

Selection and Studying of Geography as a Masters Subject in Bahawalpur, Pakistan: Students Perceptions and Prospects

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Abstract: Geography invites us to comprehensively participate in the excitement, enjoyment and meet the challenges of this dynamic globe. The present study was conducted in two higher institutes of Bahawalpur, Pakistan namely The Islamia University, Bahawalpur (IUB) and Government Sadiq Egerton College (GSEC), Bahawalpur, where geography is being offered at masters' level. The main objectives of the study were, to find out the students perceptions about selecting of geography as masters subject, to get the opinion of masters students relating to subject's scope and applications and to draw useful suggestions for the improvement of the subject in Pakistan in future. For this, data were collected through a structured questionnaire survey using quota sampling during the month of March 2017. The number of students was high in the Geography Department (IUB) than in the GSEC. Therefore, 90 enrolled students (both male and female) were selected as samples, wherein 67 students were from the Geography Department (IUB) and 23 students from GSEC. The collected data was arranged, tabulated and analyzed by applying descriptive statistics and chi-square test using MS Excel and SPSS 20.0 software. Results demonstrated that geography has gained increasing importance and adoption as masters subject. Students have developed self-interest in the discipline and were recorded deep affiliations in human geography and applied fields like remote sensing (RS) and geographic information system (GIS). Respondents argued that geography has a wide area of applications and the future of geography is bright in Pakistan. Chi-square results also verified the students' perceptions and views about the discipline's scope and applications. Based on collected data few suggestions were made to make the discipline more effective, applicable and innovative i.e. geography should be recognized as a science subject, the syllabus at intermediate and degree levels should be modified and updated, the vacant posts of geography teachers should be filled. Geospatial branches of the discipline like RS and GIS should be emphasized.

Keywords: Higher education, earth science, geography scope, RS, GIS.

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1. Introduction

Being to play a central role in the current educational systems throughout the world, geography is increasingly become important to address the present day environmental, social, economic and related challenges. Therefore it is a vital subject resource with global importance for citizens, students, and academia. Geography is gaining more attention in

the present world, comparable with the other disciplines of science (Özgen, 2013). Inclusion of geography in the curriculum, enrich students with the necessary knowledge and communications skills required in most of the academic disciplines and are of increasing value in the evolving world economy (Graves, 2003). Therefore the focus of geographic education is trust on problem-solving and inquiry-based learning, modeling and fieldworks which are greatly helping students to get practical knowledge

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and a keen interest in practices of environmental management (Tilbury, 2003). Being spatial analysts of the discipline's integrative form, geographers can establish cognitive community partnerships among higher educational institutes (Klein et al., 2011). Geography is considered as an incorporating discipline that connects natural, social and economic sciences and its distinctive dimensions of place, space, and scale (McKeown and Hopkins, 2007). Consequently morphological features have the main role in geographic research (Andronache and Ciobotaru, 2014). Geography helps to inquire and think critically and creatively about different views, impressions and relating complexities of places and hence the discipline is studied through inquiry. It is also found that the discipline of geography exposes an analogous way to support and integrate decision making, activism, participated capacity building and community development through clusters of research and volunteering way (Brewer, 2013; Spalding, 2013). Moreover, fieldwork and outdoor activities are essential to geography. Generally subject helps to develop significant elements of the skills frame with a firm emphasis on utilization of maps and visual images as well as new geospatial technologies including geographic information system (GIS) and remote sensing (RS). In many ways, emerging technologies and related developments in discipline geography offered new exciting opportunities that must be grasped and carried on to move ahead (Nellis, 2005). These transferable geographical skills help to equip people for effective and applicable lifelong learning and experiences.

