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Nominal Fee Based Caste, Gender and Stress Free Certified Audio Visual Web Degree Courses

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Abstract
IIT, IISER and IISc institutes are providing high quality education and NPTEL is providing high quality audio-visual supplementary courses in Engineering, Science and humanities streams. As India is rich in talent and poor in finance, authors appeal NPTEL, IIT, IISER and IISc core committees to see the possibility of taking an initiative in implementing and maintaining industrial and research oriented web audio-visual degree courses across Indian boundaries. These web degree courses must be independent of caste, gender and mental stress; Full course fee must be nominal; Certificates must be issued and recognizable by all other institutes, industries and organizations. Even though entrance exams are a not a criteria for admission, entrance exams must be conducted for evaluating/rating the capability of students before joining the course (initial rating) and after completing the course (final rating). By considering the students final rating, effectiveness of the web degree system can be monitored and improved year by year. In this context we review our ideas on the advantages of web degree courses in detail.

Keywords
IIT; IISER; IISc; NPTEL; Audio visual web degree courses;

I. Introduction

In the foregoing sections 2-6 authors reviewed the published content on web audio visual education [1] with reference to NPTEL's E-learning scheme [2] and other published contents on Indian education system [3-5] and e-learning system [7-14] for a clear and full purpose presentation and we seek permission for reproducing the same. For a fast reading, readers may skip sections 7 to 10.

National Programme on Technology Enhanced Learning (NPTEL) provides E-learning through online Web and Video courses in Engineering, Science and humanities streams. The mission of NPTEL is to enhance the quality of engineering education in the country by providing free online courseware. NPTEL is an acronym for National Programme on Technology Enhanced Learning which is an initiative by seven Indian Institutes of Technology (IIT Bombay, Delhi, Guwahati, Kanpur, Kharagpur, Madras and Roorkie) and Indian Institute of Science (IISc) for creating course contents in engineering and science. NPTEL as a project originated from many deliberations between IITs, Indian Institutes of Management (IIMs) and Carnegie Mellon University (CMU) during the years 1999-2003. A proposal was jointly put forward by five IITs (Bombay, Delhi, Kanpur, Kharagpur and Madras) and IISc for creating contents for 100 courses as web based supplements and 100 complete video courses, for forty hours of duration per course. Web supplements were expected to cover materials that could be delivered in approximately forty hours. Five engineering branches (Civil, Computer Science, Electrical, Electronics and Communication and Mechanical) and core science programmes that all engineering students are required to take in their undergraduate engineering programme in India were chosen initially. Contents for the above courses were based on the model curriculum suggested by All India Council for Technical Education (AICTE) and the syllabi of major affiliating Universities in India.

II. Basic pitfalls in Indian education system

In a nut shell, the basic pitfalls in Indian education system can be understood in the following way.

01. Due to so many issues, year by year, educational course fees are being increased by the central and state governments of India.
02. Political involvement is very high on caste systems and knowingly and unknowingly students are bifurcating themselves on caste conflicts.
03. Day by day private sector education system is growing and educational system is becoming like a business with large annual turnovers.
04. Many of the talented students are not in a position to get seat in IIT like institutes due to many reasons like lack of coaching, lack of ability, lack of guidance, lack of financial support and reservations etc.
05. Even though Indian government is putting lot of money and effort, most of the IIT students are leaving India and developing technological products for other countries and making India to purchase other country products and technology.
06. Poor teaching faculty and non-availability of faculty in some of the institutes.
07. In many institutes allocated faculty positions are not being filled up due to financial problems.
08. In any existing institute including IITs, one professor will teach one lesson only for one time in one year which effects ill health students, students met with accidents, students attending outdoor programmes like seminars, conferences, workshops and educational tours etc.
09. Even though teaching standards seem to be common for both talented students and backward students, there is no separate teaching methodology for the backward students and the purpose of giving a good education to backward students according to their understanding capability is not being fulfilled 100%. Due to this kind of unbalanced teaching methodology, some of the students are being detained from their respective courses with an apprehension of a bad name to the institute.
10. In educational seats allocation, forward and backward community problems are day by day becoming high.
11. Research oriented philosophy is very poor. Many Project

reports and PhD thesis are confined to libraries only and there is no strong link in between industrial and society development with those PhD thesis or Project reports.

12. Practical knowledge gaining methodology is very weak. As a sequel ever year lakhs of engineers are coming out with zero practical knowledge. Hence they are not confident on job skills, research skills and money earning skills.
13. Instead of concentrating on education, many students are showing lot of interest in internet browsing, internet shopping, internet games, internet movies, internet chatting etc. By any means if we are able to guide them in using the internet in a proper way, their future can glow like a lamp and country can glow and grow like a star.
14. In view of getting good marks and ranks, students are forced to by-heart the subject and in due course they are losing their creative and reasoning skills.
15. In villages and towns, every day students are making a long journey to reach their colleges from their homes by means of crowded buses, autos and trains. This is very risky and causing money loss, loss of valuable time and life and injuries due to accidents.
16. Students are forced to pay lot of money for staying in rooms and hostels.
17. By staying in rooms and hostels, students are losing their parents care and guidance. Due to lack of care, students in their teenage are knowingly or unknowingly becoming addicted to smoking, alcohol, drugs, pubs and so may unwanted activities.
18. Some of the colleges do not have accredited status.
19. Some of the colleges do not have adequate laboratory equipment.
20. Including IITs, no Indian universities got at least 100th position in world ranking.

