Physical Education, Innovation and Development of Virtual teaching as future option of teaching-learning in new normal

Dr. Kishore Mukhopadhyay

Associate Professor In Physical Education
Union Christian Training College,
Berhampore, Murshidabad, West Bengal, India.

***Abstract*: The outbreak of COVID-19 affected all aspects of human activities globally ranging from education, research, sports, entertainment, transportation, worship, social gathering/interactions, economy, businesses, and politics. Indeed, the entire world was in distress as a result of COVID-19 threats, the reality of the situation was challenging to bear, and the education sector remains one of the worst-hit by the Coronavirus outbreak. It has been suggested in the recent past that OLPE courses offered to secondary students are not real PE and do not meet the standards for authentic PE instruction. When scrutinized, it does seem far fetched that a student would learn about being physically active and physically literate while sedentary in front of a computer screen. This evaluation has led to the view of OLPE as an oxymoron and has created a divide over the viability of this mode of learning in the development of physically literate and active youth. Blending the synchronous and asynchronous method and applying the Flipped principle the physical education classes can be conducted in a virtual wey.**

***Keywords*: Physical Education, Innovation, Virtual teaching and New Normal.**

INTRODUCTION :

The recent outbreak of the Coronavirus pandemic increased the gaps in the education sector globally. Though, the Coronavirus pandemic is novel, but it already has noxious effects on humanity. COVID-19 outbreak has created educational disruptions, and global health concerns that proved very difficult to manage by global health systems. As at now, no nation or race across the world is immune from the coronavirus pandemic, and the entire world seems overwhelmed by the speed of the spread and the devastating effects of COVID-19. The coronavirus pandemic has no boundaries, and the effect is large and fast. Just within few months of the outbreak of the disease, it has drastically changed the lifestyles of the entire world with billions of people being forced to 'stay at home', 'observe self isolations', and work and learn from home. It has limited the freedom of people to move, trade or associate. Not only has COVID-19 caused a total lockdowns in many countries across the world, but it also caused the death of thousands of people including, women, and the elderly. It was more worrisome to know that reports from various continents, including, America, Africa, Asia, and Europe indicated a daily increase in the number of new cases, and mortality due to COVID-19. As at April, 2020, the number of global COVID-19 cases has surpassed one million cases and more than 220 thousand deaths. It was also frightening that the USA recorded more than 2000 COVID-19 deaths in a single day despite the country's strong commitment to the fight against the contagion. The number of Coronavirus deaths was soaring with no immediate solutions in sight. The disease showed no sign of slowing down across the globe. The COVID-19 outbreak triggered the President of the United States, President Trump to invoke the "Defense Production Act". The government also issued a national emergency as a result of the growing number of new cases of Coronavirus in the country. The U.S government also negotiated with the parliament to approve more than 2 trillion US dollars stimulus package to combat the Coronavirus pandemic, and to provide some reliefs to citizens and businesses affected by the Coronavirus outbreak. Similar actions were also replicated in many other countries including, Germany where 810 billion US dollars were also set aside to contain the effects of the pandemic, yet the virus rapidly spread to many parts of the world (1).

The outbreak of Coronavirus negatively affected educational activities worldwide. The coronavirus pandemic affected educational systems worldwide, leading to the widespread closures of schools (Wikipedia, 2020b). It created serious disruptions in academic activities, as well as in career plans. As part of the global efforts to combat COVID-19, many countries across the world closed down schools in an attempt to contain the coronavirus pandemic. According to the United Nations Educational, Scientific and Cultural Organization (UNESCO) monitoring, over 100 countries implemented nationwide closures, impacting over half of the world's student population (UNESCO, 2020a). Even Britain, where Prime Minister Boris Johnson - one of those who earlier opposed the move, later admitted that "closing down schools could place further downward pressure on the upward curve of the Coronavirus outbreak"(ABC News, 2020). Some of the countries that closed down schools due to COVID-19 include, Nigeria, Ghana, Senegal, South Africa, China, Kazakhstan, Ethiopia, Honduras, India, Japan, Iran, USA, France, Spain, Italy, North and South Korea, Lebanon, Vietnam, Thailand, Germany, and South Korea just to mention but a few. School closures carry high social, educational and economic costs, and the disruptions they cause touch people across communities, but their impact is particularly severe for disadvantaged persons and their families (UNESCO, 2020b). The disruption caused by COVID-19 in the educational sector may last longer than expected if a more reliable solution for coronavirus is not found on time, and the spread of the disease continues. UNESCO Director-General, Andrey Azoulayals cited by VOA News (2020), warned that "the global scale and speed of

