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Perspective of Futurology and its Implication in Education

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Abstract

Fraction of the timeline that is yet to occur is known as future. Educational strategists have largely emphasized upon the use of statistical techniques. They can learn extensively from the futurologists and the study of future in terms of the development of various perspectives on planning for future trends and issues in the area of Education. The emanating field of Educational Futures arena has its inception in study of futurology as a relatively new constellation of disciplines. It shows a strong percussion on policy in the form of foresight, scenario planning etc.

Keywords: Future, Future Studies, Foresight, Futurible, Futuristic, Innovation, Probable, Plausible, Technology

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1. Introduction

"The problem with the future is that it keeps becoming the present" aptly said by Calvin and Hobbes. Futurology is the scientific method of predicting the future. To predict the future one needs to understand the present scenario, all the arenas that are relevant in shaping every aspect of the present and how these arenas are expected to shape up things and events in the near future. Futurology can be known as the scientific study of postulating possible, probable and preferable futures that is likely to happen anytime in near future and the views, the illusion that determine those probable conditions. It may also be accredited as future studies or foresight.

There is an argumentation about the nature of this discipline as to whether it is an art or science. A future study explores to understand what can be further continued, what can be changed, and what is innovative, unusual and unique. Thus, it can be said that the discipline seeks a systematic consideration of past and present times. It also aims to determine plausibility of future circumstances and inclinations.

The study of Futurology may be called as a much extensive and more complicated system. The approach and knowledge are much less proven in comparison to natural science or even social sciences like Sociology, Economics and Political Science.

2. Review

Future is an interdisciplinary field, which studies changes, which has occurred yesterday and changes which are expected to happen today. It accumulates and analyzes both ordinary and competent strategies and speculations for tomorrow. For attaining achievable futures, it analyzes the sources, patterns and causation of change and stability in the pursuit to flourish foresight

Around the world the field of future is varyingly attributed to sometimes as future studies, strategic foresight, futurology, futuristic, futures thinking, futuring, prospectiva, futuribles and many other terms.

3. Meaning

Futurology is defined as the *"Study of the Future"*. German professor *Ossip K. Flechtheim,* can be given the credit for conceiving the term in somewhere around the middle of 1940s.He proposed it as a distinct branch of knowledge that includes, science of probability, feasibility and plausibility.

Futurology also involves taking proactive ardent stand of fetching desirable future outcomes or conclusion and conducting normative inquisition to delve into better propositions. *Prof. Henry David* elucidates Futurology as, *"the intellectual form in which a society renders account to itself of its probable and possible futures."*

Future studies can be ordinarily distinguished by three factors in comparison to research managed by other disciplines. *Firstly*, possible, probable, preferable and "wild card" futures are usually reviewed by future studies. *Secondly*, it customarily endeavors to gain a comprehensive or systematic perception based on vision of various other disciplinary studies. *Thirdly*, future studies confront and unbox the suppositions trailing assertive views, which may occur in the future.

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The field of future also occludes and rule out future forthcoming predictions and forecasting through stated supernatural or celestial mode.

4. History

Men in all eras have Dreaming and Crystal-Ball-Gazing as their cherished recreation pastime. Looking back into history we can identify a lot of creative and ingenious dreamers. Leonardo da Vinci envisioned many inventive gadgets and contrivances that correlated to the future. Jules Verne, in the 19th century, articulated about an expedition to the moon.

Futurology was also given breakthrough by Second World War. Man started looking at future more scientifically in the post World War epoch. Futurist Alvin Toffler and Social Forecaster John Naisbitt are examples of this trend. First generation of futurists namely Herman Kahn, Olaf Helmer, Bertand de Jouvenel, Dennis Gabor, Oliver Markley, Burt Nanus, Wendill Bell, Robert Ettinger may be given credit for the emergence of Future studies as an academic discipline in the middle of 1960's.

