

## Editor's Point of View...

Every creature on this planet is actively engaged in their own life race, starting from fulfilment of their day to day requirements till their aim of achieving the so called life time goals and we human beings are no exception to that. India, the second most populated country in the world with 125 crores of people in numbers, despite having good infrastructural facilities and manpower resources is nowhere near the top rankings as for the education system is concerned.

The life cycle of a successful student should start from getting over 90% in schooling, getting into an engineering college/doing a graduation and settling into a branded corporate with assured job. Well, this is the generally accepted life graph formulated by our neighbours, relatives and the entire society surrounding us in order to label someone as "successful". And the parents are mentally forced by the society to develop their children in this standardized format failing which; they will also become prey for this society. And the cycle continues... Simple. If all the fingers in our hand itself are not identical, it is utmost idiotic to expect all the students to fit into a pre-defined circle and get labelled as "successful in life". And hence, it is indeed essential for us to look into this issue from its root cause rather than commenting on a macro angle.

Education has been made too easy for the students so that more and more students can enter into the scope of education system of the country. The announcements like abolishing

compulsory CBSE board exams for class 10th from the session 2010-11, introduction of grading system, the passage of Right of Children to free and Compulsory Education Bill, reservation policies etc. are a few among them.

The online method of learning is best suited for everyone. This digital revolution has led to remarkable changes in how the content is accessed, consumed, discussed, and shared. Online educational courses can be taken up by office goers and housewives too, at the time that suits them. Depending on their availability and comfort, many people choose to learn at weekends or evenings.

Overall, traditional learning is expensive, takes a long time and the results can vary. The importance of e-learning is now a given fact and it can offer an alternative that is much faster, cheaper and potentially better.

Regards,  
Sohan Khemka

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## Indian Education System

### History

An interactive learning environment has always been the norm in India. If we go back in history, it is this 'interaction' which the sages had with their students that provided the base for the rich heritage which we have inherited today.



Education in India has a rich history: whether orally or in the form of letters written on palm leaves and barks of trees, 'information' was passed on to students from their "gurus" or scholars. Students and Gurus 'interacted' spending fruitful hours in residential schools which were called the Gurukuls. The homes of the Gurus were the Gurukuls and often temples, monasteries and community meeting places became Centre's of learning.

This Guru or 'thinker' realized that knowledge was the need of the hour and to acquire knowledge, the Gurukuls were essential. Although education was free and the Gurus never demanded fees, the students felt it was only respectful to pay Gurudakshina to the teacher. This was an acknowledgment for the knowledge he had received on various aspects spanning religion, the scriptures, philosophy and literature. The understanding needed to create medicines with 'jari butties' or learning about the Arthashastra

(warfare) or astrology – the horizon was unlimited –was to be acquired in the residential Gurukuls.

This "Gurukul System" believed in the training of the mind which was done by three simple processes: Shravana, Manana and Niddhyaasana.

- **Shravana:** Listening to the words of wisdom which the teacher spoke.
- **Manana:** Interpreting the meaning of the lessons
- **Niddhyaasana:** The complete comprehension of knowledge

The Centre's of education were spread across the country but some flourished in knowledge than the others. The Centre's of learning which recognized in the first millennium were at Nalanda, Takshashila University, Ujjain and Vikramshila Universities and they were popular for their teaching of art, architecture, painting, logic, grammar, philosophy, astronomy, literature, Buddhism, Hinduism, Arthashastra, law and medicine. Sometimes a particular university was well known for its specialisation in a particular field of study. For instance, Takshila specialized in the study of medicine, while Ujjain laid emphasis on astronomy.

The earliest school of medicine known to the world is Ayurveda 'Charka' is known as the father of Ayurveda. He developed this 2500 years ago.

After India's Independence, the states and Central Government synchronized the technical and higher education by specifying the standards. In 1964, the Education Commission started functioning with 16 members: 11 were Indian experts and five were foreign experts. Later in 1976, the education became a joint responsibility of both the state and the Centre through a constitutional amendment.

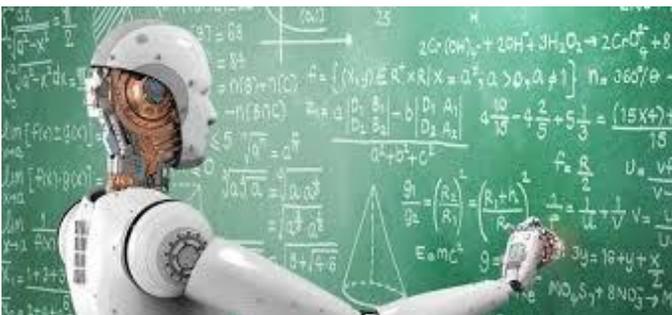
India should be proud of its educational heritage. When other civilizations had not even made a mark on the map of education, India was teaching its students subjects like 'Ayurveda' that has been carried down generations, the benefits of which we continue to reaping till this day.

