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MULTIDISCIPLINARY EDUCATION FOR ADDRESSING SILOS IN HIGHER EDUCATION IN SIKKIM

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ABSTRACT

Indian education system has seen profound change and made laudable progress since Independence. India holds a third position after China and USA in terms of enrolment and ranks first in terms of the number of higher education institutions. However, alongside growth, it is equally important to note that there have been many gaps bothering the smooth functioning of the Indian higher education sector. For instance, even with a large network of educational institutions we are still grappling with the issues of access, equity, quality, sound infrastructure. Similarly, education system is chiefly characterized by hardcore separation of disciplines where students have no alternatives to venture beyond a set stream or course despite possessing the desire and the knack. Hence, during recent times many concerted efforts and interventions have been made to address the many issues surrounding Indian higher education. In this regard, the National Education Policy (NEP) 2020 has made some ground-breaking recommendations that can respond well to these prevailing shortcomings in higher education sector. For instance, the NEP 2020 endorses the idea of multi-disciplinary approach to education where students can have more holistic knowledge base in tune with their interests and propensities. Thus, multi-disciplinary education approach is believed to make education essentially student-centric, one of the much sought after goals of education. Some states have already gone ahead with implementing the recommendations of the NEP, however in Sikkim, the stakeholders are still skeptical about its implementation. Sikkim's higher education sector is still at its nascent state with many institutions struggling to find permanent campus location. Infrastructural impediments, experienced faculty, absence of sound research culture are other possible threats to higher education. In view of this, the present paper centers around the rationale for adopting multidisciplinary approach to education to reconstruct higher education by breaking strict compartmentalization or silos of higher education. Additionally, the paper also highlights on how multidisciplinary education approach can revive Sikkim's higher education sector, and also deliberates on the challenges that lay therein.

Keywords: *Multidisciplinary, NEP 2020, Higher Education, Silos, Sikkim.*

Introduction

Education has invariably been linked to the growth and productivity of a nation. However, today what we conceive of education as a mere acquisition of an aptitude in literacy and numeracy has undergone a slight variation in its connotation, primarily due to global issues like sustainability, relevance, fostering equality, tailoring education to the demand of the global emergencies like the pandemics and creating digital learning environments etc. Given the prevailing times, there is an urgent need for transforming education system, making it more versatile and relevant. In sync with the

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cherished vision of the National Education Policy (NEP) 2020, education system during the contemporary times must maintain a fine balance between the global trends as well as local developments for instilling among learners a sense of preparedness for the global scene while anchoring around the idea of rootedness. The underlying assumptions for economic and industrial progress of a nation rests with the creation of a skilled manpower in diverse fields (Gupta & Gupta, 2012). This further reiterates the need for overhauling the current structure and design of the higher education system making it more holistic and diversified. Creation of a truly *Atma Nirbhar* Bharat depends on the carefully designed and rolled-out education system for our country. The NEP 2020 deliberates on investing among learners the 21st century skills for creation of global leadership skills. However, the stereotyped, conventional Indian higher education with limited flexibility in choice and integration of subjects could deter the vision of the NEP 2020. It is for these afore-stated reasons, higher education in India must move towards multidisciplinary approach for addressing the prevalence of *silos* or hard-core separation of disciplines and offer wholesome knowledge for learners that comes from fine amalgamation and blends of many disciplines.

Objectives

This conceptual paper was guided by the following objectives:

- To understand the prevalence of silos in higher education in India in general and Sikkim in particular.
- To explore the potentials of moving towards multi-disciplinary education for addressing silos in higher education in India in general and Sikkim in particular.

Estimates on Indian Higher Education

India holds a third position after China and USA in terms of enrolment and ranks first in terms of the number of higher education institutions. The report of AISHE (2019-20) identifies three categories of higher education institutions i.e., Universities or university level institutions which are established by the Act of Parliament or State Legislatures and have the autonomy to award degrees, colleges affiliated to universities that are not empowered to award degrees, and stand-alone institutions which are neither affiliated to universities nor are eligible for awarding degrees and therefore run diploma programmes. Indian higher education accounts for the largest education system and has been showing a steady progress with 659 universities and 33023 colleges almost a decade back i.e., in 2011-12(Sheikh, 2017) to approximately 1043 universities, 42343 colleges, and 11779 stand-alone institutions during the current times (AISHE, 2019-20). In retrospect too, India boasted of universities of global recognition before the current famed Harvard, Cambridge and produced fine scholars in the realms of medicine, mathematics, science, arts, engineering. Total enrolment in higher education has been estimated to be 38.5million, with 19.6 million boys and 18.9 million females and females constitute 49% of the total enrolment(AISHE, 2019-20). The Gross Enrolment Ratio (GER) in Higher education in India is 27.1, with GER of 26.9 for male population is 26.9 and 27.3 for female, however this figure stands below the global average of 36.7 (AISHE, 2019-20). Despite this steady progress, there are equaling worrying statistics that demand priority. For instance, AISHE (2019-2020) reports that 49,348 foreign students have enrolled in tertiary education sector in India, contrarily, a whopping 4, 62000 Indian students venture out of the country for pursuing their tertiary education. Female students' representation in institutes of national repute is the lowest, further, only 2.6% of colleges run PhD programmes and 32.6 % colleges run only single programme (AISHE,2019-2020).In addition, Indian higher education system has failed to consider the possibility of adopting inter-disciplinary approach and therefore has remained strictly *siloed.* Additionally, outdated curriculum with greater emphasis on rote learning, shortage of qualified faculties and infrastructure, lack of sound research and innovation in teaching have been acknowledged as other constraints facing Indian higher education (Abhinav et al. 2023).

