CHAPTER 4. THE FUTURE OF GEOGRAPHY IN INDIA

4.1 OBSERVATIONS AND CONCLUSIONS

On the basis of the analysis of every aspect of this study, following are certain observations and conclusions.

1. The research type

The research problem was unique as the subject of Geography at the university level was looked at from the students' point of view. Syllabus, research, teaching, working of the departments, views of Students, Research Scholars, teaching faculty and stalwarts were considered while framing the opinion about the past, present and the future.

The topic was found to be of the utmost need of the time. It was considered on a countrywide basis so as to plan for the future on the national scale.

2. The earlier work done

The review of the literature proved that Geographers abroad seemed to be well aware of the need for assessment of the present status of the subject and for thinking about the future. The review of the literature
pointed out certain nations’ positive efforts in this direction. Unfortunately Indian Geographers seemed to have missed this aspect of the study of Geography.

India’s Geography education set up at the University level was established by the British. While Indian Geographers are found concentrating on the development of only some branches of Geography, their counterparts abroad have been active in both specialised areas as well as development of Geography as a subject at the university level.

Another important aspect that has not received due attention of Indian Geographers is the creation of employment opportunities for the students of Geography at various levels. British and American Geographers have been tackling this problem for several years. There is a realisation in these countries that the students are the future of the subject.

3. Place of Geography in Ancient India

There are hardly any direct references to the status of the subject of Geography in ancient India. Therefore it was found necessary to look into indirect references like interpretation of various epics, and allusions in works of Indian scholars and philosophers.
They prove that the subject of Geography and geographical awareness was very well developed in ancient India. The past glory of ancient India correlates well with the level of importance that Geography enjoyed. Right from the invention of zero to the understanding of astronomical phenomena, astrology and almanacs, every aspect of civilisation shows clear understanding of Geography. Location and construction of townships, trade routes, climate, irrigation schemes, agriculture, defence establishments and strategies are illustrations of the awareness regarding the subject in India. Ancient Indian universities used to get students from all over the world to study various subjects including Geography. All these have gone into oblivion with centuries of alien invasions.

4. University Set-up of Geography in India

1) Types of Universities

The university set-up in India appears as diverse as all other conditions in India. All the known 08 types of universities existing in various parts of the world are found in India. However, out of these 08 types, the subject of Geography is studied and taught in 03 types of universities. While the most common types are the Regular and Deemed Universities, an Open University offering a research degree in collaboration with another research institute is
quite unique. Overall the setting of Geography education in these three types is well established.

2) Distribution

Except for a few areas in the Northeast, Universities imparting Geography education are evenly distributed.

3) Jurisdiction

On an average, every university has a jurisdiction of around 03 districts; with some exceptions. Administratively this has helped the subject, as the needs of small areas are better understood and rationally met. However this also has possibly led to the narrowing down of the vision of the Geographers, by restricting the area for the development of the subject, to their areas of jurisdiction only.

4) Stream

The subject of Geography is unique because it is both a Science as well as an Arts subject due to its wide range of topics and applicability. However due to this very characteristic, the subject is facing a major identity crisis in India. Without any clear policy, the subject is found placed under Science and/or Arts stream, both having almost the same syllabus. There is a feeling of discrepancy between Arts and Science. With the distinct mindset, all Geography departments are found striving to
come under the banner of Science as it is believed to have an edge over Arts in public appeal, job opportunities and monetary benefits.

Around 1970s, it used to be in the Commerce stream too! At the Under Graduate level, it still continues in the Commerce stream in the affiliated colleges of some universities.

Geography departments under Arts are also found, coming under various other Faculty banners like Social Sciences and Humanities.

In a recent development, Geography, in combination with certain allied subjects from the pure sciences, is being called Earth Science or Geoscience or, more recently as Environmental Science and Regional Development.

5) Medium of Instruction

Along with English, majority of the universities also has the state vernacular language as the medium of instruction up to graduation level. A few have it for the post graduation and research levels too. In a culturally diverse country like India, this is a welcome scenario. Geography is a day to day life oriented subject. Therefore the use of local language has the desired effect on the better understanding of the subject.

However there is a big hurdle in this pursuit as there are very few textbooks available in the vernacular languages. This is a problem that needs to be addressed on a priority basis.
Vernacular medium students always are at a loss, due to the time lag between what is available today in English and when it will be available in their language. Their knowledge about the subject cannot keep pace with the current developments of the subject.

The medium of instruction in vernacular language restricts the employment opportunities. Geography is a universal subject and the role of English as the language of the modern world is indisputable.

6) Degrees conferred

Depending on whether the subject comes under the Science or the Arts stream, the degrees may be B.Sc./B.A., M.Sc./M.A. The research degrees include M.Phil. and Ph.D. along with D.Sc. and D.Litt. in some cases. There exist several diplomas and certificates too.

These honours come with their string of discrimination which is carried over from the departments to the future career prospects be it a job or further study.

This is doing a lot of harm to the students as well as the subject itself.

7) The Designations set-up for the personnel with Geography

Two types of designation systems are in vogue. The British system of Lecturer, Reader and Professor is followed at most of the places. The American system of Assistant Professor, Associate Professor and Professor originated in the institutes offering professional courses like Technology and Medicine. This system is adopted by newly
established universities and mainly in the Science faculties. These designations are considered ‘better’ among the staff as well as students.

8) Teaching Pattern

The main objective of university departments or any other affiliated colleges is supposed to be teaching. However the research work is found to be getting more attention.

There is hardly any change in the age-old teaching methods.

9) Examination Pattern

The examinations are annual, biannual, semester and even weekly, depending on various schools of thought on this issue.

There is a major group who supports the semester system, which is time bound and can cover more number of subjects in less detail. This system is particularly suitable for pure sciences. Therefore it is followed where Geography is considered as a science subject.

Annual system is a bit relaxed one. It is suitable to cover less number of subjects but has the scope for in-depth studies. Therefore it is followed where Geography is considered as an Arts subject.

More frequent examinations force the students to become examination oriented. As the subject is studied in small parts, overall perspective of the subject is lost. This is harmful for both the subject and the students.
Examinations at the research levels are patterned to enable the presentation of the research proposal, conducting viva voce and, possibly, open defence.

10) Intake of students

Admissions at various levels may be direct, based on marks in the qualifying examination or through an entrance examination, interview and research proposal etc. Each has its own merits and drawbacks. Demand and supply balance also governs the total intake.

11) Manpower in the departments

Though the Departments have numerous designations both in teaching and nonteaching cadres, at the university and affiliated college levels, there are acute problems like being short of staff, discrepancy between the actual designation and duties performed. For example, the nonteaching cadre laboratory staff works as office staff, librarians and computer operators, while photographers and drivers work as peons. There is no recruitment of clerical staff for Geography departments at all, throughout India. Rarely is there, any creation of any additional posts and the recruitment is done, only to fill the existing vacancies. Raising the retirement age has aggravated the situation, as the present day students find less employment opportunities for them today and in the future too.
12) The work environment

Factors like workload, working pressures, fast changes in the subject, incorporation of new technology, lack of facilities for proper teaching and research, decline in the social status of education and its staff, the politics of education, etc., have created considerable stress for the staff, both teaching and the nonteaching.

