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Trends in Education Smart Learning Approach

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Abstract – progress and enhancement of life and modern society rapidly imposes the need and requirement for changes in educational infrastructure, which are traditionally very slow because of the area and inertia of the education infrastructure or system. Improving the quality and the enhancement of teaching and learning through the use and implementation of new trends of technology and IT enabled education is the primary target of higher education system. Electronic based Education is making every educational program that uses information and communication technologies to enhance the learning process in the form of E-learning few years before, and now a days in the form of Smart learning A revolutionary approach is to use Smart learning as a supplement to traditional teaching, as an supportive component the process of teaching and learning. This paper presents the trends in education in modern way that is Smart learning prevailing in higher education through the implementation of Smart learning and it's Standardization in education.

Keywords- E-learning, Information technology, Educational Institutes, Traditional education, Smart learning,(ICT) Information and communications technology, Smart class room.

I. INTRODUCTION

Role of Smart Class in e-Learning: Technology benefitted us in every aspect of our life right form communication to education. In ancient days students were taught in a gurukul where they were taught by the gurus. This tradition of gurukul has been left behind with the modernized culture. New method of teaching has been introduced which is publicly known as smart class. In this teaching happens through digital instruction materials, 3D animated modules and videos, all the renowned school is setting a benchmark for using this concept. Now the students are thrilled at this concept of innovative and interactive learning process. The concept of digitized classroom has not only made the education but it gave the students power to enhance their Smart class is a digital initiative of Educomp, which is rapidly transforming the way teachers teach and students learn in schools with innovative and meaningful use of technology. Powered by the world's largest repository of digital content mapped to Indian School Curriculum, smart class brings in technology right next to the blackboard for teachers in the classrooms. Students learn difficult and abstract curriculum concepts watching highly engaging visuals and animations. This makes learning an enjoyable experience for students while improving their overall academic performance in school. Therefore, it is clear that a smart classroom is a classroom that that has an instructor station equipped with computer and audiovisual equipment. The following equipments are usually used in classrooms for providing 'smart' education [1]

1. Personal Computer
2. Overhead Projector
3. Wireless Internet Access
4. DVD Player
5. Smart Board

Smart class also enables teachers to instantly assess and evaluate the learning achieved by their students in class with an innovative assessment technology- smart assessment system - designed by Educomp. Smart class is powered by a vast repository of digital instruction materials exactly mapped to meet the specific objectives laid out by different state learning standards. This repository is continuously populated through the ongoing development at Educomp's Digital Products and Solutions group. Smart classrooms are equipped with the following [1].

- Ceiling mounted LCD projector and projection screen
- Laptop connectivity for both Macintosh & PC laptops
- DVD
- VCR
- Sound system

- Touch screen Control system
- Telephone
- AUX-video Input

Advantages of Smart Classes for Students: In this age computers play a big role in our education. We hear about smart classes every day. We all know that if a topic is understood by a visual method, it becomes more beneficial to understand to students. So the demand of using smart classes is being forcefully raised. 'Smart Classes' provides education better through presentations and videos. I think a student can learn better through visualization. All the students may not understand the teaching methodology of a teacher, but can understand by smart classes. This can be seen in case of movies, i.e. students remember movies better than the lessons taught in classroom. This type of teaching creates an attention called as interest in them. So e-learning is absolutely better.

