Shreyas M. Shete and Pramod V. Desai, Rajarambapu Institute of Technology

Design tends to Virtuality

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It was a breezy morning, sunrays while penetrating through fog reached Sam's face which made him awake. It was busy day, Sam who is design student of MIT University, scheduled his design work with Meiji and Shizuka, friends from Tokyo and Ramamrutham from Madras. He switched on his virtual device and few seconds later, all were working together in a single room. Are you confused? Is it a vague? How could they reach within a seconds from their localities?.....Yaa, why not? They are present there not physically but virtually. Now you will think like, are they on Skype or webcam, surely not. This device enables their virtual images to work together even though they are some thousand miles apart. How they managed to make this miracle. There is no need to get much panique. Friend the story had begun in 2010. Let's have a glimpse on our journey of 'Design Education' from 2010.

In 2010, Design Education had completed its journey from ancient 'Vaidik' teaching system to 'Power Point Learning'. There were 25 million students and huge number of professionals working in Design field all over the world. Out of which almost 75% were under graduates. They were struggling with imagination of design concept and ideas. They were able to draft and simulate any complex design model but problem was that they were not 100% familiar about what exactly happening. There were gap between industry and design schools so that students were unable to cope up with advanced technology in design. They were lagging in analytical thinking and creativity. There were various design softwares to help students for drafting ,modeling ,analysis and advanced machining. Majorly it included softwares like ADEMS, ANSYS, Solid-Works, NX-CAD, CATIA etc. Most of the tutors were under skilled as they were not properly trained and it was hardly possible for students to learn it from actual developers. Though there were innovative design schools like 30 weeks by Vivian Rosenthal, Stanford. D school along with Enrique Allen's designer fund. Also General assembly and Michal Rock's 2X4 were trying to improve scenario of design education. Most of the rural students preferred conventional method of learning over costly and complex software learning. Students were mostly dependent on their teachers and peers. They were unable to visualize dynamic boundary conditions acting on bodies and resolution of different forces.

So how Design Education will be in 2040……..

...The biggest innovation which will improve design education is nothing but virtual reality. Concept of virtual reality is giving a thrilling experience to users. Virtual reality, which is mostly used for entertainment purpose. It can bring revolutionary change in Design Education. If we could provide educational model through VR, then it will be greater boost for students. Also hologram technique by which anyone can interact with students at any instant. Just imagine Elon Musk is explaining about his product directly to you though you are thousand miles away from him. Student with their virtual reality headsets are experiencing design from each and every aspect. Students are able to take material, change its dimensions and do the experimentation on it by actual hand movements and dragging a virtual image. In 2040, education will be

such that teacher from one country is teaching to the students of other country with the aid of holographic learning and telepresence, so education will be boundary less. Augmented reality that is a technique which will explain you any concept by visualization just by holding the device over that object. It will be able for data acquisition and extraction from object. Such inventory methods of learning will emphasize on collaborative, creative and personal learning. Modern designers while roaming outside can see any design, object, product are able to get virtual informative data within fraction of seconds. Now designers will not have to wait for surfing and get results via internet rather they just have to hold their device over product and a miracle brings all necessary visuals, animation to them. In 2050 my mind hardly permits to think of conventional, boring 9 to 5 design classes. Virtual reality and augmented reality will change students world entirely like their second life. There will be no classrooms or place to conduct design classes, hologram technique will lead us to the world, where teacher will be accessible to students located anywhere in the world, his virtual image and students virtual image can interact with each other as they are sitting in a single room. In tomorrow's world, teacher will be just an instructor or mentor and not guide. Design students will design their product virtually with their teachers & teammates.

Another emerging technology known as 3D printing will be pioneering tool in future engineering. Today as all students carry their laptops, in 2040 they all will have their own 3D printers. Designers design, machine and manufacture products by hand as like pot by potter. Imagine how great experience they will get if they are welding, grinding, milling by hand virtually and then producing it actually. Is it difficult to study casting, hardening, softening and forging by standing inside a furnace?? No I am not joking; it is the future of education with help of virtual reality. Future designers their mercy less bosses, clients will be in a virtual network where they design, manufacture and tread collaboratively.

Engineers and designers have to do numerous projects in their pedagogical curriculum and in professional life. Designers will get industrial projects, interaction with client directly and design it virtually and sell it to them. In today's engineering we require number of designers to come together for single product, but in future engineer will be capable of doing all these stuffs individually with this modern virtual tools. Designing students interact with their peers on virtual social apps for everything. They will discuss and design virtually.

Design reports will be read by designer by his own without the aid of any consultant firm. Post processing and simulation softwares should be able to generate and synthesize report in user friendly form. So that designer can be able to consult the design report. To avoid software advancement version, there should be automatic updating facility in design softwares. Due to advancements CAD, materials, robotics, nanotechnology and biotechnology will likely come together form transforming design world.

In 2040, advances in CAD, materials, robotics, nanotechnology and biotechnology will democratize the process of designing and creating new devices. Designers will be able to design solutions to local problems. Individual designers will have more latitude to design and build their devices using world class materials and labor-creating a renaissance for designing entrepreneurs. The designing workforce will change as more designers work at home as part of larger decentralized engineering companies or as independent entrepreneurs.


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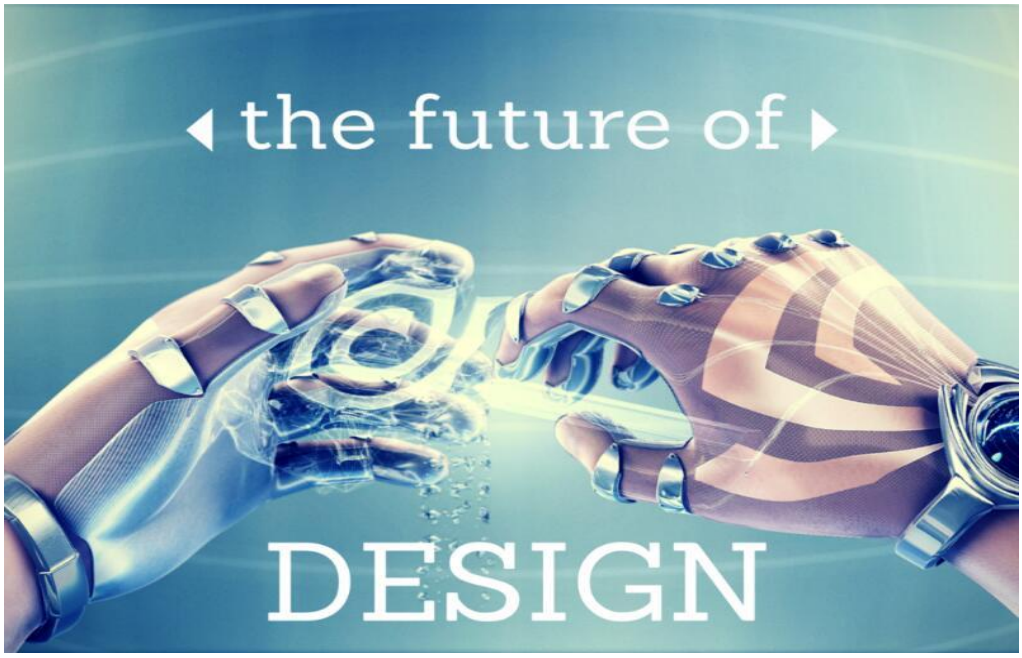
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