13) Governing bodies

Though governing bodies like the UGC and the AIU could help in the development of the subject in India, the problem of dual placement of Geography in the Arts stream in some universities and in Science in others brings forth a discrepancy in the development of Geography, as the UGC has different set of policies for different streams and their subjects.

The same is true with the UGC - JRF/NET and CSIR - JRF/NET examinations. From December 1999 however, Geography has been brought under the common banner of UGC - JRF/NET.

14) Research funding bodies

An observation of the trends of the research projects funded by one of the funding agencies, viz. the ICSSR (sample from other well-known agencies as the CSIR, DST, UGC etc.) showed a small share for the subject of Geography as compared to other subjects of the category.
15) Geographical societies and journals

The numerous Geographical societies and journals act as platforms for propagation of research works and new trends.

Some of the notable characteristics of the Geographical journals are:
(1) Promotion of multidirectional research; (2) Papers from all parts of India finding place; (3) Certain branches addressed specifically by some journal so as to encourage specialisation. An undesirable characteristic is the delayed publications due to various problems associated with stationary, screening processes, printing, etc. Geographers alone manage all journals.

Among the notable features of the Geographical societies that may be mentioned - a large number of such organisations proving the professional concern. These societies act as effective interacting forum for teachers as well as students for the development of the subject.

16) Infrastructure of the departments of Geography

Certain observations about the infrastructure at the departments can be made as follows: (1) Very few departments have a separate departmental building; (2) The atmosphere of the classroom as regards its construction, acoustics, dust, etc. is unhealthy; (3) The furniture is often unscientific and hazardous to health; (4) Each department had different types of laboratories and rooms ranging from a seminar room and a library, various categories of teachers and
the HOD's cabins or chambers, various laboratories for Cartography, Remote Sensing, Computers, Photography, Geomorphology and museums, etc. (5) A few departments possessed modern communication gadgets like intercom, internet, e-mail, etc. (6) Various teaching aids present in the departments.
Thus the subject of Geography is trying to do its best under the university system in India, under the prevalent circumstances, despite several problems and shortcomings.

5. The earlier development of Geography in the Indian universities

The early development of Indian Geography was not as a result of any demand or awareness about Geography from the Indian side, but as part of the imperialistic policy of the British in order to prepare Indians, knowledgeable about India and loyal to the Raj. This is evident from the fact that though universities started in India around 1887, Geography had to wait upto 1924 to reach Indian universities (Kapur, 1998).
The various pre independence departments had early Geographers, mostly educated abroad.
Thus the subject of Geography in India was trying to set its roots, after an era of its absence in the university system from the end of the Mughal rule to a firm British footing after 1857 and Maculay's education policy of 1887. Earlier to this, there was a similar absence
of the subject of Geography between the end of the rules of the Guptas and the Maurayas, and the invasion of Alexander and various Muslim invaders until it began to pick up during the firm Mughal rule from the times of Akbar.

6. The syllabus of Geography in the Indian universities

Certain observations about the syllabus of Geography can be made: (1) Indian universities have tried their best to keep pace, with the world changes in the subject of Geography; (2) Certain branches show their presence right from 1950s upto 2000 e.g. Regional Geography, Cartography, etc.; (3) Different syllabus for Science and Arts streams in Geography in almost all universities right from 1950 till today; (4) Different marking system has been in vogue for both streams; (5) additional papers for Science students; (6) Maximum introduction of new papers took place in the decade 1971 – 1980; (7) Specialised papers appeared from the decade 1961 – 1970; (8) Applied aspects were given recognition in the decade 1961 – 1970; (9) Professional courses with Geography started in the decade 1971 – 1980; (10) Specialisation papers were shifted to lower level classes from the decade 1981 – 1990; (11) Modern fields of Geography were introduced in the decade 1991 – 2000; (12) New concepts like Remote Sensing, GIS, Environmental Sciences were incorporated in the syllabus of the 1990s; (15) UGC syllabus modified by every department to meet local issues; and so on. Though on the one hand, development of the
syllabus is a good sign, the problems in its effective implementation, as reported by Geographers at various levels in the questionnaire survey adds to the problems of the subject of Geography in India.

7. The research at the university departments of Geography

Students level:
Conclusions made on the research at the students' level show: 1) Heavy thrust on branches of Human Geography; 2) Failure of Physical Geography to attract Research Scholars; 3) Branches of day to day importance and relevance in Human Geography like Regional Planning, Urban Geography, Agricultural Geography and Population Geography opted the most for research; 4) Environmental Geography and Regional Geomorphology had takers in the otherwise low placed Physical Geography; 5) Newer branches of both Physical and Human Geography are still to make their mark on the Indian research scene, e.g. studies in new branches like Hydrology and Geography & Gender; 6) Average maximum contribution of research from the North zone, followed by the East, South and the West; 7) Various national research resources effectively tapped, others slowly being studied; 8) A progressive growth in research number from 1941 to 1970, with a boom time in 1971 – 1980 (increase of 410% i.e. 5 times the previous number,) followed by an all time high in the decade of 1981 – 1990, reducing to nearly half in the next decade of 1991 – 2000 (change of
- 40.70%; 9) Research interest decreased in the last decade; 10) A heavy concentration on the study of local areas with local issues dominating research; 11) The third branch of 'Others' or miscellaneous subjects related to Geographical thought, research and development, totally neglected in research; 12) Research based more on assessment of a situation or exploration of a problem, rather than solution oriented, so have failed to be of much utility to the policy makers; 13) Students' research has had no impact on the development of the subject.

Research projects by teachers:

Conclusions drawn from the scenario of projects funded by ICSSR are:

1) More research on the documentation or identification of a situation, rather than solution oriented research; 2) Link between the research in Geography and the policymakers seem to be missing; 3) Geography has been given a second line treatment, while allotting funds as compared to those allotted to other subjects.

8. The Indian Geographers over the years:

The National opinion survey explained the characteristics and views of the Indian Geographers at various levels. The survey aimed at 08 basic questions asked at all the five levels of respondents. Though in
most levels a direct question was asked, in others the conclusion had to be drawn indirectly from the opinion to some other aspect, touching the said question indirectly. Their final total verdict explains the real picture of the subject of Geography in India including the Indian universities.

The total number of respondents included 20 Early Geographers, 20 Heads of the Departments, 59 Teachers, 65 Research Scholars and 452 Students – A total of 616.

The observations are as follows (The Nationwide Opinions).

1) Area of interest in the subject of Geography (At Study, Research and Teaching level).

Table 4.1: Indian Geographers – Area of interest in Geography

<table>
<thead>
<tr>
<th>AREA OF INTEREST / SPECIALISATION</th>
<th>NUMBER</th>
<th>%</th>
</tr>
</thead>
<tbody>
<tr>
<td>PHYSICAL</td>
<td>338</td>
<td>54.78</td>
</tr>
<tr>
<td>HUMAN</td>
<td>254</td>
<td>41.16</td>
</tr>
<tr>
<td>'OTHERS'</td>
<td>25</td>
<td>4.05</td>
</tr>
<tr>
<td>INDIA TOTAL</td>
<td>617*</td>
<td>100</td>
</tr>
</tbody>
</table>

* One department had two Heads, thus only for question, based on personal choice, both views were considered, making the total of 617.