Such teaching helps to maintain the student's interest and focus by engaging them fully for the entire learning experience. Secondly, from the teacher's point of view, with the arrival of this digital initiative which is so practical to modern time and friendly to use, teachers can instantly evaluate/assess the learning achieved by their students in his/her class. If a concept taught is not understood then teacher can repeat with greater clarity and emphasis. He/she can identify areas of student's strength as well as weaknesses. These ultimately help the student's for better understanding. Smart classrooms are very much beneficial in teaching-learning process in a school. We make use of an appeal to audio-visual senses of students in using smart boards. These smart boards are like a computer screen which is finely handled by a teacher and also by students to provide active participation. Some of the advantages for Smart board used inside a classroom are:

1. **Appeal to audio-visual senses:** By using smart boards in a classroom, we are appealing to both the audio sense and visual senses of students. Learning in such a way is very effective as the information is strongly embedded in kids mind this way.
2. **No wastage of time:** In traditional type of classroom, a lot of time was wasted in drawing diagrams on the black/white boards, whereas in Smart-boards, diagrams are in memory and thus time is utilized more for the active learning part.
3. **No chalk Dust:** Some teachers and even front line students used to suffer from chalk dust getting into their eyes and lungs. This had ill effect on health. Using smart-board we are eliminating this health issue.
4. **Virtual field trips:** Students are taken virtually to field trips while teaching, say, a teacher is covering a lesson on desert animals, using smart-board, we could give a tour of desert like Sahara or Kalahari to teach this topic.
5. **Marker Feature:** Smart board teaching is not 'see-only', we could use special markers to underline or mark an important location while teaching. We can even write on it to make the concept clearer.
6. **Inbuilt library:** Smart board has an inbuilt library in it which enables a teacher to have an instant look at it in case of requirement. He/she may not have to scan a real library for this.
7. **Active learning:** Smart boards leads to active learning process where both the teacher and the students are involved.

This leads to strong reinforcement of information in students. Smart boards have many advantages and every class room should have it for the ease of teaching learning process; though I strongly believe that only a strong motivation is the basic of any learning process and can be carried out in any situation.This increases the interaction between teacher and students during a lesson and students do not hesitate to ask any question to their teachers if they have any doubt in certain topic (Nath, T. D., 2012). It reduces the effort of the lecturer as its most part is done in the presentation. It is very difficult for the lectures to take continues classes in a day without proper rest so this multimedia class is a boon for the students as well as the teachers [1].

II. BACKGROUND OR RATIONALE

The Internet has fundamentally changed the practice of teaching and learning during the last ten years, especially in colleges and universities that are well equipped with new technology. This fact is most evident in the transformation of universities which offer distance learning and try to exploit benefits of challenging information infrastructure and communication technology for its core performance, with desire to improve quality and reduce costs of teaching provided to student's .Computers and Internet connections are becoming widely available in schools and classrooms. In 1999, 99 percent of teachers in the United States had access to a computer in their schools, and 84 percent had one or more computers in their classrooms. At the same time, Internet connections were also widespread, with 95 percent of schools and 63 percent of classrooms having access. Worldwide, many countries are making the creation and diffusion of information and communications technology (ICT) an important priority. Even in developing countries, usage is increasing dramatically.If computers were available in classrooms during this time period, their use mirrored this dominant mode of instruction; that is, they were primarily used to present passages of text and test students' comprehension and memory for information contained in the passages. Research on learning has demonstrated the shortcomings of this type of instruction. Students often forget memorized information, or they fail to apply it in situations where it would be useful. They need help in connecting new information to what they already know and in extending and applying their knowledge to new problems. Researchers in the early twenty-first century believe that students learn best when they work to combine their own past experience with new information in order to solve problems that are personally meaningful to them. In addition to changes in the understanding of how students learn, there have been substantial changes in what educators and policymakers believe students should know how to do. The exponential growth in information since 1950 has shifted the purpose of education. Information has become abundant and easily