The present education system has changed what it was a decade or a couple of decades ago; here are a few highlights of the present education system:

Custom software development leverages experience as well as domain expertise, which helps education institutions to manage and boost the education system, comply with changing educational norms and age-groups. Software developers provide tailored solutions for the education field to boost workforce performance as well as boost student-faculty satisfaction.

The IoT, the connection of devices, other than products like smart phones and computers to the web, is in the process to transform several areas of everyday lives. Although it may not seem an obvious app of the IoT, education is on that list. Majority of software development jobs require candidates to have a bachelor's degree, typically a BA or BSc in Computer Science, software engineering and related field. Software development education is widely offered by most colleges and universities, offering fully online degree programs as well as the traditional on campus programs.

Software development for the Education industry is impacting the field a great deal. Software service providers developed e-learning systems, which offer numerous benefits to customers, such as online education, parents' collaboration, better student assessment facility, paperless and simplified administration. Students have developed subject oriented apps, which encouraged them to learn while playing and boosted their curiosity and interest in the subject.



## THE IMPACT OF THE INTERNET OF THINGS IN THE EDUCATION FIELD

The Internet of Things influences education in a lot of ways. It is this asset intelligence, which allows institutions to make more informed decisions, in an attempt to boost operational efficiency, learning experience and campus security.

### SEVEN WAYS IOT IS CHANGING THE EDUCATION AND LEARNING FIELD

Foreseeing its tremendous potential and the limitless opportunities it would bring, the IoT is going to be one face changing mark for the education industry in the future.

**1 Use of devices for automated tasks:** Students these days are used to having their smart phones all the time. They like using them more often in the classroom. This is because students have gotten used to tasks being easier with smart devices and the internet. A lot of students use laptops for note-taking. Other tasks, like schedule-making and research also are set to be easier with the IoT. Thus, a lot of schools now switched to the 'smart' systems of reusable technology, providing students with tablets and laptops. Later on, this helps greatly in minimizing the operating expenses as well as the school's carbon footprint.

Now the kids as young as 3-4 years-old run the iPads, smartphones, gadgets and computers smoothly, because with time the brain too has started adapting the technological changes, which has taken place.

The different technologies introduced in learning such as use of internet connections, interaction with teachers, students across globe has become easy. The world has shrunken with the help of internet connection, which lacked in early years.

**2. Efficient teaching process:** The surge of connected technology means professors and teachers could make grades faster. Their checking/grading also would be easier, less biased

and more efficient. When educators have devices connected to the cloud, they would be in better touch. Thus, teachers could see which student requires more concern and attention. Other processes, which smart tech helps with are making lesson plans, adjusting schedules and more. While the tasks taken over by connected and smart devices, teachers are able to focus more on their teaching and research.

**3. Outside of the classroom learning:** In the old days, students had to borrow books, go to the library and copy out information for schoolwork. With smart technology today, they could have an improved educational experience easily, within their homes. This could supplement their classroom education and make certain that they get updated information in all levels. Students could look up and verify information within seconds.

**4. Use of Educational Software:** Computers offer incredible opportunities to advance education in all types and ages of students. There are actually a lot of different types of educational software, including:

- Interactive software for preschool children who aren't ready to use a mouse or keyboard quite yet.
- Programs that will teach children basic keyboarding skills.
- Software that teaches children how to think logically and to solve problems. Artistic software that your child can use to create and color 3D pictures. These can usually be printed out.

**5. Special education:** Anyone with even the slightest interest in the education of special kids, they will know the big role of technology. Autistic kids respond to tablets very well, and those with other disorders as well. Children with ADHD,

dyslexia or other learning impairment are helped greatly by any and all technology at their disposal. Together with this, smart schools also have a system for educating people on such students. The general public, as a result would be more understanding and open to the special individuals. It will be easier for special kids to function well in a neutral environment, and on their own as well.

