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Re-configuration of the Disciplinary Landscape: A synergistic move taken by Universities to expand the knowledge Boundaries

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Abstract

The 21st century is known as the knowledge era. The society in the 20th century witnessed innovation and research in area specific disciplines but in the 21st century it was realized that many of the societal and daily encountered problems can only be solved by Interdisciplinary researches. There is no place in this world except the Universities who can inculcate this culture in the prospective researchers. Universities are the pioneers in creating a knowledge based society. Interdisciplinary studies can be defined as the convergence of ideas from various different disciplines by specialist to solve in an integrated manner various national and International problems. The present paper tries to focus on the various factors that can promote Interdisciplinary studies in Universities, the tools and techniques that can be applied for its promotion and the challenges faced by the Universities in Implementing this.

Keywords: Knowledge era, Interdisciplinary, Innovation, Pioneers.

Introduction

Excellence in Education is the basic need of the Developing countries like India. The concept of excellence is embedded in shifting social, economic and political contexts and is underpinned by broader discourses or Ideologies[1]. Broader discourses can only be achieved by broader outlook and vision which is not possible by the traditional restrictive departmental module of education. There are tools, information and resources from other disciplines that can present a proper solution to the existing burning problems. Realizing the vision of excellence, involves a paradigm shift from specialized knowledge in particular field to Interdisciplinary orientation for coping up with the global competitiveness. The present problems faced by society require integration of information and concepts from various disciplines.

Interdisciplinarity is behind many of today's scientific breakthroughs. The complexity of problems existing in societies compels researchers to break subject boundaries, drawing an insight and deeper knowledge from a range of disciplines. Disciplines are usually self contained and isolated domains which has its own community of experts with specific concepts, views education and theory.

The National Academics have remarked that the need for interdisciplinary education is driven by increasingly complex problems that cut across traditional disciplines and recommended"…. Students should seek out interdisciplinary experiences, such as courses at the interfaces of traditional disciplines…."[2].

Objectives

The present paper envisages exploring the dynamism of the landscapes beyond Disciplinary constraints. Its major objectives are: i. To study the factors that promoted Interdisciplinary culture in Universities. ii. To study the tools and techniques required to implement Inerdisciplinarity. iii. To study the barriers faced by Universities in implementing this culture.

Factors responsible for promotion of interdisciplinary curricula: The Universities of today known as the educational temples are undergoing a paradigm shift in their approach to cope up with the complex and dynamic global environment. Presently Universities are creating a blend of curriculum to create a breed of students who can integrate their knowledge base. This is only possible by Interdisciplinary integration. Eg. A type of voice synthesizers which enable individuals with muscular dystrophies to communicate. A unique combination of Arts, Biology, social sciences and management.

Social factors: Universities are an important social element as they create the society as a whole. They build a powerful society by training the prospective managers of India. Universities should promote a curriculum which is more professional and job oriented. The Universities should promote interdisciplinary exchange of faculties so that interdisciplinary skills can be developed and promoted in students. Functional diversity and integration of organizational structure Facilitates the convergence of ideas and concepts to solve many complex and unveiled societal problems.

Technological factors: ICT's have brought a revolution in the knowledge world. Due to advancement in the IT sector, information is available at the click of a mouse. The current market dynamism and the increasing competitiveness in the global market acts as a catalyst for Universities to cross breed the ideas and concepts of various disciplines to promote innovativeness and skilled human capital. No idea is left unreachable after the development of ICT's. Internet brings everything to your doorstep. The various advanced online lectures by eminent professors of prestigious Universities have made the knowledge world broader.

Economic factors: Universities are economic entities of a nation. The economic factors are the most volatile of a nation. It includes the unemployment policies, taxation schemes etc. Universities can contribute to this field by training its students in integration with the local community. Every region has its own set of problems. The Universities and its various departments must take over the study of local community based problems and find a solution to it in an integrated manner. Eg. Some areas of India have low rainfall. This creates restriction on the availability of water for crop production. Various departments like science and Information technology and social sciences combine together to give a solution to integrate their ideas on preserving the rainwater for future use and recycling and retention of water .

Environmental factors: Universities are social entities in the sense that exist in the society and contribute to the upliftment of the society. They create Interdisciplinary synergistic teams to develop the nation. Universities must encourage candid and fruitful communication channels between various departments to create diverse programming outlets. Students should be well equipped to simulate their minds in all directions they desire.

Political factors: Government policies are an important ingredient for the flourishment of Universities. Various industrial tie-ups is promoted by the government reduces the talent gap between the Industrial sector and academic sector. Universities should not be a puppet in the hands of the political parties. Clearly chartered rules and regulations needs to be framed for the development of students, stakeholders, Universities and ultimately the Nation.

