

Modern Indian Geography: A Review

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Abstract-From the very early period, in the study of Geography the contributions of Greeks and Romans for the development and evolution of Geography are highlighted. Starting from Aristotle, Plato to Ptolemy, the ancient glory of Greeks and Romans enlightened various aspects of Geography till now. But the Indian Geographical history is not acknowledged as much as it deserved. Geography itself has to struggle for many years to make its own identity of being an independent discipline. During this journey too, we can find the influence of various schools of thoughts, such as, Ancient Indian, Arab, Chinese, German, French, American, British and Russian.

In this paper an attempt has been made to discuss the contributions of emerging scholars of India during the period 1800 to 2000 and their contribution in modern geography in shaping the geography as a discipline. An attempt has also been made to make a list of Geographers- researchers-scholars who have been the pioneer in the development of Geography in India in Modern times. There is a paradigm shift in the geographical research methodology and the techniques which have also been given the due place in this paper.

Key words- Paradigm, Paradigm shift, Research methodology, Indian Geographers, Modern geography

I. INTRODUCTION:

One of the oldest civilizations of the world, India, has very deep rooted intellectual tradition of knowledge. Here Geography had started its journey from very ancient times. India, play very pivotal role as far as its strategic location is concerned, it was a corridor for cultural exchange between South East Asia and Europe (East to West) . The contributions of ancient Indian Geographers are comparable to the contributions of Chinese, Greeks and Romans. Veda and Upanishad with its discovery of nature and Humanity laid the foundations of various indigenous knowledge systems. The ancient Indian intellectual history of knowledge was very enriched and advanced than the contemporary world. It is noticed that what the western world think, research and practiced for today had a predecessor in ancient Indian school as it have a very old, rich and prosperous intellectual heritage of culture and knowledge of almost 2000 years. Though as an Individual subject Geography has established its department in University campus and started its journey from British Colonial period(1920s onwards).

Indian geography and its arena is highly influenced by the changing dominating pattern of world geography. After having its own ancient heritage and knowledge system we can see the influences of Arabic school, German school, French school, British school along with American school over the development of Indian Geography till date. Most of them are actually the outcome of colonialism.

After independence the progress of Indian Geography has been prominent and again tried to recover its ancient glory.

II. OBJECTIVE

There is an urge has been developed from the fraternity of Geography that only a comprehensive evaluation of the development of Geography from ancient period to modern time can help to direct the future progress of the subject. The present study is an attempt to find out each and every development and lacunae in Indian School of Thought and formulate the design of Geography of modern and contemporary period. It can be classified as following:

- (i) The significant developments in Indian geography during the last hundred years (contemporary phase) with reference to ancient glory;
- (ii)The contributions of the geographers in the development of Indian geography;
- (iii) Paradigm and its temporal shifting;
- (iv) Indian geography and the challenges.
- (v) Identify the characteristics of modern Indian school of thought

III. ANCIENT PERIOD OF GLORY

The evidences of scientific development in India was as early as 5000 B.C. before elsewhere in the world. Some of the valuable sources of geographical information and concepts are available in the *Vedas, the Ramayana, the Mahabharata, Satapaha Brahman, the Puranas*, the works of *Buddhists, the Jatakas, Jains*. The *Vedas* are considered to be the first books of Hindus. Vast knowledge of Geography is reflected in the tenth book of *Rigved*. In Padma Purana *Bhugol* (Geography), *Khogol* (the science of space), and *Jyotiskara* (Astrology) are differentiated very logically. They contributed in various fields as follows:

