EDUCATION, THE SMART SOLUTION FOR DEVELOPING SMART CITIES A PRIME REQUISITE FOR DEVELOPMENT FOR A BETTER TOMORROW

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Abstract

Education has been long viewed as an important determinant of economic well-being of any nation. An economy's ability to grow over time, its ability to innovate and rise in productivity and real incomes is strongly tied to the quality of education provided to the vast majority of people in the nation. Skills and intellectual capital are increasingly important in a modern economy and quality education through schools plays a central role in the development of valuable skills. Good quality education is the foundation of new discoveries, new knowledge, innovation and entrepreneurship that trigger growth and prosperity of the individual as well as that of a nation.

The smart city concept is a vision shared by major cities as they chart their future course with more services, greater efficiency and a focus on sustainable development and the industry players that are helping them to step up to the challenges of growing urbanisation and eco-awareness.

Smart cities management is a novel concept which as gained recognition due to many factors of economic, social, educational development in a nation. It gave solutions to many problems arise from increase in population, pollution, traffic congestion, unemployment, standard of living decrease etc. Through various variable of Education, a smart city management can be facilitated which is core of the study. Leaders from education and government aspire to improve their institutions outcomes and value to society. They strive to meet rising expectations from students, communities and business with limited and increasingly constrained resources. Nations hold their educational systems accountable for a high level of performance for good reason. Education will be the critical determinant of success for communities in the 21st century just as land is the key to agrarian societies and capital investment was critical to industrial economies.

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Education must begin today to build a student-centred industry that develops in each citizen the skills necessary to prosper and thrive in that world of tomorrow. Governments and educational institutions must begin to see themselves as part of a holistic system that anticipates the needs of its citizens by directing investments and resources to embrace the future.

Introduction to the Title

Dating back thousands of years are numerous examples of ancient technology that leave us awestruck at the knowledge and wisdom held by people of our past. The concepts of Smart Cities already existed in this planet and ancient Indian university towns like Takshashila and Nalanda were smart cities of those times. They were the result of incredible advances in engineering and innovation as new, powerful civilizations emerged and came to dominate the ancient world.

Definition of Smart City

Smart cities can be defined by relevant use of technology to make life easier and more comfortable, while being friendly to the environment and human needs. It is a dream destination need to be made habitable where people of all age and income groups should experience a livable and safe city with equitable access to all basic amenities such as Livability, Accessibility, Power supply, Communication, Emergency Response, and Water Supply etc.

Education as component of Smart Cities

Among the various components of Smart Cities has mentioned earlier, the focus of this research paper is to understand the importance of Education in contributing to elements of growth and development which would facilitate Smart Cities Management. For generalizing this statement, it is utmost important to study the link of education in facilitating Economic growth which would indeed help in conceptualizing towards Smart City concept.

As much as technology and development is a key for the smart city initiative, a proper smart city education program is the foundation. Smart cities need a skilled workforce with training and experience that is in demand to succeed and continue positive growth. A refined, smart city-focused education system aids the urban development scene and combats unemployment simultaneously. Leaders from education and government aspire to improve their institutions'

outcomes and value to society. They strive to meet rising expectations from students, communities and business with limited and increasingly constrained resources. Nations hold their educational systems accountable for a high level of performance for good reason. Education will be the critical determinant of success for communities in the 21st century just as land was key to agrarian societies and capital investment was critical to industrial economies.

A population that is better educated has less unemployment, reduced dependence on public assistance programs and greater tax revenue. Education also plays a key role in the reduction of crime, improved public health, and greater political and civic engagement. Investment in education results in billions of dollars of social and economic benefits for society at large. The social and economic benefits produced by public education for employment, crime, health, and civic and political participation.

Opportunities that can help to render change in education into quality education

Educational system responds to trends which will determine not only its value to its students but ultimately its long-term value to society. It is important to understand the areas which would help the rate of change and direction of developing realistic and actionable strategies for education policy, investments and programs.

The following areas of concern can help in achieving quality education under change in instruments of education system:-

1. **Intensive use of technology in teaching and learning**

For the first time in history we have a generation of digital natives, the students of the Internet generation have grown up immersed in the use of information technologies. Unlike generations past, these students are at ease with technology and easily adapt and integrate new functionality from smart phones, laptop computers, mp3 players, game stations, and virtual reality worlds. They arrive at school expecting to leverage technology in the learning environment just as they do in their personal lives. In much of the world today, young people have come to depend on digital resources for communications, learning and entertainment activities at home, school or workplace. This revolution of mobile technology is being driven by innovations in the consumer marketplace.

New devices and services are being introduced around the world, even in emerging market economies. Broadband local wireless, radio frequency, and satellite devices are enabling new services and greater access in many regions. A plethora of new devices will emerge over the next decade as microchips proliferate, technology becomes more affordable and connectivity becomes globally pervasive.

Digital learning is a key concept that needs to be embraced by educators in today's classrooms. It could refer to the use tablets in the classroom. It could mean using online sites, services and programs as teaching tools. Alternately, it could even refer to the practice of using popular apps, social networks and communications platforms as tools to create your own digital assignments and agendas. Few examples that can be quoted are as follows Cloud Computing, Blended Learning, Flipped Classroom, Use of smartboards/ tablet computing, Learning Analytics etc. These tools will make learning easier and in accordance to the learning path of the student through which he/she can explore skills which can help them develop later for their livelihood.

