Interdisciplinary Integrated Physical Education Program Using a Philosophical Approach

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Abstract—The purpose of this presentation is to describe an interdisciplinary teaching program that integrates physical education concepts using a philosophical approach. The presentation includes a review of: a) the philosophy of American education, b) the philosophy of sports and physical education, c) the interdisciplinary physical education program, d) professional development programs, (e) the Success of this physical education program, f) future of physical education. This unique interdisciplinary program has been implemented in an urban school physical education discipline in East Orange, New Jersey for over 10 years.

During the program the students realize that the bodies go through different experiences. The body becomes a place where a child can recognize in an enjoyable way to express and perceive particular feelings or mental states. Children may distinguish themselves to have high abilities in the social or other domains but low abilities in the field of athletics.

The goal of this program for the individuals is to discover new skills, develop and demonstrate age appropriate mastery level at different tasks, therefore the program consists of 9 to 12 sports, including many game. Each successful experience increases the awareness ability. Engaging in sports and physical activities are social movements involving groups of children in situations such as teams, friends, and recreational settings, which serve as a primary socializing agent for teaching interpersonal skills. As a result of this presentation the audience will reflect and explore how to structure a physical education program to integrate interdisciplinary subjects with philosophical concepts.

Keywords—Interdisciplinary disciplines, philosophical concepts, physical education.

I. INTRODUCTION

THE demands of the education field have been changed tremendously and these changes affect educators directly. Therefore the educators should be directed to create programs, carry out research, develop the models and lead students in an environment of learning. The current teaching environment in schools should include the students across the disciplinary range and needs to require the discussions of different views. These dialogues will strength the students’ reasoning and moral judgment. In such setting, students are capable of solving problems while inspiring hope and values of the independent thinking in a democratic society. One aim of philosophy is the pursuit of happiness; therefore a concern with the body movements necessitates philosophical attention. The other aim of philosophy is self-knowledge which could translate to knowledge of the body in forms of movements.

Through the understanding of the body and mind, a person can acknowledge the ability to act physically.

In a program which integrates philosophical concepts in a physical education class; the gymnasium becomes a learning community where a series of interdisciplinary tasks including literacy, math, social studies, health and science as well as technology, in forms of movements are taught. The interdisciplinary community of inquiry is used in instructions to strategize active engagement. In several studies, [1]-[3] it is indicated that when teachers place children in games and other situations where they are not able to succeed, in addition to not learning the skill being taught, they are likely to develop poor attitudes toward physical education and physical activity.

In a small measure, this paper is intended to reflect on interdisciplinary integrated physical education program using a philosophical approach.

II. PHILOSOPHY OF AMERICAN EDUCATION

Throughout the history, philosophers have struggled with understanding of countless problems surrounding the education. Historically, many early childhood educators supported the idea that children should be trained as soon as possible to become productive members of the larger society so that the cultural heritage of the society could be preserved from generation to generation; this cultural imposition theory has been prevalent throughout the educational history of the world [4]. Parents provide the first and the most consistent educational influence in a child’s life and the first experiences occur within the family unit. The child is already familiar with the home environment as well as the occupations carried out within this setting before stepping a foot to school.

The philosophy of education has been modified as the atmosphere of schooling is changed. The trend of thoughts from Plato, Rousseau, Dewey, and Lipman to other contemporary educators shows the increasing recognition of the freedom, democracy and contentment of children while decreasing the role of pain and punishment. Education has been defined in various ways. In the Meno, Plato settles for the idea that education is a gift to fortunate people. Socrates’ points out that nature must be integrated with dialectical practices which are learning and practicing, however it cannot stand as a complete education. In Greek philosophy knowledge is within a person at birth, virtue is true opinion which comes through divine privilege or luck.

The distinction between the material and the spiritual world pervades almost the entire Greek philosophy. Rousseau took advantage of this idea and produced Émille, which assumes that all education needs to be the development of 'nature'. In
the work of Emile, education is conceived as a negative but protective process. The impact of Rousseau’s ideas upon educational theory and practices are undeniable. Rousseau's appreciation of the wonders of nature and the stress on the importance of feeling and emotion made him an important influence on and anticipator of the Romantic Movement [5]. This leads to an education based upon principles of human nature. In a study Godeleck (2013) indicated, “Since, in the humanistic philosophy of Rousseau, human nature is not preprogrammed and there does not exist a single natural or social program that could compass a human being, each human being is free, who moves forward towards uncertainty and who has never been preprogrammed by the determinants related to race or gender” [6].

