

Transformation of Education Rooms into Smart Environments in Post Pandemic Period using IOT

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ABSTRACT

Covid-19 pneumonia is rapidly spreading in India after America and other Western countries. Its rapidness is exponential that few of the states in India have highly been affected especially the western and southern parts. The furiousness of this pandemic has not omitted even the rural areas. Besides providing safety guidelines the government also follows mechanisms to safeguard people. The virus is asymptomatic that the spread couldn't be easily identified without testing. Due to this severity, effective classroom learning becomes a major concern. This work provides a proficient methodology during post Covid period to conduct classroom teaching through new tracking methods. The paper proposes a novel approach using Internet of Things (IoT) that can be applied in educational institutions. The work encompasses an easy tracking system of students who do not follow safety mechanisms when they are in classrooms.

Keywords

Covid-19 pneumonia, Internet of Things, Post Covid Classroom

Introduction

The Covid-19 has rapidly progressed and their causes are widely proliferated. The wide spread is mainly because of over-crowding in public areas such as markets, road side shops etc., and the movement of COVID positive cases people from one place to another place. This panic situation imposed lockdown of schools, colleges and public areas. Based on an assessment of risks to education, the schools and colleges remain closed from March 2020 after the announcement from central government countrywide shutdown. The classes are now conducted through online. Online classes pave a successful alternative to provide continuing education if it has reached every target individual. Also the classes are accessible to all part of the students who own a smart phone with proper internet connectivity. These online classes face more challenges than face to face peers. Doubts clarification, special attention to specific students, behavioral maintenance is important factors missing from online class learning. Teachers, students and parents wish to reopen the educational institutions. Prolonging lockdown cannot be extended further; hence conduct of classes with safety measures is the need of the hour.

Internet of Things (IoT) endows with a solution to this existing issue. IoT enables better connectivity and promotes better information access. It aid in performing useful analysis and is considered to be a boon in technological advancements. IoT based smart classroom can aid to conduct classes in the post Covid-19 period. The approach provides a key to college return. This entire new infrastructure offer safety classroom teaching. The classrooms are structured to handle classes for about minimum strength of students. This promotes teaching and learning with existing infrastructure and available faculty requirements for all students at a time [1].

Literature Review

Andre Gunther et. al. [2] introduced an approach to measure distance between nodes in wireless LANs using the round trip times. An extraordinary investigation was made on computing the difference in time between sending and receiving a data packet. The distance was estimated based on the delay incurred on propagation of data packets. Statistical methods were used to resolve low time resolution time issues.

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