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CREATION, SUSTENANCE AND PROMOTION OF CRITICAL MAN POWER: A NEED FOR RESURGENCE OF LANGUAGES, SOCIAL SCIENCES AND PROGRESSIVE SCIENCES IN CONTEMPORARY INDIA'S UNIVERSITIES

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ABSTRACT:

A very important dimension of University Education is to nurture, sustain and promote critical manpower. Once the nurtured man power reaches critical stage, it shall have greater demand, and hence vulnerable to attrition or brain drain. The research paper ponders over the practical situation in India's University Education and analyses the empirical evidences with utmost care. The paper has been presented in ensuing sub-themes: (i) Non-availability of eligible candidates: A few select instances;(ii) Diminishing fundamental research: A worrisome factor, and (iii) Why fundamental research: A few select instances; and (iv) Concluding Remarks.

Under 'Non-availability of eligible candidates: A few select instances',the substance of Languages, Social Sciences and Progressive Sciences has been truly selectively exemplified



with a key note on wider unexploited potentialities. 'The diminishing fundamental research: A worrisome factor' overhauls the existing state of affairs in the arena of research and provide measured remedies to the serious problem. In 'Why fundamental research: A few select instances', the true significance of the select areas of research has been highlighted. At last the reasonableness of the research out-put is mentioned in brief.

KEYWORDS:

Critical Manpower: Decisive and productive human resource
Linguistic Theory: A theory dealing with science of language
Morphological Structure: Structure based on morphology
Architecture: Science of Construction
Historiography: Science of History writing
Econometrics: Economics in quantified abstract form
Astrophysics: Science of space

Progressive Sciences: Sciences those are amenable to pregressive research

Wissenschaft: Science of Humanities

Spatial Bodies: Bodies across the length and breadth of the universe

INTRODUCTION:

The 21st century India's 636 Universities are afflicted with several problems. Most critical among them is the production of less competent and least exposed schol ars. These Pace Setting and Premier Institutes of Learning have greater responsibility of creating man power required for the universities and lower as well as lowest rung of education sector. Are they really discharging their responsibility to the utmost satisfied level?"According to the Ministry of Human Resource Development, most of the national premier institutions are facing faculty crunch. In case of Central University of TamilNadu, the shortage of faculty is as high as 81% followed by Delhi University 53% and Indian Institutes' of Technology 39%.India needs a mission mode approach to fill the vacant faculty positions."(1) The empirical statement has implicit meanings. First, there are unfilled vacancies in Institutes of Higher Learning due to non-availability of eligible candidates or reluctance of eligible candidates to join Institutes of Higher Learning as there are plump lateral opportunities open before them in other teaching sectors. ; Second, the eligible candidates either migrate else where causing brain-drain or join private universities for better prospects.

NON-AVAILABILITY OF ELIGIBLE CANDIDATES: A FEW SELECT INSTANCES

Let us examine the issue of non availability of eligible candidates. Firstly, the specialized research talent with appropriate doctoral degree is not available. Second, the availability of such specialized talent is hardly imaginable in roster based appointments.This is barely evident in non-availability of eligible candidates to the Universities' teaching fraternity seeking expert professionals. These days Universities notify for Assistant Professors, Associate Professors and Professors seeking specialization in each subject. These are critical areas of intellectual quickening, scientific progress, industrial growth and national reconstruction as assumed empirically essential for the 21st century India to make her presence felt in the contemporary world affairs. The problem is equally acute in Languages,Social Sciences and Progressive Sciences. In Languages, the non-availability of eligible candidates in English language and literature is so apparent that the Universities hardly find a candidate with Doctoral Degree in Linguistic Theory of Literary Criticism. How many Universities have distinguished linguists on the faculty? Hardly a few.Is not? Language is not mere communication. It is neither just literature, but an embodiment of complex morphological structure,"...a biologically endowed innate language faculty within the human brain."(2) Beyond doubt, Linguistic Theory of Literary Criticism being a pure science of language needs to be taught by expert professors as who treat language as "...a cognitive system."(3) In Social Sciences, the instance of History is pathetic. Architecture of Heritage and Historiography are purely scientific and interdisciplinary in nature, where-in expertise at university level is scarcely evident. India's architecture being"...formal, monumental and canonical"(4) requires competence in indology and oriental knowledge.In Economics, the core aspect being Econometrics is seldom pursued as an area of research.Each economic activity being quantifiable in qualitative and utilitarian terms, is necessary to "...create a diversified, efficient and competitive financial system to promote in turn the real sector economy." (5) Applied Econometrics can predict recessions, offer alternative approaches, redesign post reform monetary policies, and effect relevant structural changes in the backdrop of developments at the World level and build the nation based on acute analysis of degree of monetization.

