



## **Searching pedagogical roadmap through puzzling with nature of geography**

**Ansar Ahmad<sup>1</sup>, Aejaz Masih<sup>2</sup>**

<sup>1</sup> Assistant Professor, Department of Teacher Training & Non-Formal Education (IASE), Faculty of Education, Jamia Millia Islamia, New Delhi, India

<sup>2</sup> Professor & Dean, Faculty of Education, Jamia Millia Islamia, New Delhi, India

### **Abstract**

The present teaching scenario of geography teaching is not that much encouraging while augmenting the teaching learning processes; it has been observed that most of the teachers are not fulfilling the objectives of teaching geography in most of the cases. Geography occupies puzzling position among the classification of science. It is neither a purely natural science nor a pure social science. Generally, it is observed that most of the teachers of geography do not have a proper command over the content of science as well as social science disciplines so they face several problems how to transact the content of diversified discipline like geography. Without proper understanding of puzzling position of geography among the classification of science and its nature by the teachers the teaching could not be fruitful and effective. In this light, it is essential for the teachers to chalk out the roadmap of the nature of geography to deal with the unique nature of geography effectively. But this synthesized information of geography cannot be understood well without understanding puzzling position within the traditional organizations of knowledge. Paper concluded that nature of geography not only helps the teachers to understand the subject properly but also empowers them with the appropriate pedagogy of teaching geography by which they should thoughtfully engage themselves in teaching geography meaningful. This will also provide them opportunities for critical and reflective thinking for learning and understanding of geography, as the reasons lie within its unique nature of discourse specified by framework of dualism i.e. physical and human geography.

**Keywords:** geography, nature of geography, understanding, pedagogical roadmap, puzzling position

### **Introduction**

Geography is essentially the study of "the relationship between human activity and the environment, describing and explaining the significance of location, distance, direction, spread, and spatial succession" (Cohen, 1988, p. 248). There must be no segregation of physical from human geography, no divorce of regional from systematic geography, and both subjective interpretation and objective rigour are required. In this sense, both quality and quantity are involved in learning geography. Geography synthesizes information from many disciplines and applies it to a given location; in essence, it deals with mapable phenomena (Graves & Moore 1972). But this synthesized information of geography cannot be understood well without the proper understanding of the nature of geography. That's why the nature of geography is essential for learning and understanding of geography, as the reasons lie within its unique nature of discourse specified by framework of dualism i.e. physical and human geography. Geography occupies puzzling position among the classification of science. It is neither a purely natural science nor a pure social science. Generally, it is observed that most of the teachers of geography do not have a proper command over the content of science as well as social science disciplines. Due to inadequate command over the content of natural and social sciences they face several problems related to understanding of the nature of geography and its pedagogy. Without proper understanding of puzzling position of geography among the classification of science and its nature by the teachers the teaching could not be fruitful and

effective. It is essential for the teachers to chalk out the roadmap of the nature of geography to deal with unique nature of geography effectively. It is not only help to the teachers to understand unique nature of geography but also empower them with the appropriate pedagogy of teaching geography. Geography is a unique discipline due to its dual nature and it's interdependent with all other subjects that taught in schools and colleges and acknowledge to the societal and scientific norms of both social and natural sciences. For teaching unique nature of geography effectively and successfully, teachers need to introspect themselves about reflection prior action, reflection in action and reflection on action and also rework on geographic content with understanding keeping in mind the nature and objectives of the discipline.

### **Why Understanding of the nature of subject is important for the teachers**

Understanding of the nature of subject plays pivotal role because quality of teaching depends on the teachers understanding of the nature of subject. 'When there is a lack of understanding and expertise of the nature of subject among the teachers then the quality of teaching-learning process and students' exam results are at risk' (Smithers & Robinson, 2005). A well-developed foundation of understanding of the nature of subject knowledge is prerequisite to the teachers to teach a subject like geography effectively. "Pupils cannot be taught simply to think. They have to have something to think about," is what Lambert expresses his viewpoint on the subject matter (Lambert,