III. Role of digital web university in India

1). In each and every subject of any branch of science and engineering, high quality teaching lessons (like IIT/IISER/IISc/NPTEL Professor's lessons) are recorded and mixed/edited through software with appropriate figures, movies, documentaries, graphs, tables etc.

2). These edited audio-video lessons are kept in a web site to form into a web library.

3). Without any entrance exam and with a nominal fee package students will be given a membership and admission in this web library.

4). With flexible rules and regulations, this web library acts like a Web University.

5). This web university can be linked with various colleges and universities in the country.

6). Parallel to this web education, most of the teaching staff can be grouped into Research, Industrial and Oration wings that are interlinked with industries and a continuous fruitful research can be carried out in all areas of Science & Technology.

7). In place of 10000 books of ordinary libraries, internet connected 100 computers, multi floor digital libraries can be made available for the benefit of students across various villages, towns and cities of India.

8). Educational call centers can be made available for the benefit of students at district/mandal capitals for interaction, lab practicals and various exams.

9). Round the year after completing 10 months of the calendar year course, student will be allowed to appear for the exams conducted by digital web university at any of the call centers.

10). After passing in the exams, digital web university will provide authoritative certificates recognizable by all other institutes, industries, universities and organizations.

11). Even though entrance exams are a not a criteria for admission, for evaluating/rating the capability of students, entrance exams can be conducted before joining the course and after completing the course.

12). By considering the students final rating, effectiveness of the web degree system can be monitored and improved year by year.

IV. Mechanism of digital web university

To maintain and develop this digital web and to promote continuous Research program, with the willing of the existing teaching staff of all universities and educational institutes,

A). Most of the current teaching staff can be linked up with industries for serious live research in all areas of science and technology.

B). Some of the existing teaching staff can be grouped into Teaching wing.

C). Some of the existing teaching staff can be grouped into Audio-Video Recording & Editing wing.

D). Some of the existing teaching staff can be grouped into Web Designing and Maintaining wing.

E). Some of the existing teaching staff can be grouped into call center maintenance wing.

F). Some of the existing teaching staff can be grouped into Research and Development wing.

G). Some of the existing teaching staff can be grouped into Oration wing.

H). Through call centers, exams and labs can be conducted after completing each semester.

I). Exam center selection can be based on jumbling procedure.

J). Students can choose their branch after completion of the common first year according to their flourishing awareness and strengthened determination.

K). Students can select any optional subjects and can avail a special degree according to their changing interest and changing employment strategies.

L). Time to time, students can pursue and complete degree from any place of India during his/her four years of the course.

V. Advantages of digital web university

A) Education wing

1. Throughout the country, starting from remote villages to major towns & cities clearly speaking 'Galli to Delhi', students will get same IIT standard education and there will be no stress and no competition in getting a seat.
2. With digital web lessons, like a song, same topic can be browsed and listened for several times so that any student can easily understand the subject thoroughly.
3. For any student (either regular or distance mode or job holder) - recorded and edited 'experiments' will help a lot in understanding and executing the experiment.
4. Irrespective of their financial status - round the week, regular students, physically handicapped students, job holders, poor

students (male & female), sitting in their homes can get the quality education compared with the existing Open and Distance schemes. Thus college 'travelling expenses' and 'time loss' can be eliminated.

5. Students having poor learning skills can be made able to understand & think better in reading and grasping the things.
6. As digital web is able to provide theory part as well as virtual laboratory, student is exposed to (virtual) practical knowledge, his/her creative and reasoning skills can be improved to a greater extent.
7. As digital web is able to provide the theory part as well as virtual laboratory, all other institutions can work as laboratories so that new ideas and innovations can be generated at a faster rate.
8. Research network can be initiated among the students having same ideology.
9. Web conferences among students and digital web members can be put into operation.
10. Junior teachers and students can improve their teaching skills through the recorded and edited audio-video lessons.
11. With this digital web, all universities can be linked well and a standard syllabus and a standard education can be maintained across India.
12. Existing schemes of Professional, Open and Distance educations can be well inter-liked with this digital web.
13. As time passes, digital web university's quality of education will be improved and cost of education fee will be reduced to a minimum or free.
14. Irrespective of their caste and financial status, students can take any branch of engineering/science/arts with reference to their personal interest at any time.
15. Due to struggle for existence, existing money oriented institutes will reduce course fees and gradually transforms into a good institutes.
16. Forward and backward community problems can be resolved in seats allotment.
17. Parents stress in educating their 'boy kids' as well as 'girl kids' can be relieved to a greater extent.
18. New and creative ideas, papers, documentaries, short movies proposed by students can be published online from the web university and can be made available to public.
19. Due to competition so many web universities may evolve and can serve better education and research in the country.
20. Usage of Internet, computers, audio-video devices and printers will be increased to a great extent and there by their cost will be reduced.
21. From time to time syllabus can be modified and maintained easily.
22. In future, Audio-Video lessons can be aided by international professors and thereby we can have One World - One University.
23. Irrespective of their caste and other social elements, very soon education, research and industry will be synchronized to a compact & cohesive unit and will keep mother India in No-1 position in the world.
24. For maintaining this digital web across India, many jobs will be created.
25. Every year, lakhs of students with IIT/IISER can be made available to mother India.
26. India can become world exporter for innovative technology which in turn increases Indian economy.
27. Even though, one lakh engineers/scientists fly away abroad every year, each state in India will have one lakh talented engineers/scientists. With this kind of potential, India can attract its NRIs and foreigners.
28. Indian Vedic Science concepts can be made available for the future India.

