

Cover Story



'VIRTUAL LEARNING' New mode of learning

Education, nowadays, has put on a new 'technical' garb, in its purpose, to reach and educate children world-wide, instead of learning their subjects from a teacher in a classroom, they are getting educated sitting at home, and learning their subjects that is making its way through the web. So, the new age of educating children is through the mode of virtual education that has made a very positive impact, on the education sector, of many countries in the west. The students in the US and Europe are gaining their subject knowledge, taught by experienced 'virtual' teachers who are placed thousands of miles away from these learners. In this world-wide scenario in education, let us take a look at the education situation and the different levels of schools that are prevalent in India.

Prevailing status

The education system of our country leaves a lot to be desired and the institutions that spreads this education comes in a plethora of structures - there are the ramshackled government schools that takes care of the educational needs of the poor, the middle level school, the higher level school, then the super higher level schools and it goes on and on to the most exclusivist of them all. The latter three levels of schools to a large extent will have everything in place to impart quality education to their students. Quality infrastructure, quality teacher, quality pedagogical practices, highly efficient ICT systems and trained personnel to man them, every minor issue is taken care, to give quality education and knowledge, to make their students stand out head held high like a leader. In many of these schools good quality teacher's retention is not a problem as they are paid well with all the perks and benefits befitting their experience and commitment.

The problem of providing quality learning experience to their students arises as we go down the lower rungs of the ladder from the middle level schools. The infrastructure is mediocre; teaching again is of the same quality, the whole system works on mediocrity, but they make it up by making their students work hard on their subjects and achieve 100% results at the end of an academic year. The major problem these schools (I am not talking about Government run schools) have to deal with is finding quality teachers and retention of committed and experienced teachers, the causes for that are many and these schools ignore them. And their only concern will be to just survive without bothering or doing much in making their students reach beyond a certain level of achievement.

The new avatar of education and learning in the form of 'Virtual Learning' come to their rescue, by bringing a revolutionary change in the teaching and learning practices for the future generations.



So, what can be the alternative for majority of these learners, in this scenario, wherein, there is a dearth of quality subject teacher's adding to that the lack of interest in the present generation to opt for the teaching profession. Will the new avatar of education and learning in the form of 'Virtual Learning' come to their rescue, by bringing a revolutionary change in the teaching and learning practices for the future generations. Perhaps this is the only solution that can be construed as a means to achieve 100% literacy in our country.

What is 'Virtual learning'

Juan R. Pimentel (1999) defines a 'virtual learning' environment as follows:

... we define a 'virtual learning' environment as one that allows learners to perceive the environment, assess situations and performance, perform actions and proceed through experiences and lessons that will allow them to perform better with more experience on repetition on the same task in similar circumstances. This definition of a virtual learning environment emphasizes the importance of learning. Learners in a virtual environment are expected to make use of and include examples, observations,

experiences, situations, rules, concepts and techniques in a continuous (e.g., day by day or week by week), permanent (i.e., committing knowledge into memory) fashion to improve the performance of the execution of tasks.

A virtual learning set up allows a virtual 'face to face' interaction that robs that feeling of the personal touch of teaching and the students who wants to learn over the virtual media will have to be more devoted, disciplined and determined to complete their courses, assignments and tests.

To put that complicated sounding definition, in an easy to understand words, we can say 'Virtual Learning' Environment (VLE) is a virtual classroom that allows teachers and students to communicate with each other online, where, subjects are taught with the help of interactive sessions between a teacher based at one location while the students can be sitting in front of their computers in many other locations, elsewhere.

The advantage of providing expert teachers, teaching, will be a great learning opportunity for students who otherwise would be finding it difficult to

cope with their subjects due to non-availability of quality teachers at their location.

That is, in a virtual classroom, the teacher may communicate with the students in real-time using video or Web conferencing.

So, how does virtual learning differ from regular learning, in a regular class it is absolutely necessary to attend the class, while learning in the virtual environment can be done on a student's own terms and availability of time, online learning classes are not time bound? A regular classroom set up allows personal 'face-to-face' interaction with the teacher and that will make learning very interesting for students, if the teacher passionately teaches her or his subject, that personal touch will make all the difference for the students. But a virtual learning set up allows a virtual 'face to face' interaction that robs that feeling of the personal touch of teaching and the students who wants to learn over the virtual media will have to be more devoted, disciplined and determined to complete their courses, assignments and tests.