1. *Cosmography* (Khogol, i.e. the science of space): it includes the conjectures about the universe and the solar systems.
2. Use of the term *Bhugola* – Geography : Suryasiddhanta first used the term *Bhugola*. The term ‘*Bhugola*’ signifies the spherical shape of the Earth.
3. *Mathematical Geography*- the ancient Indian astronomer are very much sure about the accurate size of the earth and its diurnal motion on its axis as being suspended in space by its own force and they had very clear concept that the earth does not rest on some mythological tortoise or elements. In 400 and 600 AD by Aryabatta and in Pancha Siddantika (verse 18) the diameter of the Earth was represented. They had the ideas of latitude and longitude and precisely knew their importance to locate any place in the earth’s surface (Dubey,1967). The Rigved mention the principles of four directions, later on in Saptapadharthi the literature of ten directions were found. Katyayana gives the method of determining the cardinal points from the sun. The Manavasulbasutra gives the methods of determining cardinal directions.
4. *Physical Geography*: The Ramayana provides the descriptions of mountains, plateaus, rivers etc. ancient Indian scholars also has reasonable knowledge about various dwips (continents), mountain systems, rivers, fauna, flora of Brahmatvarsa (Subcontinent) and vicinal territories.
5. *Geomorphology* : The Aryans had a sound knowledge about the unequal distribution of land and ocean surface in the Earth, they also know that the maximum portion of land is located in the Northern hemisphere. The word *Jawalamukhi* and *Bhukamp* were used to refer volcanoes and earthquake in Puranas.
6. *Climatology*: Puranic and Vedic literature describe the atmosphere is between the earth and the space. In Rigved five seasons are introduced , in Valmiki Ramayan six seasons are referred. Weather phenomena such as thunder, lightning, storm, hailstorm, dust storms are mentioned in Vedic geography.
7. *Ecological thinking in Vedas*: The harmony with man and nature was recommended through several verses of Rig Vedas. The concept of sustainability was very much embedded in the Vedas which explains that whatever the natural resources we are enjoying is actually because of our wise and thoughtful forefathers.
8. *Regional Geography*: Indian scholars were very much interested in regional description of different region which proved by their knowledge regarding the geographical conditions of China, South East, Central Asia, Mesopotamia and the Trans-Oxus Asia (Transoxiana-Ancient name referring to the region of Turkistan in Central Asia, roughly corresponding to present day Uzbekistan and parts of Turkmenistan, Tajikistan and Kazakhstan). In *Aitareya Brahmana* various materials related to the regional geography of India are available. Suryasiddhanta described *Bharatbarsha* and its land and the people. Wide travelling and empirical observations is recorded showing considerable geographical knowledge of ancient Indian scholars. In Vedic age the whole world was referred as *Bhuvankosa*.
9. *Cartography*: The Vedic Aryans had notional map of India and World where the roads and rivers were represented by red and blue lines respectively. They also represented the globe of the Earth according to Surya Siddhanta.

From 3000 BC to 1183AD India experienced contributions of eminent scholars in different fields. Acharya Kapil in Cosmology, Acharya Bharadwaj in Aviation Technology, Boudhayana, Aryabhata, Brahmagupta, Bhaskara I, Aryabhata II, Sridharacharya, Brahmadeva, Bhaskaracharya and Varahamihir in Mathematics, Astronomy and Astronomy, Acharya Charak and Acharya Susrut in Medicine, Panini in Grammer, Nagarjuna in Chemistry, Acharya Kanad in Physics, Gautam Buddha and Adi Shankara in Philosophy are those who made their untiring effort for the sake of the discipline and established phenomenal research work for the forthcoming generations.

The Middle Ages:

Middle age is actually dominated by the Arabian school of thought throughout the world. India is also not beyond this territory. In 712 A.D. when Arabs came to Sind Indian intellectual society get connected with them, but their influence marked after they start their journey as emperor of Delhi after 1206. Arabians are very curious about India which depicted in the writings of Al Biruni. He wrote about the geography of India in 1030. Direct observations from soil, production and economic aspects of an area were the zone of interest to Arabian scholars from the very early period. After 15th century their philosophy started dominating in the European schools and after colonialism the modified version started its petals in India. In Medieval period whatever the geographical work had been done in Indian territory are the outcome of the Arabian Scholars. The classic works of Al-Biruni in “Kitab ul Hind”, Ibn Batuta in “Travels in India & China”, Abul Fazl-I-Allavi in “Ain-I-Akbari” are till now praised by the Geographers.