B) Research-Development wing

1. Since most of the current teaching staff can be interlinked with industries, there is a lot of scope for new ideas, concepts and innovations.
2. With the R & D wing, research projects can be carried out continuously and creative & innovative things can be developed and can be patented in the international market of science & technology.
3. The R & D equipment can be used as a special laboratory for the young students so that they can be exposed to the latest science and technology that develops creative and innovates skills in the their mind.
4. Since R & D is continuously put into operation, youth can be turned towards Science & technology (other than politics & bad issues) with rewards and cash prizes.
5. As many of the Indian students are able to get web education, they will get a lot of confidence and they can get good jobs in abroad and within India they can run their own industries effectively there by unemployment problem can also be resolved to some extent.

C) Oration wing

1. Interested staff can enter into 'Oration'. With proper schedule, round the country, they can give lectures on different aspects of science and technology at call centres.
2. Current issues of science and technology can reach young students in less time.
3. Awareness can be created among students on personality development, communication skills, self-employment and small scale industrial schemes.
4. Again recorded lectures can be put in the web for all other students.
5. Priority is given to new and challenging topics.

VI. To implement and run digital web university

A). Even though initial investments are very high, they can be collected and maintained by big software companies or industries or Govt. Of India and loans from banks.

B). Huge amount of money allocated for student scholarships can be diverted to digital web and the actual purpose of 'scholarships' can be best availed.

C). Money can be collected from charitable trusts. It is very easy for the charitable trusts in giving a high quality education to their students.

D). Just like Money saving policies, suitable educational policies can be initiated and money can be collected from the parents well before admissions. Starting from 8th class to Inter second year, parents can be made convinced to pay a prefixed amount as educational policy for a period of 5 years.

E). 'High internet speeds' and 'large databases' are required and are very common and essential for the present and future super-tech world.

F). Rupees, (20,000 to 50,000) can be collected from parents as

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a consolidate fee for all the years.

VII. The basic objectives of NPTEL

The basic objective of science and engineering education in India is to devise and guide reforms that will transform India into a strong and vibrant knowledge economy. In this context, the focus areas for NPTEL project have been i) higher education, ii) professional education, iii) distance education and iv) continuous and open learning, roughly in that order of preference. Manpower requirement for trained engineers and technologists is far more than the number of qualified graduates that Indian technical institutions can provide currently. Among these, the number of institutions having fully qualified and trained teachers in all disciplines being taught forms a small fraction. A majority of teachers are young and inexperienced and are undergraduate degree holders. Therefore, it is important for institutions like IITs, IISc, NITs and other leading Universities in India to disseminate teaching/learning content of high quality through all available media. NPTEL would be among the foremost and an important step in this direction and will use technology for dissemination. India needs many more teachers for effective implementation of higher education in professional courses. Therefore, methods for training young and inexperienced teachers to enable them carry out their academic responsibilities effectively are a must. NPTEL contents can be used as core curriculum content for training purposes. A large number of students who are unable to attend scholarly institutions through NPTEL will have access to quality content from them. All those who are gainfully employed in industries and all other walks of life and who require continuous training and updating their knowledge can benefit from well-developed and peer-reviewed course contents by the IITs and IISc.

VIII. About India's education system

India's education system, as one of the world's largest, has been studied and reflected on through academic papers, used as a case study and been the subject of many renowned books. India has a low rate of enrolment in higher education, at only 18%. There is enormous unmet demand for higher education. By 2020, the Indian government aims to achieve 30% gross enrolment, which will mean providing 40 million university places, an increase of 14 million in six years. The system is beset by issues of quality in many of its institutions: a chronic shortage of faculty, poor quality teaching, outdated and rigid curricula and pedagogy, lack of accountability and quality assurance and separation of research and teaching. With a very low level of PhD enrolment, India does not have enough high quality researchers; there are few opportunities for interdisciplinary and multidisciplinary working, lack of early stage research experience; a weak ecosystem for innovation, and low levels of industry engagement. Socially, India remains highly divided; access to higher education is uneven with multidimensional inequalities in enrolment across population groups and geographies.