2. Reforms in governance

This variable can be achieved through framework of internal and external to institutions ensuring quality, accountability, transparency etc. through their reforms such as

- Compulsory accreditation

The move towards regulating outcomes has been accompanied by the introduction of a more sophisticated quality assurance system based on the establishment of a national accreditation agency for higher education and also several other agencies with a specialized focus.

- Enabling environment for private and foreign participation

This would help in rendering better techniques of pedagogy and learning on international skill development

- Thrust towards internationalization

Internationalization has been a powerful driving theme enabling the Indian education sector to both be in consonance with global standards as also emerge a leader in higher education globally.

- Industry Linkages

There are insufficient levels of meaningful industry participation in aspects like curriculum development, research and faculty exchange programmes. Placement services in many universities are very limited resulting in a lack of co-ordination between employment seeking graduates and prospective employers who are looking for suitably qualified candidates

- Employability

The Indian education system on the whole is not aligned to the skill and manpower needs of the market. Skills shortage across sectors is accompanied by high levels of graduate unemployment, highlighting the need to include employment-linked modules in courses

- Research and Development

Sufficient focus on Research and Development will help in bringing solutions to posing challenges in quality education.

Review of Literature

Quality in education has been widely discussed & debated issue all over the world. There has been lot of contribution by many journals, Articles, research papers, University rating agencies etc. Some the contribution as a part of review of literature is given below:-

1.	Roadmap for Educational Innovation in Institutions of Higher Learning: Towards Inter-University Centre for Innovation by Prof. Anil k. Gupta, W.P. No.2012-06-01, June- 2012	The research paper discussed about technology & social media can create quality in classroom
2.	A Study of Influential Factor on Quality of Education By Mohammed Abaalkhail & Zahir Irani, International Journal of Humanities & Applied Science (IJHAS) Vol. 1,No.3, 2012 ISSN2277-4386.	The paper investigates the major influential factors on quality of education in general
3.	International Initiatives in Assessment of quality & accreditation in higher education by Dr. MM Gandhi, Research India Publication, ISSN 2249-3093 volume-3.	The research discussed about various quality indicators prevailing all around the world.

4.	Department of Business, I. a. (October 2013). Global Innovators: - International Case studies on Smart cities. London: National Archives, London.	The research focussed on understanding the concept cities through very examples
5.	Sekhar, D. P. (August 2015). Smart Cities through Secured Governance - A pathway to accelerated growth. Navi Mumbai:- Micro Tech Global Foundation.	Book focussing on concept of Secured governance enabling the future of smart growth

Objectives of the Research

1. To identify the concept of Smart City and variables facilitating Smart Cities
2. To understand the role of Quality education in facilitating Smart City Management
3. To study the importance of learner centred learning towards creation of quality in education
4. To analyse the role of technology in creating quality education
5. To study the various reforms of governance in creating smart growth i.e. quality in education

Hypotheses of the study

1. Smart city growth is an amalgamation of technological development and educational development
2. Quality education helps in facilitating Smart City management
3. The transition of learner – centred learning helps in creation quality in education
4. Educational Technology has significant impact on knowledge, skills and personal learning paths by facilitating smart growth
5. Various reforms of governance such as accreditation, employability , research and development, industry linkages etc. helps in creating quality education leading to smart growth.

Research Methodology

Research Methodology introduces overall research design of the study which includes the methodology adopted for carrying out the research study and various phases of this research.

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This study has been conducted with prime objective of identifying the role of quality education in facilitating smart growth. Although, a number of techniques are available for collecting primary information from academicians and policy makers as well as students, well-structured questionnaires have been designed and used as prime survey instruments for data collection as the questionnaire addresses the issue of reliability of information by reducing and eliminating differences in the way the questions are asked, and how they are presented.

Research Design

In order to satisfy the objectives of the research, the study employs both exploratory and descriptive research design. Exploratory research design has been used to generate basic knowledge on importance of education and for analysing the academicians; descriptive research design has been used.

Data Collection

Primary Data: - Questionnaire Method

Secondary Data:-

- Official publications of Central and local governments, Census Board of India, Statistical Abstract of India, Indian Foreign Statistics, Economic Survey
- Official publications of semi government statistical organization
- Report submitted to economists, re-search scholars, universities and various educational and research institutions.
- Newspaper and Periodicals
- Website Links

Sampling: - Convenience Sampling

To understand the impact of quality education facilitating smart growth, 50 academics of higher education were surveyed from different institutions.

Recommendations through analysis of data

1. It is the primary responsibility of the institution to provide students the opportunities to imbibe quality education through orienting them towards active learning which will help them explore their skills.
2. Learning centred education should be followed for evoking their innate capabilities, leading them into critical thinkers
3. Institutions should devise various innovative styles of learning techniques to understand different learning styles of students which could be relevant and meaningful.
4. Learning through technology is a novel interactive concept, it's awareness require immense important and action taken to create awareness
5. Technological learning would an innovation which would radically change the traditional pedagogy for prospective future technological change happening
6. Students would benefit immensely with the integration of technology in Learning as it would help them learn and grasp effectively
7. Through personalized learning tactics, students can cultivate their own way of learning and assimilate the knowledge for better development of skills and talents.
8. Skill development will lead to better application of knowledge for practical utility
9. Compulsory accreditation can help in achieve better facilities in enhancing quality education in education system
10. By commencing private and foreign collaborations , various global techniques and standards of education can be achieved
11. Quality education will be achieved by developing skills at initial stages of education by referring to various industry linkages in pedagogy and curriculum.
12. Good focus should be given on increasing areas and opportunities of research and development for understanding intricacies of quality education.

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