



Improve competence to be globally competitive

There are thousands of engineering institutions in the country. Over 15 lakh students graduate from these institutions every year. Leading global companies seek to hire top talent from the country.

In engineering colleges, IT industry is the largest recruiter and demand for talent from the core sector is muted. While infrastructure projects are expected to enhance the demand, currently it is low. Hence, top talents from across the spectrum of engineering education prefer the IT industry.

Given the large number of engineers, our country should ideally be developing new generation technologies and lead the way. However, reports suggest that only 7 to 10% of the engineers are employable, that too in the general technology areas. IT companies are struggling to find the right talent. Core reasons identified for the gap in demand and supply are weak foundation in mathematics and science, logical thinking and communication skills.

The impact of these shortcomings is not just on an individual's employability but affects the business and the country's competitiveness. While the quantum of workforce available is helping India in IT services segment, our competitiveness in innovation is low. The result is quite evident with regard to Artificial Intelligence, Machine Learning etc.

According to a study, of the 750 occupations currently in vogue, 51% of job activities are highly susceptible to automation. This necessitates the redefinition of most occupations and related skills.

Two-pronged approach:

We need to look at two key areas when we seek to move towards the right direction. One is competence building and other is the curriculum relevance.

Competence building:

We need to improve our competence to get ready for the future. There is a globally accepted framework for competence building, the Revised Bloom's Taxonomy.

The lowest competence levels are remembering followed by understanding. When we closely look at our current education system, other than the leading research-based institutions (which contribute a very small percentage of the total graduating students), most institutes focus on these two levels.

There is very little focus on Applying, Analysing, Evaluating and Creating. This is why the industry does not find the students employable and job-ready even for a generic technology role.

To be competitive in the global arena, there is a need for a graduate, particularly an engineering graduate, to focus on Evaluation and Creation. Earlier, the entry tests for IITs and other premier institutions used to push aspirants to move up to higher level of Analysing. However, the exam prep business which helps one prepare for these exams have enabled aspirants clear such exams by cramming and memorising.

People generally work towards improving what they are being measured on. From institutional perspective, remembering is easy to assess and to automate assessment. Simple multiple choice questions are used to assess students.

This reflects that the assessment process favours competence level of remembering and hence that level of competence is achieved.

The current assessment process, however, needs to evolve to higher levels. Competitions like Hackathons help one move up to Apply and Analyse levels. Case studies, discussions, essay writing, thesis writing and presentations (which are not scalable and automatable for assessment) are necessary to help one go up the level of competence.

Unless we move to such assessment methods in colleges, we will continue to generate competencies at lower levels only.

Curriculum relevance:

Another area of focus is curriculum. There is not much focus on updating the curriculum. Industrial processes change at a far higher pace than what academic institutions can cope with. Framework for making the industry and academia work together is not strong. Hence, the industry-academia gap continues to exist.

There have been a lot of discussions on revising the curriculum in line with global new trends and the breakneck speed at which innovation and disruptions happen in the market.

There is a lot of merit in updating curriculum to include new age courses on machine learning, blockchain and other emerging technologies.

Generally, there is little difference between the curriculum of top

engineering schools in the world and a tier 3 institution in India. But, the real difference is how the curriculum is delivered and what level of competency is built. This requires a very strong focus on the basic building blocks: Mathematics, Science, Analytical Skills and Communication Skills.

Ideally all engineering schools ought to churn out high competence graduates. This can happen only when the evaluation system pushes one towards achieving higher levels of competence.

Link:<https://www.deccanherald.com/supplements/dh-education/improve-competence-to-be-globally-competitive-760666.html>

AICTE-UGC merger: New body likely to look into higher education standards

Once UGC and AICTE are merged, new bodies called the Higher Education Grants Council (HEGC) and Professional Standard Setting Bodies (PSSBs) will be set up.

The new merged entity of All India Council for Technical Education (AICTE) and University Grants Commission (UGC) will look at the standards of higher education institutions in the country.

Sources told Moneycontrol that while there will be one single regulator National Higher Education Regulatory Authority (NHERA) for the higher education sector, there will be bodies under it to look into quality maintenance of institutions.

Once UGC and AICTE are merged, new bodies called the Higher Education Grants Council (HEGC) and Professional Standard Setting Bodies (PSSBs) will be set up.

"PSSB will be responsible for looking into upholding and maintaining standards of higher education in the country. This includes conducting regular checks at institutes to ensure that all facilities (academic curriculum, faculty, research activity) as well as infrastructure is up to the mark," said an official.