Neither nature nor education was saved when Rousseau came to inform the world in details, nevertheless the purpose was thoroughly defined. Emile gives the impression of public education but then the dialogue is primly an image of private education, which is the real theme of the book. An American educator and philosopher, John Dewey believed that educational thought should be involving minimum of discipline and work. This system is able to always concentrate on a child to be creative, free, and happy. The idea is to emphasize on a social format in which the natural desire can be mainly fulfilled. According to Dewey in early education the child should work and study cooperatively in order to learn how the community of life is continued as well as how it revolutionized through the common efforts of humans [7]. The moral forces in the child, in the school community, and in a larger society lead into the expansion of what Dewey considers the only practical type of morality. Plato did not look at education as a human right and reserved it only for those gifted individuals, whereas Rousseau believed in natural education, but Dewey believed in education as a tool for democracy.

Lipman’s idea which was built upon the recommendations of John Dewey and a Russian educator named ‘Lev Vygotsky’ (1972) emphasized that it is not enough for children simply to remember what has been said but also to examine and analyze the materials. A thinking process is what children learn about the world but students must reason on why and what is taught in school. The nature and purpose of public education should provide opportunities for everyone to examine the strength in any subject. American public education has come a long way to develop a democratic system that grants every individual a chance to express educationally. The discipline of education is to establish and propose values for individuals. In an educational system the presence of promoting the character should be presented by supporting society. Everyone should have access to education and the purpose of education must a human right. Keenan (2007) says, “…all human beings have the ability to learn. Learning is a process that occurs in an interpersonal context and is dynamically comprised of factors that include motivation, attitude, cognition, affect, and self-regard” [8].

The traditional American philosophy reflects on ideas, values and ethical practices. With respect to this tradition, nature and purpose of educational philosophy needs to focus on ability to think of children in a productive process. This way, children become prepared for a meaningful participation in society. The Sample philosophy (2010) reads, “Part of teachers responsibility is to provide students with the background knowledge needed to solve problems, but educators should also help students build confidence in their ability to use the things that they have learned to tackle difficult, ill-defined ‘real world’ problems” [9].

The relationship of American philosophy to educational philosophy starts from philosophical development of education. Sharp (2010) stated, “It is through education that philosophy can bring about a change of emotional and intellectual dispositions to prepare the next generation to think and act differently in their daily lives in light of new, broader and more satisfying conceptions of existence”[10]. The aim of public education should blends in with improving the children’s thinking and continuous of ‘wonder’ in their world. The education needs to be able to drag traditional philosophy from theory and utilize it to create children’s thinking without losing the ‘wonder’. In a society children need to learn adaptation to changing conditions such as multiculturalism. Accurate decisions and correct judgments do not exist without provided educational opportunities. An educational system which is efficient, rational and accountable is capable of managing the development of children’s thinking. Plato and Rousseau both influenced the philosophy of education in the United States but it was not until Dewey when approaches to improve critical and appreciative thinking to promote humanity were established.

In teaching trend of thoughts should offer an arena for the linkage of philosophical, psychological and educational concepts. Educators who desire to improve the knowledge of the students can utilize this ground. The students’ ability to think in a productive manner and the relationship between critical thinking and the aim of democracy need to be teacher’s goal. Teachers need to realize that critical and appreciative reflections about ideas, values and practices should be promoted by encouraging and allocating ideas.

Educators essentially are to create programs which advocate an educational system which promotes development of knowledge, decision making investigation of pedagogical reflections on pedagogy and subject matter. The change will occur when the educators exchange ideas with colleagues to close the links between theory and practice. The students can discover ways in which schooling offers opportunities for moral and ethical inquiry. Expansion of pedagogical obligations is another scope which could be beneficial to students. The most important mission of an educator is to prepare students for meaningful participation in the society.

III. PHILOSOPHY OF SPORTS AND PHYSICAL EDUCATION

Prior to 20th century, there is almost no work focusing on philosophical issues of sports and physical education. During the sixties academics became interested in this subject and in 1972 "…Philosophical Society for the Study of Sport formally
The competitive nature of sport is undeniable. Teachers of elementary schools, emphasize on cooperation however the competitive nature of sport appears sometimes before the middle school as children become part of a bigger world which is competitive. Sports are a place where one’s ethical values are exhibited, tested and learned. Most sports follow two basic structures; the intense involvement of body physically and intellectually. This intense involvement leads the individuals to whole person due to body and mind relationship, but merges with competitive situation where winning matters. Temptations are grabbed by opportunities such as; usage of Human Growth Hormones, intentionally injuring the opponent, intimidating toward the opponent when the referees are not watching, cheating or lying. This is where children need to be trained to take ethical stands consciously. When children are taught ethical fundamentals such as; fair play, teamwork and sportsmanship it is possible to exhibit ethical standpoint later on in life.

