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## Learning by Doing : SMART CLASSROOMS AND e-LEARNING

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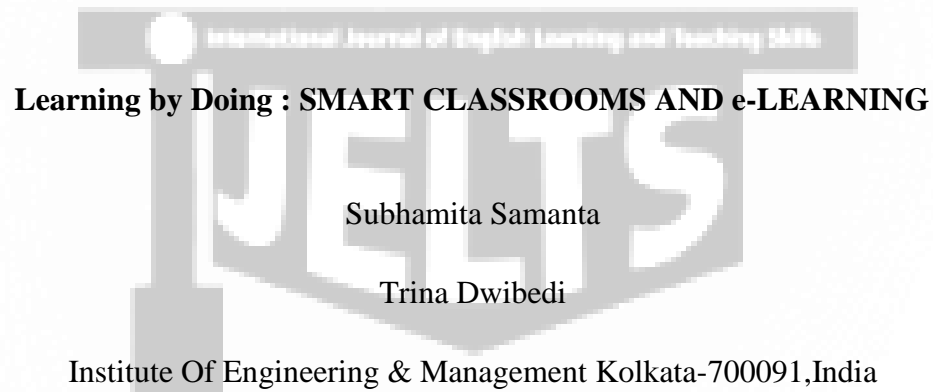
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Running Head: SMART CLASSROOMS AND e-LEARNING

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### ABSTRACT

*This paper is about the much growing technology “SMART CLASSROOMS and e-LEARNING”. The Smart Classroom project explores the challenges and potentials of the Intelligent Environment as a new human-computer interaction paradigm. The Smart Classroom could actively observe, listen and serve the teachers, and teachers can write on a wall-size media-board just by their hands, or use speeches and gestures to conduct the class discussion involving of the distant students. This paper discusses the advantages, disadvantages and main uses of the system.*

**Keywords:** *Smart classrooms, e-learning, human-computer, media-board, Intelligent Environment*



## 1. INTRODUCTION

e-Learning is the employment of technology to aid and enhance learning. It can be as simple as High School students watching a video documentary in class or as complex as an entire university course provided online. As technology advances, so does e-learning, making the possibilities endless. This paper discusses the smart classes as a modernized method of education in Indian education scenario which provides quality education to students by helping them in better concept formation, concept elaboration, improvement in reading skills and academic achievement.

SMART(classrooms) can be elaborated as:

**Showing**-This aspect represents the teaching material and its presentation basically capabilities of the classroom, which needs not only showing the contents but it can be clearly and attractively visible. It also shows content suitable for learners. The existing research shows that multi- screen displays can decrease cognitive load and improve learners' achievement. Colvin

(2007) noticed that the multi-screen is far better than single-screen in the academic improvement and getting good achievements of learners

**Manageable** – This dimension signifies diverse layouts and the convenience of management of the Smart classroom. The equipment and apparatus, systems and organization, various resources and aids of Smart classroom should be easily managed, including layout of the classroom, equipment, physical environment, electrical safety management and network management etc.

**Accessible** dimension shows convenience of resources procurement and apparatus access in the well-arranged Smart classroom, which includes resource selection, content and text distribution and its access speed.

Chen Shijian (2003) shows that the rich and vast network of learning resources is favorable and conducive to

independent self-learning, interactive cooperative learning, modified learning, so the implementation of this approach is for betterment of educational socialization.

**Real-time Interactive** feature represents the ability and caliber to support the teaching-learning interactions and human-computer interactions of the Smart classroom, which involves basic convenient operation, smooth interaction and interactive tracking among teachers and students in convenient operation. Generally, the Smart classroom should be able to support the specific and ordinary interactions between man and machine. Their interactive equipment and interface with a simple, fully-featured, vibrant navigation, consistent with the operative habits and their characteristics, touch, visual and voice interaction can easily improve the interaction between man and machine.

**Testing** –This aspect is explained the perception of the physical environment during the classroom interaction and also learning behavior of students in the Smart classroom. The physical environment of the class including air, temperature, light, sound, color, odours, area etc, affect the physical and mental activities and actions of teachers and students in the smart class.

## **2. PRIMARY USES OF e-LEARNING**

### **Non Academic/Corporate**

Both small and large businesses are increasingly using e-learning for initial and updating staff training. Both external resources and in house programmes developed on company intranets are used.

### **Academic: Educational Websites**

Some institutions (and individual academics) have preferred to develop their own online educational resources. These are basically individually designed websites that are tailored to a particular audience, often on a

particular subject. They are much like an interactive textbook, including audio, video and 3D graphics. Some also contain activities and quizzes etc to aid learning.

### 3. ADVANTAGES AND DISADVANTAGES OF e-LEARNING

#### Advantages:

- Widens access to the course: students can learn from wherever they are and numbers do not have to be limited.
- Provides access to more information, and allows students to use their own initiative to find it. • Students imbibe extra computer skills that may prove useful generally.
- Students can study whenever and wherever they want to.
- Digital information reduces strain on the library. Students no longer feel they have to fight over books.

#### Disadvantages:

- Students miss out on the benefits of face-to-face interaction and the knowledge sharing that can arise from this.
- Computer systems can be prone to technical difficulties. Failure of server, client or connection can mean the students are unable to study.
- Expensive and complex to implement.
- Less technology-savvy students may not perform as well as they would do in a traditional class. • There are potential health risks associated with excessive computer usage.

#### 4. CONCLUSION

A scientific understanding of learning includes understanding about learning processes, learning environments, teaching, sociocultural processes, and the many other factors that contribute to learning. Smart learning is effectively doing its task to cope up with the difficulties people face during odd times. The smart classes are a new generation educational product which helps students gain more marks and is a step to the future of education.



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