ADVANTAGES

- Students can study anywhere, anytime with just an access to a computer/ Internet connection
- Self-paced learning modules that allow students to work at their own pace
- It facilitates learning through a variety of activities
- Saves time and travel costs
- Builds self-knowledge, self-confidence and encourages students to take responsibility for their learning

DISADVANTAGES

- Some learners may not be motivated to complete their courses
- Students may feel cut-off from the teacher and classmates
- Bad Internet connections may make accessing course materials problematic
- Beginners may find it difficult to use the learning software
- Some students may get confused if they do not have the routine of a traditional class



The current trend in the field of education 'virtual learning', has to cover a lot of ground before it can be considered as a perfect tool to educate the large number of our children who are waiting to be educated. The main hindrance for the spread of 'virtual learning' to all corners of our country will be internet bandwidth and other infrastructural issues. If the government of our country is really serious about taking quality education to all the remotely living children then they should work towards that goal by involving private and other educational organisations, to contribute money and muscle to bring to reality, what the medium of virtual learning promises.

To find out about the views of educationists, service providers on this issue – Brainfeed had talked to some eminent school principals, CEO's and COO's of educational agencies, read on for their replies...

A great supportive system for learning

Have you experienced 'virtual learning' what are your views about it?

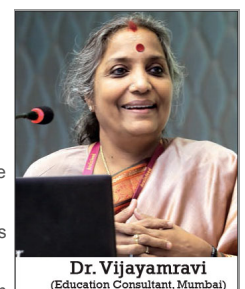
I have. It is a great supportive system for learning, when you do not have great faculties at hand, for learning.

Can you enumerate the pros and cons of 'virtual learning'?

Pros: It can reach to students far away even when there are glitches in reachability by way of power supply etc because the satellite mode helps them get the actual learning in place

Through this even those students who cannot travel to great schools, get the experienced learning techniques from great teachers/professors and they can also interact with them

Cons: Unless and otherwise the systems are established, the links are correctly used at both the delivery end and receiving end, the system



Dr. Vijayamravi
(Education Consultant, Mumbai)

may not work. It needs committed technology support

Do you think a traditional 'brick and mortar' classroom educated student will be different from a virtual classroom educated student?

Of course. Ideal situation is that. Satellite classrooms are only an alternative.

For a country like ours with a mismatch of haves and have-nots do you think 'virtual learning' will be able to change the education and learning scenario of its children?

To some extent, yes. Quality of education may certainly differ. Any substitute would not have the original quality.

If 'virtual learning' as it is being projected as the future of education how far will it serve the purpose of educating the masses of children of our country?

To a large extent it would serve. Even better platforms for interaction with other countries is possible

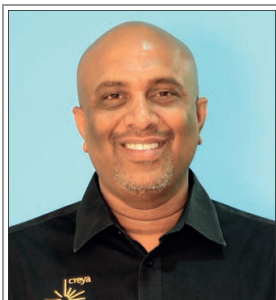
But whatever said and done-education is a process that has to be developed from within. The individual student has to show the willingness to learn, then like Eklavya, he can learn even without a guru.

Virtual classrooms coming soon in Government run colleges in Karnataka

According to Higher Education Minister R V Deshpande, Karnataka government will soon set up smart class rooms and virtual classes at its first-grade colleges to achieve quality enrichment of teaching-learning processes through technological interference. Smart class rooms are being set up in select 50 government first-grade colleges as a pilot project. In a phased manner, smart classrooms will be also be set up in other government colleges. Deshpande further explained that, "This measure is intended to supplement the traditional course delivery system by enabling the students to access useful online Open Course Ware content offline and bypass the bottleneck of text book production." Uninterrupted access of the stored e-content can be availed with the help of Wireless local area network, which is being set up in the hundred government first-grade colleges across the state.



It is a replacement for teacher-centric education



Hari K Verma
Co-Founder & CEO, Creya Learning

Have you experienced 'virtual learning' what are your views about it?

Yes. Virtual Learning is a technology-based replacement for teacher-centric methods of education. It is used to teach remote students using video lectures, photos and animations. Although it can be effective for college students, working people seeking continuing education courses, supplemental education and short duration courses, it is an ineffective method of teaching in the K-12 context. In the K-12 scenario, the need of the hour is to move from such teacher-centric methods of education to student-centric methods of learning, where technology is one component in the many tools students use to build their own understanding of the universe. This way, students are able to move beyond just regurgitating facts to higher order thinking skills such as problem solving and analytical thinking.