The Government's reforms have broad support within the sector, but many predict it will be a messy and unpredictable process. The devolution of authority and responsibility for higher education reform to the state governments has begun, but there will be huge differences in the capability and the will of different states to act. This will result in great variation in how the reforms unfold across the country, possibly with important implications for international collaboration in the future. Key challenges facing the system include quality assurance, credit transfer systems, movement between higher education and vocational skills streams and teacher training in higher education. There is an urgent need for sysstematic change in affiliated colleges to improve the quality of teaching and learning. Private businesses are waiting impatiently to enter the higher education market. The private sector will continue to grow, but 'for-profit' higher education is unlikely to be sanctioned soon. There is currently limited collaboration with industry. Indian institutions would like to engage with industry in the development of science parks, incubation centers and technology transfer units. Higher education in India is undergoing considerable change. With over 600 million people in India under 25 years old, the system is under tremendous pressure to expand. India's young population has a huge appetite for education and, as the growth in the size of the middle classes escalates, millions are increasingly able to pay for it. By 2020, India will have the largest tertiary-age population in the world and will have the second largest graduate talent pipeline globally.

The third factor affecting educational change is political. Education in India is highly politicized and complex. Throughout the political system to the highest levels, the education sector is powerfully represented; reforms in education are controlled by political processes and interests at both central and state levels. Many education reforms, plans and ambitions are highly contested. There is a complex interplay beneath the formal structures affecting the distribution of power and resources in education in India; underlying pressures, interests, incentives and institutions can influence or frustrate future educational change. This is particularly complex in the higher education sector. The Indian government is planning huge expansion at all levels of education. While there is no doubt that this will be the decade of change at a transformational scale and pace, India's rise faces daunting challenges. The education system as a whole is beset with issues of quality, access and equity, and change is happening much faster in some states than others. The general standard of education in India is low. There are not enough seats in schools, colleges or universities to cope up with the enormous and increasing demand. Traditional approaches to meet this demand will not be sufficient in the time-scale needed. With the rise of the middle classes, an increasing number of people need not rely on the state to provide an education service. India does not have enough high quality researchers. The number of students taking PhDs and entering research posts is very low: 4,500 PhDs are awarded per year in science and engineering, compared to 30,000 in China and 25,000 in the US. There is systematic segregation of teaching and research; most teaching-focused universities (the vast majority) do not provide students with research experience or the skills which would prepare them for research careers. As a consequence, India has seen a dramatic shift towards private provision across the entire education spectrum, including higher education. The private sector is already playing a significant role in the development of education in India, and its influence and presence will increase substantially. Education is vital for India's competiveness and economic growth, but also for social stability. The disparity between rich and poor is growing, and expectations on the part of young people and their parents are high. Geographical differences are vast, compounded by social divisions and inequalities in education provision. Over the last decade, higher education has been on a steep growth trajectory. India now has the largest higher education system in the world in terms of the number of institutions, and the second largest in terms of the number of students. However, despite impressive growth, India's higher education gross enrolment ratio (GER)

at 18% is currently well below the global average of 27%.The government plans to increase GER in higher education to 30% by 2020. This will require a transformational change at a pace and scale never seen before. As India currently has 26 million students enrolled in tertiary education, by illustration, it would need another 800 universities and over 40,000 colleges in the next eight years to provide the planned additional 14 million places (40 million places by 2020). At current growth rates, India will fall very far short of this figure, therefore the Indian government has put an ambitious five-year plan into place to boost the rate of expansion significantly.

If there is one overall structure which defines Indian higher education, it is the affiliated college system. The vast bulk of students study at public and private colleges which are affiliated to state universities. These colleges do not have their own degree awarding powers; they deliver the courses, curricula and examinations specified and regulated by their parent state university. The affiliated college sector is huge, enrolling over 90% of undergraduates, 70% of postgraduates and 17% of doctoral students. Some universities have as many as 1000 colleges affiliated to them. There are considerable challenges in regulation and quality control; and while there are notable exceptions, many are perceived to be sub-standard. Last year, accreditation through the National Assessment and Accreditation Council and the National Body for Accreditation of all universities and colleges was made mandatory. A huge exercise is underway to accredit the two-thirds of universities and four-fifths of colleges that do not have accredited status. State universities, therefore, through their activities, form by far the greatest element of higher education in India. They are run and funded through their respective state governments. There is wide variation in the amount of funding they receive, but in general, they have been critically underfunded over the last 20 years. State universities depend on affiliation fees paid by the colleges for their survival. These fees, supplemented by state government funding, are generally used to pay salaries and little else; most have poor infrastructure and conduct little research, although pockets of excellence exist. Many state universities spend much of their time administering the exams and admissions to their affiliated colleges. Places at state universities are highly sought after by students. Most, but not all, state governments have legislation in place to grant university status to private colleges, providing them with their own degree-awarding powers and much more autonomy. This is the fastest area of growth in new universities. There are currently 100 such private universities in India (16% of degree-awarding institutions).The central government also has the means to grant university status to private institutions, under the 'deemed university' category. There are currently 129 deemed universities (20% of degree-awarding institutions). It is unclear whether or not this central role will continue, given the plans to devolve more decision-making to the states.