- A majority of the Indian Geographers are interested in the branches of Physical Geography (Fig. 4.1).
INDIAN GEOGRAPHERS -
BRANCHES OF INTEREST AND SPECIALISATION IN GEOGRAPHY

<table>
<thead>
<tr>
<th>Category</th>
<th>Percentage</th>
</tr>
</thead>
<tbody>
<tr>
<td>Physical Geography</td>
<td>54.78</td>
</tr>
<tr>
<td>Human Geography</td>
<td>41.16</td>
</tr>
<tr>
<td>Others</td>
<td>4.05</td>
</tr>
</tbody>
</table>

Fig. 4.1
2) The reason for opting for the subject of Geography. (For Studying, Research, Career, Teaching)

Table 4.2: Indian Geographers - Reason in opting for Geography

<table>
<thead>
<tr>
<th>REASON FOR OPTING FOR GEOGRAPHY – FOR STUDYING, RESEARCH, TEACHING &amp; CAREER.</th>
<th>NUMBER</th>
<th>%</th>
</tr>
</thead>
<tbody>
<tr>
<td>POSITIVE</td>
<td>498</td>
<td>80.84</td>
</tr>
<tr>
<td>NEGATIVE</td>
<td>52</td>
<td>8.44</td>
</tr>
<tr>
<td>CAN'T SAY</td>
<td>66</td>
<td>10.71</td>
</tr>
<tr>
<td>INDIA TOTAL</td>
<td>616</td>
<td>100</td>
</tr>
</tbody>
</table>

- A vast majority of the Indian Geographers have opted for Geography for various positive reasons (Fig.4.2).

3) The Syllabus of Geography - Is the syllabus appropriate?

Table 4.3: Indian Geographers - Is the syllabus appropriate?

<table>
<thead>
<tr>
<th>SYLLABUS</th>
<th>NUMBER</th>
<th>%</th>
</tr>
</thead>
<tbody>
<tr>
<td>GOOD</td>
<td>271</td>
<td>43.99</td>
</tr>
<tr>
<td>BAD</td>
<td>318</td>
<td>51.62</td>
</tr>
<tr>
<td>CAN'T SAY</td>
<td>27</td>
<td>4.38</td>
</tr>
<tr>
<td>INDIA TOTAL</td>
<td>616</td>
<td>100</td>
</tr>
</tbody>
</table>

- The syllabus of Geography according to majority of the Indian Geographers is not upto the mark (Fig. 4.3).

4) The quality of Research in Geography at levels of Students, Research Scholars, Teachers.

Table 4.4: Indian Geographers – Quality of research in Geography

<table>
<thead>
<tr>
<th>THE RESEARCH IN GEOGRAPHY</th>
<th>NUMBER</th>
<th>%</th>
</tr>
</thead>
<tbody>
<tr>
<td>GOOD</td>
<td>173</td>
<td>28.08</td>
</tr>
<tr>
<td>BAD</td>
<td>317</td>
<td>51.46</td>
</tr>
<tr>
<td>CAN'T SAY</td>
<td>126</td>
<td>20.45</td>
</tr>
<tr>
<td>INDIA TOTAL</td>
<td>616</td>
<td>100</td>
</tr>
</tbody>
</table>

- The quality of Research in Geography according to the majority of the Indian Geographers is Bad (Fig. 4.4).
INDIAN GEOGRAPHERS-
TYPES OF REASON IN OPTING FOR GEOGRAPHY
(For Studying, Research, Teaching, Career)

81%

11%

8%

Positive □ Negative □ Can't Say

Fig. 4.2

459
INDIAN GEOGRAPHERS - OPINION ABOUT THE SYLLABUS

- Good: 43.99%
- Bad: 51.62%
- Can't Say: 4.38%

Fig. 4.3
INDIAN GEOGRAPHERS - OPINION ABOUT RESEARCH
(At the Student, Research and Teaching levels)

- Good: 28.08%
- Bad: 51.46%
- Can't Say: 20.45%
5) The quality of teaching of Geography in India.

Table 4.5: Indian Geographers – Quality of teaching in Geography

<table>
<thead>
<tr>
<th>TEACHING IN GEOGRAPHY</th>
<th>NUMBER</th>
<th>%</th>
</tr>
</thead>
<tbody>
<tr>
<td>GOOD</td>
<td>312</td>
<td>50.64</td>
</tr>
<tr>
<td>BAD</td>
<td>274</td>
<td>44.48</td>
</tr>
<tr>
<td>CANT SAY</td>
<td>30</td>
<td>4.87</td>
</tr>
<tr>
<td>INDIA TOTAL</td>
<td>616</td>
<td>100</td>
</tr>
</tbody>
</table>

- The quality of teaching in Geography in India according to a major share of Indian Geographers is Good (Fig. 4.5).

6) The attitude of Students and general public towards the subject of Geography.

Table 4.6: Indian Geographers – Attitude of students and the general public towards Geography

<table>
<thead>
<tr>
<th>ATTITUDE OF STUDENTS TOWARDS GEOGRAPHY</th>
<th>NUMBER</th>
<th>%</th>
</tr>
</thead>
<tbody>
<tr>
<td>GOOD</td>
<td>206</td>
<td>33.44</td>
</tr>
<tr>
<td>BAD</td>
<td>291</td>
<td>47.24</td>
</tr>
<tr>
<td>CANT SAY</td>
<td>119</td>
<td>19.31</td>
</tr>
<tr>
<td>INDIA TOTAL</td>
<td>616</td>
<td>100</td>
</tr>
</tbody>
</table>

- The attitude of the Student community and the general public towards the subject of Geography, according to a majority of Indian Geographers is Bad (Fig.4.6).

7) The future of the subject of Geography in India.

Table 4.7: Indian Geographers – The future of Geography in India

<table>
<thead>
<tr>
<th>THE FUTURE OF GEOGRAPHY IN INDIA</th>
<th>NUMBER</th>
<th>%</th>
</tr>
</thead>
<tbody>
<tr>
<td>BRIGHT</td>
<td>238</td>
<td>38.63</td>
</tr>
<tr>
<td>DARK</td>
<td>327</td>
<td>53.08</td>
</tr>
<tr>
<td>CANT SAY</td>
<td>51</td>
<td>8.27</td>
</tr>
<tr>
<td>INDIA TOTAL</td>
<td>616</td>
<td>100</td>
</tr>
</tbody>
</table>
INDIAN GEOGRAPHERS - OPINION ON THE QUALITY OF TEACHING IN GEOGRAPHY

- Good: 50.64%
- Bad: 44.48%
- Can't Say: 4.87%

Fig. 4.5
ATTITUDE OF THE STUDENTS AND THE GENERAL PUBLIC TOWARDS GEOGRAPHY

PERCENTAGE

Good: 33.44
Bad: 47.24
Can't Say: 19.31

The attitude towards geography

Fig. 4-6
Indian Geographers - The Future of Geography in India

Predictions About the Future

- Bright: 38.63%
- Dark: 53.08%
- Can't Say: 8.27%

Fig. 4.7
IN INDIA?

IS THE SUBJECT OF GEOGRAPHY FACING A CRISIS OF SURVIVAL IN INDIA?