However, in spite of all these positions and growth, it is also apparent that the desired standards have not been accomplished in geography education. One of the most primary reasons for less-effective use of geography in many areas of the present world is the inadequacy of geography education (Geçit, 2010). Similarly, the teaching and studying of geography in Pakistan at a higher level remain the topic of discussion since a long period of time. Though, it is passing through progressive stages in many parts of the world but still search identity and proper recognition in Pakistan (Fatima et al., 2015). The scope and choice of the discipline particularly at masters level are been debated and students and even teachers at a higher level are not very much clear about the strength and value of the subject. Presently, twenty-two higher institutes (universities and post-graduate colleges) offering master's degree of two years in the subject of geography (Eduvision, 2018). Normally, it is thought that the discipline hasn't wide

applications as compared to the pure science or market-oriented subjects and that is why it is considered a much difficult task to gain a reasonable job after completion of the degree. Similar views have been heard from enrolled students and passed out students about the discipline. Are all these views or speculations are true and discipline geography hasn't a wide array of applications particularly in the employment sector and thus losing the relative significance? To search out the possible answer of this critical question and existing position of discipline among students of geography, the current study was conducted in Bahawalpur City to draw a clear picture of students' views and prospects about selection and studying the subject of geography at master's level. In this regard, the main objectives of the study were to find out the students perceptions about selecting of geography as masters subject, to get opinion of the students of Master of Science (M.Sc.) in Geography relating to the subject's scope and applications and to draw useful suggestions for the improvement of subject in Pakistan in future in the light of students views.

2. Materials and Methods

2.1. Topic and area selection

Geography being as an academic discipline helps the students to learn the value of the environment and appreciate. The topic of current research is little worked previously in Pakistan nevertheless the students' and academics perceptions and speculations that have been listened for a long time. Moreover, the importance and application of geography in different fields of life had been the area of interest for researchers. Therefore, it is desperately needed to unveil and explore the recent trends, choices, utilization, and perceptions of students who are studying geography at the master's level. This study does not only highlight the thoughts and views of geography students but also proves helpful to bring improvements and innovations in the subject and thus make this subject more acceptable and practical among modern sciences. The study was conducted in Bahawalpur City, famous as an educational city in the southern part of Punjab province by selecting two renowned educational institutes namely, The Islamia University, Bahawalpur (IUB) and Government Sadiq Egerton College (GSEC), Bahawalpur, Pakistan.

2.2. Data collection

Current research mainly focused on primary data that was collected in a field survey through personal investigation and a structured questionnaire. The

survey was conducted in March 2017 to visit both institutes. Total of 90 students (male and female) were chosen as samples randomly for a questionnaire survey and were interviewed to collect the required data. Although, subject geography is equally important and popular in male and female students of various levels (secondary to post-graduate) (Fatima, 2016). However, it is observed that the ratio of female enrolled students was considerably high than male students in both institutes. Hence, due to a large number of students (both male and female) in university than in GSEC, the quota sampling was used based on the students' ratio. Therefore, 67 (75%) enrolled students (45 female and 22 male) were selected from the Department of Geography, IUB and 23 (25%) students were selected from the Department of Geography, GSEC from previous and final years respectively. Besides, selected literature on the discipline was reviewed and necessary secondary data about students' strength was obtained from the offices of concerned departments of both institutes.

2.3. Data processing and analysis

The collected data was required to be classified and categorized. Therefore, different computer operations (coding, tabulation, etc.) were carried out to convert the data into a comprehensive form by applying software like MS Word, MS Excel. After that, data were analyzed by using SPSS 20.0 software through the application of two techniques. First, descriptive statistics (frequency and percentage) was used to overview the main trends and second chi-square technique was applied to test the significance of students views and prospects about the subject's selection and its scope. To meet the objectives of study, first focus was given on the perceptions and choices of students in order to select geography as masters subject, second their opinions about the subject's scope and its applications and third the useful suggestions were drawn to bring positive improvements in the subject in Pakistan and future expectations of students from the subject.

3. Results and Discussion

Importance of the knowledge of geography makes this subject an intimate choice of a vast number of undergraduate students. Geography offers synergetic possibilities to transformative learning experiences and geographical and cultural scales also influence the attainment of educational and administrative goals in higher education (Conway-Gómez et al., 2011; Norgard and Skodvin, 2002). In higher education, the enrollments of geography students' increasing

amazingly over time i.e. in the USA between 1985-86 to 1994-95, the number of bachelor's degrees awarded in the discipline of geography was enhanced from 3,056 to 4,295 (Murphy, 1998). Similarly, the scenario is shifting with increasing enrolments of students in many Pakistani higher education institutes (universities and colleges) where discipline geography is being taught.