the educational disruption due to coronavirus is unparalleled and, if prolonged, could threaten the right to education". No doubts, unplanned school closures can cause severe problems for students, educators, parents and the society at large. It could negatively affect the academic interest and performance of students. If the students are not engaged productively, it could lead to idleness which might result in youth involvement in crimes, loss of interest in learning, and poor academic performance. The US Centre for Disease Prevention and Control (CDC) also expressed concerns about the implications of school closures. According to the CDC, "longer closures may result in more students congregating outside of schools. It can affect the quality of teaching and learning and academic achievement particularly for students with special needs or those with learning difficulties that often requires more physical attention and guidance from the teachers. Though, technology can be used to remedy some of the fallouts from school closures, but it cannot replace the important effect of face-to-face interactions by students and teachers. Besides, many students do not have the necessary access to supportive technologies which makes it harder to maximize the potentials of learning technology during school closures. However, against all odds, mathematical model and empirical analysis of reactive closures of schools in past pandemics indicates that it reduces the total number of cases in the community by 25 percent and postpones the peak of the pandemic by a week or two, while proactive closures of school during pandemics remains one of the most beneficial interventions that can be employed to mitigate the impact of epidemic disease (3).

Several researches were held to substantiate the public health impacts of corona and related viral pandemics along with their roots. For instance, Anjorin (4) states virology to have begun in 1892, and the first coronavirus, avian infectious bronchitis virus, to have been isolated in 1937. That was followed by severe acute respiratory syndrome coronavirus (SARSCoV) in 2002 and Middle East respiratory syndrome coronavirus (MERS-CoV) in 2012. Corona virus attacks brought about 21000 deaths out of over 470000 cases with about 82000 observed in China, and a total of over 380 000 confirmed from 194 countries till 25th of March 2020. More recent evidences have shown drastic infection which the most advanced countries have declared to be defying (WHO, 2020) wherein Americas, Europe and Eastern Mediterranean have been more precarious.
Alston (March, 2020) states that, universities in different angles of the globe have seen closure due to the pandemic behind corona, and the ripple effect is going to be both academic and social. The academic impact comes about as a result of delay in lesson coverage whereas the social impact is in the fact that, the society fails to get educated taskforce on job-streams as expected. More to state, Alston (2020:4) underlines the economic impact behind students' failure to pay for their education by tracing the case of Chinese Students attending their university education in Australia.
It is hard to compensate missing classes and provide tutorials as well. Teachers may not spend a longer time to manage classes or provide feedbacks since such contacts are feared to be gate-openers for contamination. Students may not take their ample time during lockdown or upon return to be a productive time owing to wrong acclimatization. The usual team-based learning and arranged time duration may not be used properly since both teachers and students could feel frustrated to have peer or vertical access to one another (5).

ONLINE PHYSICAL EDUCATION :

It has been suggested in the recent past that OLPE courses offered to secondary students are not real PE and do not meet the standards for authentic PE instruction. When scrutinized, it does seem far fetched that a student would learn about being physically active and physically literate while sedentary in front of a computer screen. This evaluation has led to the view of OLPE as an oxymoron and has created a divide over the viability of this mode of learning in the development of physically literate and active youth. This viewpoint, however, may be changing. With a greater number of secondary students opting to make use of a wider network of entirely online or hybrid/blended (some online and some face-to-face) courses, OLPE may be an oxymoron of the past (6).
In 2007, the National Association for Sports and Physical Education (NASPE) stated that PE teachers were divided on their view of the viability of OLPE (7). The official NASPE position at that time was that OLPE was a neutral method of learning and the good or bad of the delivery model would be borne out by the impact it had on learning. To this day, some still question the validity of OLPE as a viable educational alternative for face-to-face PE due to a perceived negative impact on learning (8).
There seems to be minimal research to support OLPE, so it is no surprise that many PE teachers still advocate for face-to-face instruction to ensure that appropriate learning and skill development are taking place (7).Many individuals, including political representatives, question whether or not OLPE should even be offered to students (9).
In order to make use of the instruction time optimally and benefit from, there are programs suggested to be viable as stated below:

BENEFITS OF ONLINE TEACHING AND LEARNING

• Convenience: 24/7 access from any online computer; accommodates busy schedules; no commuting, no searching for parking.