Can you enumerate the pros and cons of 'virtual learning'?

Virtual Learning can be a good way to learn for college students, working people seeking continuing education courses, supplemental education and short duration courses when used collaboratively and augmented with forums, quizzes, game-based learning and other engagement methods. But it cannot be the main method of learning for school-going students, and does not replace a learning space where students work collaboratively on projects and solve problems.

Pros: It is effective for short courses, continuing education etc. It can be useful if it is made collaborative. It helps remote areas that lack teachers.

Cons: It is ineffective for large groups of students - e.g., one teacher lecturing 100+ children in different locations.

Do you think a traditional 'brick and mortar' classroom educated student will be different from a virtual classroom educated student?

A traditional "brick and mortar" classroom is no different from a virtual classroom if communication is mostly one-way. In fact, a student of a "virtual-only" environment is isolated from his peers, whether by force or by choice, and will miss out on the social and community aspects of attending a brick-and-mortar school.

Virtual learning augmented with collaboration is necessary to make it effective. Small group sizes are extremely important in virtual learning environments. Perhaps the critical factor for success is that the class is composed of like-minded people who are attending the virtual class by choice, not coercion or compulsion.

Virtual learning environments must pay attention to providing such resources (online forums, virtual experiments, game-based learning etc.) to make it effective.

For a country like ours with a mismatch of haves and have-nots do you think 'virtual learning' will be able to change the education and learning scenario of its children?

As per the latest ASER 2013 survey, 96.8% of all our students between ages 6-14 are now attending school. So the problem we face in our country is no longer about reach – we are managing to put most of our children through the school system. The problem is now of quality of delivery of learning. We have to examine if virtual learning can make an impact in this scenario.

Large-scale usage of virtual learning, as it is currently understood, will not work in a country like ours, where there will be (there is!) lots of money pumped into projects to wire school campuses to remote teachers and have smart boards and projectors in classrooms. All this technology will just be used to beam down content in the form of canned lectures, pictures and videos – not in the thoughtful creation of technology to create content, to perform research or to join larger communities in learning and making. The use of ICT in this manner only serves to mask the inefficiencies of our current learning paradigms and to hide the inadequacies of bad teachers.

Virtual learning cannot cater to different types of learners unless they are pre-screened and grouped. Otherwise, it will be worse than the "brick-and-mortar" schools.

If 'virtual learning' as it is being projected as the future of education how far will it serve the purpose of educating the masses of children of our country?

We need technology-driven "real" learning in the country, not virtual learning! Children must be helped to make real world connections to what they're learning inside the classrooms. Technology is a powerful tool; its effectiveness depends on how people are using it. Quality of instruction/delivery is extremely important. To reiterate, we are no longer fighting the problem of reach (which we have solved), we are trying to solve the problem of quality of learning. Virtual learning, when utilized properly, can be a powerful tool in our arsenal to solve this problem.

Traditional teaching should go parallel with virtual classroom

Finding qualified and knowledgeable teachers who are passionate about their profession are becoming hard to find, what in your opinion can be done to overcome this problem?

We may offer lucrative salaries and professional growth areas to teachers

What in your view should be done, so that our younger generation, don't get left behind in their pursuits of getting quality education due to dearth of qualified teachers?

Our teaching system should be modified to include standardized worksheets and Lesson Plans to be done by all teachers. These Lesson Plans and Worksheets should be evaluated by an SME or software on a weekly basis.

Due to the technological advances and introduction of newer ways of learning what kind of an improvement do you envisage in the field of education and the learners?

Learners are now becoming more research oriented and the education system is now evolving to be broader than book oriented system

It's being professed that the future of education will be 'virtual learning' what are your comments on that?

I completely agree as it is innovative and captivates the attention of the learners. Learning while doing culminates into lifelong learning.

If 'virtual learning' or 'virtual classrooms' are the future of imparting quality education, in your opinion will that be as magical as the traditional 'brick and mortar' classrooms?

Traditional teaching has its own benefits and should go parallel with Virtual Classrooms. This will leave a better impact on students.



Ms. Sudha Goyal
Principal, Scottish High International School,
Gurgaon

Virtual learning overcomes the barriers of time and distance



Mr. Harman Singh
CEO, WIZIQ

Can you enumerate the pros and cons of 'virtual learning'?