Colonial Period: The Heritage of Repository:

Colonial period of 200 years in India not only change the society and life styles of the Indians but also highly influence the educational environment too. Under very critical and fragile circumstance each discipline had to survive in very hardest way. Geography also struggled with the same. In the canopy of the Queen's monarchy, in India Geography only serve the needs of the administrators regarding regional descriptions to exaggerate and strengthened the expansion of colonialism. Geographers provide the comprehensive information regarding the land, the natives, regional productions and stored resources. The same is complemented with maps and gazetteers. As an individual discipline Geography has started its journey in University during 1920s. Along with these the then geographers take initiative to established several geographical societies for giving acceleration to the research works.

The primary theme of enquiry and focus in Geography of India is the centrality of space, place or region irrespective of the period. Primarily, the systematic approach was followed for full filling gazetteer type of research, later the British administration realized the importance of regional cataloging and their wide usage. The district and other gazetteers, census reports are the outcome of this approach.

After 1920s, those who started writing the modern history of Indian Geography were N. Subramanyam (Chennai), R.N. Dubey (Allahabad), K.S. Ahmad (Lahore), Tahir Rizvi (Aligarh) and S.C. Chatterjee (Patna). During this phase two leading geographical societies were established – the Indian Geographical Society at Madras (1926) and the Geographical Society of India at Calcutta (1932) (Rana, 2013).

When the British East India company started to strengthening their footsteps over Indian sub continent, they struggle to deal with its territory, regions, places, physical features, resources, its native peoples, their social and economic life etc. To satisfy their need they laid the foundation of Survey of India followed by Geological, Zoological, Botanical, Linguistic, Archaeological and Anthropological Surveys. With the efforts of these organizations British had a fairly good notion of the Indian Territories, and it results with the publication of Indian Map in '1inch to 32 Miles' scale in 1881 which is the first map of India. Survey of India achieved new dimensions day by day and become very enriched with reliable geographical information of the then time. In colonial period accurate surveying in association with extensive field works and reports made all the collected information very accurate and precise. The nature of geography also changed into systematic description and interpretation. Continuous effort of Geological, Archaeological as well as Anthropological survey of India, Census of India, Indian meteorological department create very efficient publications as the source source of geographical information.

MODERN TIME CLASSIFICATION: BEFORE INDEPENDENCE , AFTER INDEPENDENCE:***Phases of Development***

Modern Geography in India has a history of a century, after its introduction in Punjab in 1920s. Its development may be viewed as contained within a series of sequential phases, sketched as: (1) The Constructive Stage: Pre-1950s; (2)the Second phase as The Illustrative Stage: The 1950s; (3)The third phase as the Substantiative Stage: The 1960s; and (4)The Reformatory Stage: 1970s. (5) The stage of Speculation 1980s, (6) Phase of Quantification From 1990s till date.

(1)The period of before 1950/The Constructive Stage: Pre-1950s:

In the second half of 19th century Modern Indian Geography in Indian schools was imported by the British. The approach of study become more professional and of academic interest when Universities started their journey from undergraduate level through Lahore (1920),Aligarh (1924) and Patna (1927). The foreign influence also diversified from British school to French School by very worthy leadership of R.N. Dubey, M.H. Rahman and S.P. Chatterjee who were trained in French Universities. Man land relationship in a possibilist approach was initiated in the country with their logical explanation, it give a new methodological orientation in the field of research. Along with it, Indian school also influenced by the German school of belief system with N.R.Kar and K.R.Dixit for the same reason. But due to strong colonial biasness British school get the advantage to rule over the the then geographical orientations. The contributions of M.Shafi, R.L. Singh, C.D. Deshpande, P.Dayal and George Kurien are very significant here in both Regional and Systematic approaches.