Multidisciplinary Approach to Education for Addressing Silos

The phenomenal growth of higher education has somewhat intensified the culture of institutions having stratified administrative and support services leading to compartmentalized organizational structures referred to as silos (Mizuta, 2022). Globally, universities offer 1000 disciplines, however, fueled by the idea of specialization and mere information accumulation in these diverse fields, the applicability and relevance of knowledge in specific context is less explored and thus has become strictly restricted (Jacobs et al. 2021). Indian higher education is typically characterized by this phenomenon of isolation and strict compartmentalization of academic disciplines. academic discipline provides the learners with redundant knowledge having little applicability in the wider social context and is treated

separately which leads to the creation of several silos having little interaction among them and consequently fails to prepare learners for increasingly complex and interconnected world by (Jacobs et al. 2021). Mizuta (2022) further asserts that this trend of silos can be detrimental to the organizational growth, students, staff etc. Addressing these long-standing issues in higher education has become a perennial concern among the educationists and policy framers. Multi-disciplinary, treated synonymous as inter-disciplinary trend refers to the idea of collaborating two or more fields in the field of research, education etc. (Jacobs, 2014).In this regard Jacobs (2015) argues that specialization holds relevance to the extent that it can address certain specific issues within the precise academic domain, contrarily for many complex issues of society, environment, philosophy, it is imperative to leverage knowledge and viewpoints from diverse areas of specialization. In the Indian context, the National Education Policy 2020 has made remarkable suggestions that could target some of these enduring challenges. NEP in lucid terms has outlined the need for shifting towards multi-disciplinary higher education. Referring to the ancient Indian universities that catered to heterogenous students' population in multidisciplinary environments, NEP envisions reviving this glorious culture of multidisciplinary institutions, partly to end the hard-core separation of higher education and to promote the idea of holistic development of learners. Accordingly, NEP proposes the conversion of all Higher Education Institutes (HEIs) to multi-disciplinary by 2040 with a renewed student strength i.e., to hit the target of 50% Gross Enrolment Ratio (GER) by 2035 for optimal use of resources and creation of a multi-disciplinary community (NEP, 2020).

"Large multi-disciplinary universities and colleges will facilitate the move towards high-quality holistic and multi-disciplinary education. Flexibility in curriculum and novel and engaging course options will be on offer to students, in addition to rigorous specialization in a subject or subjects" (para 11.6, NEP 2020).

Further, the policy asserts that the integration of Science, Technology, Engineering, and Mathematics, commonly referred to as (STEM) with arts infuses learners with higher-order mental abilities and the latest 21st-century skills. Such an arrangement anticipates the possibility of making students ready for diverse career opportunities instead of limited avenues that come with conventional specialization system. Likewise, it can very well respond to the age-old demand for integration and flexibility in curriculum and actualize child-centric education.