At present, UGC helps to maintain standards in university education across the country. On the other hand, AICTE serves as an accreditation body for engineering, management, hospitality and other technical institutes across the country.

No inspections are conducted by regulators, due to which there are quality concerns at several higher education institutions. The human resource development ministry is keen to address these concerns, because they want to attract more international students to the country.

Once UGC and AICTE are merged, the new quality maintaining body is likely

to identify regions, courses and institutes that need to be looked at on a regular basis. There would be incentives for maintaining the standards while there could be disincentives for poor quality institutes.

Earlier, the AICTE-UGC merger had been sent to the cold storage due to a lack of consensus among the two entities on what will the new entity's role be. However, the National Education Policy has mandated this merger which could be implemented in FY21.

After this, PSSB will be set up and there could be regional chapter looking at different streams of education and setting minimum deliverables for each institute operating in that domain.

Link:<https://www.moneycontrol.com/news/india/aicte-ugc-merger-new-body-likely-to-look-into-higher-education-standards-4403341.html>

Blended learning shows the way

Blended learning is a way to bridge the gap between education imparted in schools and colleges and real-life. It is a combination of traditional teaching and technology, which is used to meet the preferred learning style of students, as well as aiding teachers. The idea is to take the educational experience beyond the periphery of the physical classroom and offer students-teachers a more flexible environment. Hence, it is important to adopt the set of approached teaching and manage blended learning environment with the current methodical setting.

Technology has transformed the learning system to an extent where it is not just about acquiring knowledge anymore. Integrating technology into the classroom is an effective way to connect with students of all learning styles. The personalised education will build the entrepreneurial traits in the aspirants, which is the need of the hour. The idea is to break the traditional passive learning model and adopt this hybrid form of learning, which is a blend of classroom and online learning.

In our education system, a teacher cannot be replaced with a mere technological device. Hence, the entire concept of blended learning is not to alienate teachers, but to work alongside traditional ways of imparting education and enhance the classroom experience.

Adapting to technology Teachers can now be in more control and focus better on the understanding of students than just the delivery. The smart classroom experience is about adopting this new approach to impart wisdom and knowledge to our young generation.

The five major benefits one can derive from adopting blended learning are as follows:

Efficiency: For decades, teachers have spent days explaining math and science to the students with the concept of projectors. It is a difficult method as it was more of a dry and conservative method, where understanding the psyche of the students was difficult. Today, integrating

technology in education helps students stay engaged. Blended learning through mobile devices and other wireless devices such as the IoT helps teachers to understand the student's level of knowledge more accurately and it also helps improve the efficiency of the entire learning process.

Accessibility: Educational materials were earlier available only during classroom hours. Students may have been able to take their textbooks home with them but they didn't have an effective way to interact with or engage with the material. With technological advancement and learning apps, students have more flexibility to access knowledge from anywhere. This results in gaining more interest in the material and outcomes are even more accurate and successful.

Pace: Blended learning allows students to understand each concept at their own pace. Therefore, it breaks the 'one-size-fits-all' model. This acts as a balancing technique between quick and slow learners. It promotes in-depth learning, reducing constant stress.

Teacher-student engagement: This particular learning helps students to get involved with their teacher or professor via technology; email, messages etc. Combining new tech like virtual reality with traditional classroom instruction is one example of how blended learning promotes teacher-student engagement. In the end, both teachers and students benefit from this shift in their relationship, as teachers can monitor the progress of each student more effectively.

Fun with learning: Students tend to get bored at some point with long lectures and even longer academic day. Now, due to technological advancements, the idea is to make learning more fun for the new generation. The students get experiential learning and the hope is that they will take up higher education in a more informative manner.

Better opportunities: With versatile talent and diverse culture, India needs combined support from government and global educators to avail the opportunities and benefits of blended learning.

The future is going to be a very different scenario, thanks to technological advances in emerging fields like robotics, genetics, medicine, and quantum science, amongst a multitude of other areas that are redefining our way of living. As a parent, you have a choice to make now.

You can either let your child become a passive consumer, or you can empower and encourage your child to be an innovator, creator and tomorrow's change-maker.

Link:<https://www.deccanherald.com/supplements/dh-education/blended-learning-shows-the-way-756087.html>

Digital Learning Tools Are Everywhere, But Gauging Effectiveness Remains Elusive, Survey

Shows

Educators are using digital tools to boost student learning more than ever. But few believe there's good information available about which resources are going to be effective in the classroom.