**6. Safety:** With general student bodies and campuses becoming bigger and bigger, schedules are paramount. Now, parents want to make certain that their children are not in any place where they could come to harm. When timetables and bus schedules are regulated via smart technology, there would be a more secure system. Furthermore, there is less chance of a child being left behind because of lack of knowledge regarding bus schedule. Parents also could track their children on their way to and from school and on field trips too.

**7. E-Learning:**

Digitization has transformed the era on the mouse click or touch of a mobile phone to every possible extent. Resultant, the approaches become easier and tasks have computed as simpler. From shopping to dating, business to research, holding business meetings to keeping social contacts all are in the same phase and the whole world is getting submerged into one term i.e. on the internet. Significantly, learning is not only restricted to the classroom but also available on the digital platform is known as Electronic Learning or E-Learning.

E-Learning, the word specifies the concept that the learning through the electronic device like desktop, laptop, CD-ROM, Digital Television or mobile. However, now the learning through mobile also referred as m-learning. Students have a different opinion with regard to e-learning and some are very enthusiastic and excited while some have hesitation for this innovative approach. So, let's

understand the term e-learning, its types and clear doubts by focusing on the following challenges and advantages.



### Types of E-Learning

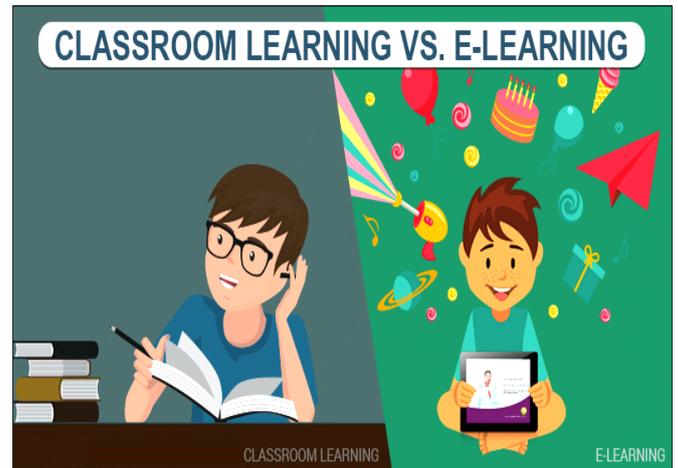
Generally, there are three types of e-learning process - Synchronous E-Learning, Asynchronous E-Learning and Blended Method.

- In Synchronous E-learning, the learning is carried out in the real-time process through a virtual classroom. The student and the instructor have to interact at the same time through the usage of the internet and communicate via messaging, chatting, video conferencing or calling.
- Asynchronous E-Learning is the learning through the recorded medium. It is not based on the real-time learning process. It's carried through lectures, online study material, embedded learning, courses or the discussion groups.
- Blending method inculcates the features of both the Synchronous and Asynchronous learning.

### Online Environment versus Traditional Classroom

There seems to be no end to the debate brewing between the supporters of online learning and traditional classroom learning as to which is a better system in comparison to the other. However, just like there are two sides of a coin,

there are both good and bad points of these two forms of learning.



### Online Learning Environment

An online learning environment gives students the opportunity to earn degrees from any registered school conducting online courses without attending regular classes. This form of learning is great for working students who can continue their study whilst carrying on with the professional careers. Physically challenged students can especially benefit through online learning, as it offers them the scope to learn from home, at their convenience.

**Flexible:** You can attend your classes at a time that suits you best. You just need access to a computer or a laptop to start attending classes. Mobile devices such as Smartphones, iPads, tablets are used to view course schedules, do assignments and give examinations from any remote location. This flexibility lets professionals have access to quality education, without geographical restrictions, 24x7.

**Cost-effective:** The online form of learning proves to be highly cost-effective, as you don't have to spend money on buying or leasing land to construct a school or college. Additionally, the cost of purchasing paper and printing class registration forms is reduced once you resort to taking courses online. Moreover, students don't have to worry about the expenses associated with traveling or accommodation costs and vehicle parking.

**No Face-to-face Interaction:** When you pursue a degree online, you are more likely not to interact with the teachers throughout your career. Hence, computer-based learning seems more impersonal, not allowing face-to-face interaction with other students or with the teacher.

**Lack of Discipline: Often** students taking online classes lack discipline because of the flexible timings and the opportunity to study at their convenience. It gives rise to a laid-back attitude in students since there is no fixed time to study or attend classes.

**Traditional Classroom Environment:** Most students prefer the traditional classroom-based learning experience as opposed to online classes. Such students choose to interact full-time with the teacher and other classmates. Let's see the pros and cons of such a form of learning.