All of these stall warts are not only contributed for their individual research interest as an expertise but also associated with university departments and make very significant contributions to convert them as a hearth of the discipline.

By 1950s three more universities (Allahabad-1937; Madras-1932 Diploma,1940-P.G; Varanasi-1946)have started their journey with Geography.

Around 1940s, on the eve of the British departure from India the total strength of students pursuing studies in degree classes of geography was approximately 1000, with a total teaching staff of 74.

Another interesting fact here is, the first generation of the Indian Geographers was actually not trained in Geography, being emotionally attached with the subject they select it as their career and dedicated themselves.

Along with the above mentioned professional geographers, H.L. Chhibber, M.B. Pithawalla, K.S. Ahmad, S.M. Ali, N.K. Bose are mentioned particularly with great respect in this period.

This phase was marked by descriptive Idiographic approach with more emphasize on physical landscape and gazetteer type of narrative writings of heterogeneity and unevenness.

As the structure of Modern Geography was strengthened its root in this phase, it can be termed as Constructive phase.

(2) The Illustrative Stage: The 1950s

The Illustrative phase (1950-60) is no doubt an advancement from the earlier one in respect of the numbers of the universities started Geography in P.G. level in national platform, but the itinerary is same as previous British influenced. A boost to the growth and recognition of geography as a social science came in the mid 1950s, there are two forces that worked as the booster factor here, the first, the growing awareness of the role of geography in education, and the second, the applied role of the discipline towards the planned national development. (Kapur, 2004)

A country which get rid of almost 200 years of colonialism, definitely suffered from severe social as well as economic crisis. In the extremity of poverty, unprecedented population growth, mass illiteracy, fragmented infrastructure and weak industrial and agricultural base a country can not recover itself with only economic development. After 1st and 2nd five years plan, the planning commission realized that a balanced regional development was the utmost criteria of India in that phase. Carrying the visa of regional planning, land and land use surveys, spatial analysis of population, agriculture and industry, and the region as geographical crucible for analysis, geographers participated in numerous regional plans (Kapur, 2004). They also identified as a significant and skilled personals for regional surveys, mapping and preparing resource inventories by National Government and planning commission. 'India and Pakistan' (1952) by O.H.K. Spate, 'Banaras: An Urban Geography' by R.L. Singh (1955) are the most influential books published in this phase. National Atlas of India by S.P. Chatterjee also deserve a special mention here. With the initiative and unbelievable effort of Prof. S.P. Chatterjee National Atlas Organization established in 1956, which was further revised as National Atlas & Thematic Organisation (NATMO). Along with this establishment of national importance and heritage, foundation of Indian Council of Geographers, inauguration of Geography unit of Indian Statistical regional Survey and arrangement of International Geography Seminar in Aligarh bring extra shine to this phase. The impact of R.L. Singh's book laid the foundation of Urban Geography in India. K.Sita and V. Nath made significant contribution in this field.

It may be noted that Aligarh, Allahabad, Banaras, Calcutta, Madras and Patna marked their signature from the very starting period to till date as far as the quality of teaching, faculty and research works were concerned. But the other university departments fails to keep pace with them. Along with the British methodological system the influential role of USSR, Australia, USA, France West Germany become prominent after independence (Rana, 2013).

(3) The Substantive Stage: The 1960s :

The Substantive stage was glorified by the era fashioning event of the decade, 21st International Geographical Congress held in New Delhi in 1968. The importance of the following events help to justified this phase as substantive stage of Modern Indian Geography.