Fig. 4.8

Percentage

Yes 58.44
No 33.27
Can't Say 8.27
GEOGRAPHY IN INDIAN UNIVERSITIES
- SURVIVAL CRISIS

INDIA

The Final Opinion
51

205

360

Yes
No
Can't Say

Fig. 4.9

467
• The future of the subject of Geography in India including at the Indian universities according to a majority of the Indian Geographers is Dark (Fig.4.7).

8) Whether the subject of Geography is facing a crisis of survival in India including at the Indian Universities.

Table 4.8: Indian Geographers – Survival crisis for Geography in India

<table>
<thead>
<tr>
<th>SURVIVAL CRISIS FOR GEOGRAPHY</th>
<th>NUMBER</th>
<th>%</th>
</tr>
</thead>
<tbody>
<tr>
<td>YES</td>
<td>360</td>
<td>58.44</td>
</tr>
<tr>
<td>NO</td>
<td>205</td>
<td>33.27</td>
</tr>
<tr>
<td>CAN'T SAY</td>
<td>51</td>
<td>8.27</td>
</tr>
<tr>
<td>INDIA TOTAL</td>
<td>616</td>
<td>100</td>
</tr>
</tbody>
</table>

• The subject of Geography is facing a crisis of survival in India including the Indian Universities was strongly felt by a vast majority of Indian Geographers (Figs.4.8. & 4.9).

9. The subject of Geography is facing a crisis of survival in India, including the Indian universities.

4.2 SUGGESTIONS AND RECOMMENDATIONS

Based on the analysis of the data and conclusions drawn from all aspects, the following suggestions and recommendations are put forward for the future development of the subject of Geography in India with
stress on the development of the subject of Geography in Indian universities (Plate. 16).

In order to ensure the availability of dedicated students as future Geographers in the subject of Geography at the university level, some major interventions are required outside the university system as well. The suggestions and recommendations thus start from these levels on to the university level.

1. The society needs to be made geographically literate.

Presently the stress of the Government and the educational policy makers in India is on the literacy of the population. But there is a general illiteracy about the geographical view and conditions among the public of India. Even the highly qualified Indians fumble, when it comes to basic geographical information of their own areas like addresses, directions, distances, specialities of the area, and so on.

A geographically literate and aware society is the first requisite for the subject and nation to develop. For this teaching of the subject of Geography has to be strengthened from the school level.

2. The teaching aids of Geography in schools, right from the preliminary level should contain articles like the globe (majority of them do not have it), maps, charts (the schools have charts of
Plate 16. From the past to present to the future. The study to ascertain the status of the subject of Geography in Indian Universities and workout viable solutions for the future. The Research Scholar at the Department Library at Chennai (Tamilnadu).
animals or fruits but seldom of Geography), models, books and atlases.

3. Geography should be made a compulsory subject at the school level, right from Class 1 to 12, in all schools. Various states have a selection of specialised branches or streams like Arts, Science, Commerce etc. from Class 8 level onwards or Class 11 level onwards. All these should compulsorily have Geography.

4. The subject of Geography is mostly combined under the heading of Social Studies with History and Civics. The paper consists of three subjects, History-Civics-Geography. The break-up of marks is usually 40+20+40=100. Instead of this system, Geography should be a separate compulsory paper.

5. In majority of the schools, there is a notion that, any teacher of other subject, by reading a few books of Geography can teach the subject. Hence in majority of the schools, the subject of Geography is taught by a NonGeographer. The argument is that no skill required in teaching the already stated facts in the textbook of Geography. Geography is not a subject to be read or written or taught by the lecture method, but has to develop an attitude of looking at things. This attitude will make the student, a complete human being and a perfect citizen of a nation. For this, it is of
utmost necessity that the subject of Geography in schools is taught only by Geographers.

6. The subject of Geography should have compulsory practicals at the school level, similar to those in the subjects of Physics, Chemistry and Biology.

7. The schools usually organise science exhibitions, art and handicrafts exhibitions, cultural shows and other activities as a part of their working set-up. Similarly, there should be a full-fledged exhibition, debates and quiz on Geography. Both the subject as well as the students could develop through the production of teaching aids like models, maps, charts, etc.

8. The schools should possess at least a globe, maps of the levels of town or city, state, India and world, atlases, along with models, films and others. It is generally observed that though schools may have a globe, it is hardly shown to the students. These teaching aids could also be produced on a joint venture between the Geography teachers and the students.

9. The school textbooks of Geography must be timely updated and modernised, so as to help them in their future university education and other spheres of life too.
10. The school education has various extracurricular activities like sports, culture, NCC, NSS, Scouts and so on.

Geography should have a student's force, known as the NGG - National Geographic Guards – an organisation based on the principles of physical training and discipline like the NCC, mental and personality development like the NSS, social work in the spheres of environmental conservation, sustainable development, cultural ethos and the development of a sense of patriotism. This organisation could be at the school level as the junior level NGG, and at the college and university level as senior level NGG. The saving of the environment and the concept of creating environmental awareness can be best impressed on the minds of children and the community by the generation of such organisations at the school, college and the university levels.

11. At the college and university level, Geography should be a compulsory subject for all the forms of education. Any education without the basic knowledge of the surroundings and the nation where it is to be applied is of no use in national interests. Hence all streams and faculties should have a compulsory paper of Geography, with qualified Geography teachers to teach it.
12. The subject of Geography should be free from the label of Arts and Science. The subject of Geography should not be divided externally in this manner. Though Geography has these internal two categories as Physical and Human Geography, for the world, Geography should never stand divided. The subject of Geography could have achieved much more than whatever it has in India, if it had stood as one undivided subject.

There are various problems in the existing bifurcation as reported by the various respondents. These all go on to affect the job opportunities, where the Science students, though in the minority numerically, are preferred to a vast majority of the students of Arts. If the subject has to fully develop it should award a common degree known as Bachelor of Geography (B.G.) and Master of Geography (M.G.)

13. The degrees of B.G. and M.G. can be conferred only with the separate existence of the Faculty of Geography. This faculty will have interdisciplinary tie-ups as per the requirements of the students. It can have tie-ups with all other streams.

14. Certain subjects like Geography, Mathematics and Statistics are studied in India under various streams like Arts, Science and even Commerce along with Polytechnic, Engineering etc. There is seen a
discrepancy in the social response given to these degrees. E.g. B.Sc. or M.Sc. Geography is considered better than B.A. or M.A. Geography, B.A. or M.A. Mathematics is considered inferior to B.Sc. or M.Sc. Mathematics and so on. To have, for all these exceptional subjects, one common identity, there could be a way out by putting all these three subjects into one separate faculty. This suggestion was floated in the questionnaire at various levels and a suitable name for such a faculty was asked for. The name suggested ranged from the Faculty of Applied Sciences, Faculty of Analytical Sciences, Faculty of Basic Studies and so on.

15. There is a need for a new outlook towards the methods of intake of students for courses in Geography. In the proposed Faculty of Geography, the intake of the students at the graduation level i.e. F.Y. B.G. level should be based entirely on an extensive Geographical Aptitude Test. This test could weigh the marks of the qualifying examination, physical ability, mental ability, logic, geographical perception, personality traits, aptitude for learning, expression power and so on to select the right candidates with both physical and mental energy to take on the challenges of this subject.