**Access to the Institution's Facilities:** The facilities offered on campus such as visiting the library, labs, gym, student health centre, and so on can be fully enjoyed when attending traditional classrooms.

**Social Interaction with Instructors and Other Students:** Classroom learning offers face-to-face interaction with the teacher and other students. Students can go to their teachers before, during or after a class to solve issues regarding a particular lesson. Additionally, teachers can arrange for sporting and recreational activities in order to develop leadership, team building and social networking skills.

**Larger Time Commitment:** In a traditional classroom set up, everything is fixed starting from attending each class to lunch breaks and summer or winter vacations. Students will have to attend a class when it is scheduled and give examinations on the date fixed by the school administrators.

These were few of the key difference of online learning vs class room learning

## Advantages of E-Learning

- **Flexibility:** - In the traditional classroom, students have to go to college or institute regularly with the scheduled syllabus that needs to be accomplished at the specific time period. While e-learning method offers you the flexibility to study anytime, anywhere with your own timelines.
- **Fast-pace Learning:** - Students can study at their own speed and interest. They do not need to try to match up with other student's speed and pace. They can wrap up their syllabus as fast or as slow as they want.
- **All-time Access:** - The syllabus and study material are available online that offers access anytime and anywhere, so the students do not have to worry about when to sit down for study, they can do it anytime and anywhere.
- **Higher Retention and understanding:** In online classes, the learning process is carried out through presentations, images and videos. It is a well-known fact that visual contents register easily in human memory than verbal and text contents. It helps to understand things better and increases the retention and understanding ability of the student.
- **Immediate feedback and results:** - In traditional learning, it takes time to check copies and declare results. While in e-learning, tests are taken through online quizzes. This has reduced the time to generate results and has also gained greater appeal amongst students as they do not have to face the teacher at the time of the result.
- **Greener Approach:** - Papers are crafted by cutting down trees. In e-learning, students are saving papers - saving trees. So, this is an environment-friendly method of learning.
- **Cost Effective:** - Undoubtedly, the usage of the internet reduces the cost of paper, books, notebook, files, pen and other stationary products. In addition, it also reduces the cost of traveling to the college or learning centre.

Hence, e-learning is a cost-effective learning method.

- **Easy Updating:** - It is very easy to update notes and other lectures in the online mode by the instructors, and it is really difficult to make changes in the published books at a short notice.
- **Techno and Internet savvy:** - with regular accessing the internet, students become acquainted with the devices. This brings proficiency in the usage of internet and information technology.

### Disadvantages of E-Learning

**Self-Discipline:** In regular teaching methodology, teachers or instructors have greater control over student's attentiveness and behaviour. They motivate students to learn through interactive teaching styles. However, in e-learning student should have to exercise self-control to study and to learn.

**Computer literacy:** Students should have computer literacy and basic troubleshooting skills to continue study without any breaks.

**Availability of system and internet:** Student should preferably have their own system/ laptop and high-speed internet connection for e-learning.

**Learning Approach:** In regular learning, the student interacts with the instructor and other students that make study interesting. In e-learning, the student may feel bored studying alone. There will be no discussion and no second opinion that may lead to one-way thinking.

Despite all these challenges, E-Learning is still the modern and future way of learning in this ever-growing busy society.

### No peripheral benefits

When you bring together a team of people to be trained with subject matter experts, you set the stage for something more than just basic learning.

If structured right, the dynamics of personality, intelligence, vision, and creativity all intertwine to create a group that is more than the sum of its parts.

Group situations can produce solutions to core business problems and bring about massive transformations - largely because of the sheer energy that is produced by the environment of a team that has come together for a single purpose.

Similarly, live training can foster team-building and create an environment where individuals deepen their relationships, get know each other better and learn in a unique environment where they all have the same goal. Done right, training is about much more than just pushing new information into employees' heads.

E-learning certainly has its benefits, but HR professionals must understand the limitations and disadvantages that are inherent with these training schemes. These factors should be carefully considered when developing any training plan to determine the right solution for your business.

### E-Learning Real-time examples

- **Byjus:** E-Learning App
- **Slideshare:** From here you can Discover, Share, and Present presentations and infographics with the world's largest professional content sharing community.
- **YouTube:** From here you can get ideas of subject by searching anything and you will find many videos, webinars of that topic
- **swayam.gov.in:** SWAYAM is a programme initiated by Government of India Includes online courses
- **Blogs:** In google you can find al-most all the blogs for any topic to learn anything  
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