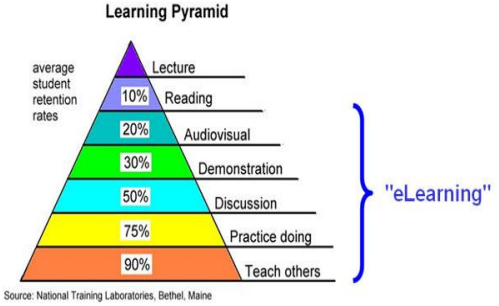
accessible. Rather than reading the unified perspective typically presented by a textbook, students have access to many different points of view. Instead of memorizing, students now need assistance in learning how to find and select relevant information for problems they need to solve.Traditional computer-assisted instruction (CAI) and many integrated learning systems (ILSs) deliver precisely this form of instruction in a range of subject-matter areas. Typically computers dedicated to ILSs are clustered in computer laboratory settings, rather than being located in individual teacher's classrooms. Students who acquire new information as they solve problems are able to understand its usefulness, remember it, and use it to solve problems in the future. Solving interesting problems is more likely to stimulate a student's interest than memorizing isolated facts, and this interest has been shown to positively affect learning. Students solving real problems view their efforts as real work and have a sense of purpose and value. Organizing instruction around problem solving makes new demands on teachers, including locating meaningful problems and projects and providing students with the resources and guidance for solving them. Teachers are finding that ICT can help them meet these demands, and they are integrating it into their instruction in many new and exciting ways[2],[3],[4].

Modern form of Instruction and Information Technology using technology to find and represent educational problems.

One major challenge for teachers interested in problem-based learning is locating problems that are appropriate for their students and for the topics that they need to learn. Problems must be complex enough to support sustained exploration and encourage collaboration, and they should have multiple interrelated parts to develop students' ability to break problems down and organize their solutions. Representing and communicating such complex problem situations is an important function of technology. Unlike problems that occur in the real world, technology can incorporate graphics, video, animation, and other tools to create problems that can be explored repeatedly. Multimedia representations are easier to understand than problems presented as text. One example of using technology to present problems is the mathematical problem-solving series, The Adventures of Jasper Woodbury. Each problem in the Jasper series is presented as a video story that ends when the main character experiences a problem that can be solved using math. Using technology that can be easily searched and paused for inspection, students search the video looking for clues to help them understand and solve the problem.In addition to observing research activities, students are able to ask questions and get immediate answers from the scientists. Whatever type of technology is used, an important goal is to create problem representations that are interactive and under the learner's control. The student creates a plan for investigating the problem, and the technology creates an environment that makes flexible exploration possible [5],[6].

Find educational resources using technology.

A second function of technology in problem-based learning environments is locating information needed to solve problems or do other kinds of research. In the past, teachers attempting a problem-based curriculum felt the need to limit problems to those for which they had expertise or the local library had resources. Now the World Wide Web brings a seemingly endless amount of information on almost any subject, and it is possible for students to choose topics based on personal interest rather than availability of resources. Internet research projects are gaining rapidly in popularity. In the spring of 1998, 30 percent of teachers surveyed (and 70% of those with high-speed Internet connections) reported they had assigned Internet research tasks for their students during the school year. Use of the Internet to gather information for solving problems sometimes resembles a modern version of library research, in which students gather and synthesize information from published reports. Despite the fact that the task seems traditional, the characteristics of this new medium require special skills for students. The sheer volume of information allows students to study almost any topic, but also makes it more difficult to locate precisely the right information from among the thousands, or even millions, of sites that might be located. In addition, the ease of publishing and accessing materials on the Internet increases the likelihood that students will encounter inaccurate or biased information. As a result, students must learn new strategies for conducting searches and evaluating the information that they retrieve [7]. Many times students are unable to find or understand the available resources. In such cases, teachers are also turning to ICT to link their students with mentors and subject-matter experts. In one such project, fourth-and fifth-grade students in McAllen, Texas, compared the experiences of their families on the Texas La Front era to colonial life in the original thirteen U.S. colonies, with the help of the director of a historic preservation center and museum in Fredericksburg, Virginia.Students also use technology to collect data in their schools and communities. For example, using handheld computers outfitted with various types of probes, students can monitor the water quality at various locations in nearby streams or lakes. By transmitting their individual readings to a laptop computer in a field laboratory they can quickly graph their data and visually compare readings.