• Enhanced Learning: Research shows increased depth of understanding and retention of course content; more meaningful discussions; emphasis on writing skills, technology skills, and life skills like time management, independence, and self-discipline.

• Leveling of the Playing Field: Students can take more time to think and reflect before communicating; shy students tend to thrive online; anonymity of the online environment.

• Interaction: Increased student-to-teacher and student-to-student interaction and discussion; a more student-centered learning environment; less passive listening and more active learning; a greater sense of connectedness, synergy.

• Innovative Teaching: Student-centered approaches; increased variety and creativity of learning activities; address different learning styles; changes and improvements can translate to on-ground courses as well

• Improved Administration: Time to examine student work more thoroughly; ability to document and record online interactions; ability to manage grading online.

• Savings: Accommodate more students; increased student satisfaction = higher retention and fewer repeats.

• Maximize Physical Resources: Lessen demand on limited campus infrastructure; decrease congestion on campus and parking lots.

• Outreach: Give students options; reach new student markets; appeal to current students thus increasing enrollments.

Online Physical Education Opportunities Many school districts originally developed online education and physical education courses to reach the needs of diverse students. Online courses in physical education, if designed and implemented appropriately, may serve as an appropriate method of instruction for individuals who are unable to be in school-based settings, such as students located in remote geographical areas, students with special needs, or working students. The most advantageous opportunities for online physical education courses may be for schools that lack certified teachers or have inadequate facilities and equipment. A quality online course might serve as a vehicle to provide increased opportunities for physical education in a different and new learning environment. The most commonly provided online physical education courses, often provided by universities, are physical activity electives and/or fitness courses. These are most effective after completion of an in-person comprehensive physical education program by providing additional opportunities for students to participate in physical activity outside of the school day. Likewise, online courses might fit a school district's need for elective courses, beyond the required courses in physical education.

Online courses might promote relevance and positive attitudes for some students. An overweight student may be motivated to take an online fitness course, which may be less intimidating, thus enhancing self-esteem and contributing to exercise adherence. In addition, an online course might encourage family involvement in a student's fitness efforts and might actually lead to the engagement of other family members. This is of particular importance since the student participating in an online fitness course will be participating in fitness-related activities requiring parental oversight. This individual goal setting is also an important component for becoming physically active for life (11).

Approaches of Distance Education :-

Synchronous Approach: Live lectures are delivered with help of technologies.
• E.g. IGNOU lecturers are delivered through TV channels like Gyan harshan and INC is Conducting contact classes for PhD nursing via videoconferencing at six centers in India.

Asynchronous Approach- Recorded videos, Print materials etc. are used.
• E.g. Most of the universities follow this system by sending text
materials, recorded multimedia materials to distant learner by post or email.

FLIPPED LEARNING:
Using flipped learning in PE will also make the subject, and the school, more transparent and this is a positive thing when we see that many parents have little insight into PE, and value the subject. It is important to point out that the backbone of this method is still the learning that happens in school, between the students, and between the students and the teacher. The videos that the students use for preparation for the PE lessons are used to increase their motivation for participating and to give the students a deeper understanding and a better learning outcome. It is also important to evaluate the content in your practical PE lessons so that the students can fulfill the aims in the curriculum in a way that creates motivation for a lifelong healthy life style.
The method of flipped learning is a way of teaching that can enrich both our lessons and the subject PE. Flipped classroom is a "pedagogical approach in which direct instruction moves from the group learning space to the individual learning space, and the resulting group space is transformed into a dynamic, interactive learning environment where the educator guides students as they apply concepts and engage creatively in the subject matter" (The Flipped Learning Network, 2014).

F Flexible Environment

Flipped Learning allows for a variety of learning modes; educators often physically rearrange their learning spaces to accommodate a lesson or unit, to support either group work or independent study. They create flexible spaces in which students choose when and where they learn. Furthermore, educators who flip their classes are flexible in their expectations of student timelines for learning and in their assessments of student learning.