2. Sportsmanship:

Albert Camus, who was an outstanding soccer player in his youth and a Nobel Prize winner for literature in 1957, once said, "I learned all I know about ethics through soccer" [12]. Children need to investigate the moral theory which occupies sports. The gymnasium should be similar to a life task where a child needs to take responsibility. Eventually a child will experience unfair, inappropriate and disposition, but there is the experience of struggle for victory under the sportsmanship spirit which is honorable. Physical education teachers should train children to feel joy of victory by fairness. As the result, children will learn qualities such as; self control, avoiding aggression, ethics, and respect to keep soul and mind admirable. At a time when sportsmanship is taught, this moral quality will be firmly fixed with children all the way to adulthood.

3. Gender Equality:

Equality as a social justice issue is among the most intellectually challenges. Promoting social justice and equality among biological diverse groups apply beyond sports. The value of sports for females should start before elementary school education. All games and sports at school need to be co-educational, therefore both sexes can benefit from the participation. The little girls should understand and consider the great areas of athletic opportunities. Athletes of all kinds face difficult challenges in sport; however gender equality should not be one to confront the situation.

IV. EAST ORANGE SCHOOL DISTRICT, NEW JERSEY, UNITED STATES

East Orange is a city located in Essex County, NJ and approximately fifteen miles away from midtown Manhattan, New York and eight miles far from Liberty International Airport in Newark, New Jersey. The city has a total of almost four square miles sitting on flat land. The population of this town is about 70,000 with 90% black or African American, 5% Hispanic, 3% white and very small numbers of Asians and Native American.

The median household income of a family is $40,348 which 19.4% of population lives below poverty level. East Orange has 88.5% blacks, African-Americans and 7.9% Hispanic or
Latino based on 2010 survey [13]. This town has offered many celebrity residents and among the most famous ones are: Jamal Anderson an NFL running back, Athea Gibson a tennis player who died in East Orange in 2003, Brian Hill a former coach of Orlando Magic, Whitney Houston a singer and actress, Jared Johnson an NFL player, Queen Latifah a rapper and actress, Dionne Warwick a singer, Tate George an NBA player and many more.

East Orange School District is a comprehensive community public school district with 11,989 students serving from Pre-K to 12th grade. The district is one of 31 Abbott districts in New Jersey and was classified by the New Jersey State Department of Education as one of the lowest socioeconomic groups. About 900 teachers serve in 21 public schools.

The East Orange physical education curriculum was revised and re-written in the summer of 2012 to reflect the aims of this program. The focus of the guide is to utilize the best practice while integrating the New Jersey Common Core Standards. These standards are:

Health Standards:
- Wellness: All students will acquire health promotion concepts and skills to support a healthy, active lifestyle.
- Integrated Skills: All students will develop and use personal and interpersonal skills to support a healthy, active lifestyle.
- Drugs and Medicines: All students will acquire knowledge about alcohol, tobacco, other drugs, and medicines and apply these concepts to support a healthy, active lifestyle.
- Human Relationships and Sexuality: All students will acquire knowledge about the physical, emotional, and social aspects of human relationships and sexuality and apply these concepts to support a healthy, active lifestyle.

Physical Education Standards:
- Motor Skill Development: All students will utilize safe, efficient, and effective movement to develop and maintain a healthy, active lifestyle.
- Fitness: All students will apply health-related and skill-related fitness concepts and skills to develop and maintain a healthy, active lifestyle. The goal is to assure that the elementary physical education teachers will be able to provide every child with proper knowledge. Students are informed in several areas such as; current health issues, maintaining a healthy lifestyle, components of health and skill related fitness, and appropriate techniques used in sports.

V. DIONNE WARWICK INSTITUTE OF ECONOMIC AND ENTREPRENEURSHIP

Dionne Warwick Institute of Economics and Entrepreneurship is an elementary school serving students from Pre-K to 5th grade. In May of 1998 this school was one of the ten schools in state of New Jersey to be recognized as the “Star School” by New Jersey State Department of Education [14]. On December 1, 2003 the National Center of Education and the Economy of Washington, DC selected Dionne Warwick School as a National Model School for the Whole School Reform model [15]. This award and ranking was given to Dionne Warwick elementary in recognition of the school’s high level of implementation of the design and the tests results in literacy and math. The National Model School of “America’s Choice” had over 500 schools in the United States at the time and only 12 have been designated as national models “In 2008, Dionne Warwick Institute was one of the two schools, in the state of New Jersey recognized as the national Title I Distinguished School” [16].