Table 1. Number of enrolled students in M.Sc. Geography at IUB in past 10 years

Session	No. of enrolled students
2005-2007	37
2006-2008	56
2007-2009	53
2008-2010	49
2009-2011 (M&E)	72
2010-2012 (M&E)	82
2011-2013 (M&E)	68
2012-2014	49
2013-2015	44
2014-2016	42

Source: Department of Geography, IUB (2017). M, Morning; E, Evening.

Currently, geography has been taught in two institutions in Bahawalpur City (e.g. IUB and GSEC) at the master's level. In IUB, the Department of Geography was established in 1986 and providing facilities in the major branches of physical, human and applied geography. The Department of Geography (IUB) has produced many graduates, who are playing a pivotal role in regional and social planning as well as decision and policy making of the country. Presently the Department is offering M. Sc. (morning & evening) and M. Phil. (Master of Philosophy) Geography programmes including new diploma courses in GIS and RS. Details of students enrolled in the Department of Geography, IUB from 2005-2017 are given in Table 1. Data shows significant interannual variations in students' enrolment. As Department encouraged a maximum number of students for admission. Therefore, the year 2010-12 was apex when 82 students were enrolled in Department of Geography (IUB) in both morning and evening classes to study geography at masters level (M.Sc.) while rest of the years are shown slight ups and downs in students' enrolments.

Table 2. Number of enrolled students in M.Sc. Geography at Govt. S.E. College in past six years

Session	No. of enrolled students
2009-11	04
2010-12	13
2011-13	11
2012-14	15

2013-15	13
2015-17	15

Source: Department of Geography, Govt. S.E. College (2017)

Table 3. Reasons for selection of geography as Masters Subject

Reasons	%age
Low merit in B.A/B.Sc	11.2
Self-interest	65.3
For job	15.3
No idea	8.2

Source: Field survey (2017)

In GSEC, M.Sc. Geography degree program was introduced in 2009 and many students who cannot afford university expenses and didn't fulfill admission criteria, in universities, preferred to study geography in the GSEC under the annual examination system. Table 2 showed that student enrolments increased gradually since 2009. However, the students' numbers are comparatively less than university perhaps due to better availability of teaching sources, structure and laboratory facilities.

3.1. Reasons behind the selection of geography as Master's subject

Present era considered the age of competition when with every coming day, new disciplines and subjects are being introduced and competition for jobs is more than ever in the past. Here does a question arise that which perception enforce the students to study geography at the master's level? The students' perceptions about the geography of various academic levels have been researched in different parts of the world but in Pakistan, it has not been inquired satisfactorily (Fatima, 2016).

Table 3 portrays that majority of the students (65.3%) have claimed to choose this subject because of self-interest and 15.3% students have select this subject as they perceived to get a job easily after doing Masters in this subject. About 11.2% of students admitted without any hesitation that because of low merit in B.A and B.Sc. they did not get admission in their desired subject, so they choose this subject as the last resort. Whereas, 8.2% of students had no clear idea about the selection of the subject at the masters level. It is a fact that many students holding B.A. and B. Sc/ (Under-graduation) degrees looked confused and divergent to choose the subject at the master's level. It is found that the choice of the subject like geography on the secondary level and higher is mainly based on students' perceptions

regarding their understanding (Adey and Biddulph, 2001). Among a few of them choose this subject with the advice of their elders, relatives, and friends. Furthermore, the higher qualification in geography can also be useful to take the general community issues and unfairness (Klein et al., 2011).

3.2. Study of geography at intermediate and undergraduate levels

It is perceived that students who had studied geography at intermediate or Faculty of Arts (F.A.) and undergraduate or degree (B.A./B.Sc.) level has stronger subject base than students who attempt this subject for the very first time at master's level. First ones are comparatively much clearer about the basic concepts and much sensible while choosing this subject at the master's level. On the other hand, students who study this subject for the first time face many difficulties in understanding the basic concepts and have no solid base. Fortunately, from last few years, geography now placed as a distinct separate subject from social studies and being taught from grade VI to grade VIII as a compulsory subject, while, in grade IX and grade X as an optional one.