To summarize and present findings using technology. In the past, students memorized and used formulas and models created by others to solve problems. Students often used these formulas, especially in the early stages of learning, with little understanding. In the early twenty-first century computer tools provide the opportunity for students to construct and test their own models using tools such as spreadsheets or concept maps. This type of instruction deepens students' understanding of abstract concepts and allows these concepts to be taught at an earlier age [8].

III. TOOLS AND TECHNOLOGIES USED FOR SMART GENERATION

A successful e-learning experience will use a combination of the technologies most appropriate for the practitioner, the learner group, the course content and course assessment. Central to e-learning success are communication technologies which are generally categorized as synchronous or asynchronous. Synchronous activities happen at the same time and involve the exchange of ideas and information with one or more participants. Synchronous activities occur with all participants joining in at once, as with an online chat session or a virtual classroom. Virtual classrooms (also virtual conferences or web conferences) allow practitioners and students to interact in real time from their own computer using text chat, live voice, and interactive whiteboards.

A Learning Management System (LMS) is software for delivering content, tracking students and managing training. Practitioners set up a course web page to hold learning content and assessments, then track and manage their students with tools like grade books and activity reports.

M-Learning or mobile learning covers learning with portable technologies like mobile phones, or PDAs (personal digital assistant), where the focus is on the technology (which could be in a fixed location, such as a classroom); learning across contexts, where the focus is on the mobility of the learner, interacting with portable or fixed technology; and learning in a mobile society, with a focus on how society and its institutions can accommodate and support the learning of an increasingly mobile population that is not satisfied with existing learning methodologies[9]

Teachers' Integration of Technology in Instruction

Although ICT is creating opportunities for fundamental changes in the way teachers teach and the way students learn, a recent survey indicated that only one-third of teachers feel prepared to use it effectively. This includes being able to use word processing, spreadsheet, presentation, and Internet browsing software. Such tools help teachers increase their productivity by preparing reports or lesson plans, taking notes, and communicating with colleagues and parents. These basic skills are necessary, but not sufficient, for creating changes in instruction.Then, after observing changes in their students–including improvements in behavior, absenteeism, collaboration, and independent learning–teachers gradually begin to experiment and use technology to teach in new ways. It often takes four years or more from initial attempts until changes in student learning can be observed. Research indicates that change at all levels will be necessary to bring about widespread and effective use of technology. Successful programs must devote a substantial portion of their budget to extensive professional development and technical support; they must encourage a culture of collaboration in which teachers work together to explore more effective uses of technology; and they must modify their assessment systems to measure changes, such as deeper understanding and improved problem solving, that result from effective technology use [10][11][12].

E-learning

E-learning with its original name in English has become ubiquitous "brand", the trademark for an
Innovative approach of teaching new generation of students. Its subset, online learning, is the focus of
Attention, both because of its increased use at all educational levels and numerous analyses of
Positive and negative aspects of this teaching method [13]. E-learning usually takes the form of online courses. Element of the course is learning object. Contents of the course are obtained through compiling and organization of learning objects. The concept of objects is standardized in a rigorous form of established procedures of how these pieces of content are compiled and organized into courses and packages for delivery on the Internet. Learning Management System (LMS) is the dominant technology that is now used to organize and deliver online courses.

Trends of change in learning

The introduction of computers into the classroom and the emergence of the Internet have intensified the debate about what improves learning: use of a specific technology or application of appropriate teaching method. For promotional purposes on the Web, online learning must create challenging activities that enable pupils/students link new information with old ones, adopt new meaning and
use their cognitive abilities, because it is the strategy of teaching, not the technology, which affects the quality of learning [14]. Specific attributes of computers are required to present real-life models and simulations to students so that the media affects learning. The computer itself is not the one that makes students learn but real life models and simulations, and student interaction with those models and simulations. The computer is more a tool that allows processing and delivery of instruction for students [15].. As previously noted, the media is not determinative factor in the quality of learning; elaboration of the program determines the effectiveness of learning. C. Review of LMS development According to the sources from the Internet that talk about the development of systems for e-learning, we can see that a giant leap forward in terms of functionality and flexibility of the systems has been made. One of these flexibilities is that the system provides management of all capabilities and capacities, that it develops LMS for specific target