This school is named after Dionne Warwick the great American singer and entrepreneur who attended elementary school at this site and still pays visits. In such environment administrators and teachers effectively operate to continue the achievement of students. Schlechty (2001) stated: “Discussions of good schools and bad schools generally center on the degree of success schools have in producing students who meet some explicitly stated or tacitly implied learning standards” [17].

Physical education at Dionne Warwick elementary has a unique curriculum. This program works around different centers and addresses three learning fundamentals; visualization, auditory and kinetics. The curriculum is inspired by America’s Choice model. America’s Choice was established in 1988 and has been offering, “…educational standards movement in the U.S., and the America’s Choice program has become a premier provider of comprehensive school and instructional design services, technical assistance and teacher professional development” [18]. However the school does not pursue the model any longer but many strategies are exploited by the teachers and administrators:

1. Literacy Center:

Upon arrival students perform a series of cardio respiratory movements. Following the completion, students gather at this center to read and learn the month, year, and the important current events of the month and/or the week. All the information is written on the board. An activity related to the current events is explained and students will perform the movements in a game related form. Upon completion of the activities which covers New Jersey Standard 2.6, students gather at the literacy center following the direction of the teacher. The word wall at this center will provide the students an opportunity to visually observe how sports and skills are written. This segment covers New Jersey Standard 2.5. History and rules are also written and discussed at this center. By reinforcing literacy in physical education students get ready to strengthen this ability. The literacy will not stop at this center, periodically during the year; children will make their bodies into shape of different letters, words and sentences. The notion of physical literacy is comparatively new in the United States and it has been around for about 40 years. Whitehead (2001), a philosopher by training, has spent most of the last 30 years looking to define physical literacy and its impact on the philosophical concept of physical literacy in the extensive body of work which defines literacy.
in terms of; 1) physical competencies, 2) the ability to read and respond to the environment and to others in interaction, 3) the ability to use the body as an instrument of expression/communication, and 4) the ability to articulate/demonstrate knowledge, skills and understanding of health [19].

2. Math Center:
This center is used at different times throughout the year. The main purpose is to teach geometry shapes and times-table within physical education program. Posters of different geometric shapes are installed on the wall to show students how each shape appears. Children will make the bodies into different geometric shapes either individually or in a group. Sporadically students in grades 3, 4, and 5 utilize the times-table to complete the cardiorespiratory movements such as jumping-jacks. This exercise is utilized customarily during the months of March, April and May before the New Jersey Standardized testing. Of course math education does not end at this center. All throughout the year foundations of mathematics is studied by children through the basic mathematical concepts which are number, geometrical figure, set, and function through physical activities. The aim of the philosophy of mathematics is to provide and to understand the place of mathematics in people's lives. This center and activities offer children to appreciate the use of math in sports and daily life.

3. Health and Science Center:
Students study human body systems, dental health and hygiene, nutrition, disease prevention, and general health at this center through posters, pictures, skeleton, books and other related objects. After completion of the instruction a physical based performance which relates to the discussion will follow. This center is used during the month of October due to breast cancer awareness, Lance Armstrong Day and Children’s Health Day, and in February due to Children’s Dental Month as well as in March as it is National Nutrition Month. Healthcare is a neglected area in the US society especially within the inner city communities. By offering the students the philosophy of healthcare which constitutes the maintenance of health for human beings, children are able to discover the dieses prevention behaviors. Health has been understood as the foundational necessary for civilization and public life.

4. Social Studies Center:
Children will study many aspects of social sciences such as; history, geography, and social changes within the respected week throughout the year. Students will be engaged in physical activities after the study is completed and activities are explained. Countries, cities, celebrations, holidays and people are discussed at this center with conjunction of literacy center. At this age children will become familiar with the basic philosophy of social sciences through differences and similarities between the social structures.

5. Technology Center:
Music, DVD and video libraries are housed at this center. Music: Different music is played during activities. The music is the month’s theme related, for example during the month of September, Spanish music or songs performed by Spanish singers will be played due to Hispanic Heritage Month. Children listen to variety of music from Mozart, R&B in addition to songs from different countries while demonstrating skills, games or cardiorespiratory movements.

Philosophy of music is the study of fundamental questions regarding music such as; the relationship between music and the mind, musical history which reveals the connection between music and emotions. More often students perform different dances with the music. These dances are included but not limited to; Irish Jig, Russian Kalinka, Persian, ballet, and modern.

Videos & DVDs: Children gather here at the end of each lesson and before leaving the gymnasium. Students watch a few minutes of training videos or professional athletes performing the sports/skills which were just completed. At the center, generally questions are asked, skills are explained through the videos and DVDs, students are asked to share the funding and ideas with each other and then with the class.

