ORIGINAL RESEARCH PAPER

Education

KEY WORDS: Career Options, Future Readiness, New Age Technology

CAREER OPTIONS AND FUTURE READINESS AMID NEW AGE TECHNOLOGY

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ABSTRACT

The prime objective of this longitudinal study is to understand the fast-changing landscape of Indian academia. Using document analysis as a primary data gathering tool, the study has firstly delved into analyzing how New-age-technologies are changing India's higher education landscape. Secondly, the study made an attempt to assess whether Indian students are becoming future ready from job perspective or not. Thirdly, the study explores most sought-after future ready programs in humanities and science fields. As part of findings, the study has revealed several striking facts followed by suggesting corrective measures to make education learner centric.

INTRODUCTION

We must admit the fact that new circumstances and realities require new initiatives and so happened three years ago when the pandemic broke out across the globe. And the first lesson that we got from the pandemic was we should be ready with alternative modes of quality education whenever and wherever traditional education is not possible. In the beginning, we were little apprehensive as well as critical of online education but with passing time upgradation in technology coupled with solutions provided by Edtech industries brought online education almost at par with in-person education or on-campus education. Moreover, Edtech industries and their innovations got a boost because of our new education policy (MHRD 2020) that has laid a huge emphasis on the importance of digital literacy by integrating AI education in the forms of offering subjects like Artificial Intelligence, Design thinking, machine learning from school to higher education with special emphasis on robotics, coding, computational thinking, data annotation, image classification, speech transcription, virtual reality, augmented reality, IoT, cloud computing, block chains, big data analysis, etc. These AI based subjects are not only changing the matter but also the manner of learning through digital pedagogy and help our students become more employable and industry-ready. So given the current scenario, I can undoubtedly say that the education landscape of the country has indeed changed.

Research Questions

1. How New-age-technologies are changing India's higher education landscape?
2. Are Indian students becoming future ready for employment?
3. What are the career options for students after 12th Grade in Arts and Humanities?

Findings and Discussion

In response to the first research question, the study found several striking facts about how new-age technologies are changing India's higher education landscape. The first perceivable change brought by new-age technologies is online education. Online education has enabled us to take the classroom to students. There is no more fear of accommodating any number of students nor is any worry of managing large class-size because we are having smart global classrooms where teachers and students using different e-learning platforms connect with each other around the globe and learn in a more collaborative and interactive manner. For instance, concepts like circulation and respiration are easier to understand now with the help of virtual and augmented reality. This instills curiosity, creativity, and imagination in young brains and makes learning more interactive and stimulates students' minds to focus more deeply on the subject. With the help of AI solutions, today's teachers are giving competency-based learning in which teachers can personalize as well as customize the lessons as per learning pace and styles of different individuals. New-age-technologies have also helped us to have accurate and adaptive assessment in which teachers can better understand whether an individual has understood a lesson or not or what is the weak area and accordingly decide a strategy to meet the gaps and further alter their teaching pattern so that gaps in learning can be effectively bridged. But to ensure higher degree of digital fluency, I've three recommendations.

1. The first requirement for online teaching-learning is to create Digital infrastructure with the help of cloud computing. In this direction, National Digital Library of India, eBasta and ePathshala are going to be linked with cloud where one can find virtual libraries having millions of digital books for students (Sociology Group, 2022).
2. The HEIs should either create or procure standard high quality e-content, technology, and digital pedagogy with an immersive and project based learning to solve real-world problems. Further, the HEIs need to organize periodic capacity building programmes as part of awareness drive to empower their students and faculty to align with the ongoing best practices in online education.
3. The need is felt to demolish digital divide entirely by promoting equitable education for all so that all students from rural and urban backgrounds have equal access to quality practical and hands-on experiment-based learning experiences using virtual labs.
4. There should be a paradigm shift from providing services to emphasis on innovation; by promoting extensive research both on the technological as well as educational fronts and beyond.

In response to the second research question, the point is how best can we meet the expectations of new education policy to stay competitive and to remain relevant in today's technology-enabled academia. NEP 2020 has put a huge emphasis on the importance of digital literacy and integrates AI education by offering subjects like Artificial Intelligence, Design thinking, machine learning from a young age to all levels with special emphasis on robotics, coding, computational thinking, 3-D machining, data annotation, image classification, speech transcription, virtual reality, augmented reality, IoT, and big data analysis so that our students could meet the future needs and our professionals could be industry-ready.