Groups (professions, companies, institutions), integrates it with repositories, and creates a learning object database. It also increases the virtual interaction on social global level, develops advanced searching of LMS database, and increases the balance between control and freedom of LMS users in order to achieve better learning and support [16]. The results of numerous staff training show that LMS provides good results that offer some benefits, but also state that it must be adjusted to provide better monitoring / reporting of non-formal learning showing the participants who acquired knowledge and not those who have been trained [17]. From the middle of this decade when different distributions of LMS have been developed, their number has increased by 15-20 each year. According to some data, there are about 90 LMS products on the market. Some of them are free, Developed within the Open Source community, others are commercial. This table provides an overview of the learning [3].

Table 1. Evolution of E-Learning

Property	Behaviorism	Cognitive	Constructivism	Connectivism
How Learning Occurs	Black Box Observable behavior main Focus	Structured computational	Social, meaning created by each learner	Distributed within a network, social technologically enhanced, recognizing and interpreting patterns
Influencing Factors	Nature of reward, punishment, stimuli	Existing schema previous experiences	Engagement participation, social, cultural	Diversity of network strength of ties
Role of memory	Memory is the hard writing of repeated experiences where rewards and punishment are most influential	Encoding srorage,retrival	Prior knowledge remixed to current context	Adaptive patterns representing of current state existing in network
How transfer occurs	Stimulus response	Duplicating knowledge of holder	Socialization	Connection to adding nodes
Types of learning best explained	Task based learning	Reasoning clear objectives, problem solving	Social vague	Complex learning rapid changing core diverse knowledge sources

IV. STANDARDIZATION OF E-LEARNING

The main role of standards in the process of implementation of e-learning is reflected in the effort to develop standardized data models and standardized structure of educational programs and enable their use regardless of the tools that were used to create them and the environment within which they are used [18]. Standardization process provides the following features of e-learning program:

 Interoperability which ensures the possibility of electronic exchange of materials among
Different LMS systems,

 Multiple use (reusability), implying the use of educational materials in different courses for
Different students regardless of the tools used to create them and LMS systems used to deploy them,Ability to manage (manageability), where we take into consideration the ability of systems to Record relevant information about a student and program content,

 Accessibility which indicates the possibility for author and students to access contents of e-learning anywhere,

 Durability which provides functionality of the system in case it needs to be updated and improved. Creating standards is a long-term process which goes through four interactive steps: research and
Development with the aim of finding possible solutions, development of specifications, testing i.e. activating pilot programs and official accreditation.

A. SCORM standard SCORM standard introduces the term SCO (Sharable Content Object) which represents basic learning object. SCO is equivalent to a lesson in an e-course. SCO may contain text, images, video clips and even interactive contents, such as flash or java
Applications (these smaller pieces used to create SCO are called Assets). SCO is defined by metadata which enable lesson to be found according to the different technical and pedagogical criteria. A complete SCORM package is described in manifest. The following picture shows SCORM package structure.

PHASES OF E-LEARNING DEVELOPMENT So far there have been three generations of e- learning Technology development, table 2. The first generation of e-learning 1.0 is related to the delivery and experience of online training courses of 60 and more minutes. Those were synchronized courses
Delivered with use of virtual classroom software or asynchronized courses designed with use of
Authoring tools and with course contents according to the traditional model of training. Courses were usually led by LMS[3],[19][20].