In the era of early 20th century, Futurology as a field commenced, connected with the inception of systems science in academic discipline. It conspicuously emerged in countries like France, the former Soviet Union and Eastern block communist ruled countries highlighting of national, political and economic outlining,

5. Methodologies

Practitioners for future avail a far-ranging models and mechanisms. Most of the mechanisms are derived from various academic disciplines, which encompass Sociology, Economics, History, Geography, Psychology, Engineering, Mathematics, Astronomy and aspects of Theology.

Future studies take it as one of its important attribute to interpret substituted futures. These efforts comprehend collection of quantitative and qualitative data that is regarding the possibility, probability, plausibility of change.

Practitioners in recent times have initiated to review social systems and uncertainties. They also strive to outline scenarios with the help of the causal layered analysis method, which contrive preferred visions for the future.

Future studies also encompass normative or preferred futures. Practitioners are using inconstant proportions of inspiration and research. Many futurists apply a methodology called emerging issues analysis. This method explores for the source, which has led to change, issues and concerns.

6. Future Techniques/Methodologies

Forecasting is a common methodology which pursuit to predict future state from current trends. Professional scenarios often rely on "back casting"-i.e. diminishing the uncertainty factor and transition in the present for arriving at anticipated substitute for the state of future. Futurists utilize a diverse range of forecasting methods including: -

- Delphi Method: It is a quite favored technique practiced for studying future. This method ascertains for configuring process of communication for a group. It helps in dealing with a composite problem effectively by group of individuals.
- Causal Layered Analysis (CLA) : It targets to "open up" the present and former events to generate substitute futures relatively than on evolving a depiction of distinct forthcoming future. This technique is used for strategic planning and future studies for shaping up effective future.
- Environmental Scanning: It is generally utilized during the commencement of a futures project. The scanning tries to aim at the extensive expedition of all considerable trends and concerns beyond a far-reaching scope of actions,which further helps in determining future course of actions.
- Scenario planning: A scenario is a probable depiction of capacity which may transpire in future. It is not a precise prediction of events to occur in future.
- Morphological analysis: This technique is a refined probing to entire feasible resolutions to complex obstacles, which may be involving many dimensions, structure or not calibrated on any scale.
- Future history: It is a speculated account of the future prospectives which helps in presupposition.
- Monitoring: This method intends appraisal of all circumstances, as they materialize or exactly afterwards the event.
- Content analysis: It is generally utilized for the methodical or standardized review of the specific aspects.
- Back casting: It is concerned with the recognition of a distinct outline and discovering its causation. It is a backwards forecasting technique which derives development from past to the contemporary events.
- Back-view mirror analysis: This analysis frames out the inference to take interest in future problems and obstacles which may occur with people.
- Cross impact analysis: This method was developed as an endeavor to check apprehension of future events, in case they may combine and relate with each other. It can further help in foreseeing the damage and reduce uncertainties.

- Future workshops: It was developed for the group of people who can predict and contribute in the decision making process for the future without being subjugated to the verdicts announced by certain specialists.
- Failure Mode Effects Analysis (FMEA) : This technique examines and analyzes probable failures and its after effects in future products or processes.
- Measured action: This activity reforms production competence by a calculated extent of risks and outcomes.
- Futures biographies/ imagining: It aims to create individual imaginaries, to assemble people's opinions regarding the future. It also appraises the assumptions for the study of foresight.
- Futures wheel: This technique presents a pattern of methodical brain storming strategy. It targets at determining or encasing ramification at different levels of variety of future activities.
- Relevance tree: The technique works systematically and sub-divides a broad substance towards progressively several number of small sub-topics that map out the ideas.
- Simulation and modeling: These tools are based on Computer aided learning and a method advanced towards representing real phenomenon. The tools are extensively utilized for scrutinizing behaviors along with comprehending progress.
- Social network analysis (SNA): It has evolved as a leading procedure in academic fields. This technique plays a crucial role in speculation and study.
- Systems engineering: It is a multidisciplinary way to innately complicated engineering systems as the behavior and communication amidst constituents of the system is not constantly apparent.
- Visioning: This method is favored for studying acceptable future alternatives. It also gives significance to ideals and ethics.
- Trend analysis: This technique observes and analyzes the preceding accomplishment of a valid trend and tries to venture the result in forthcoming events.
- Adaptive role playing: This technique is similar to Games theory where it studies verdicts that takes place in an environment where distinct players communicate.