"These are all part of developing 21st-century skills because education embeds these kinds of things to qualify the youngster with respect to what is needed in the 21st century which is communication, creativity, problem-solving and things of that type.

Here all the HEIs need to prioritize equity as traditionally built schools have an extensive technical gap that must be filled through a variety of activities and interventions in the school system in order to provide the youth with technological fluency. and provide a platform for students all over the world to use learning and innovative technologies in STEM education. Ever since the country voiced for self-reliant or Atmnirbhar Bharat, a host of companies like Stemrobo,

NextEducation, etc. came into being and are making great innovations in Block-based programming, App development, AI, Python, 3D designing, Arduino programming, and fun with electronics are among our six primary innovations. With the government's goal of becoming India Atmanirbhar, we take pride in being a 100% 'Make in India' company.

We intend to instill curiosity, creativity, and imagination in young brains, as well as abilities like design thinking, computational thinking, adaptive learning, physical computing, and more through blended learning, 3D and DIY kits, and AI-based experiential and interactive learning our endeavor is to provide an unrivaled experience to the students.

If we talk about the future of Edtech industries, we find that the education industry, like any other, has undergone an internet transition following COVID. However, the online education market is expected to rise by 11.6 billion by 2026. This demonstrates that the EdTech revolution is not a passing fad, but rather a long-term answer. The edu-tech or ed-tech business is now thriving as all educational institutions, large and small, take a hybrid approach to learning. All inventions are born from a need and the need of the hour is to bridge the learning loss & is to adopt tech-based education, in order to move ahead and keep up with the global trends.

Although artificial intelligence is currently incapable of doing common-sense tasks in the real world, it is capable of digesting and interpreting massive amounts of data significantly faster than the human brain. The artificial intelligence program can then provide us with synthesized action. In this manner, artificial intelligence assists us in the game-playing of potential outcomes of each action and streamlining the decision-making process. We utilize AI to collect data on how kids learn a language and frequent errors among users who share the same mother tongue, as well as to uncover trends in how knowledge is remembered.

We both observed foreign nations that were technologically sophisticated. The reason for this is that those countries have traditionally placed a higher value on K-12 education than on anything else. It's why little countries like Finland and the Netherlands gave birth to world-famous corporations like Nokia and Philips. This would not have been conceivable if these countries had not prioritized basic education.

We need to shift the whole education culture of K-12 from 'active listeners' to 'active makers'.

In response to the third research question, the study lists up the following subject which are more prone towards future readiness from career option perspectives. Unlike yesteryears, the world of today is changing at a very fast pace. For instance, IT world is one of the biggest examples of fast changes. But our education system is something in which change takes place at a very slower pace. As a result, a mismatch between the current system and future employment can be seen. And the prime reason of this mismatch is our present curriculum is not aligned or designed to meet the future needs of job Industry. As per a report, in ten years down the line, 75% of what we teach today will be of no use as industry needs or requirements of job market will have changed drastically due to disruptive innovations. Similarly, a report commissioned by the New Zealand Productivity 1 NorthTec, New Zealand commission (Ghonge, 2020) identifies the effect of digital disruption and the change of the workplace to be threatening 40% of current jobs in the future. Do we expect 40% of our working population to disappear or be unemployed? Most likely not. We must prepare and expect to retrain for the new jobs that will continue to evolve. That is not likely to require long study, new qualifications. Short modules focused on competencies and delivered flexibly are likely to be in demand rather than importing workers. Disruptive innovation describes *any* situation in which an industry is shaken up and previously successful incumbents stumble.

Hence our curriculum should be agile and flexible that could meet current and future employer needs. This provides a choice to curriculum designers to rationalize, simplify and organize existing curriculum or leap forward to transform curriculum and teaching and learning experiences. We need to consider the liquid expectations of future employers and graduates. The work place moving rapidly from a content driven system to a skills and competencies based environment is another key driver for change. Conceptual structures are challenged as we consider the cognitive and technical transferable skills for the future. We need to design a curriculum that could be future-proofing. The current education system is undergoing a paradigm shift from a mere knowledge-driven curriculum to skills-driven curriculum. who are the learners and what do they really want and how do we integrate and meet their current and future needs? How can we deliver and exceed learner expectations and fulfill organizational strategic objectives? We work in a world where expectations of learners create global expectation of learning and roles beyond traditional modes of instruction and engagement. We must also consider the cultural and support needs of our students and the increasing equity gap that can exist between young and old, wealthy and poor in digital uptake and support networks. How connected are our learners, what experience and cultural support can they bring with them on their journey?