Virtual learning is one of the fastest growing trends in educational uses of technology. It provides numerous benefits by making quality education easily accessible to all.

By breaking the four walls of a classroom, online education has enabled teachers and students from any part of the world to connect with each other over internet. It overcomes the barriers of time and distance and provides more flexibility to students by allowing them to learn at their own pace as well as from comfort of their own homes.

Virtual learning is also cost effective as it reduces the costs of travel and fee associated normally with higher education.

Do you think a traditional 'brick and mortar' classroom educated student will be different from a virtual classroom educated student?

Yes, a virtual classroom educated student will be different from a traditional 'brick and mortar' classroom educated student by being better informed and more aware of the world around him. As virtual classrooms enable students to interact with teachers from any part of the world, they gain more exposure than their traditionally educated peers. Online education also enables students from different parts of the world to interact and have a better understanding of different cultures as well as exchange ideas with each other.

For a country like ours with a mismatch of haves and have-nots do you think 'virtual learning' will be able to change the education and learning scenario of its children?

Yes, definitely. Online education or virtual learning can offer unique opportunities: access to quality education and cost-effectiveness. Even the Central Government has announced an allocation of `100 crore to set up virtual classrooms and online courses. It is heartening to see the government recognizing this need and taking decisive steps towards incorporating technology to bridge the gaps currently prevalent in our education system.

If 'virtual learning' as it is being projected as the future of education, how far will it serve the purpose of educating the masses of children of our country?

On adoption of virtual learning, the impacts on the masses of children of our country will be as projected below:

- Students from even remotest of areas will have access to best teachers in the world and that too, in the most cost effective way.
- Learning outcome through the inclusion of virtual learning in education will be enhanced pragmatically.
- India is struggling with massive dropout rates in the schools across the country. One of the major reasons of the dropout is the non-availability of quality teachers in the schools. Virtual learning will overcome this challenge.
- With the fast penetration of optical fibers across the country, establishing a virtual learning center in any corner of the country would be every easy and inexpensive.
- Adoption of Bag less education in Virtual Learning will curb the overall stress level of children.
- Inter school collaboration and knowledge exchange amongst the teachers and students will be possible.

With the present communication network and bandwidth will it be possible to take 'virtual learning' to all corners of our country?

India is growing quite fast as far as technological development is concerned. It is the world's third largest internet using nation after U.S. and China.

According to the 'Internet in India 2014' report published by Internet and Mobile Association of India and IMRB International, the number of internet users in India will reach to 302 million by the end of this year. With this kind of growth, it does not seem difficult to take 'virtual learning' to all corners of our country. Most importantly, platforms like WiziQ are built in a way that they consume very less bandwidth.

What are the software and technical interface required for 'virtual learning'?

People usually associate virtual learning with technical complications and high setup costs, which is actually not true. Online learning is in fact more cost effective and much easier to implement. The technical requirements of virtual learning include an internet connection, a computer and a cloud-based platform with provision to conduct live online classes, storage space for educational content, video streaming and hosting facility, and features to conduct online tests and assessments. WiziQ provides all these tools and presents a one stop shop to fulfil all the requirements of virtual learning include an internet connection, a computer and a cloud-based platform with provision to conduct live online classes, storage space for educational content, video streaming and hosting facility, and features to conduct online tests and assessments. WiziQ provides all these tools and presents a one stop shop to fulfil all the requirements of online education.

'Need for balance between chalk and talk method and virtual learning'


There is a subtle difference between a 'virtual learning' and 'online learning' while virtual schools can be integrated into public schools, online learners have the time and space to decide the way they would want to learn, says Resy Antony, Head of Humanities Department, Good Shepherd International School, Ootacamund.

When asked if a student educated in a virtual classroom has an edge over a 'brick and mortar' classroom student, she says, "A student who has access to a variety of technological tools and websites, blogs and ready made material is surely at an advantage, but the role of a teacher, the personal touch and one-on-one interaction can never be debated. The need of the hour is for a balance between the 'chalk and talk' method and virtual learning."

Smart boards have made their way in schools in a big way. All students at the Good Shepherd International School are given laptops and have internet access 24X7. Students have an advantage of storing study material online and could access the same at any point. Apart from the content and learning that goes on in a conventional way, web communication tools help a great deal, she added.



Ms. Resy Antony
Head of Humanities Department,
Good Shepherd International School, Ootacamund



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