F.1	☐ I establish spaces and time frames that permit students to interact and reflect on their learning as needed.
F.2	☐ I continually observe and monitor students to make adjustments as appropriate.
F.3	☐ I provide students with different ways to learn content and demonstrate mastery.

L Learning Culture

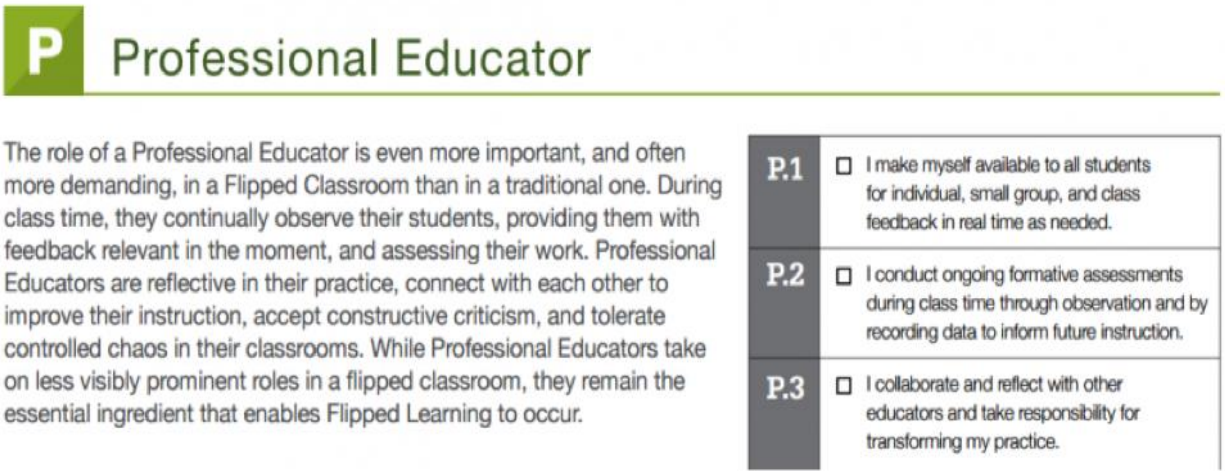
In the traditional teacher-centered model, the teacher is the primary source of information. By contrast, the Flipped Learning model deliberately shifts instruction to a learner-centered approach, where in-class time is dedicated to exploring topics in greater depth and creating rich learning opportunities. As a result, students are actively involved in knowledge construction as they participate in and evaluate their learning in a manner that is personally meaningful.

L.1	☐ I give students opportunities to engage in meaningful activities without the teacher being central.
L.2	☐ I scaffold these activities and make them accessible to all students through differentiation and feedback.

I Intentional Content

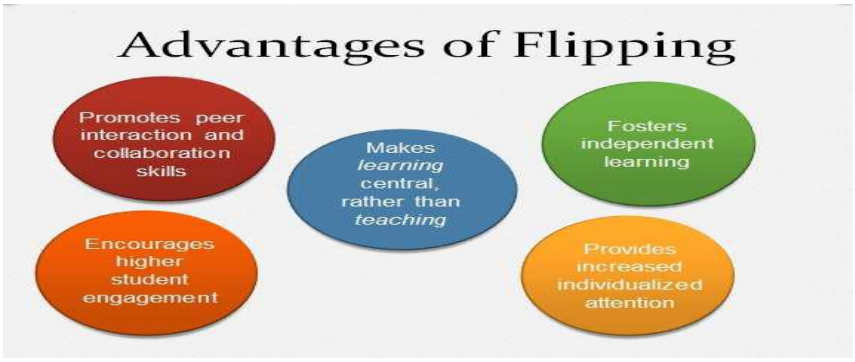
Flipped Learning Educators continually think about how they can use the Flipped Learning model to help students develop conceptual understanding, as well as procedural fluency. They determine what they need to teach and what materials students should explore on their own. Educators use Intentional Content to maximize classroom time in order to adopt methods of student-centered, active learning strategies, depending on grade level and subject matter.

I.1	☐ I prioritize concepts used in direct instruction for learners to access on their own.
I.2	☐ I create and/or curate relevant content (typically videos) for my students.
I.3	☐ I differentiate to make content accessible and relevant to all students.