In terms of design, we should have dedicated modules that could have provision of integratingall the best practices to make better pathways choices. Stable employment is no longer the norm as people work for many different clients and numerous companies.

In terms of assessment, it should be designed to gather evidence of learning rather than harvest assessment. The complex relationship of curriculum and assessment can be harnessed to ideate and develop programs where students do not realize that they are being assessed as they collect evidence of learning along the journey. Self-assessment, peer assessment and portfolios along with social media and networks such as Linked-in for example provide a body of work for future employers. The new courses will combine in-depth knowledge with a sharp focus on the valuable skills of creativity, critical thinking, collaboration, oracy and digital literacy. Moving away from the heavy GCSE focus on written examination and terminal assessment, the new Future-Ready Courses will combine modular written assessment with a much broader range of assessment methods including TED-style talks, presentations, 'viva voce' discussion, film-making and business planning.

Talking of Humanities, it is imperative to quote Aristotle who said, "*Educating the mind without educating the heart is no education at all.*" And, educating the heart is feasible only when we enter the faculty of Arts. Unlike yesteryears that echoed one's fascination for STEM (science, technology, engineering, and mathematics) courses, today, a paradigm shift can be seen from STEM to Arts and Humanities not just because Humanities too offers an array of bright career options but more because Humanities teaches us how to live as well as how to make a living. Pertinently, a few days before his death, Steve Jobs had said, "It is technology married with Liberal Arts and Humanities that yields the results that makes our hearts sing". Although, one can have more than 100 career options by pursuing Bachelor and Master degrees in a host of Humanities subjects like Anthropology, Archaeology, Economics, Education, English, Geography, History, Indian and Foreign languages, Linguistics, Philosophy, Political Science, Psychology, Rural Studies, Social Work, Sociology, etc., here I present a brief account of 12 most sought after

courses vis-à-vis right career options in Humanities after Class 12th.

1. English and Foreign Languages
A Bachelor followed by a Master degree in English and any Foreign language will help you pursue a career of Blogger, Columnist, Editor, Lexicographer (dictionary builder), Teacher (Nursery to Tertiary Level), Proofreader, Novelist, Tele-caller in MNCs, **Tourist Guide,** Translator, Writer, Interpreter in embassies and international organizations like UNESCO, UNICEF, United Nations, WHO, etc.

2. Political Science & International Relations
A Bachelor followed by a Master degree in Political Science and International Relations will help one pursue a career of Political Analyst/Scientist, Diplomat, Intelligence Specialist, Lawyer (with a Law degree), Public Relation Officer (PRO) in MNCs, IAS Officer, IPS Officer, IFS Officer, Officer in Indian Revenue and Postal Services, Politician, PRO in UNESCO, UNICEF, United Nations, WHO, and World Bank.

3. Career Opportunities in Mass Communication & Journalism
A degree in Journalism and Mass Communication will help one pursue a career of Advertising Officer, Content Writer, Editor, Interviewer, Journalist, Lecturer, PRO, Event Manager, News Analyst, News Anchor, News Reader, etc.

4. Law
A degree in law, which is one of the most sought after courses in Humanities, will help one pursue a career of Lawyer, Lecturer in law colleges, Legal Advisor to Firms, Legal Journalist, **Taxation Officer**, etc.

5. History
A Bachelor followed by a Master degree in History will help one pursue a career of an Archivist, Archaeologist, Civil Services Officer, Historian, Heritage Conservator, Lecturer, Librarian, and Museum Curator/Manager.

6. Sociology
A Bachelor followed by a Master degree in Sociology will help one pursue a career of a Correctional Counselor, Disaster Development Worker, Human Rights Officer, Public Health Educator, Social Activist, Social Researcher, Sociologist, Social Worker, and **Urban Planner**.

7. Geography –
A Bachelor followed by a Master degree in Geography will help one pursue a career of a Cartographer, Climate Environmentalist, Geologist, GIS analyst, Weather Scientist, Researcher, and Urban Planner.

8. Fine Arts and Performing Arts
A degree in Fine Arts or Performing Arts will help one pursue a career of Painter, Sculpturer, Graphic designer, Cartoon Designer, Musician, Actor, Dancer, Photographer, etc.