In Progressive Sciences, the country is almost stagnant in terms of creation of expertise. "Incessant growth in Science is essential for the application of many use ful methods for the application of analysis to obtain solutions to a wide range of practical problems."(6) In recent years, science and technology have been advancing at unbelievable velocity, and the development of new electronic devices has paced this advance in dramatic fashion. "As a consequence, we must not only teach basic facts and techniques that are useful today, but we must also give the fundamental concepts required to understand and tackle the problems of tomorrow." (7) "The invention of 'audion' or triode about 1905 by DeForest was the beginning of vast electronics industry we have

today. Its ability to amplify, detect, and mix electrical signals has led to literally thousands of applications.” (8)

The academic research and development laboratories in India have the daunting task to enlarge the frontiers of knowledge in pure and applied science and in technology. Astrophysics is an area where contemporaneous critical manpower is not being produced in India's Universities. Till today astrophysicists are unable to understand how the process of formation of stars in galaxies first increased and then waned in the last few billion years or so. Why didn't the galaxies form stars in one bright display and then plunge in to darkness? Why did the stars form in a regulated manner over a long stretch of time? The present work in India is confined either to furtherance and application of pre-existing knowledge or sheer pondering in present knowledge. Literally, no break-through is coming forth in Astrophysics. It is evident from the research abstract comprising Doctoral and Post-Doctoral degrees awarded by the Indian Universities.

DIMINISHING FUNDAMENTAL RESEARCH: A WORRISOME FACTOR

As mentioned earlier, diminishing research in fundamental areas like Linguistics, Econometrics and Astrophysics will have undesirable impact upon a country which is not even a century old! As men with expertise retire off in each University and Research Laboratory, those men themselves are worried at the core for not having demonstrably created substitutes to further and enlarge the task at hand. It should be remembered that the evolution and reputation of Principles of Management and Information Technology, the fundamental research in the fore-mentioned areas has contributed significantly. It should also be remembered that both 'Principles of Management' and 'Information Technology' are the most shallowest offshoots of the fundamental research. T.S. Eliot has rightly observed 'Where is knowledge, we have lost it in information'. Information tells how to go about. Knowledge reveals what the reason for an occurrence is. Hence information is none else than one among the several by-products of knowledge. If knowledge generation is the key role of each university, the generated knowledge should also be of relevance to the growth of mankind.

The focus of each University of India is to have well qualified and knowledgeable researchers as members of faculty. As Universities in India proliferate, there is a race for obtaining expertise as faculty by each University. The University Boards of Appointment (BoA) apart from routine statutory norms in appointment ought to consider rare expertise demonstrated at the Doctoral level by the candidate and his/her competence to produce better scholastic Ph.D.'s in core areas. This certainly boosts morale of meritocracy and put the fundamental research on track again. The UGC Regulations-2010 governing recruitment and promotion norms needs to pay closer attention to this insightful aspect that can reenergize the whole University Education. Such recruited faculties while guiding Ph.D. students shall devote themselves singularly to the core areas' like Linguistics, Architecture and Historiography, Econometrics and Astrophysics both by will and mandate. Such faculty shall have to admit Ph.D. students on the basis of either personal verification of credentials of the candidate or consider Junior Research Fellowship (JRF) as mandatory norm apart from the University regulations. The Vice Chancellor himself/herself shall chair the Supreme Research Committee of the University to keep track of the resultant out-come of the envisaged fundamental research. If this process is effectively observed the Vice Chancellor really does play 'True Man Power Building Role' based on "... the rational, independent and impartial investigation of the documents of the past." (9)

WHY FUNDAMENTAL RESEARCH: A FEW SELECT INSTANCES

Normally, there is unanimity in opinion that fundamental research means research process and out-put which is original and has utilitarian value based on "...logic and epistemology of the pure science or philosophy." (10) Why I should consider research in Linguistics as fundamental? "Linguistics is the scientific study of Language." (11) Language is a purely human and non-instinctive method of communicating ideas, emotions and desires by means of voluntarily produced symbols." (12) It contains phonetics, phonology, morphology, syntax, semantics, language acquisition, psycho-linguistics, language disorders and sociolinguistics." Since language is implicated in so much of our lives, there is clearly a large and open ended number of quite desperate activities to which applied linguistics is relevant." (13) Linguistics precisely addresses most imperative and contentious areas of contemporary language. It evolves the principles of literary stylistics as an endeavour to mediate between

linguistic description and literary criticism.” (14) As we have observed both language in general, and particular languages can be studied from different points of view. Therefore the field of linguistics as a whole can be divided in to several sub-fields according to the point of view that is adopted or the special emphasis that is given to one set of phenomena, rather than another.” (15)