Multidisciplinary Education in Sikkimese Context

Education in Sikkim during the pre-merger period i.e., before 1975 was under the patronage of the *Royal Durbar.* Higher education received greater priority from 1922 onwards, although higher education in Sikkim flourished sparingly, nonetheless during the 21st century many positive developments like hiked gross enrolment ratio (GER), increase in the number of higher education institutions is being witnessed. Presently the Directorate of Higher Education and the centrally sponsored initiative of the Rashtriya Ucchatar Shiksha Abhiyan (RUSA) jointly fulfill the specific need of providing financial grants to higher education and cater to the various needs of higher education in Sikkim (Annual Report 2021-2022). However, higher education in Sikkim has been encountering certain persistent challenges chiefly identified as poor funding, lower employability of students, and less focus on research activities (AQAR Sikkim, 2020). Additionally, the author recognizes other pertinent issues in higher education such as poor quality of education on account of outdated curricula, limited choice of subjects which are mostly traditional, lack of regional relevance of education, absence of permanent campus location.In view of these concerns, the author argues that multi-disciplinary education can very well respond to some of these challenges and offer holistic knowledge base to students. Increasing flexibility in the choice of subjects accentuates the possibility of equipping learners with the desired flair that makes them employable in the global market by unfolding before them varied career opportunities. Ordinarily, students in Sikkim are not much aware of this idea of subject integration and thus lack the needed knowledge and skills demanded by the modern competitive world. Additionally, it is observed that Sikkim produces an insignificant number of civil servants. The author attributes this trend partly to the prevailing educational structured evoid of variety of subjects and the possibility of amalgamation among them. With the prospect of integrating many academic disciplines, multidisciplinary approach can rectify this dominant practice to a certain extent. The author therefore argues that the multidisciplinary education equips Sikkimese students with the desired subject specialisation and the needed skills to navigate through the ever-competing world. Author's arguments are backed by Shukla et al. (2022) who maintain that multidisciplinary approach develops among learners an understanding and appreciation for diversity of knowledge, simultaneously investing in them the specific subject knowledge and the needed 21st century skills. Likewise, when expert knowledge is drawn from many academic specialisations the

issue of poor and outdated research culture can acquire a new perspective. Scholars like Morse et al (2007) and Schmidt (2012) in Jacobs et al. (2021) have acknowledged the boons of multidisciplinary research approaches and their practical utility in responding to some budding challenges in education, society, environment etc. While there are ample opportunities for collaboration in the field of research and education, however, in Sikkim this possibility is less explored consequently leading to strict discipline-oriented research. Hence in a generic sense too, developing a synergistic relationship across diverse disciplines can usher transformative reforms in Sikkim in so far it responds to the challenges of disaster management, boosts tourism and hospitality industry, and would be instrumental in the conservation of biodiversity and environment in a holistic manner. In this context, experts from different academic specialization can collaborate and work towards finding feasible solutions to some of these typical issues encountered in Sikkim.

Essential Reconsiderations in Adopting Multi-disciplinary Education

Given the manifold benefits that ensue from moving toward multi-disciplinary education approach it is imperative to reconsider certain issues as identified below:

- **Need Assessment:** at the outset, careful thought must be given to identifying the demand for various disciplines keeping in mind the issue of relevance, utility, and the availability of the needed resources both material and human for multi-disciplinary education.
- **Collaborate:** likewise, prioritizing active collaboration among stakeholders, universities, and colleges in chalking out the roadmap for implementing multi-disciplinary education merit equal attention.
- **Flexible Curriculum:** at the heart of the multi-disciplinary education is the cautiously framed curriculum. Therefore, in curriculum designing elements of flexibility and seamless integration must be ensured. This facilitates hassle free choice of courses from different disciplines for the learners**.**
- **Faculty Orientation and Teacher Preparedness:** It is ultimately the teachers who implement any scheme of education, consequently orienting faculties to adopt multi-disciplinary education, collaborating faculties from many disciplines to promote inter-disciplinary teaching and research must receive precedence.
- **Infrastructural Assessment:** Investing in infrastructure, chiefly the libraries and laboratories for creation of a multidisciplinary and holistic educational environment for promotion of multi-disciplinary research and education culture in educational institutions is apparently a vital reconsideration.
- **Awareness:** Sensitizing students and parents about the gains of multi-disciplinary education must also be prioritized.

Additionally, successful rolling out of multi-disciplinary education is underpinned in making concerted efforts such as human resource training, commitment from the stakeholders, and capacity building programmes (Jacobs et al. 2021). Moreover, there must be meaningful blend and integration across disciplines for ensuring the relevance and utility of knowledge instead of mere accumulation of information.

Conclusion

Today education sector at all levels is charged with complex challenges that falls beyond the purview of stereotypical education. There are pressing issues of relevance, sustainability, quality, and most importantly developing among learners the 21st century skills, all of which transcend the boundaries of traditional domain-specific knowledge, inherently aimed at awarding degrees and jobs. Multi-disciplinary education will serve in good stead in view of these evolving concerns of higher education. Multi-disciplinary education in Sikkim's higher education sector will be a noble venture and could possibly revamp the educational practices in the state, provided that certain pertinent issues like teacher-preparedness, infrastructural challenges, time-tabling, flexibility in curriculum, response from the stakeholders are re-examined. The NEP 2020, has set the stage for multi-disciplinary trends in higher education in for the country. In the state of Sikkim, Sikkim University has taken the lead in implementing the NEP from 2022 and currently all the other higher education institutions are gearing towards its implementation. Therefore, in view of these positive trends it is expected that a shift from the culture of siloed education and learning towards holistic and multidisciplinary education for the creation of well-versed individuals would soon actualise in the Himalayan state of Sikkim.

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