7. Elements of Futurology

- Trend assessment: The assessment develops proficiency to recognize orientation of the present trends, uncertain dimensions, determine their possible repercussion on each other and reciprocate in a convenient and apt way.
- Pattern recognition: The capacity to identify patterns as whole not comparatively as specific single determinants.
- System perspective: It is the ability to encompass whole system in comparison to individual components.
- Anticipation: It forecasts short-lived and far-reaching outcomes to be achieved over the ages and in various different circumstances.
- Instinct and logic: To bank upon amalgamation of instincts and logic rather than thinking by rational reasoning.

8. Shared Assumptions by Futurists

Many futurists have been recognized authors. After much research about latest trends and ideas, they narrate forecasts of the account on the basis of observations, predictions as well as prognosis by them. The futurists in preceding eras were associated with scholastic organizations. For instance, we can quote one of the scholar cum futurist, John Mehali , whose book was published with name *'The future of the future'*. Futurist authors like Patrick Dixon, Alvin Toffler and John Naisbitt further illuminate this class.

The shared suppositions by the futurists were as following:

1. We are in the middle of the era of historical transformation or transition.
2. Variety of diverse prospects has been as its center point in futuristic.
3. Creation of alternatives.
4. Participatory futures.
5. Long term policy transformation.
6. Influences public policy as internal transformation and attempts to be a part of the process to devise alternative futures.
7. Complexity and trans-disciplinary approaches.
8. Motivated by a zeal to bring change.
9. Sustainability was a recurring theme.

9. Futurology in Education

9.1 Futures Studies in World

In the year 1975, the very first graduation programme in *futures studies* was originated in the United States. Shortly after the University of Houston witnessed the M.S. Programme in *future studies*; after a year Hawaii University at Manoa introduced Masters programme in *Public Policy in Alternative Futures*.

Future Studies as academic discipline has been a recent programme. It has advanced in many different countries after commencing in the United States in the 1960's, Future education aims to strengthen the practice of predicting perceptions, mechanisms and procedure. It permits scholars to forecast assumptions for far-reaching consequences in distant future, substantially along with imaginative visionary.

History of future education has been documented in the works of few selected futuristic authors like Richard A. Slaughter (2004), David Hicks, Ivana Milojevic, Jennifer Gidley, and Alvin Toffler.

Tamkang University, Taiwan runs the largest future studies programme in the whole world.

9.2 Futures Studies in India

During the last decades of the 19th Century, the education that was imparted was suited to the times. It should be the aim of all education to teach us, not merely how to use the power that knowledge may give, but how to use it well.

Futurology or Future Studies was adopted by Central Board of Secondary Education as optional attitude from the session of 1992-93. It has dimensions like it is progressive, enthusiastic and challenging. It is not only limited to specialists but the study of future is a basic requirement of every individual. Every individual is a futurologist.

Past is only a source of experiences. We have to spend our life in future. Futurology talks about future but do not lay stress on prophecies. It is not an astrological science. It is an inclusion of planning, prediction and assumptions. The changes in the development of scientific activities and thought affect futurology.

In India, the futurology curriculum has been started by many colleges and universities, Indian Institute of Management and future, College of Technology and Agricultural Engineering, Udaipur; Stela Marris College, Chennai; Indore, Madurai, Tiruchirapalli, Annamalai and University of Dayal Bagh, Agra.