9. Design
A degree in Design will help one pursue a career of Costume Designer **for Entertainment and Film Industry**, Writer for Fashion Magazine, Fashion Designer for textile companies, boutiques, garment export houses, marketing and media department of fashion brands, etc.

10. Hotel Management
A Bachelor followed by a Master degree in Hotel Management will help one pursue a career of Chef, Food Service Manager, Front Office Manager, Housekeeping Supervisor in hotels, restaurants, cruise ships, railways, resorts, airlines, etc.

11. Economics
A Bachelor followed by a Master degree in Economics will help one pursue a career of Business Analyst, **Economist, Statistician,** Officer in Banking Sectors, Risk Advisory Associate, Research Associate in financial consultancies, ministries, insurance and accountancy firms, Policy Maker, etc.

12. Education:
A Bachelor followed by a Master degree in Education or Elementary Education will help one pursue a career of School/Teacher, Human Development Officer, Curriculum Designer, Communication Expert, Researcher in Child Development, Human Relations, Education Planning, Education Technology, etc.

12. Peace Studies:
Given the worldwide unrest at family, society, nation, continent, and world level, an urgent need has emerged to study peace studies. Such a program is offered at UG, PG, and Ph. D levels in most of the colleges and universities.

As far as future ready programs are concerned in science, technology, and management the following are 12 most-sought-after subjects from the perspective of future readiness. Here, we need to understand and identify future needs or industry needs and accordingly we need to prepare a dynamic curriculum to make our students stay competitive in the emerging fields. So our nest task here is to make a checklist of the emerging, non-fading or most sought-after career paths from future perspectives which will remain in demand. And in my survey, I found 18 career paths or subjects that will remain in huge demand and the subject that tops in my list is computer science. The reason is our reliance on technology is increasing day by day, More precisely, those who specialize in coding or game coding, data science, Cybersecurity, information technology, artificial intelligence and Software Development will have secured jobs in future. And career in data science as per the US Bureau of Labor Statistics will be the most demanding career path. The second in my list is pharmacology which is constantly evolving followed by Construction Management, Human Resources, Nursing, Engineering, Business, Advertising and Marketing, then economics followed by Event Management, Psychology, and Medical. So, what we can recommend today's HEIs is to design first a future-proof or future ready flexi curriculum that could meet current and future employers' needs. Such a curriculum should have a provision of offering last semester of teaching by industries especially to nurture students with hands on experience on skills development or in the areas in which our graduates are going to make their careers. In coming days, brand name or university name or your beautiful resume will not no longer fetch you jobs. What will matter more is your demonstrated ability of competency. Thirdly, since Monolithic educational structures which often lack resources will not fit with the new work environment to ramp up new employees, it is advisable that HEIs revamp the ways of teaching and learning and adopt a new system that takes personal needs and sudden developments into account. In addition, all the HEIs are recommended to have CPD cells in their premises to address to ongoing developments in the respective fields.

CONCLUSION

Thus, to transform India into a digitally empowered society, all the concerned stakeholders need to join hands together firstly to bring online education at par with offline or on-campus education in terms of effective teaching, effective learning, and effective evaluation and make students professionally more industry-ready with a knack of creativity, innovations, and problem-solving abilities so that they could stay competitive and remain relevant in today's technology-enabled academia.

Secondly, What the National Research Foundation (NRF) needs to do here is will have to promote high-quality research in the realm of science and technology. Given the rising

applicability and falling costs of AI-based predictions, special focus has been given to promote application-based research to address global challenges in areas such as healthcare, agriculture, and climate change using AI.

The policy also envisions the use of AI-powered solutions for the attainment of its goals of a multilingual as well as holistic education. The efforts of promoting multilingualism among the school students will be interlocked with efforts to enhance Natural Language Processing capabilities for India's diverse languages. Additionally, AI will be used to track and record the life skills training of a child, with the aim to prepare a holistic report card.

It is time to move from marks-based reporting to understanding more about the student. The move from the focus on summative-based assessments to formative assessments is another great aspect that we need to look forward. I believe AI can also play a crucial role here. We should use smart use of technologies such as AI in helping the stakeholders of the system by reducing their workload and making life easier by enabling them to focus on their core skills."

First, they need to design a future ready flexi dynamic curriculum that could meet current and future employers' needs. Such a curriculum… in respective fields. In coming days, …competency. Secondly, all the HEIs are recommended to establish CPD cells … new developments.

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