The intake at the Post graduate level, i.e., F.Y.M.G. should be based primarily on the same parameters as for the B.G. level selection,
but with more stress on the usefulness of the candidate to the subject and the nation as a whole. Geography should not continue to be a last resort for the leftovers, but the first and last destination for the deserving real citizens of India.

There should be an aptitude test for research too. This should be primarily based on the research aptitude of the student, the areas of interest for research, the use of the research for the development of the subject and the nation. The stress should be on what is going to be the research, rather than the present day attitude of how much is going to be the research. In other words, quality, rather than quantity, should be the criterion.

Whatever be the level, the basis of selections to the Geography courses should be on how much the candidate has the ability to learn and express it usefully rather than how much he/she has learnt, already by futile bookish entrance examinations and interviews. The subject can develop only with the right people in it.

16. The duration of the courses of Geography of the mainstream learning i.e. for B.G. and M.G. should be of 03 and 02 academic years respectively.
17. Two schemes of courses for graduation for Geography are suggested here.

(A) The first stream (Stream A) or scheme of courses for graduation in Geography will be known as Bachelor of General Geography or B.GG. The duration of this scheme will be of 03 years with emphasis on the preparation of Geographers to qualify for all those lines of profession with or without an open competitive examination, such as the UPSC, State PSCs, Banking, Railways, Police, Defence etc. with graduation being the minimum required qualification. Geographers should be able to qualify through all sorts of examinations for a variety of jobs.

(B) The second stream (Stream B) will be with the subject of Geography in details known as the B.G. with duration of 03 years. Students of only this stream will be able to go for the M.G. level. This stream will be helpful only for those students, who would like to choose Geography as a career or profession. Others are free to join Stream A and get out of Geography at the earliest. This second stream will be of no use to those trying to use this as a means of being just a graduate and then changing their line.

18. The working of these two streams in the new proposed Faculty of Geography would be under the semester system.
19. The syllabus for both these streams will be separate and will be interdisciplinary in nature. The interdisciplinary tie-up should be with subjects of any other field and stream of knowledge.

20. The syllabus break-up, under the new schemes will consist of:

1) The first semester will be common for both the streams A & B.
2) The first semester will emphasise only on what is Geography – its subject matter, scope, dimensions, basics, various branches, research trends, application and employment scenario.
3) The second semester will start off with the students selecting the stream, either General Geography – Stream A or Geography – Stream B.
4) The students will now study 02 allied subjects from any discipline in both the streams for the next semester along with Geography.
5) In Stream – A, General Geography, the emphasis will be on training the student to face the challenges of all career options with or without a competitive examination. For example, in the case of an aspirant for the IAS cadre appearing in an UPSC examination, all aspects of Geography useful for clearing any competitive examination, along with allied subjects could be selected. e.g. any 02 from among subjects like say Mathematics, Statistics, Logic, Working English, Public Administration,
Political Science, Sociology, Management and so on as per interest.

The second semester will allow selection of any 02 other subjects. This will continue till the end of Semester 03. The same system will continue for the 4th and the 5th semesters too, with another 02 new subjects along with Geography. This will mean, a student of General Geography will have a fairly detailed knowledge of Geography on the one hand and a fair or workable knowledge of 04 other subjects as well.

The syllabus of the other 04 subjects to suit this format will have to be thought of by a joint effort of experts of all subjects.

The last semester, i.e. Semester 6, will have only the preparation of students for examinations, interviews, group discussions, applications and project work using all the knowledge taught to them to pursue other career options.

6) In Stream – B Geography, the emphasis will be on the overall in-depth development of a Geographer to make a career, making exclusive use of Geography.

(1) For the Graduation level – B.G. – Semester 1, will be common with Stream A.

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In Semester 2, the students will be introduced to almost all branches of Geography in details, with emphasis on scope, certain basics, research trends and application.

In Semesters 3 & 4, the emphasis will be on the study of Physical Geography along with the selection of 02 other allied subjects related to the branches of Physical Geography.

In Semester 5 & 6, the emphasis for Geography will be on the selection of branches of Human Geography and from the third category of 'Others'. In this semester too, there will be a study of 02 other interdisciplinary allied subjects.

So at the end of three years in Geography Stream – B, a student has a deeper knowledge of almost all branches of Geography, with a workable knowledge of 04 other subjects, 02 on the physical side and 02 on the Human and ‘Others’ – Miscellaneous side.

(2) The syllabus for the 02-year Post Graduation M.G. will consist of 04 semesters.

i) At the start of the 1st Semester, the students will select any 02 branches of Geography – the combinations
could be (i) Both from the Physical side, (ii) Both from the Human side, (iii) Both from 'Others'. (iv) One from Physical, other from Human. (v) One from Physical, other from 'Others'. (vi) One from Human, one from 'Others'.

ii) The study will consist of 2+2 Allied subjects along with 02 specialisation subjects of Geography – a total of 06 subjects.

iii) The study in this format will continue for a period of 03 semesters, i.e., Semesters 1, 2, & 3.

iv) The 4th or the last semester will consist of projectwork based on the specialisation and an internship in a professional institution related to the branches of specialisation. e.g. A student specialised with Geography of Tourism could work with a travel agency or tourism department of the government; a student specialised in Geography of Transport could work with either the Railways or Airlines or transport planning organisations; a student of Environmental Geography could work with an NGO, engaged in environmental studies; a student of Cartography could work with a map making organisation; and so on.
At every level and in every stream, the syllabus must remain the same all over the country and should be totally nationalistic in outlook. The subject of Geography and its syllabus should address to the concerns and problems of India alone first and then think about anything else. The Indianisation of the syllabus of Geography will be the number one priority under this new set-up.

21. Every paper of Geography should have theory as well as a practical portion.

22. The teaching of the subject of Geography should consist of classroom teaching, laboratory exercises, demonstrations, assignments (written and oral), symposiums, seminars, public addresses, study tours, social work for the application of Geography for social use, debates, quiz, projects, and so on, at all levels of study of Geography.

23. Regarding the examination set-up and pattern, the suggestions are:

1) There will a semester examination at the end of each semester at all levels of Geography.

2) The examination scheme for B.G. – Stream A & B will be as follows:

   (1) The 1st Semester examination will be at the end of Semester 01, targeting the evaluation of how much the student has understood about what Geography is and its orientation.
(2) There will be no other examination in between the semester.

(3) There will be however, a monthly evaluation based on individual performance in parameters like attendance, classroom ethics, written and oral assignments, presentation skills, debating qualities, time management, conduct in the classroom and outdoor field trips and other external activities of the subject and any special skills useful for the learning of Geography.

(4) The practicals should be evaluated during the learning and presentation process itself and not during the end semester examination.

(5) There will be a written examination of the theory portion of all papers at the end of the semester.

3) The examination scheme for the M.G. will be as follows:

(1) There will be a written examination of the theory portion at the end of Semester 1 & 2 only.

(2) The monthly evaluation method similar to the B.G. level will continue from Semester 1 to 4.

(3) For Semester 3, the examination will be based on a general seminar presentation to explain what was learnt in the preceding semesters and a proposal of project work for the last semester.

(4) The 4th Semester examination will be based on the evaluation, defence and presentation of the project work and the evaluation
of the work experience or internship and its reporting by the student.

