Paradigm shifting in Indian Higher Education sector to adopt Industry 4.0 – A Review

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Abstract

Main objective this review is to discuss occurrence of the education system in the age of industrial revolution 4.0 most challenging issue i.e. information management facing some organization in rising countries. Everyone has too many leisure activities. Our brains are always rerouted due to reduced focus. As technology accelerates, what we realize in education is not the entire career. In fact, yet schools are not very helpful in selecting a occupation. Landscape of educational innovation changed by the fourth industrial revolution (IR 4.0). IR 4.0 is controlled by digital physics frameworks and artificial intelligence to make the individual-mechanism interface versatile in broader way. The innovational revolution provides another educational model for the future - learning 4.0.

IR 4.0 allows new intelligent robots to replace people in certain activity sectors, In order to prepare graduates for future work and life. Learning should take advantage of relevant information and capabilities that robots cannot replace. Creative Education 4.0 disrupts innovation, focusing on further development in educational and skills to make future education more personal, super, virtual, portable, global and smart. Beyond the twenty first century's capabilities, superior skills and growth, for example, huge information, artificial intelligence (AI) and inspection, dispersed computing and Internet of Things (IoT), portable arrangements, virtual reality (VR), online networks, and better reality (AR) has programmed fun, and in all-purpose, transforms educational processes and teaching progress landscape into new computerized teaching methods and intelligent classrooms. The IR 4.0, which was detonated exponentially, turned future learning into a fairyland.

Science fiction is a place of scientific certainty, creative energy is omniscient; fundamental and improved certainty is climbing into advance classrooms. Rambles, Self-sufficiency & intelligent robots, and classrooms are the enjoyable of the day. As advanced educationalists must study innovative ways & innovative ways use innovation of educational to enhance future education. Regarding this, this introduction assumes that teachers are required to repeat the old origins of their guidance and learning and to upgrade their learning experiences to reach the needs of Education 4.0.

Keywords: Knowledge administration, Higher Education, Industrial Revolution 4.0, Education, Information Management.

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I. Introduction

Information previously used for equal knowledge. Information is limited and can be processed. Persons can get information and use it as a competitive advantage. Things get more complicated as time goes by. Today, information is shaped and sized differently and is becoming increasingly uncontrollable. The arrival of the Gen-Zs with advanced intelligence and digital capabilities has brought many difficulties to teachers. The current Gen-Zs report in a dialect that a more mature generation may not fully understand; they have their own genre - computer type. They have their own unique understanding and expression.

Advanced locals use the enormous assets of the Internet and computerized innovation to create imaginative, creative and expressive things in the context of digital security issues. These technology addicts and Wi-Fi generation also tend to deal with the intelligent way of learning through frame joins through the intricate montage of pictures, symbols, sounds, videos, entertainment, transfer and artificial intelligence (AI). . In order to maintain learning at this advanced stage, computerized education and mixed teaching methods are necessary to improve learning and ability by flipping classrooms, MOOCs and chat rooms.

Industry 4.0 related to all data advancement in all-purpose, occurs in its own model of specific categories or permutations. More or less, from one perspective, the so-called smart framework can replicate simple and cumbersome timelines like digital mass production. As per this case, the digital physical framework of Industry 4.0 can be viewed as a true type of creation or similar to organize social behavior to repeat the plan. The digital physics framework can then rebuild the adaptability, creativity and absolutely new H2M connectivity with extremely intelligent and creative engagement and joint efforts in the liquid system.

II. Worldwide responds to Education 4.0

At the Forefront of the basic research we can observe the United States in artificial intelligence (AI), supporting the history of the field, primarily

through the work of federal research funds and administration laboratories.

• The central government's hold up for non-institutional artificial intelligence research and advance is manage through the the National Science Foundation (NSF), the National Institute. . Ministry of Health (NIH), supported primarily by the Defense Advanced Research Projects Agency (DARPA), Office of Naval Research (ONR) and Advanced Intelligence Research Project (IARPA).

• Main national study efforts, such as the the Big Data Initiative ,National Strategic Computing Initiative, and the Brain Research through the Advance of inventive Neuro technology (BRAIN) initiative have also contributed to the improvement of artificial intelligence research.

• The projected and current benefits of artificial intelligence tools have increased the economic vibrancy of the country and the productivity and comfort of its people. A supporting article lists the federal government-funded strategic plan for artificial intelligence innovations and development. Canada is a global education superpower. Compared with almost all OECD countries, they spend more on each college student.