2009b, p.1) <sup>[15]</sup>. No doubt that understanding of pedagogical content knowledge is of paramount importance for the teachers' for effectively transacting the unique nature of geography. Lambert states: "forming productive relationship with children is very important. My view is that this task is made more possible when the teacher is able to form a productive and creative relationship with the subject matter (Lambert, 2009b, p.2)" <sup>[15]</sup>. But he also adds: "this subject knowledge new teacher brings from their experiences in higher education or elsewhere has to be reworked before it can be taught effectively (Lambert, 2009b, p.2) <sup>[15]</sup>". Many factors influence learning and instruction within the classrooms, including the understanding of the nature of subject, teacher's prior knowledge, the pedagogical patterns and social interactions that occur. The teachers' understanding of the subject develops in response to the myriad of exchanges and events (including patterns of student learning) that happen in his or her classroom over a period of time. As a consequence of their complex and demanding profession, teachers have limited time for professional development and limited energy for reflection about their subject. Prior research about teacher learning has suggested that in order for teachers to develop their own understanding of learning within their content domain or nature of subject, they must critically examine and reflect upon their interactions with students (Ball & Cohen, 1999; Putnam & Borko, 1997, 2000). We understand how they can come to adopt new understandings and practices within their domain. Teachers can best develop new understandings about learning and instruction in their domain by experimenting within the context of meaningful classroom activities. The reasons for teachers' lack of reflection practice could be due to time constraints, the demands of the school schedule and responsibilities of curriculum development and student assessment etc. In this backdrop, it is essential that teachers should need to have sound understanding of the nature of subject, pedagogical knowledge, pedagogical content knowledge, knowledge of Information and Communications Technology (ICT).

### **Geography as a Discipline**

Geography is a discipline that tries to explore how environment emerges by natural processes, how societies produce, organize, using and misusing the environment, and how societies are influenced and managing themselves in the changing scenarios of the world by the environment in which we are living. Thus, the basic aims of geography is to study both natural and human phenomenon and their interactions, focusing on space, places, and regions, directing and questioning both the processes of short-term and long term and their resultant patterns. The contribution of geography to the knowledge and understanding is its central focus on space and the environment as its fundamental notions of the study. Since space is a prime dimension of both nature and humanity, encompassing and related to various processes of nature and human activities. There is no doubt that geography is one of the important discipline in the education system, which has long been incumbent for promoting awareness, understanding and curiosity of the diversity of the world's phenomena, people and places.

### **Pedagogy for Teaching Geography**

There are number of barriers to achieve aims and objectives

of teaching and learning of geography that is identified, one of the factors mentioned is that teachers sometimes fail to engage the students in the teaching learning process effectively. Here, one of the important reasons for declining of students' interest in geography needs to be appreciated in a way that the subject is taught by the teachers effectively using different styles, strategies, methods and geographical skills keeping in mind the individual differences, interest and need of the students. It reflects on the disagreement regarding inadequately trained teachers and also has much older perception and the attitude about geography. It has been observed that geography taught by some teachers at both secondary and senior secondary levels fail to engage students in various activities and skills related to geographical phenomenon and using and understanding of maps, GIS, GPS etc. relying sometimes on memorization of the geographical facts, terms, concepts and software packages of GIS as a teaching strategy and style generally referred as "bay and caps" of geography. "Pedagogy supports teaching through the physical arrangements of the classroom, time scheduled, activity designed, relationships defined, expectations and values set, and participation structures imposed. Teachers use pedagogy to prepare and guide their own and their students' participation in teaching, learning and activity performance. Because students' learning performance is better understood than they used to be, the value that participating in activity with others have in developing knowledge is clearer. This awareness encourages teachers to try alternative models of teaching. The ability to shift to such models relies on understanding pedagogy's role in transforming teaching (media.wiley.com)". The Kothari Commission (1964-66) emphasized the professional training of teachers for the qualitative improvement of education but only some steps have been taken till date in this regards (NFG-Teacher Education, NCF-2005). NCERT and SCERTs have been taken great initiative for in-service teachers of most of the subject areas in general and geography in specific by providing time to time in-service education programmes via face to face, distance education mode and also through teachers' guide, modules with the help of EDUSAT. As we know that geography deals with enormous range of phenomena, ranging from physical, biotic to human. The four spheres, namely lithosphere, atmosphere, hydrosphere and biosphere constitute the geographic environment. This makes geography highly interdisciplinary, drawing upon and contributing to numerous other fields of knowledge. Geography as a discipline has also its philosophy and conceptual framework which has too its methods, tools, techniques, skills and strategies. Globe, maps, diagrams, relief models, top sheets, spatial analysis methods are important ingredient for teaching geography. Numerous statistical techniques and models are applied for regional as well as quantitative analysis in geography and to understand the spatial temporal aspects of the society which is essential for both teachers and their learners but generally it is observed that teachers are not using it properly due to lack of understanding about the pedagogy of geography, as geography is a diverse discipline borrowed several concepts from other disciplines and study as an integrative way. The present teaching scenario of geography teaching is not that much encouraging while augmenting the teaching learning processes; it has been observed that most of the teachers are not fulfilling the objectives of teaching geography in most

