



# To measure the strength by the application developed by 11<sup>th</sup> and 12<sup>th</sup> grade students for quick analysis of student trainees and physical education faculty members

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## ABSTRACT

The term educational technology refers to the use of technology in educational settings. It can be categorised as elementary and secondary schools, colleges and universities, corporate training sites, or independent study at home. This discussion, however, will focus on the integration of Physical Education with Technology in grades K-12.

The CBSE Core subjects like Mathematics, English, and Science have often turned to educational technology to improve student learning. But a quality physical education program can also utilize technological tools to help learners with physical activity. From elementary school through high school, programs are integrating technology in physical education.

For all the technological progress, though, implementation remains a major challenge. Schools and

educators across the country continue to wrestle with the changing role of teachers, how to balance flexible and “personalized” models with the state and federal accountability requirements they still must meet, and the deeper cultural challenge of changing educators’ long-standing habits and routines.

By integrating Physical Education and technology physical educators now have a wide range of tools they can use to examine and improve their students’ physical skills. The list includes video analysis, wearable tech, physical education apps, gaming systems, virtual classes, and monitors and trackers.

“Students do better academically when they participate in regular fitness and exercise.”

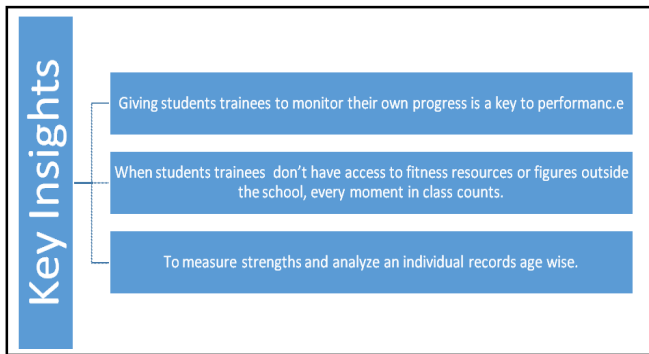
## The importance of technology in physical education:

In every aspect of our lives, we have seen the importance of technology. The use of technology has

allowed us to knock into things we could have never dreamed of.

For years now, physical education teachers have turned to different apps and websites to help monitor physical activity levels and fitness testing. The insights and data that technology has provided are crucial for student growth.

There are many ways technology is used in physical education in schools today. Technology in Physical Education is anything and everything that helps teachers to improve the environment and class room activity's for students and get them to be more physically active in and outside of the class room. There are many different ways technology is used, and it is a positive way to engage students in their physical education class. In our view technology in physical education is a very effective way to improve student's physical fitness in and outside of the classroom. There are many ways that technology can help provide our Physical Education teachers with positive teaching strategies in order to improve the quality of their classes.



**Keyword:**

Physical education, Technology, Application development, Software development, Python, MYSQL, Frontend, Backend

**INTRODUCTION**

**Topic :** To measure the strength of student trainees and an application will be developed by students of grades 11<sup>th</sup> and 12<sup>th</sup> for quick analysis.

Technology is a big part of the fitness testing that occurs in most public school systems. There are three different types of tests, the pacer, pushup, and sit up test.

For the pacer test the voice will tell you when to

begin, and then you must run from one sideline of the court to the other before the beep. You must do this continuously back and forth until you reach a passing score.

For the pushup and sit up test you must go up and down as the voice commands until you either pass or fail. For example, in few high school the faculty used all of these forms of technology for our state fitness testing. Even some of our athletic coaches will use the pacer test as a way to get our sports team in better condition.

Also, some PE classes use music for warm ups in order to get the students focused or excited about the class. By using the music the kids will want to start moving instead of no music which may make the beginning of class seem boring and bland.

However, we would like to record entire data through the application which can be used for later reference to draw inferences.

**Experimental :**

*Equipment required :*

- Dumbles -2 Kg/5 Kg/8 Kg
- Stop watch to record time and
- Whistle to initiate or end the activity.

*Technology platform :*

- Python as front end interface
- MySQL as back end interface

**MATERIAL AND METHODS**

- All the trainees will be explained the purpose and method of assessment.

- The trainees will perform slight warm up exercise.

- The dumble weighing 2kg will be given to all the trainees at initial level.

- Stop watch will be reset to note down the timings of each subject.

- Whistle will be used to start and end the activity.

**Precautionary measures :**

- The posture and movement of limb has to be appropriate.

- The movement of hand muscle or group of muscles needs to be observed by trainer.

- No Jerky movements allowed during this entire cycle.

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Table 1 : Learning parameters				
Age category	Intensity	Days of training	Timings	Counts to be recorded
17 to 18 years	2 Kg/5 kg	One week	1Min/2Min	
	2 Kg/5 kg	One week	1Min/2Min	
	2 Kg/5 kg	One week	1Min/2Min	

\* Intensity and timings will be finalized on the basis of regular observation by Physical Education Faculty

## OBSERVATIONS AND ANALYSIS

– The Physical Education faculty and trainee/ students will be able to get quick result on the basis data recorded.

– The generation of reports will assist Physical Education faculty and trainee/students to analyse the individual skills and work on exact strength of a trainee to produce desired result.

### Conclusion:

Future perspective.

The readings can be performed using advance parameters or conditions.

– The following categories like Beginner’s, Intermediate or expert.

– The analysis will also be specific gender based *i.e.* boy or girl.

– All age groups from 8 to 18 years will be added to figure out observations.

Through experience and practice you develop your learning as skills are developed through this process. When you step outside your comfort zone on what you know and enter the “unknown” is when you learn to adapt and develop new skills.

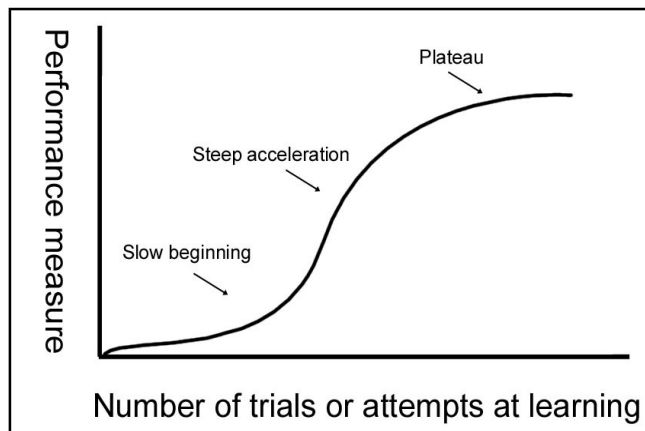
The hypothetical data defines learning curves of beginner’s category will be higher than expert category.

### Key takeaways :

– The learning curve is a visual representation of how long it takes to acquire new skills or knowledge.

– In sports, the slope of the learning curve represents the rate in which learning new skills translates into performances.

– The beginner’s category shows the slow beginning slope of the learning curve, the intermediate category shows the steep slope and expert category shows the plateau slope where the physical education training actually begins.



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11<sup>th</sup>  
Year  
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