Architecture and Historiography need attention from researchers. The Architecture of India is rich, diverse and abundant. The evolution, growth and maturity of India's Architecture has contributed significantly to the genesis of Civil Engineering. The glossary found in oriental architectural literature and the components evident in concretised India's Architecture are almost synonym to the structural components of Contemporary Civil Engineering. An example in this regard "lalatabimba refers to lintel" (16) and "pronaos is porch." (17) The scholars who studied India's Architecture have found about one lakh jargons which are either conceptually evolved or imbibed from cultural experiences by Indian Architects. This highly productive area of knowledge, where upon Civil Engineering and Tourism Industry have built pedestals, hardly considered as an area of fundamental research. There are still several areas in Architecture of India, where-in research is either inadequate or very haphazard. The Wooden Architecture of India in the extreme North and Deep South is a case in point.

Reconstruction of History has always been at the centre of historical thinking. The science of writing history is referred to as 'Historiography'. "It comprises the study of the development of man's sense for the past." (18) "...While History proper is the historian's reconstruction of the past, 'historiography', says Aurthor Marwick, is really the history of historical thought-it is not only the theory or practice of history." (19) In the first half of the nineteenth century, after the very emergence of the Science of Humanities (Wissenchaft) accuracy was thought essential to the determination of facts wholly based on "the identification and authentication of primary sources." (20) Research, according to von Below was the motor of historiographical change: "Every where our work proceeds as follows: We begin our research with particular concept ions, revise the latter according to the results obtained, then approach the issues anew with the findings we arrive at in order once again to approach a revision of our ideas on the basis of new research work. This is how our work advances." (21) The most recent school Structural Historiography theorises the structural processes of evolution and change. It explicates the "...meaning of actions of people rooted in one time and place, to persons in another." (22) Historiography being a sensitive and challenging area of research, deserves priority attention in Universities.

Econometrics is the most scientific way of presenting economic activities in the light of well developed economic thought. It is "an instrument for understanding and explanation of observable facts and relationships." (23) Econometrics functions upon the conception of "... economic universe and their interconnectedness with the unadorned rigour of elementary differential equations." (24) The very mathematical illustration of the mode of action of a definite act of causes may be complete in itself, and strictly accurate within its clearly defined limits," it is otherwise with any attempt to grasp the whole of a complex problem of real life, or even a considerable part of it, in a series of equations. For many important influences, especially with the manifold influences of the element of time do not lend themselves easily to mathematical equations; they must either be omitted altogether or clipped and pruned till they resemble conventional birds and animals of decorative art." (25) In Econometrics, the "...propositions are presented in a setting which emphasizes both their implications and-what is just as important-their limitations; and the whole is built-up in such a way that at each successive point in the argument the attention is always focused upon the new elements in the problem, the rest having been satisfactorily disposed off at an earlier stage." (26) Economic theory is meant to be about the real world. We seek, by the use of theory, to explain, understand and predict phenomena in the real world, and our theory must therefore be related to, and tested by empirical observations of the world around us."...The student of economic theory needs to ask at every stage what are the relevant magnitudes and quantities in the real world." (27)

In the ancient past, Indian men of science classified the skies in to "... zodiacal constellations; they calculated with remarkable accuracy the diameter of the Moon, the eclipses of the Moon, and the Sun, the position of the Poles, and the position and motion of the major stars." (28) "The earliest astronomical treatises, the Siddhantas' were none else than science." (29) Astrophysics is the scientific study of physical and chemical structure of the space. The space around the Earth comprises fascinating spatial bodies floating along the infinite

horizon of the cosmos. Although India's contribution to Astrophysics is remarkable, the West is far more progressive. The Hubble Space Telescope, a joint venture between National Aero Space Agency (NASA) and European Space Agency (ESA) has literally exposed the wonders of the universe. Having travelled about three billion miles ever since its launch in 1990, the Hubble Space Telescope has so far made 1.2 million observations. It has placed our world in to a context of hundred billion stars in hundred billion galaxies. The Hubble has determined the rate at which our universe has been expanding. The utility of space technology in manifold ways by the developed and developing countries has practically transformed the lives of the people in true sense of the term. As rightly observed earlier, India's Astrophysics needs to have a great leap forward by means of first order University research, almost equivalent to or even better than those of the National Physical Laboratories. Our Universities have the potential to supplement the knowledge base and consequentially propel the national agenda of the Premier Research Laboratories of the country.

The fore mentioned instances are no utopian ideas. Fundamental research in such areas is quite attainable as India's Universities have abundant infrastructure and intellectual professorial staff. The fundamental areas of research can be identified in each discipline and referred to as 'core areas of research.' This is indispensable to distinguish the useful and wanton areas of research. The envisaged mission can only be justifiably attained by formally constituted Teaching and Research Universities as they devote their time entirely to the cause.

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