



ASSESSING THE RELATIONSHIP BETWEEN MULTIPLE INTELLIGENCE LEVELS AND ACADEMIC PERFORMANCE IN PHYSICAL EDUCATION CLASSES IN SENIOR SECONDARY SCHOOLS

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ABSTRACT

This research paper aims to investigate the relationship between multiple intelligence levels and academic performance in physical education classes among senior secondary school students. The study examines how different intelligence profiles, as proposed by Howard Gardner's theory of multiple intelligences, may influence students' achievements in physical education. The research adopts a quantitative approach to gather data through intelligence assessments and academic performance evaluations. The findings will contribute to a better understanding of the role of multiple intelligences in physical education and provide insights into developing tailored instructional strategies for diverse learners.

Keywords: Multiple intelligences, Academic performance, Physical education, Senior secondary schools, Correlation.

I. INTRODUCTION

Physical education (PE) classes in senior secondary schools play a crucial role in promoting students' physical fitness, overall well-being, and cognitive development. While traditional academic subjects receive significant attention in educational research, the relationship between multiple intelligences and academic performance in PE classes remains relatively unexplored.

Howard Gardner's theory of multiple intelligences proposes that individuals possess a range of intelligences, including linguistic, logical-mathematical, spatial, bodily-kinesthetic, musical, interpersonal, intrapersonal, and naturalistic intelligences. This theory challenges the traditional notion of intelligence as a single, measurable factor and suggests that individuals may excel in different areas based on their unique intelligence profiles. Understanding how multiple

intelligences relate to academic performance in PE classes is essential for developing effective teaching strategies and creating inclusive learning environments. By recognizing and accommodating students' diverse intelligence profiles, educators can tailor instruction to maximize student engagement, motivation, and achievement in PE.

II. MULTIPLE INTELLIGENCE LEVELS IN PHYSICAL EDUCATION

Physical education encompasses various activities that can engage different types of intelligence. While the concept of multiple intelligences was proposed by Howard Gardner as a way to understand different cognitive abilities, it can also be applied to physical education to acknowledge the diverse ways in which individuals excel in physical activities.

Here are some examples of multiple intelligence levels in physical education:

1. **Bodily-Kinesthetic Intelligence:** This intelligence involves the ability to control one's body movements and handle physical tasks effectively. It is often associated with athletes, dancers, and individuals who excel in activities that require coordination, balance, agility, and motor skills.
2. **Spatial Intelligence:** Spatial intelligence refers to the ability to perceive and understand the physical space around oneself, as well as the ability to manipulate objects within that space. It is relevant in activities such as orienteering, gymnastics, and team sports where players need to understand and navigate through the environment.
3. **Interpersonal Intelligence:** Interpersonal intelligence relates to the ability to understand and interact effectively with others. In physical education, this intelligence is essential for team sports and cooperative activities, as it involves skills like communication, cooperation, leadership, and empathy.
4. **Intrapersonal Intelligence:** Intrapersonal intelligence involves self-reflection, self-awareness, and understanding one's own strengths, weaknesses, and goals. In physical education, individuals with high intrapersonal intelligence may excel in setting personal fitness goals, managing their own training routines, and adapting their approach to physical activities based on self-assessment.
5. **Naturalistic Intelligence:** Naturalistic intelligence is the ability to understand and interact with the natural world. In physical education, this intelligence may be relevant in outdoor activities like hiking, camping, or ecological explorations that involve an appreciation and understanding of the natural environment.
6. **Musical Intelligence:** Although primarily associated with auditory skills, musical intelligence can also be applied to physical education. It involves the ability to perceive

and reproduce rhythms, timing, and patterns, which can be relevant in activities like dance, synchronized swimming, or rhythmic gymnastics.

7. **Logical-Mathematical Intelligence:** While predominantly associated with problem-solving and logical reasoning, logical-mathematical intelligence can be applicable in physical education through activities that require strategy, tactics, and analysis. This includes sports like chessboxing or sports that involve complex decision-making based on mathematical calculations, such as archery or shooting.

It's important to note that individuals may possess a combination of these intelligences and can excel in different areas of physical education. Embracing and accommodating diverse intelligence levels can create an inclusive and engaging learning environment that caters to the strengths and preferences of all students.

III. ACADEMIC PERFORMANCE IN PHYSICAL EDUCATION

Physical education (PE) is an essential component of the educational curriculum, aiming to promote physical fitness, motor skills development, social interaction, and overall well-being. While academic performance is often associated with traditional academic subjects, it is equally important to assess and understand students' academic performance in the context of physical education.

1. ACADEMIC PERFORMANCE IN PHYSICAL EDUCATION:

Academic performance in PE refers to the demonstration of knowledge, skills, and competencies related to physical education content and objectives. It involves the assessment of students' understanding, application, and performance in various aspects of PE, such as sports skills, fitness assessments, knowledge of rules and strategies, teamwork, and overall participation.

2. FACTORS AFFECTING ACADEMIC PERFORMANCE IN PHYSICAL EDUCATION:

Several factors can influence students' academic performance in PE classes. These factors may include:

a. Physical Fitness Levels: Students with higher levels of physical fitness may demonstrate better performance in PE activities and assessments. Physical fitness components, such as cardiovascular endurance, muscular strength, flexibility, and body composition, can significantly impact students' abilities to engage in physical activities and achieve desired outcomes.

b. Motor Skills Development: Proficiency in fundamental motor skills, including locomotor skills (e.g., running, jumping) and object control skills (e.g., throwing, catching), can contribute to

students' performance in PE. Developing and refining these skills through practice and instruction can enhance students' overall performance and enjoyment of physical activities.

c. Interest and Motivation: Students' interest and motivation levels play a vital role in their engagement and performance in PE. Positive attitudes, enjoyment of physical activities, and intrinsic motivation can lead to increased effort and commitment, ultimately influencing academic achievement in PE.

d. Self-Efficacy and Self-Perception: Students' belief in their own abilities (self-efficacy) and their perception of their competence in physical activities can impact their performance. Students with higher self-efficacy and positive self-perception are more likely to exert effort, persist, and perform well in PE.

e. Teaching Strategies and Instructional Approaches: The teaching strategies and instructional approaches employed by educators in PE classes can significantly influence students' academic performance. Varied and inclusive instructional practices that address different learning styles, provide appropriate feedback, and promote skill development can positively impact student outcomes.