24. There should be a uniform marking system all throughout the country. The subject of Geography in India cannot afford the discrimination between marks, grades and credits.

25. The research in Geography under this proposed new system would be as follows:

1) There will be a separate new single degree in research known as the Doctor in Geography (D.G.) equivalent to the existing Ph.D.

2) There will be no M.Phil. system in research of Geography. Research cannot be a short-term investment bypassing others to get into mainstream Geography.

3) The duration of the Doctor in Geography will be a timebound course programme, with duration of 03 academic years or 06 Semesters.

4) The aspirant for a D.G. will have to have a B.G. Geography – Stream B and a M.G.

5) As already explained in the intake section, the entrants will have to clear the Research Aptitude Test to join for D.G.

6) The first semester will be used for the preparation of the research proposal and for the registration. The calendar of 03 academic
years will start from the date of admission to this course and not from the date of registration as done in the present set-up.

7) The Research Scholar will work for the next 05 semesters.

8) A monthly evaluation of the research progress will be done by both the Scholar as well as the Supervisor.

9) The examination of the thesis will be based on monthly evaluation reports, the viva voce and a valued public presentation. All these formalities will have to be completed in 03 academic years from the date of admission to the course.

10) The duration of time taken for the successful completion of the research be specified in the D.G. degree certificate.

11) Other researches like Post Doctoral or D.Litt. will not be a part of Geography.

26. The operation of the set-up in which the subject of Geography works in India will have to drastically change to suit the future. For this 05 alternative patterns of working are suggested here.

(A) 1) Under the existing set-up, there is a need for separation of the subject of Geography from Arts and Science and putting it as a separate faculty. Other newer schemes like turning Geography to Science, Earth Science or Environmental Science will not work. The age-old set-up and working with a new label cannot be acceptable to the society for long.
2) The intake of students should be entirely based on entrance examinations.

3) The syllabus of Geography needs to be updated to address current problems.

4) The intake of teachers today, is preferably based on the qualification of clearing the NET/SET examination. The present day format of the NET/SET requires a drastic change. The NET/SET examination should be based on two separate set-ups of a Teaching Aptitude Test and a Research Aptitude Test and an interview, rather than plain written examination that has no guarantee whether the candidate is sufficiently knowledgeable about the subject, has the ability to do good research or has the qualities of effective teaching.

5) M.Phil. and NET/SET should not be equated, as is done in many universities.

(B) The second working set-up proposes a division of universities with the subject of Geography into centres of learning and research according to the three sides or categories of Geography – Physical, Human and ‘Others’. Equal number of universities will have the three categories. This will lead to improved infrastructure and facilities with high quality output. This system will be in practise only for the M.G. level and not the B.G. The centre for the study of say, Physical Geography, will run courses on each and every
recognised branch of the category. The department will have teachers of every branch of specialisation in that category.

(C) The third set-up proposed consists of a division between teaching and research. The universities will only teach. There will be no research from these teaching departments. The only research activity will be from the teachers, for the improvement of their teaching skills in the form of research articles only. Teachers undertaking research projects will not be a part of this set-up.

For research, there could be a set-up of research centres, where aspiring Research Scholars for Doctor in Geography – those interested only in research by clearing the Research Aptitude Test of NET - will study and work for their D.G., research projects, research articles etc. There will be no teaching in this set-up except for a short orientation programme for new aspirants for D.G. after the completion of M.G. under the proposed Faculty of Geography.

This will ensure that Geographers interested in pursuing research as a career will be channelled straight to the field and line of interest, while those interested in teaching of the subject of Geography will continue with the teaching university set-up after clearing the Teaching Aptitude Test of NET.
The fourth set-up suggested is to make Geography of the present
day university set-up, into an autonomous body working on the
lines of a manufacturing industry. The subject of Geography in the
future will have to work like an industry if it has to survive in
India.

The set-up will be as follows:

1) This body will have various internal departments, all to be
   manned exclusively by Geographers alone.

2) Firstly the intake of students – This will be based on the lines
   of the raw material procurement department of an industry.
   This will require strict screening, tapping the correct resource
   students and selecting them as future investments.
   Geographers with psychological and management skills will
   work in this department. Their primary job will be to select
   the right students, devise newer means to implement newer
   screening methods, tap resources from various student
   bases, by extensive interaction with the student and the
   teaching community.

3) Then comes the syllabus department – This department will
   have Geographers specialised in Geographical Thought and
   the knowledge of all other allied fields and will frame the
   syllabus at all levels of learning, keeping in view the psyche of
   the students, the problems of the times, job opportunities and
   national development. This will involve research of various
trends of syllabuses all throughout the world, incorporation of newer ideas to suit the Indian demands, break-up of contents, deciding the depths and duration of various levels of learning of the subject of Geography, interdisciplinary syllabus framing keeping Geography as the core and other activities to decide the process to be used to produce unique Geographers.

4) Then comes the process department — similar to the operations department of an industry — the teaching department of Geography. Teaching Geography effectively to classes at various levels will be the primary work of this department.

5) The next department will be the research department where research on various branches of Geography will be carried out.

6) Another department will the Research & Development department, which will concentrate on the development of all aspects of Geography like the syllabus, student and teachers intake methods, teaching methods, evaluation method in examinations, research, research output as syllabus input, job market trends and its linkage with the syllabus, development of administration in Geography, and so on. This department will also be the Quality Control Department.
7) There will be one examination department to conduct examinations at all levels of Geography.

8) There will be a marketing department, where the stress will be on popularising the subject of Geography, selling Geography as a concept, creating students base for Geography, creating geographical awareness and obtaining consultation works for Geography.

9) There will be a services department – which will be primarily engaged in consultation works of all kinds of projects involving Geography.

10) There will be a placements department, where students of Geography will be helped in finding employment.

11) There will be an Informatics department, with the Library, Cartography and other laboratories under its domain.

12) Finally there will be an administrative department, that will control the entire working of the organisation, make policies, control finance and liaison between Geography and other fields.

(E) The fifth set-up suggested is on the lines of a defence organisation. There will be an ‘Academy of Geography’ like defence academies. Physical fitness, detailed geographical knowledge with heavy fieldwork and theory studies, personality development, planning, marketing, research all dealt with to
create a third line of defence – a defence force of academics. A Geographer must be physically and mentally fit. The academy can have a placement cell which supplies manpower to industry, business, defence services, civil services, universities, research organisations, and so on.

27. Besides these 05 working models suggested, certain other aspects are suggested which are common for any of the working patterns, including the one existing and working today. The suggestions are:

1) Intake of teachers on the basis of the Teaching Aptitude Test conducted by a neutral body like the UGC.

2) Separating of the Research Aptitude Test and the Teaching Aptitude Test, which is common today under the banner of NET/SET.

3) Teaching and non-teaching staff should be on rotational transfers as similar to the defence services. Geographers should have no objection to this, for the study of Geography itself is the study of spatial dimensions.

4) Uniform working pattern of Geography throughout the country.

5) Same and uniform syllabus all throughout the country.

6) Uniform marking scheme all throughout the country.

7) Same degrees are awarded throughout the country.
28. Every Geography department should have its own media publication unit. The activities of the department in teaching, research and application need a social presentation on a national scale. This will be possible only by a self-publication and media unit. With the era of information technology at the doorstep; this move is a must.