• The Canadian Conference Committee also pointed out in its report "Learning in the Digital Age" that the standard model has become a pressure for higher education (PSE) as it evolves from a specialized field to a mass-produced service. It shows that digital learning may actually be more attractive, less passive, and more adaptable to different learning styles than traditional lecture-based learning (propagation).

• Digital literacy in Canada is the next step in digital literacy, which provides students with the resilience needed to take part fully in the worldwide digital community. It assures that they will advantage from the digital economy & create new chances for creative expression, employment, social inclusion and innovation,.

• A report released by the Canadian Teachers' Union in 2013 highlighted three major challenges facing the government in education; early childhood, new technologies and research support. 2016 - The 2020 ASEAN Work Plan includes relevant priorities, such as the expansion of the use of ICTs by expanding the ASEAN Network University (ACU). These include advancing ASEAN research programs and higher education levels through online and cross-border mobility, and preparing teachers for ICTs by

improving the teacher's ability to meet the special needs of disadvantaged groups (Mustafa, 2018) .

• Singapore, the highest achiever of the current International Student Assessment Program (PISA: OECD's global research in member and non-member countries, studying mathematics, science and reading performance for 15-year students) is seen as a model for systemic progress each part of the education system incorporates an overall national strategy (Brown-Martin, 2017).

• Dr. KhineMye, Director General of Basic and Alternative Education of the Ministry of Education in Myanmar, said that the country has carried out four phases – infrastructure, interdisciplinary institutions, mainstreaming 21st century skills and interdisciplinary cooperation – redesigning higher education for IR 4.0 (Mustafa, 2018). In Thailand, the Minister of Education, Teerakiat Jareonsettasin, said that the ministry had to give up the central plan to redesign the Thai IR 4.0 higher education. The department has provided funding to any university that wants to redesign the course. Twenty universities accepted the proposal and the government has approved the budget to redesign the course.

• In Malaysia, the Framework of Higher Education 4.0 (MyHE 4.0) was established to address IR 4.0 issues and challenges. Under this framework, universities must change their courses and delivery to ensure that their graduates have jobs. One of the measures being taken is to develop comprehensive, balanced and entrepreneurial graduates who can adapt and fill the work that does not yet exist.

III. Industrial Revolution 4.0 (IR 4.0)

The 4th industrial revolution is the phase of facts progress, in which the boundaries among the physical, biological, and digital domains are blurring - Schwab (2016). Every IR changes the way of we live, interact and work. In this ever-fluctuating environment, managers and employees must adapt quickly. It is necessary to open up and prepare for the new strategy and know the reality that hazard and advancement are inevitable. Without appropriate information and lack of resilience, not possible for organization to compete in this ever-changing environment. Managers must supervise the organization in such a way that employees will change their ideas, vision and attitudes over time. Organization requires thinking of information management as an approach, which means to know how to implement knowledge management (KM)

approach to improve the presentation of systems and processes. The landscape of educational technology changed by IR 4.0. The rapid change of knowledge has developed an advance educational model for the future. Convergence of different technologies, Speed,breadth and depth, and scale regression make the 4th IR different.

IV. Educational Influence of IR 4.0

Higher education in field of the Fourth Industrial Revolution (HE 4.0) is a vague, rational and dynamic that can change society and get better things. The 4th industrial revolution was driven by counterfeiting, changing the work environment from job-based attributes to people-centered qualities. it will reduce the separation of themes along with humanities and sociology Because of the combination of people and machines, with science and innovation. For example, Ipoh has a restaurant that uses "celebrity robots" instead of waiters/waitresses to serve customers. This shows that the automation of services reduces the applications of human services. There are inequalities in addition to technology because the accessibility of technologies and connections is not the same. Many people have been displaced by unemployment, with a world population of 7 billion, but only 3.5 billion people have access to connectivity.

Peter Drucker in 1997 believed that the university will not endure. Advanced education is in deep disaster. The university site does not stay alive as an accommodation organization. Now a days (collage) buildings are absolutely inappropriate & completely unnecessary. It is a real forecast as the innovative coding university established in Paris was launched in 2013 and is open 24/7. No tuition, teachers or books. Work of students on a project and receive multiple internship programs at a specified level, they will earn points and move them to the further level Once the project is completed.

V. Education Near Outlook

Traditional education has made tremendous contributions to the current level of industrial development and technological progress.

• The role of the university: to shape the technology of the future through a test bed that is a generation of innovation and education.

• As of now, education connects to mobile devices through applications in the cloud, no longer limited to knowledge, but extends to skill acquisition.