Fitting with the revised Bloom's Taxonomy

In traditional learning, lower level of learning such as remembering and understanding is happening in class, while students are usually left to work on activities that involve higher level of learning outside of classroom. However, in the flipped classroom model, learning is flipped. As you can see from the pyramid, students can finish the lower level of cognitive work before class. And when they come to class, they can engage in higher cognitive levels of learning with peers and teacher present (12).



APPLICATION :

- Vedio Conferancing
- Creating Youtube Chanel
- Live on line or virtual mode through laptop or android phones
- Using emails and WhatsApp
- Creating Google Site
- Telephonic Conversation and discussion
- Sending Videos
- Reading Meterials, pictures and diagrams etc.
- Using a blend of synchroneous and asynchroneous mode.
- Creat virtual play ground at home

GLOBAL INITIATIVES FOR VIRTUAL SPORTS :

After the Body Coach Joe Wicks became PE teacher to millions of children across the world, a UK-government backed campaign has been launched to keep everyone active during the coronavirus lockdown. Many countries are offering a large number of indoor workout options online through the campaign Join the Movement for people of all ages. The workouts included some that are targeted at elderly and less mobile people (13).

CONCLUSION :

In this study, a Virtual Learning System that integrates Virtual Classroom , Virtual Laboratory and Virtual play ground services was presented.
An important extension of the system is to add a module for knowledge level estimation of the students.
Plan to design this module by deriving a new set of classes from the previously developed ones such as a Content Provider Class.
With the usage of software agents, we managed to provide a certain transparency of the physical allocation of the hosts in our system, needed for different types of data manipulation and resource sharing.

During the usability testing, students found the system intuitive and easy to use.

Referances :

1. Edeh Michael Onyema et .al, Impact of Coronavirus Pandemic on Education, Journal of Education and Practice , www.iiste.org ISSN 2222-1735 (Paper) ISSN 2222-288X (Online) Vol.11, No.13, 2020

2. UNESCO: 290 Million Students Stay Home due to Coronavirus. (2020, March 7). Retrieved April 21, 2020, from learningenglish.voanews website: https://learningenglish.voanews.com/a/unesco-290-million-students-stayhome-due-to-coronavirus/5317148.html

3. File:SARS-CoV-2 without background. (2020). Retrieved April 21, 2020, from Wikipedia website: https://en.wikipedia.org/wiki/File:SARS-CoV-2_without_background.png.

4. Anjorin, A. A. (2020). The coronavirus disease 2019 (COVID-19) pandemic: A review and an update on cases in Africa. Asian Pacific Journal of Tropical Medicine. Retrieved from: www.apjtm.org.

5 Kufi, Endalew Fufa & Negassa, Tolera & Melaku, Retta & Mergo, Robsan, 2020. "Impact of corona pandemic on educational undertakings and possible breakthrough mechanisms," BizEcons Quarterly, Strides Educational Foundation, vol. 11, pages 3-14. http://www.bequarterly.rysearch.com

6. Mohnsen, B., Implementing Online Physical Education. Journal of Physical Education, Recreation & Dance, 2012. 83(2): p. 42-47.
7. National Association for Sport and Physical Education, Initial guidelines for online physical education [Position paper]. 2007.
8. Daum, D.N. and C. Buschner, The Status of High School Online Physical Education in the United States. Journal of Teaching in Physical Education, 2012. 31(1): p. 86-100.
9. Scott, L. Online PE classes at Gilbert district raise eyebrows. 2013 [cited 2013 October 3]; Available from: http://www.azcentral.com/community/gilbert/arti cles/20130318gilbert-online-pe-classes-raiseeyebrows.html.
10. Stern Joshua, ntroduction to Online Teaching and Learning, (http://www.gao.gov/new.items/d021125t.**pdf**). The Future of **Online** ..

11. 2007, National Association for Sport and Physical Education, an association of the American Alliance for Health, Physical Education, Recreation and Dance, www.aahperd.org/naspe 1900 Association Drive • Reston, VA 20191, U.S.
12. https://flippedlearning.org/wp-content/uploads/2016/07/FLIP_handout_FNL_Web.pdf

13. Retrieved from : https://gulfnews.com/uae/dubai-hostsits-first-ever-home-marathon-with-more-than-700runners-from-across-the-globe-1.1586590597716, [Accessed 8.03.2020]