Prof. S.P. Chatterjee with his eminent leadership organize the event and chaired as president. It inspire the research activity to International standards. During this phase number of universities offering post graduate studies has reached 36. *Transactions of the Indian Geographers* (Patna), *Deccan Geographer* in Secunderabad, *Geographical Outlook* (Ranchi), *Indian Journal of Geography* (Jodhpur), *Geographical Knowledge* (Kanpur), *Geographical Viewpoint* (Agra), and the two Hindi journals known as *Uttar Bharat Bhoogol Patrika* (Gorakhpur) and *Bhoodarshan* (Udaipur) have started their journey. This phase also experience a tendency of shifting interest of higher studies towards North America. Along with the development of all the traditional sub discipline of geography, R.L. Sing's edited 'Applied Geography' show very significant contribution. Ashok Mitra also contributed in the study of the levels of regional development in India. "India: A Regional Geography" (1977) edited by R.L. Singh was the first regional work of India as the evidence to the devotion and integration of Indian geographers.

In this period, Geographic associations and journals, especially in the Gangetic Belt, experienced rapid growth and the Geographic Journals had started coming in the language of Hindi also, the dominant language in North India. The phase of *Hindianization* flourishes its petals.

(4) *The Mature Stage: 1971(The maturing of Indian Geography) :*

It is the phase of maturity as far as the methodological development of research is concerned. Adopting ideas without any critical examination under the halo of foreign superiority is one of the basic trends in this phase. To wider the vision and opportunities for the scholars, several national-international events, symposium had been arranged. National Geographic Society of India, Institute of Development Studies and National Book Trust contributed enormous in the Indian geographical literature.

(5) *Stage of Speculation 1980s:*

Adding multiple thoughts, visions from various sources helps to identify this phase as the Stage of Speculation. Indian geographers adopted new approaches, methodologies and terminologies after getting influenced by British and American sources. Ineffective infatuation with Marxist methodology also noticed, but it concentrated only around JNU, Delhi.

In North India, 'Hindianisation' strengthened its root and enlarged its periphery, in some universities Hindi became the medium of instruction in P.G. and Ph.D. thesis.

(5) *Quantitative Phase of Indian School -1990s :*

By 1992 over 60 institutions all over the India offered higher education courses in geography. Massive use of computer and computerized cartography, research in interdisciplinary approach and most of all prioritizing socially relevant research were the salient features of this phase. In North India 'Hindianisation' received more popularity as well as massive students get interested of Geography as they can use their mother tongue for higher education. Except North, Geography is still learned in English at post-graduate levels, and M.Phil and Ph.D theses are continued to be written in English in the rest part of the country. This phase is getting more pace with the flank of internet. Indian Schools started to fly in the global arena.

Among the contemporary geographers A.B. Mukherji, Moonis Raza, G.S. Gosal, P.D. Mahadev, R. Ramachandran are the foremost to remember. voices were raised to advocate "Indian Geography must reach to its own identity and roots".

Onwards 2000 was a Prospective stage which encourage to find own roots keeping in pace with the technological advancement achieved globally.

PARADIGM IN GEOGRAPHY

A discipline always have to change its content according to the need of the society which encourage paradigm shifting. If any discipline have to sustain their existence they have to participated in paradigm shift. Along with the shift in paradigm of a discipline, the thought process, vision and outlook of the people also started changing. The spirit of geographical research is evolved around the study involving the relationship between man and the environment. The global and national priority of social needs and justice indifferent decades have been followed by the paradigm changes in research. (Paul & Jha, 2021)

From the ancient time to till date Geography faced very tough and struggling path for its development. Through out the journey it had been interrupted by many crisis period along with some positive movements. The evolutionary process can be portrayed with the help of Kuhn's model of Paradigm. Six paradigmatic phases interrupted by six crisis phase can be identified during the whole course of development of geography in the world till the recent times. (Rana, 2008.p-368)