University education is, by law, not-for-profit in both public and private sectors. The reality is a little more complicated. The majority of private institutions in certain parts of the country operate a widely prevalent means of making money through illegal 'capitation fees', in the form of one-off fees paid by the student, off-the-books. Arguably, the greatest challenge facing higher education in India is the chronic shortage of faculty. Various reports estimate that 30-40% of faculty positions are unfilled. Most faculties have had no training in teaching. Other issues in teaching and learning which compound the problems include: 1) Outdated, rigid curricula and the absence of employer engagement in course content and skills development. Very few opportunities for interdisciplinary learning. 2) Pedagogies and assessment are focused on input and rote learning; students have little opportunity to develop a wider range of transversal skills, including critical thinking, analytical reasoning, problem-solving and collaborative working. 3) High student: teacher ratio, due to the lack of teaching staff and pressure to enroll more students. 4) Separation of research and teaching; lack of early stage research experience. 5) An ineffective quality assurance system and a complete lack of accountability by institutions to the state and central government, students and other stakeholders. This has resulted in graduates with low employability, a common feature of higher education across south Asia, and an insufficient basis for movement to higher levels of study and research. These problems are endemic across higher education institutions in India, including many of the 'top tier' institutions, but particularly so in affiliated colleges and state universities. Despite an average growth rate of over 7% in the last decade, India's GER in higher education is very low. By some estimates, even if India succeeds in its target of 30% GER by 2020, 100 million qualified students will still not have places at university. India needs to drastically increase the number of places at universities and enrolment through distance learning programmes.

IX. Facts on E-Learning

Information and communication technologies (ICTs) have enormous potential in education however, the development, use and change management of eLearning happens with a particular context. The contextual factors influence the E-Learning theories and practices, which must be understood by the developers and users. The context is multifaceted which includes community, culture & technology have become critical when understanding and implementing ICTs in education. The organization of higher education institution (HEI) is made of internal and external elements. Internal factors are the human characteristics and the organizational attributes and external context is made of government ICT-policies and the broader social environment. The research tries to show the contextual factors either a support or obstacle in the process of E-Learning development and use. System developers need to design an E-Learning model within the context of the existing support and resources. There will be no common E-Learning-model to fit every context rather learning has to be conducted within the culturally defined contextual frameworks. E-Learning is a multi-dimensional concept which needs to be comprehended in terms of its relationship with the social environment within which it is applied, meaning that a successful eLearning model in UK may not be as successful in India.

There are also several benefits emerging from E-Learning systems, difficulties occur when systems are not developed according to the learner characteristics such as nationality, gender, and cognitive learning style. Two primary variables are user's interest in eLearning and their competencies in using digital facilities. The learner preferred-learning path depends on their personal characteristics of age, gender, teacher-led or self-study, familiarity with computer, and learning style. Likewise, teachers use ICTs which is influenced by a diversity of factors like: demographics; accessibility; digital literacy, perceived usefulness and ease of use of new system. New generation students are using media in many different formats, which shows a new learning style as is their multitasking: using computers and the Internet at the same time as video games, print media, music, and phone. The teachers, students

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and other users of ICTs will behave according to their demographic characteristics of age, educational level, cultural background, physical and learning disabilities, experience, personal objectives and attitudes, learning preferences and styles, motivation, reading/ writing skills, ability to work with diverse cultures, familiarity with differing instructional methods and previous experience with E-Learning.

The increasing contextual impact on E-Learning is being identified in the research about the integration of educational technologies. In traditional computer-based learning, the computer which was used as a tool to complete a task or get something done so there was no need to address the broader environmental context of the individual. In a study of Indian universities, found that "most IT education is ineffective because it is largely on technical grounds and not at all concerned with contexts and real world problems. Another research on E-Learning reveals that despite the best of intentions, efforts and resources, many of the E-Learning projects end in failure because they won't undertake perspectives of existing and changing social and political context. There is a conflict between the requirements of industry/market for graduates and whatever, is produced by the universities. ICT graduates are required to develop a cache of knowledge and skills and studies report that the gap between theory and practice is widening and the computing-curricula is failing to reflect the external demands. Due to the globalization and global-village, governments are facing problems in enabling their education system to transform the societies into information and knowledge-communities. Modern organizations have requirement for technical talent to fill new digital job-profiles like network managers, web administrators, developers, programmers and security specialists, but universities seems to be in trouble, for example, student-enrollments in ICT-related courses are increasing all over the world but the output of IT graduates is still less than the demand.