of the cases. Generally all teachers do not have a proper command of science and social science disciplines so they face several problems how to transact the content of diversified discipline like geography. Geography as a unique discipline due to its dual nature i.e. science and art and it is interdependent with all other subjects that taught in the schools and colleges and acknowledge to the societal and scientific norms of both social and natural sciences. For dealing dual nature of geography it is very essential for the teachers to have sound understanding of the nature of geography.

### **Why Nature of Geography and Pedagogy is Important**

Geography is very diverse and extensive field of teaching and learning where each and every phenomenon varies over space and time. For teaching spatial-temporal phenomenon of geography, teachers faced several problems like how to impart content and what pedagogy should be adopted to teach diverse range of phenomena to their students. For doing this it is prerequisite to impart content with reference to the significance of location, direction, distance, spread and spatial succession of both natural as well as human phenomena. Teaching geography should be about developing the capacity of the spatial thinking such that students who study the subject are assisted in becoming a good learner. For this, geography teachers should be exposed to learning of different teaching methods, techniques, strategies and procedures for explaining the nature of discourse characterized by frameworks of physical-human dualism of geography. This is complicated to understand and transact by the teachers by employing both quantitative and qualitative methods to impart the integrative, empirical and practical aspects of geography. Shulman distinguished “seven bases of knowledge of which pedagogical content knowledge is one of them; content knowledge, general pedagogical knowledge, pedagogical content knowledge, curriculum knowledge, knowledge of educational contexts, knowledge of learners and knowledge of educational purposes, ends and values” (Shulman, 1987)<sup>[23]</sup>. Turner-Bisset (1999) suggested a more integrated and holistic concept and developed a substantial model of knowledge bases for teaching where pedagogical content knowledge is seen as an overarching base. They categorized three types of knowledge that is related to subject matter knowledge or content knowledge; “substantive knowledge, syntactic knowledge, and belief about the subject”. This type of knowledge comprises the facts and concepts of a discipline (i.e. the knowing that). Syntactical knowledge consists of the ways and means through which the knowledge is developed and established (i.e. the knowing how). Beliefs about the subject ultimately refer to the impact regarding personal orientation and the conceptions concerning a subject have on teaching a subject (Turner-Bisset, 1999, p.43). Martin (2005, p.63) builds on these three content bases of knowledge and describes them, in terms of teaching, asking these three questions; “what am i going to teach, how am i going to teach it, and why am i going to teach it in this way?”. Formulating these three related bases of knowledge into questions as a conceptual and theoretical framework for teaching which makes the concepts easy, concrete and relevant for the students and it can also be really helpful to the students to understand and structure what it means to learn to teach geography properly. To successfully teach unique nature of geography,

teachers need to introspect themselves about reflection prior action, reflection in action and reflection on action and also rework on geographic content by asking themselves the three questions as formulated by Martin (2005) based on Turner-Bisset’s (1999) knowledge bases; “what am i going to teach, how am i going to teach it, and why am i going to teach it in this way?”. Pedagogical content knowledge of geography is the type of integrated knowledge and holistic perspective of natural as well as human phenomena that is unique to the teachers teaching physical-human dualism of geography; it explains all about what geography teaching (Cochran, King & De Ruiter, 1991).