29. On the college and university students front, there lies a responsibility of popularising the subject of Geography for the right reasons in the right manner among the student community, right from the school age to the end of the formal education. This can be done by either the National Geographic Guard (NGG) Senior Wing whose working is already explained in suggestion no. 10, or by a national body of the students of Geography known as the Association of Students of Geography. India (ASGI), with its unit in every department of Geography. Its primary aim will be to popularise the subject of Geography among students and general public and act as a platform for students' association to voice the opinions of students.

30. The role of the professional geographical associations in India should be to act as platforms for teachers' viewpoints for the development of the subject of Geography.
31. Besides the ideas suggested for various set-ups, roles of various levels of Geographers and courses like the B.G., M.G. and D.G. under the new Faculty of Geography, Geography could also conduct various courses of social relevance. Some of them suggested are:

1) Geographical Photography
Geography had a glorious past with photography in the earlier set-up. The same could be used efficiently today by designing and conducting a course on Geographical Photography. This will be a specialised field at par with today's Fashion Photography or Industrial Photography. The geographical insights of taking and developing photographs could open enormous avenues of employment.

2) GIS Application
Use of the latest GIS softwares to analyse the data of any field.

3) Computer aided Cartography
The use of this will help Cartography reach new heights in India.

4) Remote Sensing Applications and Interpretations

Course no. 2, 3 & 4 are fortunately seen to be under consideration in some universities.
5) Geographical Consultation

The course to instruct on how to open and run a consultation service with Geography.

6) Geographical Journalism

Journalists always say – 'Journalism with a cause.' Geography can also add a new dimension to journalism with the slogan – 'Journalism with a base, Journalism with a solution.' With this course, Geographers in the future could work as Social Journalists.

7) Geography and Tourism

In the present state, this course exists, but the stress is not on Geography. The core of the course is tourism and Geography is the peripheral component. The low profile of the Indian tourism industry is due to this. If turned the other way round, with Geography as the core and all aspects of tourism around it, the Indian tourism industry will boom.

8) Librarians of Geography

The knowledge and techniques of maintaining the libraries of Geography should be imparted in this course.
9) Geography & Media

The best use of the coming era of information technology can be tapped by Geography, with Geographers being trained to work independently in the print and electronic media.

10) Sports Geography & India

The use of the subject of Geography to develop various sports and games in India can take India to the top of the world of sports.

11) Geographical Museology

Many departments of Geography have museums. The proper maintenance of the museum artefacts and archives of Geography in a geographical perspective can save immense national and international heritage from being destroyed by time and mismanagement.

12) Geographical teaching aids and models making

Geographical teaching and the awareness of the subject of Geography among the public can reach great heights, if the preparation and marketing of various teaching aids and models (both working and non-working) is taught.

32. In order to control the working and development of the subject of Geography in India, a new controlling national body is suggested.
1) An independent, national, autonomous body for monitoring the development of the subject of Geography, known as the IGC – 'Indian Geographical Congress' is proposed to be set-up.

2) This body will work on 3 different level (a) The Veteran Indian Geographical Congress (VIGC) – only for Geographers retired from active service; (b) The Indian Geographical Congress (IGC) – only for Geographers in active service; and (c) The Indian Geographical Congress Colts (IGCC) – those studying Geography, engaged in research and those Geographers not in service.

3) There will be equal representation from all the 3 levels on an all India basis.

4) This all-India representation will have certain fixed tenure for all.

5) This Congress will decide the future of the subject of Geography in India.

6) It will act as an authority in framing the syllabus, conducting the GRAT (Geography Research Aptitude Test) for research careers and GTAT (Geography Teaching Aptitude Test) for aspirants in teaching career, document the trends of geographical research and teaching, examine the D.G. theses and approve awarding of the D.G. degrees, approve the validity of research articles and projects, recommend candidates for employment and so on.

7) It will act as a censor body on all aspects like research and projects – where it will act as an authority in recommending research proposals for funding to different agencies.
8) It will act as a liaison between Geographers and Policy makers.

9) This body will be manned exclusively by Geographers at all levels.

10) On later expansion, this body can have state units.

33. This research study was primarily aimed at concentrating on the status of the subject of Geography in Indian universities and hence the aspect of employment of Geographers was not touched, as this would have diverted the research to other avenues off from the axis of the main pursuit. But as this aspect was also felt to be important for the future of Geography subject in India, a cursory or overall view was taken about various employment opportunities available for Geographers.


Hence the list provided will be true in India too. Those already opted by Geographers will mean a recognition of those professions in this thesis, while those not opted will mean a suggestion for newer avenues.
Geographers were seen to be employed as:

(Based and modified from W. G. V. Balchin 1983)