The first phase is Pre-paradigm Phase, where scholarly observations of the Eastern and Western civilizations (Ancient phase) were noted. This phase is followed by Professionalization phase which indicated the concentration of geographical research in the west especially in ancient phase. There after the first Paradigm Phase has started. This phase is characterized by the contributions of Greeks and Romans (up to 500A.D.) First Paradigm phase is ended with First crisis phase. This Crisis phase is known as the dark age in Europe (500-110 A.D.). Paradigm phase II is started with the rise of Arab School of thought (800-1450A.D.). From the Middle of the 15th century the age of Discovery had started. This phase is known as Crisis Phase II (1450-1650). The Classical period of Geography with the influential role of German school is known as Paradigm Phase III (1650-1859). Late 19th century is characterized with dualistic tendencies in Geography also referred as Crisis phase III. The period of Late 19th century to early 20th century as emergence and establishment of Determinism to explain the man nature relationship is termed as Paradigm Phase IV and in Crisis Phase IV main focus is towards the Criticism to Determinism and Paradigmatic shift to Human to physical (early 20th century). Dominance of French School of thought and rise of Possibilism in 1930s is popularized as Paradigm Phase V which is followed by Crisis Phase V that is dominant by Quantitative Revolution from 1940 to 1970. After 1970s it is the phase when research interest to shifted towards Humanistic approach, later on this phase is lead with the rise of Behaviouralism. It is the Paradigm Phase VI. Now Geographical research is evolved around computer based Methodological Revolutions. It is the Crisis Phase VI of 21st century.

The contributions of Indian geographers along with this phases of paradigm is can be analysed.. From 3000 B.C. to 1183 A.D. we can coagulate Indian contributions along the world's heritage. From the mid of Paradigm Phase II to Crisis phase V of Quantitative revolution India is under the rule of Colonialism of different empire, as a result the research and knowledge building procedure both have suffered. The whole nation eagerly fight for the independence of the nation which weekend the culture of Geography at that time. Eventually the dominance of world geography of the then period very easily influence the Geography of India before independence. Not only that after independence it takes almost four decades to get rid of the colonial influence in every sector of the country. Geography is also not exceptional, it started get Indianised after efforts of several decades.

PARADIGM CHANGES IN INDIAN GEOGRAPHY

Over emphasis on western thoughts and ignorance of indigenous methodological system are one of the biggest threat for Indian geography.

During 20th century, the researches shows a trend of shifting from Gazetteer approach to analytical approach, which is very positive sign as far as the development of the discipline is concerned.

Geography as a independent discipline have struggled for bias ness of its content from very early period. The history reveals that the persons who came forward for the establishment of the subject as independent discipline are mainly from the discipline other than Geography(mainly from Geology and other physical science background). This reflect a strong physical bias of contents in the research works of Geography. With the passage of time, as British influence started dominating , Indian Geography tend to be shifted towards economic approach. Later on, with the journey of Urban geography , a great transformation towards social science is observed.

The conceptual framework of the subject experienced a massive changes over last 100 years. In the research work of 1920s, the main concern was over regions. In descriptive narration the factual information regarding the region was provided to the colonial administrators to fulfilled their demands. The government also encouraged and promoted this type of research for their imperialist interest. Publications of those periods are based on descriptive methodology without logical explanation make geography much more linear in nature rather than to make it more scientific. Eventually, the distance between the philosophy and the content of subject started to increase.

During 1930s-1940s , the persons specially trained from the possibilistic doctrine notably, Dr. S.P. Chatterjee, R.N. Dubey, M.H. Rahman started regional studies involving explanatory description and classification. Their research included surface features, climatic characteristics, biotic environments along with the reciprocal relationship between man and nature advocating possibilistic philosophy.

After independence, decolonization made a huge impact and alteration in the role of geography as well as geographers. They were treated as most convenient and reliable pillar for the national development. Several national organizations were established, e.g. National Atlas Organization, Indian National Committee for Geography etc. Census of India, the Planning Commission, Central Arid Zone Research in Jodhpur, Town and Country Planning in Delhi, Calcutta Metropolitan Planning Organisation, Hyderabad Metropolitan Project, All India Soil and Land Use Survey, Regional Survey Unit of Indian Statistical Institute had started working with Geographers as very important contributors. There are number of issues related to development emerged after independence which need spatial information and skilled persons to deal with it. Nath, Sundaram, Misra and Roy significantly contributed here.