That's the takeaway from a survey released Sept. 12 by the New Schools Venture Fund, a nonprofit venture philanthropy firm that works with K-12 schools, and Gallup, a polling organization.

The survey found that about two-thirds of teachers—65 percent—use digital tools every day and about 53 percent say they would like to use technology more often. (Those findings present something of a contrast with an **Education Week survey conducted earlier this year**, which found that only 29 percent of teachers felt strongly that ed tech supports innovation in their own classrooms.)

Despite the enthusiasm for technology found in the New Schools-Gallup survey, teachers and administrators also reported that they don't have as much information as they'd like about which digital tools actually help students master content.

In fact, only about a quarter of teachers—27 percent—said they had a lot of information about the effectiveness of the digital tools they used. And only about 25 percent of principals and 18 percent of administrators say there's a lot of evidence-based information available about the effectiveness of digital learning tools used in their districts.

'A Healthy Dynamic'

That's despite the fact that more than a third of teachers cited a tool's ability to provide "actionable data on students' progress" at the top of their list of criteria in selecting digital resources for the classroom.

What's more, nearly two-thirds of the educators—65 percent—who took the survey said they've jettisoned a digital tool that they had initially piloted or adopted. Forty-one percent cited lack of improvement in student learning outcomes as a primary reason for ditching a digital resource. And 27 percent mentioned cost.

That's not necessarily all bad, said Stacey Childress, the chief executive officer of the New Schools Venture Fund

"You could be of two minds about this," Childress said. "In many ways, [it's] a good sign that folks aren't locked in to things that aren't working well. That's a healthy dynamic."

On the flip side, though, that number [65 percent] is "pretty high," she added. "We need to ensure that by the time the tool gets to the classroom, the product development process and small-scale evaluation process have made sure the product works for the situation in which it's being implemented—so that more of these are likely to work by the time they get to classrooms."

And she said teachers and administrators need more specifics about what context a digital tool might be suited for.

"There are big gaps between teachers' optimism about what technology can bring to the classroom and their desire to use it even more—and the information that is available to them," Childress said.

A Trial-and-Error Approach

In the absence of clear evidence, though, educators say they are testing out digital tools largely through trial-and-error.

"We end up just kind of trying them out to see if they are going to be a great tool," said Jamie Richardson, the principal of LaCreole Middle School in Dallas, Ore. "You have to get in there and try it out and see how easy or functional it is."

He asks his teachers to regularly share resources that have worked for them. And he speaks often to other administrators to get their advice on the best tools available.

In fact, 94 percent of teachers say they are most likely to get information on digital learning tools from other teachers. Eighty-five percent get the information from their school or district. Nearly 50 percent choose from a list provided by their district. And 58 percent say they get input on new tools by looking at social media.

"I fall down that rabbit hole of Twitter way too often," said Kristina MacBury, the principal of Sarah Pyle Academy, a public school in Wilmington, Del. that offers a non traditional drop-out prevention program and is part of the Christina School District. Seeing how other schools are using new technology "build[s] a snowball of excitement."

Lack of Training Is a Problem

There are still substantial barriers to using technology in the classroom, the survey found. More than half of teachers—56 percent—cited lack of training as a "significant" or "extremely significant" problem. Nearly half say that some teachers believe non-digital tools are more effective. And 46 percent said the problem was that they weren't sure which tools to use.

"We do believe the survey results show, overall, a very positive view among educators about the current use of technology and optimism about using it in the future. It's higher than what was expected," Childress said. "The real story in the survey is a little deeper, in the way that teachers are using it in classrooms. There are things they wish digital tools were better supporting them on."

Still, educators are optimistic about the potential impact of education technology. Ninety-percent of teachers say that it's helpful in doing research or searches for information. And 71 percent of teachers, and 78 percent of principals, view it as a good tool to get students to work on projects with

others.

"Technology helps kids collaborate and think more creativity," said Darren Ellwein, principal of South Middle School in Harrisburg, S.D. "It really helps facilitate creativity and innovation."

Educators are ponying up their own money for digital resources too. In fact, more than 4 in 10 teachers reported that they had used money out of their own pockets to cover the cost of classroom technology, according to the survey.

That's happened at Sarah Pyle Academy.

"I always say no, let me reimburse you," MacBury said. But sometimes teachers will "get excited [about something] and say 'I want to try this out,' or they want to bring it to me with some solid evidence that it's working or why it's working."

Link:<http://blogs.edweek.org/edweek/DigitalEducation/2019/09/effectiveness-tech-survey-new-schools-gallup.html>

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