Legal factors: Every organization has got a distinguished legal entity. Separate legal entity demands for clearly framed employment laws. Usually UGC rules the functioning of the Universities.

Ethical factors: Universities are the temples which not only promote knowledge addition but also add an element of spirituality and humanity in the making of the minds and characters of young India. Foremost goal of Universities should be promotion of education which is useful for the nation as a whole. No problem of the 21st century is discipline centric, so an interdisciplinary attitude should be sparkled to create flair among the students to address various burning issues of the nation. The EQ, IQ and SQ (Spiritual Quotient) of a person all needs to be balanced through the wisdom of education.

Tools for Developing Interdisciplinarity in Universities: To promote the culture of inter breeding of ideas in Universities various facilitations are required. These increase the strategic choices and creativity in an individual and redirect the actions of the prospective researchers towards growth and Innovativeness. The tools which act as a catalyst for promoting the culture of interdisciplinarity are listed below:

Communicating Across Perspectives: Usually specialized disciplines have their own specialized terminologies and concepts. This can act as a barrier to Interdisciplinary curriculum development. Every researcher should try for building a bridge through mutually shared concepts across perspectives, to remove the conflicting views of a concept. Working in an Interdisciplinary concept involves understanding of conflicting yet internally coherent standards for arriving at a workable solution to a complex problem. The benefit of knowledge integration is to focus on a new perspective beyond the scope of a single discipline. Considering an integrated discipline allows the respondents to formulate hypotheses that escaped their sight before and fitting combinations to attain the societal goals. It is a must for Universities as Academic departments have closed environments and there is a great friction between the departments. Universities must promote building of a research cell where channelized communication between top management and the various cadres of employees should be promoted for promoting Interdisciplinarity in the closed minds and opening gateways for growth and development of the nation as a whole. This attitude promotes the solution of a problem from various disciplines.

Development of a Cross Disciplinary Curricula: All graduate and post graduate courses must include an element of cross breeding of subjects in various disciplines. For example the case of manufacturing artificial limbs. This is not possible without the combination of technology, social sciences, biology and various other perspectives.

Experiential Learning: There are certain professional courses where internship is a must for completing the course. This is in promotion due to the common belief that Self experience is the best way to acquire knowledge. Albert Einstein told "Learning is experience, everything else is just information". Experiential learning helps to tackle real world complex problems. Every problem existing in society is different and requires a different strategic approach. Universities must encourage this aspect by providing various simulated conditions in laboratory, arranging workshops, Brainstorming sessions encouraging Interdisciplinary approach to problem solving.

Digital library: The revolution in the IT sector has transformed the face of libraries in India. Digital library is a burning example

of the wonders of Information technology. Digital library can be defined as a managed collection of information with associated services, where the information is stored in digital formats and accessible over network[3]. These advanced libraries are considered as miracles as it allows integration and sharing of ideas and concepts of various disciplines. Every University must promote this culture by development of Digital repositories which acts as a resource boon for reference by willing researchers on the click of a mouse. It is based on multimedia so the uniqueness of this facility is based on Interactivity.

Upgraded technology: Can we imagine our life without Internet? Internet and other technological facilities like Video conferencing, online journals and Wikipedia etc helps every individual to update his arena of knowledge by adding a spicy element of other disciplines. Universities with such upgraded technology can tie up with foreign Universities promoting interaction of Faculties and students and update themselves with the global advancements. This accelerates the exchange of staff and scholars and provides greater global visibility accelerating the two way development for building a positive climate. These factors motivate the faculties to cross breed their ideas for a transformative society.

Conclusion

To actually develop in the knowledge era of the 21st century, the shell of the specialized disciplines needs to be broken to cope with the global competitiveness and accelerate the social and economic progress. Knowledge oriented society can only be constructed by cross breeding of ideas and concepts which is only possible through Interdisciplinary studies. The universities act as a catalyst for change in psychology and research solution seeking mindset. The curriculum of the courses running in the Universities should be more practical oriented and involve more field work for increasing the experiential learning. Universities should have tie ups with industries, workshops related to skill development should be promoted to meet up the skill shortages existing in various sectors of the economy. Universities with their various innovative strategies can drive the economy towards social modernization. Faculty development programmes and Inter departmental fests should be encouraged for skill updation and collaboration. Every university should be equipped with a rich and resourceful library for cross facilitation and synthesis of data.

Last but not the least communication channels should be candid and formal. Healthy communication strategies should be promoted to demote interdepartmental conflicts. Open ideas and new concepts should be welcome with open and rational minds. The minds should be trained in such a way that every discipline should be respected and the traditional disciplinary boundaries broken heading towards a more interdisciplinary outlook to address the various societal problems and work hand in hand towards its solution.

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