During 1960s Nomothetic approach introduced in Indian Geography International exchange programme, and geographers attracted towards its logical and experimental design.

In early 1970s, Quantitative revolution effect the studies and research of geography as the whole world.

The geographers who followed the new paradigm had changed radically their system of belief, methods, theories, and language of geography the with the introduction of quantitative techniques (Rana,2013).

In last hundred years of Indian geographical research experienced several changes as far as the dominant paradigm are concerned. From Idiographic, Regional, descriptive, Gazetteer approach of colonial period to Nomothetic, Deductive, explanatory regional approach along with the focus towards applied geography in the arena of decolonisation. International exchange programmes in terms of seminars, symposia, conferences in India as well as abroad play very important role in designing the contemporary research. A survey have been made between the twentieth century and twenty first century regarding the orientation of examining 'credibility' and 'topic of concern' and this has shown a massive shifting in the orientation in

research. (Kapur, 2004). The focus of 20th century's areal differentiation has changed to Aerial integration in 21st century. Balanced regional development shifted towards sustainability, city turn into city systems, climatic types changed into climate change, dividing land has changed its concern towards sharing water, internal security replaces the concept of external threat, nation, state boundary coalesced in Globalization and localization. Most of all self sufficiency is now replaced through inter-dependency.

Lacunae of Indian School :

The threadbare discussion in Indian geography reveals that Indian Geography have been facing several problems :

A) over-saturation with foreign (western) concepts and methods create continuous deprivation of indigenous methodological system, which lead to the disparity in geographical research, education and related resources.

B) After independence, geographers specially who are trained in abroad have a tendency to carry their work through their students in similar pattern. What they learn in abroad may be out dated and fail to keep pace with the contemporary requirements, but as they are highly influenced the almost identical and similar work in different region are examined. This ultimately produced a huge outdated, thoughtless doctoral thesis.

C) International Geography has achieved enormous progress in theory and practice in last century, but India till last half century has tried hard but failed to keep pace with the progress.

D) As elsewhere in the world, in the departments of Geography teaching of Physical Geography is continued, though undertaking any serious research in Physical Geography is becoming more and more infrequent.

E) Now a days the the course curriculum has changed drastically, there are many instances which shows the very important parts of geography are withdrawn from the post graduate syllabus of many universities. For example, content of surveying and use of surveying instruments including dumpy levels and Theodolites are now not included in many universities. The study of methodology of field work has now shifted to excursions without proper Geographical investigation/field study.

F) The most alarming and dangerous issue is the declining interest in cartography. In many department cartography become an optional paper for the course curriculum, and now Geographers depend on draftsmen for their cartographic works.

G) Regional Geography has lost its popularity. Quantitative revolution changed the vision of geographers. Researchers and scholars are now more interested to find out the generalizations using various statistical techniques as they are convinced with that spatial identity of Geography, rather than to find out the regional characteristics of the subject.

H) Research in hard core physical geography or in theoretical perspective is not at all practiced in India. Micro-level studies getting more and more popularity but research work does not concluded towards generalizations.

I) Colonial influence is still remained after so many years of independence in various form. For example our syllabus from school to college does not incorporate the basic concepts and methodology of geography. Besides this, regional issues create obstacles in the path of development of geography, i.e. "influence of Hindinization" restricted the learner into only regional perspectives as language became the barrier here.

In a holistic approach geography is still struggling for its identity in the international platform with various up gradations and drawbacks. Not only in the field of learning the subject individually but as far as the provision of employment is concerned it still remain in infant stage.