3. ASSESSMENT OF ACADEMIC PERFORMANCE IN PHYSICAL EDUCATION:

Assessment of academic performance in PE involves a combination of formative and summative evaluation methods. These may include skill tests, fitness assessments, written assignments, peer and self-assessment, teacher observations, and participation evaluations. Assessments in PE should align with the specific learning objectives, address different intelligences, and consider individual student strengths and areas for improvement.

Understanding the factors influencing academic performance in PE and employing effective assessment strategies can help educators and policymakers enhance the quality of physical education programs, promote student engagement, and support overall academic success.

IV. RELATIONSHIP BETWEEN MULTIPLE INTELLIGENCE LEVELS AND ACADEMIC PERFORMANCE IN PHYSICAL EDUCATION CLASSES IN SENIOR SECONDARY SCHOOLS

The relationship between multiple intelligence levels and academic performance in physical education (PE) classes in senior secondary schools is a topic of interest that aims to explore how different intelligences may impact students' academic achievement in the context of PE. The theory of multiple intelligences, proposed by Howard Gardner, suggests that individuals possess a variety of intelligences, each representing different abilities and strengths.

1. Identifying Multiple Intelligence Profiles:

To assess the relationship between multiple intelligence levels and academic performance in PE, it is essential to identify the predominant intelligence profiles among senior secondary school students. This can be done by administering appropriate intelligence assessment tools or surveys that measure various intelligences outlined by Gardner, such as linguistic, logical-mathematical, spatial, bodily-kinesthetic, musical, interpersonal, intrapersonal, and naturalistic intelligences.

2. Correlation Analysis:

Once the intelligence profiles of the students are identified, statistical correlation analysis can be conducted to determine the relationship between these intelligence levels and academic performance in PE. This analysis involves examining the extent to which different intelligences are associated with students' performance outcomes in PE classes.

3. Academic Performance Indicators in PE:

Academic performance indicators in PE can include various aspects, such as skill proficiency, fitness levels, understanding of sports concepts and strategies, teamwork, participation, and overall engagement in PE activities. These indicators can be measured using a combination of quantitative and qualitative assessment methods, including skill tests, fitness assessments, written assignments, teacher observations, and peer evaluations.

4. Interpreting the Findings:

The findings from the correlation analysis can provide insights into the relationship between specific intelligences and academic performance in PE. For example, it may reveal that students with higher bodily-kinesthetic intelligence exhibit better skill proficiency or that those with higher interpersonal intelligence demonstrate stronger teamwork abilities. These findings can help educators and policymakers understand how different intelligence profiles contribute to academic success in PE classes.

5. Implications and Application:

The results of the study can have important implications for instructional practices and curriculum development in PE classes. Educators can use this information to design teaching strategies and learning activities that cater to students' diverse intelligence profiles, promoting active engagement and enhancing academic performance. For instance, incorporating a variety of instructional methods, such as visual aids for spatial learners or cooperative group work for interpersonal learners, can optimize learning experiences and outcomes.

6. Limitations and Future Research:

It is important to acknowledge the limitations of the study, such as the sample size, potential biases in intelligence assessments, and the complexity of measuring academic performance in PE. Future research can focus on addressing these limitations and exploring additional factors that may influence the relationship between multiple intelligence levels and academic performance in PE, such as self-regulation skills, cultural factors, or the role of technology in PE instruction.

By assessing the relationship between multiple intelligence levels and academic performance in PE classes, this research can contribute to a more comprehensive understanding of how individual differences in intelligence profiles impact students' success in physical education, thereby informing educational practices and supporting the holistic development of students in senior secondary schools.

V. CONCLUSION

In conclusion, assessing the relationship between multiple intelligence levels and academic performance in physical education (PE) classes in senior secondary schools provides valuable insights into the impact of diverse intelligences on students' achievements in the PE domain. By considering the theory of multiple intelligences proposed by Howard Gardner, educators and policymakers can develop strategies that cater to students' unique intelligence profiles, enhancing their academic performance and overall engagement in PE.

Through the identification of predominant intelligence profiles among senior secondary school students, educators can gain a better understanding of their students' strengths and areas for improvement. This knowledge enables the design of instructional approaches and learning activities that align with different intelligences, fostering a more inclusive and effective learning environment. The correlation analysis conducted between intelligence levels and academic performance in PE reveals the extent to which specific intelligences contribute to students' success. These findings allow educators to tailor their teaching methods and provide targeted support to students who may benefit from a particular approach. For instance, incorporating bodily-kinesthetic activities for students with high bodily-kinesthetic intelligence or promoting collaborative projects for those with strong interpersonal intelligence can maximize student engagement and achievement. The implications of this research extend to curriculum development, as it highlights the importance of incorporating a variety of learning experiences that address different intelligences within the PE curriculum. By doing so, educators can promote a well-rounded approach to physical education that recognizes and nurtures students' diverse strengths and abilities. It is important to acknowledge the limitations of this research, such as sample size constraints and the complexity of assessing academic performance in PE. Further research is needed to address these limitations and explore additional factors that may influence the relationship between multiple intelligence levels and academic performance in PE.

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