ICT not only brings about changes in the way to deal with information but also changes the way we think and how we view our world. Cultural change is bringing about a greater access to information and the fact that this access is provided by new technical means makes it more "scientific". This type of cultural change is creating a form of stress, fuelled by the inability of the individual to be in sync with the speed of cultural transformation; becoming an outcaste in the information society which is presented as the ultimate fear. Many factors in education is complicating the process of innovation: Technological, social and pressures from the work world encourage educational institutions to evolve. Domain that readily accepts change, education reacts gradually to these external pressures. Today's world's culture is no longer only literary and art, but also it should be enabled by technology and science. ICT is at the crossroads of these two aspects. Refusing the condemning illiteracy and being unable to integrate into today's world. The integration of ICTs in HEIs demands a re-definition and re-evaluation of role in education and development of society according to the changing social context, where the communication networks are radically changing and knowledge is becoming the central driving force verifying that "learning cannot be separated from its social context". The teachers of modern age are constantly forced by media, education-department, professional associations, and parents to update. The social grounds for an E-Learning in HEI cannot be neglected in a serious undertaking.

There needs to be a focus on the bottle necks in the way of successful and context-friendly E-Learning systems because barriers can make technology use frustrating for the technologically perceptive, let many teachers who may be somewhat techno-phobic. The digital literacy of teachers is indispensible otherwise one cannot expect teachers to play their due roles in the movement of computer literacy by making their students to so develop their culture and context that their life becomes digitally charged work environments and broader contexts. There is no doubt in the fact that ICT is not neutral rather supported by an ideological complexity that represents ideas as diverse as the globalization of the economy, information society and the end of national policy in the favor of world government. A number of communities interest in and perspectives on the relationship between people and ICTs. It includes industry, academia, designers, policy makers and other institutions. Instructors are feeling that they have pressure to use IT, but they commonly face several obstacles when attempting to use technological teaching techniques. Institutions of higher education must strategically develop IT integration plans that help overcome these obstacles, addressing the needs of diverse pedagogical agendas and multiple levels of comfort with technology.

There are a number of challenges that are faced by universities in developing countries as they seek to implement the e-learning systems. In developing countries the results are almost similar to developed states in many terms as well as different at broader level. Despite research and testimony that technology is being used by more faculty, the diffusion of technological innovations for teaching and learning has not been widespread, nor it has become deeply integrated into the curriculum based learning. Given that E-Learning solutions must be compatible with the contextual factors of any country, the measurement and assessment of demographic impacts on user perceptions are critical to the successful digital opportunity initiatives for higher education in a developing country. The education system provided via the Internet is being improved year after year and has been enhancing along with the development and advance of Internet technologies. The advance of e-learning has, to a great extent, been affected by the development and application of wireless Internet Furthermore, the advance of e-learning has been influenced by numerous software programs, such as the Blackboard system, and others. By means of these, as well as other programs, students are enabled to be in constant contact with their virtual professors. Most often, they have lectures or consultations with their professor live, twice or more times a week, whereas during other days throughout the semester, professors ask students questions, initiate discussions, send additional reference materials, assign topics for seminar papers, etc. Yahoo voice messenger, Skype and similar programs, where the professors' voice may be heard, along with video conferences, are used for lectures. However, certain faculties do not offer this means of communication among professors and students; instead, they use readymade software packages which are bought by students along with the tuition fee at a certain faculty, and he/she may contact a professor in regard to covering the syllabus material, when the need arises. At the end of the semester, the student takes the examination, most commonly in a test form, also performed online and writes an independent final paper defended orally.

Depending on whether the student has chosen a certified or a non-certified program, upon completing the study program, he/ she will or will not be awarded a diploma. However, what is most important to many students graduating from virtual faculties is the fact that the diploma most often does not state the type of studies, that is, whether he/she studied online or face to face. The reason for this lies in the fact that these two methods of studying