In all the centers children are constantly engaged in community of inquiry either through verbal or non-verbal communications. Taken Lipman’s concept into the account gymnasium becomes a community of inquiry, which leads to questioning, reasoning, connecting, deliberating, challenging, and developing problem-solving techniques [20]. Children are strongly prohibited from criticizing peers but rather encouraged to assist with the movements.

In this program students are able to realize that the bodies go through experiences and become a place where a human can learn to express and distinguish drive. Training professionals, gymnasium visitations, mentoring programs for recent physical education teachers are all approaches to create an effective program. Nevertheless, not always, Dionne Warwick institute did provide a solid physical education record. At times the program lacked discipline, students’ involvement, current events and philosophical concept as well as lack of social relationship and effectiveness. The administration called upon a physical education teacher who was able to build an enriched program. This program established strong philosophical concepts which were added gradually.

Physical education teachers must view the gymnasium as a learning community to employ the program. Assumptions should be tested rather than solutions to be handed out. When the spirit of inquiry infuses to the daily routine, gymnasiums are on the way to become true learning environment.

VI. PROFESSIONAL DEVELOPMENT
Improving physical education teachers’ qualifications, professional development training as well as conducting and implementing a program which is inclusive in all aspects are part of the district’s focus. A teacher training should take place as an essential means toward philosophical enlighten. All teachers in the state of New Jersey are required to complete 20 hours of professional development per year.
Teachers of physical education attend minimum of five professional developments per year designed by the district and some teachers will reach out to out of district sessions. The professional development committee consists of physical education teachers and the Director of Elementary and Secondary Education. The plans are typically implemented in the month of June for the following year. This concept assists the teachers to be involved in achieving goals at various performance levels. Walker (2001) stated, “It (collaborative learning) emphasizes activities that encourage systems thinking, joint learning, open communication, constructive conflict management, and a focus on appropriate change” [21].

The aim is to inform teachers on the latest models to continue search for effectiveness of the educational programs and look at particular procedures or approaches to conduct successful agendas. The scale to which the staff development is aligned to the strategies of student achievement determines whether the areas of improvement were identified.

VII. THE SUCCESS OF THIS PHYSICAL EDUCATION PROGRAM
This integral program caters to all children of all skill levels. The entire student body will participate in this sequential, differentiated program that meets at each student’s personal health and fitness level. Social skills which include but are not limited to cooperation, communication, respect, sportsmanship and team work with appropriate values of driven education are important aspects of the curriculum. Through the philosophical approaches diverse opportunities to engage in physical activities necessary to support a healthy mind and body committed to development of a positive attitude is reinforced.

The physical educators teach motor skills within games and sports as well as developing belief in importance of fitness, fairness and ethics, exhibition of sportsmanship, motivation, cooperation and citizenship. In order to foster personal growth to meet the challenges of the society, physical education teachers have a unique responsibility to expand certain personal and social qualities and to guide students toward an active and healthy lifestyle. Certain programs such as NFL Play 60 and Let’s Move by Michelle Obama are part of fight against sedentary lifestyle.

The state of New Jersey educational consultants, East Orange supervisors and Dionne Warwick administrators all have been visiting the gymnasium periodically and the entire body have spoken on its success. In response to this curriculum Wangberg (2011) who was the 41st Lieutenant Governor of Minnesota and currently a college professor once said: “…rather unusual approach to try to combine physical education matters with classical philosophy of education… This does sound like a most innovative program set in a highly challenging milieu” [22].

VIII. FUTURE OF PHYSICAL EDUCATION
The future of physical education must be dominated by particular leaders and educators who grasp the philosophical foundation of education. To achieve powerful action and make schools prosper, physical educators must first understand the tremendous social shifts and technological changes they are confronting and the expectations these conditions impose them [23]. Educators are required to be prepared for taking any drastic changes and physical educators are no exception. No major invention or shift on transition has taken place without struggle. Physical educators have an obligation to teach moral and ethical principles such as; values, honestly, integrity and fair play.

Research and practice confirm that there is a slim chance of creating and sustaining high-quality learning environment without a skilled and committed leader to help shape teaching and learning [24]. Under the strong leadership and support of the faculty for change many transformations take place. If the education foundation supports a range of efforts to strengthen leadership, teachers and students can improve learning to be engaged in a healthy lifestyle. Well designed program which is mentioned here could be a powerful and constructive way to strengthen learning through integration and repetition. This important fact was recognized by the leaders and the teacher of physical education at Dionne Warwick Institute of Economics and Entrepreneurship and the result was a well established interdisciplinary integrated physical education program using a philosophical approach at an elementary school in an urban district.

REFERENCES
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