FUTURE DIRECTIONS AND DIMENSIONS

Twenty first century takes us from the mono disciplinary approach to transdisciplinary approach covering the interdisciplinary and multidisciplinary routes. This journey become easier with Remote Sensing and GIS. Remote sensing and GIS enhances the precision level and take the subject towards the ultimate of accuracy. Adequate theoretical knowledge of the subject in association with precise efficacy of the technological input will create a phenomenal research in Geography. This is the ultimate goal of the subject too.

Now a days, almost all University added Remote Sensing and GIS in the UG and PG course curriculum, professional courses like diploma and certificate course also provided by some universities as well as by some organizations like, NATMO, DST, IIRS etc. All these initiatives are very beneficial for upgrading the subject.

A century old modern Geography of India is just starting to look beyond their territorial boundary. There is no doubt that the persons with whom Geography started to flourish are stalwart of their period. They contributed more than their the then environment was permitted, but now the need is to carry forward their legacy maintaining their standard with proper hands. Now a days, Some phenomenal and extra ordinary works are done also, but their proportion is very small in comparison to the mass production of thesis and research paper are written.

The evolution of geography which is discussed through the phases of development shows how geography has moved away from the initial 'gazetteer map' to a more descriptive / analytical framework keeping pace with the changing paradigm. So far, Indian Geography need a proper methodological system of its unique and distinctive character that can reflect a essential synthesis of our own age old cultural heritage and the chronological development in every aspect we achieved. Geography should encourage the research in both the field physical as well as social. Physical landscape with proper origin, modification, their reciprocal relation with environment, ecological and environmental studies should incorporated in our research with extensive field work following deductive approach. Accordingly, human nature, behaviour, habitats, cultures, challenges and opportunities they get, the age old man -nature relations with modern adaptations need to be properly investigated and analytically presented. Still there are some parts which have the potentiality to grow as a research theme, for example traditional cultural region, social core and pattern identification, evolution of language through various dialects etc.

The research gaps from the earlier studies need to be fulfilled. Most of all, Indian geographers should acknowledge and cultivated the traditional contributions from ancient period. Unless, Indian Geography will nor revive its own glory and distinctive individualism in the world Geography.

CONCLUSION

To recreate Indian geography, today's task is to open up the intellectual horizon of the students, researchers. Whatever the subject have altered and modified in past century from philosophical and methodological perspectives are very essential to learn for future vision. Students and researchers should aware about the technological, intellectual, and societal symbiosis that had postulated the successive fabrication in theory and practice of geography.

The restructuring of the syllabus at the Bachelor's and Master's level can help to incorporate the variety of themes and prospects of geography.

The convergence of physical and human environment is very challenging. In geographical perspective the process of both urbanization and industrialization had very deep impact over any region. But it is very interesting to note that the region also play very significant impact over the two said processes. Now the need of the time is to identify the problems as well as the effects from both side. Then only, it would be possible to make geography practically effective as a problem solving discipline through its applied approaches and established as a theory forming social science irrespective of regional heterogeneity.

References:

- (1) Dixit R.D. (2006), *Geographical Thought: A Contextual History of Ideas*, PHI Learning, p-300.
- (2) Dube, B. (1967), Geographical Concepts in Ancient India, *National Geographical Society of India (NGSI)*, Varanasi, India.p-183.
- (3) Kapur, Anu (2004): Geography in India, A Languishing Social Science, *Economic and Political weekly*, 39(3)pp-4187-4195.
- (4) Paul, K & Jha, V.C. (2021): Paradigm Shift in Geographical Research and Geospatial Applications, *Sociedade and Natureza*, Vol. 33, <https://doi.org/10.14393/SN-v33-2021-59651>.
- (5) Rana, Lalita (2008): *Geographical Thought : A Systematic Record of Evolution*, Concept Publishing Company. New Delhi, P-495.
- (6) Rana, Lalita (2013): Evolution of Modern Geographical Thinking and Disciplinary Trends in India, *The Association for Geographical Studies*, pp-1-35.