are regarded fully equal and no distinction is being made among them in terms of employment. In spite of the fact that virtual faculties have been in existence around the world for about ten years, not much research has been conducted showing to what extent the knowledge acquired in this way differs to the traditional knowledge acquisition, in respect to quality, pedagogical methods used, and other matters. Furthermore, there are still doubts about what is considered e-learning, what the e-learning process is, and what has to be included in order to create a quality online study program. Bearing this in mind, in this paper, we will endeavor to provide an answer to these questions, based on the latest research conducted in the past several years in the world, as well as first-hand experience and personal research. The aim of this research was to find the answer to several crucial questions, as follows:
1) To what extent does e-learning improve the process of knowledge acquisition, by juxtaposing this educational model with numerous other models? 2) What are the prerequisites in terms of the technical infrastructure and logistics for e-learning? 3) What models of e-learning are in use and which ones give the best results? 4) To what extent is the role of the professor-instructor modified in working with students who opt for this model of education? 5) What are the costs compared to the profit earned at faculties organizing Internet studies? Based on the results of this research, which is considered one of the most comprehensive and recent of this kind in the world, indicative data for this form of education have been collected. The most significant indicators include: A) It is only 18.7 % of all educational institutions in the USA that do not offer some of their study programs via e-learning. B) About 2.4 % of state educational institutions in the USA have not included this kind of knowledge acquisition in their educational models and have kept to the traditional forms C) Students at more than 90% of virtual faculties are satisfied with this kind of education and knowledge acquisition D) All the faculties that provided an adequate training for the professors, as well as other members of virtual faculties, have managed to adapt to the new method of work in a fairly short time and achieve the desired results E) Educational institutions have made significant savings in terms of human and other resources utilization, and thereby have increased their profits. For example, at the Wisconsin-Madison University, 172,000 US$ have been saved, due to savings in professors' time, who previously had to spend much more time in teaching sessions in order to cover for large groups of students; in addition, the number of traditional classrooms has been reduced, and thereby costs necessary for their use. On the other hand, by designing an online program, many faculties, which previously did not have their business site, managed to save large sums of money for buying their business premises, an example of which is the University of North Carolina in Charlotte. F) Furthermore, the number of students has increased, and higher study efficiency has been achieved. For example, some American faculties have, owing to varied and high quality programs, succeeded to reach the number of 800,000 students showing further growth tendency. E-learning has enabled a higher degree of interactivity among professors and students and easier study material coverage in both undergraduate and graduate students. Furthermore, professors and assistants have developed their students' critical thinking and have given them more freedom in their choice of discussion topics and mutual exchange of ideas and information and knowledge expansion. G) Students have shown a great adaptability to this kind of studying. Namely, e-learning has proven to be a very popular and acceptable way of studying, owing to its flexibility, as well as its higher degree of innovativeness in terms of introducing new and contemporary programs in comparison to traditional faculties. Research has revealed that both students and administrators believe that the quality of e-learning responds to the traditional teaching methods in terms of quality. According to this research, three quarters of leaders in state faculties and universities trust Interned-based learning quality to be the same or even better than face to face learning. This research has also shown that universities offering online studies have so far had more than 2 million students and that the number has been increasing by 25% on an average every year. H) Compared to traditional ways of studying, study efficiency is increased in this way, as a result of continual learning, so that studies may be completed in a time frame shorter than assigned.

The development of modern technologies, the Internet in particular, on the one hand, and the changes in ways of managing, communication and work organization in enterprises ,on the other hand, have in the recent years resulted in changes in the kinds of knowledge and ways for its acquisition. Having in mind that the Internet has found its way into daily life and use, both in various domains of entertainment and business transactions, the use of the Internet in the education sphere is naturally expected. Namely, in the sphere of education, the Internet offers a global platform for information storage and its presentation in textual, visual, graphical or any other form. It also serves as a means of synchronous and asynchronous communication. Taking into consideration the above mentioned statements, it is logically expected that online studies will grow in popularity, and that the network of virtual faculties will keep spreading in the future. Further to this, Internet education will soon become the dominant form of education worldwide, which is to reach its peak in a few years. At the same time, it is to be expected that the methods of work and communication among students and professors will continue to improve and that efforts will be made in increasing the quality of this kind of studying. The extent to which a country will become part of the global educational Internet network, will, depend on the degree of utilization of new Internet technologies and the level of popularization of this form of education. Namely, many world prestigious faculties offering distance learning studies, engage famous people studying there as the best promoters of this way of studying. This form of studying still does not have a large number of advocates in Serbia, since, in fact, there are no real Internet studies. In other words, Internet education is even now considered as some form of correspondence studies. In addition, many faculties yet lack the relevant software and accompanying equipment, as well as adequately trained staff, which would use them in their work with students. Furthermore, the development of Internet studies is still lagging behind in this country, as it is still at the bottom of the ladder among countries in terms of Internet users (about 20%). A factor further aggravating Internet studies development here is the fact that people's beliefs here change very slowly regarding any kind of novelty, especially in education.

In compliance with this, most people cannot imagine a "classroom without walls", nor a completely different way of studying. For a large group of people, it is unimaginable not to go to the faculty and not to attend lectures, as this would make it impossible for them to feel as academic citizens. The number of those among them, who are skeptical towards the quality of thus acquired education, must also be high. As a result of this, although the Ministry of Education has made provisions for Internet education in the Law of Education, it is still in its infancy and has not received full

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media promotion. This is why little is known about this area, which is approached with a certain grain of salt and suspicion. In order to change the existing prejudice, it is necessary to point out to the general public all the advantages of online education, so that both future students and their prospective employers could get the real picture. In this way, in times to come, this country as well could enlist among those who have developed a new and very profitable branch of economy, by using a modern and flexible form of education. This does not mean that faculties with "classrooms without walls" will fully replace traditional faculties. They will continue to exist and to attract those students who prefer classical learning models, yet they will also have to change in accordance with the needs and requirements of contemporary education. In keeping with this, it may be concluded that virtual faculties and their expansion will have positive consequences and impact on innovating traditional faculties work as well. It may reasonably be expected that in addition to high profits earned by faculties, students will be the ones to enjoy highest gain as they will get the education to their order and needs, as well as suited to the requirements of their future job positions. This is further corroborated with the fact that more and more employers do not distinguish between those students who have graduated from Internet schools and those who have graduated from other schools in their recruitment decisions.