### **Conclusion**

From the above discussion it can be concluded that geography occupies puzzling position among the classification of science. It is neither a purely natural science nor a pure social science. Generally, it is observed that most of the teachers of geography do not have a proper command over the content of science as well as social science disciplines so they face several problems how to transact the content of diversified discipline like geography. Without proper understanding of puzzling position of geography among the classification of science and its nature by the teachers the teaching could not be fruitful and effective. It is essential for the teachers to chalk out the roadmap of the nature of geography to deal with the unique nature of geography effectively. It not only helps the teachers to understand the unique nature of geography but also empowers them with the appropriate pedagogy of teaching geography by which they should thoughtfully engage themselves in teaching geography meaningfully. This will also provide them opportunities for critical and reflective thinking for learning and understanding of geography, as the reasons lie within its unique nature of discourse specified by framework of dualism i.e. physical and human geography. Geography is a unique discipline due to its dual nature and it’s interdependent with all other subjects that taught in schools and colleges and acknowledge to the societal and scientific norms of both social and natural sciences. For teaching and learning unique nature of geography effectively and successfully, teachers need to introspect themselves about reflection prior action, reflection in action and reflection on action and also rework on geographic content with understanding keeping in mind the nature and objectives of the discipline.

### **References**

1. Ahmad A. Development of a Test on Understanding of Nature of Geography and its Utility for Studying Understanding of Senior Secondary and Under Graduate Students about the Nature of Geography. Unpublished M.Phil. Dissertation, Jamia Millia Islamia, New Delhi, 2014.
2. Ahmad A, Masih A. Understanding of Nature of Geography: An Uncontested Objective of Teaching Geography. The Signage: An International Bi Annual Bi Lingual Refereed Research Journal of Education & Social Sciences, 2015. ISSN 2321-6530.
3. Ahmad A, Masih A. Pedagogy for Preparing a Reflective Practitioner. Edu-Research A Quarterly International Peer Reviewed Refereed Research Journal of Education, 2016, 10. ISSN 2348-6015.
4. Ahmad A, Masih A. Understanding the Nature of

- Geography: A Paramount Goal of Teaching Geography. Emerging Trends in Education. Ed: Shakir, M., NP New Delhi Publishers, 2018. ISBN: 9789386453327
5. Ahmad A. Dualism and Dichotomies in Geography: General and Particular; The Indian and Geographical Journal. 1978; 58:2.
  6. Bender B. Thinking across the divide: perspectives on the conversations between physical and human geography, 2004.
  7. Dikshit RD. (Ed.). The Art and Science of Geography, New Delhi: Prentice-Hall of India.
  8. Gregory D. Areal Differentiation and Post-Modern Human Geography, in D. Gregory and R. Walford (eds.) Horizons in Human Geography, Macmillan, London, 1989.
  9. Hartshorne R. Nature of Geography: A Critical Survey of Current Thought in the Light of the Past, Association of American Geographers, 1939.
  10. Hartshorne R. Perspective in the Nature of Geography, Chicago, 1959.
  11. Holt-Jensen A. Geography: History & concepts. London: SAGE Publications, 1999.
  12. Hussain M. human Geography, Rawat Publication House, Jaipur, 2002.
  13. Hussain M. Evolution of Geographical Thought, Rawat Publication House, Jaipur, 2006.
  14. Jensen AH. Geography History and Concept, A Student's Guide, Third Edition: Sage Publication, London, 1999.
  15. Lambert D. Why subjects really matter: A personal view, 2009b. Retrieved March 1, 2016, from <http://www.geography.org.uk/gtip/thinkpieces/educationalpotential/>
  16. Lambert D. Reframing school geography, in Butt, G. Geography, Education and the Future, Continuum Press, 2011.
  17. Lambert D, Morgan J. Teaching Geography. Berkshire: Open University, 2010.
  18. Linch K. (Ed.) The future of geography: The debate continues. Geography, 2002.
  19. Minshull R. 1970. The Changing Nature of Geography, London, 2002.
  20. Mitchell D, Lambert D. Subject knowledge and teacher preparation in English secondary schools: The case of geography. Teacher Development. 2015; 19(3):365-380.
  21. Mitchell D. Geography teachers and curriculum making in changing times. International Research in Geographical and Environmental Education. 2016; 25(2):121-133
  22. Shulman L. Those Who Understand: Knowledge Growth in Teaching". Educational Researcher. 1986; 15(2):4-14.
  23. Shulman L. Knowledge and Teaching: Foundations of the New Reform", Harvard Educational Review. 1987; 57(1):1-22.
  24. Smyth J. (Ed.). Educating teachers: Changing the nature of pedagogical knowledge. London: Falmer Press, 1987.
  25. Speake J, Fox V. Changing geography- Regenerating city centres. Sheffield: The Geographical Association, 2002.