• With the expansion of national and global network services, physical boundaries are no longer an obstacle to education.

VI. IR 4.0 in Education- Challenges

In 2017, Dr. Colin was worried about educator. "They are ready to respond to the fourth investor relationship and question whether the university has the ability to manage the convergence, liquidity, power transfer, and contingency and ethics issues brought about by the fourth portfolio. He emphasizes on emerging technologies and investing in interpersonal relationships, building institutional capacity for digital resilience and accountability and digital governance is a key strategy for endurance; however, it is not clear that the higher education sector is adequately adapted to "create" for learners, scholars and practitioners. Encourage the environment, imagine , break down barriers, innovate, collaborate, and create; develop a 4.0-ready ecosystem that fits the institutional environment; engage students and staff through regional and global networks and alliances of higher education institutions to promote greater interpersonal relationships; Curriculum and technology transfer, incorporating spiritual values and ethics, sense of connection and national identity a with the community; and paying attention to the profits and risk of the fourth industrial revolution. "(Wahid Omar, 2017)
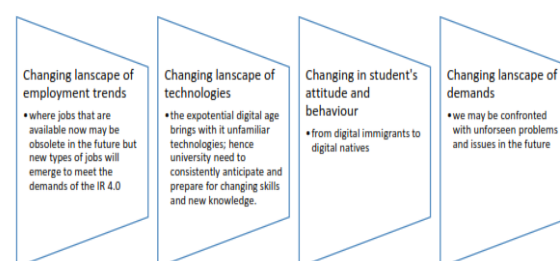
Fig.1 changing trends

VII. IM Regarding IR4.0 Role of Technology

Because of rapid economic and social changes, schools/universities must practice students for unfinished work, technologies that have not yet been invented, and issues that we do not yet understand. Schleiher (2011). The education sector is under pressure to meet the requirements of the digital community.
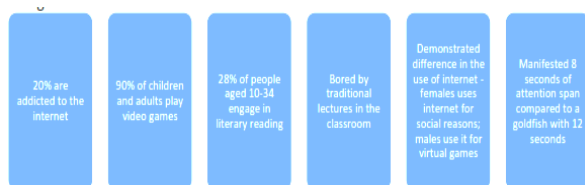
Fig.2 Role of technology

What Needs to Change in Education?

1) Connect employment and education

Employers require working with universities and schools to develop courses and share courses for Practical knowledge of the market. The education approach also requires changing in order to focus on life.

2) Improve forecasting

Better prediction of industry and labor market trends is critical for businesses, governments, individuals to respond quickly to change. Big data may prove to be critical to more accurately predict changes in the job market and where expected skill shortages are expected.

3) Disrupting education and labor policies

Although in by improving access to education impressive progress has been made, learning quality has rarely improved on any scale. The government's policies are lagging behind in reducing the national labor force. Education and labor policies need to be re-examined to be more practical and applicable to altering market reality.

VIII.   Education-As-A-Service (EaaS)

The propagation of Internet broadband connections, affordable mobile devices, and a wealth of educational content has opened the door to changing the way education is taught.

• Cloud computing and other technologies have created a way of education that could ultimately undermine accessible higher education systems.

• With the help of the government policy makers, Education Cloud, and business practitioners can answer a full range of key strategic questions: providing education in the fastest, more effective, and best form of affordability; cultivating 21st century student skills and Appropriate ways to make students for a new job market; encourage local innovation with the strongest incentives; and share resources in the most fluid ways across, institutions, regions or countries as a whole.

• Higher education organizations are responsible for a wide range of stakeholders, such as governments, certification bodies, private and public sources of funding, academics, management, support staff and students.

IX.   CONCLUSION

In order to encounter the transformation challenges of Industry 4.0, organizations require having a successful policy. The development of technologies such as artificial intelligence and large data will return extreme processes. The next creation prefers to use apps and smart phones. New technologies change our lives by inventing new, unimaginable things and making them in new, unimaginable ways. Computerized interruptions are taking place every day. In mastering the fourth industrial revolution, we must save our central qualities, ethical standards and the Malaysian way of life. Pioneers of higher education should provide computerized management of their foundations, abuse the potential open doors brought about by IR 4.0, and have great obligations and agility. If we mistakenly use the progress in the fourth round of IR, it will undoubtedly lead us to deviate from our way of life, the quality of the center and the happy character of Malaysia. In this way, Malaysia must develop codes of conduct for ethics and responsibility to control the progress of these fourth investor relations by organizations and personnel.

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