S. A. Kalpana, "Benchmarking in Physical Education Teacher Education Program. *International Journal of Education*",  
<https://doi.org/10.18488/JOURNAL.61/2016.4.11/61.11.262.267>.
- [10] K. S.-J. Richard, "Benchmarking the Physical Therapist Academic Environment to Understand the Student Experience".. *Physical Therapy*, <https://doi.org/10.1093/PTJ/PZY051>
- [11] M. E.-M.-M.-R. Claudia, "Validation of BESS (Balance Errors Scoring System) Test in Physical Education." *Journal of Sports Sciences*.
- [12] S. L. Lamia Hassan Al-Diwan, "The impact of the use of an educational curriculum in a cooperative (integrated and third stage". *Journal of Studies*.