<table>
<thead>
<tr>
<th>SR. NO.</th>
<th>GEOGRAPHERS EMPLOYED AS</th>
</tr>
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<tbody>
<tr>
<td>01</td>
<td>Administrator - local and National.</td>
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<tr>
<td>02</td>
<td>Administrator - hospital services.</td>
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<tr>
<td>03</td>
<td>Advertising Executive - research and management.</td>
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<tr>
<td>04</td>
<td>Air Force Officer - pilot, education and intelligence.</td>
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<td>05</td>
<td>Aircraft Broker.</td>
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<td>06</td>
<td>Air Traffic Controller.</td>
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<td>07</td>
<td>Agro chemical products - Manager.</td>
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<td>08</td>
<td>Antiquarian bookseller.</td>
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<td>09</td>
<td>Architect.</td>
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<td>10</td>
<td>Archivist.</td>
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<td>11</td>
<td>Army Officer - intelligence and technical.</td>
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<td>12</td>
<td>Auctioneer.</td>
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<td>13</td>
<td>Bank Manager.</td>
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<td>14</td>
<td>Book Publisher.</td>
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<td>15</td>
<td>Buyer - industry and commerce.</td>
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<td>16</td>
<td>Career Advisory Officer.</td>
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<td>17</td>
<td>Cartographer - defences, surveys, and maps publishers, teaching, and universities.</td>
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<td>18</td>
<td>Census Officer.</td>
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<td>19</td>
<td>Chartered Surveyors.</td>
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<td>20</td>
<td>Chartered Accountant.</td>
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<td>21</td>
<td>Civil Servant.</td>
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<td>22</td>
<td>Climatologist.</td>
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<td>23</td>
<td>Conservationists.</td>
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<td>24</td>
<td>Computer Manager.</td>
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<td>26</td>
<td>Computer - Marketing Officer.</td>
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<td>27</td>
<td>Data processor.</td>
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<td>28</td>
<td>Editor - book, atlas, films.</td>
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<td>29</td>
<td>Environmental Research Officer.</td>
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<td>30</td>
<td>Estate Agent.</td>
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<td>31</td>
<td>Farmer.</td>
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<td>32</td>
<td>Field Studies Officer.</td>
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<td>33</td>
<td>Film Producer.</td>
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<td>34</td>
<td>Glaciologist.</td>
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<td>35</td>
<td>Health Services Officer.</td>
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<td>36</td>
<td>Horticulturist.</td>
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<td>37</td>
<td>Housing Manager.</td>
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<td>38</td>
<td>Hydrographic Officer - Navy.</td>
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<td>39</td>
<td>Hydrologist - Water authorities.</td>
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<td>40</td>
<td>Income Tax Inspector.</td>
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<td>41</td>
<td>Industrial Relations Officer.</td>
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<td>42</td>
<td>Inspector of Factories.</td>
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<td>43</td>
<td>Journalist.</td>
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<td>44</td>
<td>Lecturer - Universities and Polytechnics.</td>
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<tr>
<td>45</td>
<td>Landscape Planner.</td>
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</tbody>
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(Contd.)
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<tr>
<th>SR. NO.</th>
<th>GEOGRAPHERS EMPLOYED AS</th>
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<tbody>
<tr>
<td>46</td>
<td>Land Surveyor.</td>
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<tr>
<td>47</td>
<td>Land Valuer.</td>
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<tr>
<td>48</td>
<td>Lawyer.</td>
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<td>49</td>
<td>Librarian.</td>
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<tr>
<td>50</td>
<td>Map Officer - Survey.</td>
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<tr>
<td>51</td>
<td>Map Research Officer – Publishers, defence.</td>
</tr>
<tr>
<td>52</td>
<td>Marine Surveyor.</td>
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<tr>
<td>53</td>
<td>Marketing Manager – business and commerce.</td>
</tr>
<tr>
<td>54</td>
<td>Member of Parliament.</td>
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<td>55</td>
<td>Mercantile Mariner.</td>
</tr>
<tr>
<td>56</td>
<td>Museum Curator.</td>
</tr>
<tr>
<td>57</td>
<td>Naval Officer – education, intelligence, technical.</td>
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<tr>
<td>58</td>
<td>Patent Officer.</td>
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<td>59</td>
<td>Pedologist.</td>
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<td>60</td>
<td>Personal Officer/Manager – industry and commerce.</td>
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<td>61</td>
<td>Pest Research Officer.</td>
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<tr>
<td>62</td>
<td>Photogrammetrist.</td>
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<td>63</td>
<td>Planner – local, regional and national.</td>
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<td>64</td>
<td>Police Officer.</td>
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<td>65</td>
<td>Probation Officer.</td>
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<tr>
<td>66</td>
<td>Production Manager – industry and commerce.</td>
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<td>67</td>
<td>Publisher.</td>
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<td>68</td>
<td>Radio Commentator.</td>
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<td>69</td>
<td>Recreation Manager – Sports Centre.</td>
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<td>70</td>
<td>Research Officer.</td>
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<td>71</td>
<td>Research Scholar.</td>
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<td>72</td>
<td>Retail Stores Manager.</td>
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<tr>
<td>73</td>
<td>Sales Officer/Manager – business and commerce.</td>
</tr>
<tr>
<td>74</td>
<td>Secretary – Specialist services.</td>
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<tr>
<td>75</td>
<td>Secretary – Personal.</td>
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<tr>
<td>76</td>
<td>Shipping Broker.</td>
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<tr>
<td>77</td>
<td>Social Worker.</td>
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<tr>
<td>78</td>
<td>Surveyor.</td>
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<td>79</td>
<td>System Engineer.</td>
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<td>80</td>
<td>Teacher – Schools.</td>
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<tr>
<td>81</td>
<td>Television Producer.</td>
</tr>
<tr>
<td>82</td>
<td>Traffic Engineer.</td>
</tr>
<tr>
<td>83</td>
<td>Traffic Manager.</td>
</tr>
<tr>
<td>84</td>
<td>Transport Officer/Manager – roads, rails, and air.</td>
</tr>
<tr>
<td>85</td>
<td>Travel Agent.</td>
</tr>
<tr>
<td>86</td>
<td>Tourist Guide.</td>
</tr>
</tbody>
</table>

Geographers, with the proposed set-up of suggestions in this thesis, can work in many more fields than the above list.
Along with this list of employment scenario, certain suggestions are made to increase the employment opportunities and the use of the subject of Geography in India. They are:

1) All the teaching streams under the university set-up of learning should have compulsory Geography with a qualified Geography teacher to teach it.

2) All branches of the Government and Private Organisations should have a Geographer with them.

3) Industries and business should have a Geographer in their management cadre, like MBA and so on.

4) All medical set-ups should have a Geographer in their planning and administration.

5) The qualification level required for the teaching of Geography should be as follows:

   (1) In the Present day existing set-up

   Class 1 to Class 4  Bachelors Degree.
   Class 5 to Class 7  Bachelors Degree.
   Class 8 to Class 10 Masters Degree.
   Class 11 to Class 12 M.Phil.
   FY onwards            Ph.D.

   (2) In the proposed Faculty of Geography set-up

   Class 1 to Class 7  Bachelors Degree.
   Class 8 to Class 12 Masters Degree.
   FY onwards            D.G.
6) All aspirants for Civil Services examination conducted by the UPSC should compulsorily have Geography as their option along with their own subject. Infact Geographers can be the best administrators. With their knowledge of spatial and temporal differences, they can come out as the best bureaucrats.

7) With the extension of the proposed NGG, from the school to the university level, there should be a new regiment of Geographers in all the three armed forces of defence known as the NGG - a force for the protection of the environment and social welfare, along with defence and combat. The officers of this regiment should be only Geographers.

34. It is a rule of the agricultural marketing sector that the producer of the agricultural commodity must himself take it to the market to sell it. Similarly Geography and Geographers will have to come to the public eye and to the eyes of the policy makers for its active involvement in nation building, by getting into active politics. Other subjects like Economics, Commerce, Political Science, Law, Sociology, Social Work, Sciences, Technology seem to have understood this long back and are ruling the nation. Geographers must make a dent in this.
Finally, this Ph.D. thesis proposes the study of the subject of Geography in the foregoing format, to be different in set-up and in thinking with different kinds of solutions. The solutions are based on Research, Planning, Psychology, Sociology, Economics, Geographical Thought, Regional Geography, Politics, Mass Communication, Journalism, Education, Management and many other fields, with a view to put forth a new branch of Geography in the category of ‘Others’ clubbing Geographical Thought, Research Methodology, Geography Education etc. which would be known as ‘Research and Development of Geography or R & D Geography, in short.’ Cartography, Statistical Techniques, Remote Sensing & GIS, which have been traditionally clubbed under the category of Physical Geography, could also be included in this newly proposed R & D Geography. This will help to strengthen this branch besides doing justice to these branches by placing them in the group in which they deserve to be slotted. This thesis claims to be the first in this new branch of Geography.

4.3 SUMMARY

This research was the need of the hour for Geography in India. The observations on aspects like the research type, the earlier work done, the place of Geography in ancient India, the university set-up of Geography, the early development of Geography in Indian universities, the syllabus of Geography, the research by students and teachers at the university
departments of Geography, the opinion survey of the Indian Geographers at various levels depicting a renewed interest in branches of Physical Geography, syllabus not being up to the mark, bad quality of research at student level, negative attitude of students and general public towards the subject, a dark future and an acute crisis of survival of the subject in India including at the Universities explain the problems with the subject in India. A large number of viable, practical, grassroot, hard-core, tough all-round solutions have been suggested from a student’s point of view. If sincerely implemented, the subject of Geography in India including at the universities can attain significant heights.

REFERENCES