9.3 Need for Future Studies

Gone are the times when an education could last a lifetime. We are faced with situations that change continually. The need to anticipate possible changes gives us the ability to adapt quickly. For example: In some fields, a university degree can be obsolete within a few years. More students will attend classes online. Students will demand for more options for taking admissions in variety of courses. Scholars to a greater extent will demand cellular phones, other hand held compact gadgets to attend classes, as is the practice in many developed nations.

By 2020, online courses will be the medium for earning degrees for 60 percent of the students. The scholars are becoming smarter by using latest technology and in future, there will be very less information which they will not be able to access. For this, the faculty members need to be ready and flexible. They need to play a role of more as an organizer and guide. Faculty members need to work in the field of finding out best research and inspiring new innovations and thrive to do away with any misconstruction, fallacy and wrong information.

Scholars with modern contemporary skills will arrive in the educational institutions and continue to contribute in new innovations. The institutions will become interdisciplinary focus points and will try to generate resources on their own without any grants. The successful faculty member will need to utilize information and communication technology in the manner different from others.

9.4 Advantages for Students and future Education system

- Futurology will help in developing intelligence and analytical thinking.
- Set of expertise techniques in examining apparent and favored prospective will be developed by students to flourish insight.
- Conceptualize more, just, sustainable human and planetary futures.
- Students will be able to comprehend the transition and repercussion that human, social and ecological systems are going to face in future.
- Students will strive to follow their conscience, and be responsible citizens and take appropriate measures towards initiating superior futures.
- They will be able to develop ability to face challenges caused by new changes.
- They will be able to ready for the future.
- Globalization of Education.
- Digital Native students.
- More education in less space.
- Advances in technology.
- Interdisciplinary learning.
- Students will gain more control.
- Age of students to rise.
- Competition for Students.
- Academic Institutions to partner with regional economic development.
- Increase in part-time faculty.
- Accountability and assessment tools.

10. Conclusion

The purpose of education is to prepare for future not today. Those who are admitted or entered into education at elementary stage would come out after 16 or 20 years to enter into their lives or in society. They would be capable to adjust, acquire the place and can pace with the world. Thus, the education is given for future always. The orientation of education is towards future life education.

At the end, we can say that wisdom may perish someday. Maybe today's "fact" becomes tomorrow's "misinformation". A society in flux stresses the capability to comprehend importance of knowledge management. Schools in future need not teach

mere raw data but the ways to analyze it and reach to a conclusion. Students need to identify how to reject the old theories and also pick up when to replace them. In short, they need to develop learning efficiency. The future education requires preparing the individual to reclassify information, to appraise its credibility, to look at obstacles with alternative solutions, and most important is to learn--how to prepare self.

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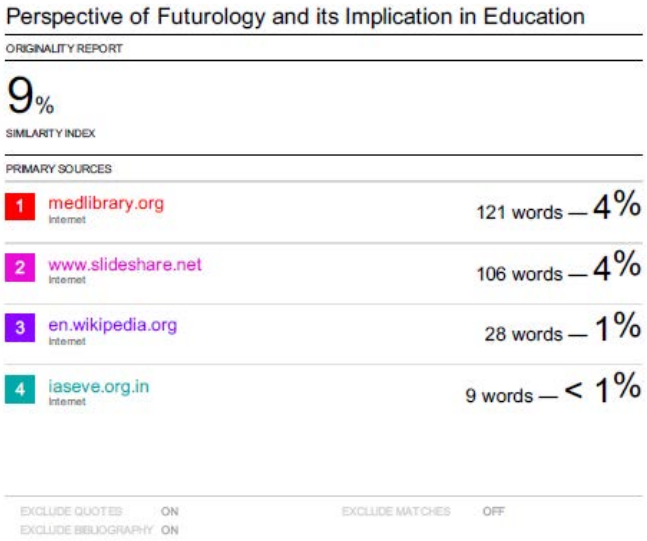
Annexure-I



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