Classroom training typically incurs substantial delivery costs, production costs, travel and location costs, and set-up and material costs. These costs rise for each additional learner. E-learning, on the other hand, incurs only production costs and small implementation costs. And because these costs are fixed, the return on investment increases with each additional learner. There are indirect cost savings to e-learning as well, because learners typically spend much less time away from the job when using e-learning than they do when attending classes. E-learning combines a variety of rich media and interactivity – audio, video, quizzes, simulations, etc. – that leads to increased retention and a stronger grasp on the material. The ability to personalize the learning to the individual needs and learning styles of learners gives it another edge over classroom training. E-learning gives learners more control, as learners can typically start over, revisit, or replay segments in a way that is typically impossible to do in a classroom. E-learning also provides a safe place for learners to make mistakes, which can be a crucial aspect to successful learning. No one likes to fail in a classroom full of other people. E-learning lets the learner fail without fear and then provides the feedback to get them back on track. E-learning can be accessed anytime and anywhere. Because it is self-paced, learners can work at their own pace and fit the training into their own schedule. With an ability to precisely and quickly control and change delivery times, e-learning can take advantage of "down time" for employees or can be delivered "just in time" to synchronize with job tasks. With e-learning one can deliver consistent training through a standardized process. You avoid the problems caused in the classroom when different instructors cover the same material in different ways. It is much easier, and more affordable, to update e-learning than to update and reprint materials, retrain instructors, and re-conduct classroom sessions.

E-learning allows to get education to every person out of dependence on its residence or social and economic status. Though today's interactive training is more often, it is used to train specialists in economics, humanities, science, and much more rarely in engineering. That's because engineering education needs technological laboratory practical works as well. But this problem is possible to be solved, for example, with the help of so-called virtual laboratories and distance practical works. But in spite of one more important educational factor still exists necessary to build up the character of a young specialist in industry: the absence of interface communication with a tutor. That's why we suppose that as far as technical universities concerned it is expedient to combine classical training with e-learning: mixed educational technologies. Key advantages of e-learning are flexibility, convenience and the ability to study at one's own pace at any time and any place where an internet connection is available. The participants can participate and complete coursework in accordance with their daily commitments. This makes an e-learning education a viable option for those who have other commitments - such as family or work – and/or cannot participate easily e.g. due to reduced body function. There are also cost and time benefits with blended learning, not having to commute to and from a place where education is given face-to-face.

X. Indian women's educational and career attainment

The changes in women's educational and career attainment may have multifaceted characteristics. Women might have increased their enrolment in colleges compared to men, but women may still differ in terms of the types of subjects in which they are enrolled. Distance learning is becoming increasingly attractive for women, as shown by some research studies. Namely, more than 60% of those over 25 years of age and female opt for this type of development and education in the world. The reason for this lies in the fact that this method of learning offers numerous advantages. Among the most prominent benefits, the following may be pointed out: the flexibility of the learning process (students study at the time most convenient to them); - achieving a better balance between personal and other commitments (they may spend more time at home with their families); - minimizing costs (both time and money savings are made); - a deeper sense of self-fulfillment (acquiring relevant and useful knowledge and achieving professional goals). Furthermore, women at a certain age, over the age typical for students (18-22years of age), consider virtual classrooms to minimize the embarrassment and alienation factor. In addition to these advantages provided to women by online studying, it also enables women to choose a certified course, offered by more than 90% of faculties in the world Accordingly, women are given the opportunity of choosing some of the programs from a broader range, the ones that best suit their professional interests and goals, without the requirement to move geographically. In other words, women are no longer limited to the local educational institutions, but have at their disposal a more comprehensive choice of educational programs offered worldwide. Also, studying over the Internet enables women permanent development thus reducing the educational gap in comparison to men. At the same time, the social status and life quality of women are being improved. Higher qualifications enable women to contribute more to their community.

XI. Conclusion

Advantages of digital web university are plenty and plenty! Its 'effectiveness' and 'influence' only depends on its implementation and long standing execution. With this scheme, long standing 'caste and seat reservation quota' problems can be completely eliminated. Students stress in getting a seat in good college can be relieved. Parents stress in educating their 'boy kids' as well as

'girl kids' can be relived to a great extent. Even though many of the regular IIT holders are quitting India, staring from 'galli' to Delhi, mother India can have lakhs of digital IIT holders. As many of the Indian students are able to get IIT like education, they will get a lot of confidence on educational skills and they can run their own industries effectively and there by unemployment problem can also be resolved to some extent. Not only for India, digital education can be implemented in any developing country. Even though the proposal under consideration is interlinked with many political and social issues, with reference to 'Vision2020' program, this proposal can be given a chance in Indian higher education system. For its successful implementation and long standing execution, political leaders, private and public industrial sector, scientists, professors, economists, engineers, IT professionals, officers, doctors, private educational institute owners and all Indians should come forward with great vision and magnanimity. Authors request Indian central and state governments, NPTEL, IITs, IISc, IISERs, all Indian universities and all other educational institutes to initiate and execute a joint action plan in this context.

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