Table II. Three Generations Oelectronic Learning

Main components	**E-learning 1.0**	**E-learning 1.3**	**E-learning 2.0**
	Courseware (interactive content of the course) LMS Authoring tools	Content LCMC Rapid authoring Tools	Wiki Social Tools Blogs Accessories
Ownership / Disposition	Above, one direction	Above, collaborative	Below, the student initiated, peer learning
Build time	Long	Quickly	No
Access time	Before working	In the pause of	During work
Size of content	60 minutes	15 minutes	1 minute
Virtual Meetings	Class	The working time	Peers, experts
Delivery	Suddenly	In many parts	When you need
Access to content	LMS	E-mail, Intranet	Search, RSS feed
Starting	Over ID cards	Student	User
Content creator	Institution	Organization	User

E-learning version 1.3 has been used to introduce the e- learning generation that has dominated the last few years, when learning was developing faster and was delivered in smaller segments. Learning became available at work and was adjusted to the needs of work so that it had a simple design that could be easily read. This is the reason why learning hasn't been always accessed through LMS, but delivered to the student by email, or was accessed via intranet of a certain organization. E-learning 1.3

Contents were usually created by experts for a specific scientific field using backgrounds made in fast e-learning tools or LCMS (Learning Content Management System) [18]. As the number suggests, e-learning 2.0 implies a huge step forward in development compared to the time from 1.0 to 1.3. E-learning 2.0 is based on the tools that combine ease of creating contents, Delivery to the Web and integrated collaborations. Anyone can create contents in terms of everyday work. In fact, it is expected from e-learning 2.0 to make transfer and learning action controlled by a student or worker more organic. Learning is a combination of access to contents, mostly performed by students of the same age or coworkers, as well as the access to students of the same age through social

Software. In addition, many people quote social and network effects to be the most important for learning.[9].

What Makes Recommendations Different in E-learning from that in Other Domains?

Making recommendations in e-learning is different from that in other domains (the most studied domain of recommender system is movie recommendations, [21, 22, 23, and 24]. Particular issues for an e-learning recommender system include Items liked by learners might not be pedagogically appropriate for them Adaptive E-Learning System (static learning materials) Learner model personalized learning material (a) Adaptive e-learning system (b) Evolving e-learning Learner model Evolving E-Learning System (evolving learning materials) personalized learning material The Web Learners' usage/rating For example, a learner without prior background on the techniques of web mining may only be interested in knowing the state-of-the-art of web mining techniques in ecommerce. Then, it should be recommended that he/she read some review papers, for example, an editorial article by two of the leading researchers in this area [25], although there are many high quality technical papers related to his/her interest. On the other hand, for the learner coming from industry with some prior knowledge who wants to know how web mining can be utilized to solve e-commerce problems [26] should be recommended, because the paper is the KDD-Cup 20001 organizers' report on how web mining can support business decision making for a real-life e-commerce vendor, and points out challenges, as well as lessons learned from the competition, which can benefit both researchers and industry practitioners. By contrast in other domains, recommendations are made based purely on users' interests. Customization should not only be made about the choice of learning items, but also about their delivery [27]. For example, some instructors will recommend learners to read an interesting Magazine article, such as a related article in Communications of ACM, before a technical paper, because they believe it will help learners understand the technical paper and make them less intimidated. However, this is not the case in e-commerce recommendations, where site managers prefer to leave the list of recommended items unordered to avoid leaving an impression that a specific recommendation is the best choice [28]. In our proposed system, we will organize papers not only based on their main research Categories, but also their technical levels. For example, review papers, workshop papers, highly technical papers etc.

In addition, making recommendations in the context of intelligent tutoring system isMore tractable than in other domains in that learners' interests, goals, knowledge levels etc, may be better traced in a constrained learning environment.

Smart Methodologies

In many schools, teachers feel their teaching job very boring and dull; while students feel very uneasy with the teachers and also with the school. It is because of our routine working system. In several schools, teachers are not interested to do some innovative. They feel easy and comfortable with traditional teaching style and think nothing should be done. In these situations, it is very difficult to improve the situation. But it is not a solution! There are several ways to develop the education and classroom teaching. Teachers have to open their mind for new ideas and also new challenges. They have to welcome the innovative ideas and innovative teaching learning methodologies. They have to discover the new models and new techniques to create an interest among their students and their staff. Many educators have been searching new and effective classroom teaching learning techniques for their schools. They want to make learning fun. Would you like to do something innovative in your school? Why not?

If you have such questions like-

How to make a smart classroom?

How to make classroom teaching active?

How to make teaching interesting and smart?

How can we make interesting and smart classroom environment?

What is the smart way of teaching?

What are the active teaching techniques?

What is the smart teaching?

If your answer is "Yes" than this article is for you.We are living in such world where many persons have been doing a lot of work for learning theories, innovative learning styles, effective learning styles, developing advanced learning resources, different learning skills, self directed learning, interactive learning and virtual learning also. Now we are familiar with smart learning, smart class learning and we are going to introduced e learning and online education in our classrooms. So it will be very nice to know about these smart, active, interactive and modern learning methodologies. Internet technique helps us to discover more smart learning methodologies. Now it is possible to discuss about our teaching learning experiences to wider community through internet. Many persons are doing a nice work in this field to make awareness about innovative education and

E-learning, there are several innovative and smart teaching learning methodologies to make our classroom smart, active, innovative and interesting.

Active learning methodology:

Active learning methodology is an active methodology for teachers. In A.L.M. there are main focus on the student's activity and group activity. Teachers have to help the students to learn. Now teacher's role is changing in learning. Teacher is as a facilitator in learning.

Smart learning:

Smart learning is the new vision in education using computer, internet and multimedia in classroom teaching. It is really a smart teaching learning way, because it is the teaching of the modern age. Smart learning introduces worldwide approach in our classrooms. Internet is the ocean of knowledge. Smart learning is a smart and innovative learning concept for smart teachers of a smart school. Smart learning gives unique learning opportunities to the students.

Activity Based Learning:

It is an active learning technique, useful in various subjects. It makes teaching learning more interesting. It is more useful in primary and Pre- primary classes. Activity Based Learning provide great opportunities to the students through interesting activities. It may be used in our day by day classroom teaching easily. Some Active Teaching Learning Techniques.

V. CONCLUSION

The SMART classroom and E-learning is a one of the resource for students needing research, technology, or writing help, specifically aimed at the research needs of undergraduate students. The usage of this new technology must be encouraged in the current education system. The E-learning and smart classroom provide the students as well as teacher to learn through a new techniques and too in a different and interesting This article reviewed the current status of the research project that was initiated six months before by the author as an individual

Effort with support of students and which was later supported by the e-learning team of local school. The main theme of this research is

Focusing on employing AI techniques, remote sensing to promote e-learning from fourth to fifth generation. The research developed many

Smart tools and environments centered on the student model and supporting one-to-one adaptive e-learning. It employed theories from cognition, education, and learning. Proactive

Student model is also developed to model student's traits, emotions, cognition, and background knowledge. There are still many research directions to investigate under

the same lines presented in this article. Integrating all tools developed so far is one major concern as adaptation to accommodate

the central knowledgebase is expected for all tools, which in turn will expectedly lead to update in the knowledgebase Model it. Another concern would investigate methods for supporting students with special needs: super intelligent We may conclude that the introduction of more and more powerful communication devices calls forth LMS for more accessibility, independent from dominant or previous set platform for teaching contents and teaching activities access. More present virtual social interaction gets an important place in the process of creating applications supported by LMS. In social interaction users more and more exchange learning resources along with their ideas and opinions in discussions, presentations, blogs, commentaries and similar tools for that purpose. This way, learning shifts from corporative to global level which implies necessary adjustment of LMS organization. According to all of this, we conclude that any present LMS has the need to develop and improve.

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