Results show that 6.1% of students have never studied geography before the master's level. These were the students who were studying geography with the perception of "no idea". Majority of the students (50%) have studied geography earlier in undergraduate level and self-interest had developed so that they liked to choose this subject at master's level in comparison to many other science and arts subjects. One of the strong facts about this deficient gap is that geography is treating as an optional/elective subject at intermediate and degree level in Pakistan. In addition, certain limitations and factors in higher institutes (colleges) are responsible that stagnant the subject's promotion at intermediate and degree level i.e. lack of facilities (labs, equipments, maps, attendants), unavailability of teachers due to vacant posts, irrational subject matter, lack of guidance and proper teaching practices and others (Fatima et al., 2015). About 42.9% of students took this subject from intermediate to master's level. Only 1% of students have studied geography at the intermediate level then changed their subject at degree level, and then finally chooses geography as master's subject.

3.3. Family encouragement

Family encouragement always pushes up the students and boosts up the confidence of students and affects students' academic performance positively. It also influenced the students' achievements and their

mental and physical status. This is because of many components of environmental literacy (e.g. perception, behavior, cognitive skills, etc.) are included in the secondary education geography course books, to enhance the students' mental and observational abilities (Koc, 2013).

Table 4. Family encouragement to study geography

Response	%age
Self-interest	60.2
Yes	19.4
No	20.4

Source: Field survey (2017)

Table 4 depicts that 60.2% of students were studying geography at master's level because of their self-interest. Their families were neutral about their choice of subject. It is also explored that geography is sensed to be very informative and important for male and female students at different levels (Fatima, 2016). About 19.4% had full family support and encouragement for their selection of subject at the master's level. It is found that the parental educational level, beliefs, attitudes and actions fostering students motivation effectively (Usher and Kober, 2012). Whereas 20.4% of students had gained no family encouragement and support in their selection of subject at master's level perhaps due to the less awareness and illiteracy.

3.4. Confidence to get a job

Geography builds-up the knowledge of various environments all over the world with comprehension of maps and a wide range of fact-finding and problem-solving expertise both inside and outside the classroom. As such, it prepares pupils for practical life and employment effectively. Yet it assumed that the geography graduates are not fortunate to get a job timely and easily.

Results show that 87.8% of students were fully confident that they would get a job easily after the completion of the master's degree (Table 5). Moreover, it is also beneficial for geography, earth science and environmental science (GEES) graduates to identify and take advantage of enterprising chances i.e. start their own business (Maguire and Guyer, 2004).

Table 5. Confidence about the job

Response	%age
Yes	87.8
No	12.2

Source: Field survey (2017)

Table 6. Field of interest to join

Fields	%age
Teaching	59.2
Administration	22.4
Management	14.3
Consolation	4.1

Source: Field survey (2017).

However, 12.2% were not hopeful about the job after the completion of their study. Majority of the hopeless students were of those who study this subject as they have no other option or those who study this subject for the first time. Unfortunately, in Pakistan, geography has yet not attained its place so far as it's deserved due to various obstacles from less interest by government authorities to deficient resources, lack of research, lack of modern teaching techniques, fewer employment opportunities and outdated and unbalanced curriculum (Fatima et al., 2015).

3.5. Field of interest

Students who study geography have developed different fields of interest to engage after the completion of a master's degree. As a study of geography helps in every field of life in various ways, so students have many fields to join after having more perfection in that particular field.

Results show that 59.2% of students especially girls were more interested in the field of teaching (Table 6). It is suggested that the traditional interests of geography learner still exist in categories such as teaching methods and teacher preparation (Stoltman, 2012). Un-doubtfully, in Pakistan, the teaching is the more preferable job of many geography graduates after masters. But more importantly, the recruited geography teachers should be served as "role models" for their students (Aderogba, 2012a). In this sense, as far as the role of geography teachers concerned, it can't be neglected as they are most capable to motivate and convince students about the wide spectrum of geography applications in the real world. Therefore, the role of teachers is more radical regarding their attitudes towards their students in nurturing self-esteem (Ghazi et al., 2014). About 22.4% of students were interested in administration after doing Central Superior Services (CSS) and other professional exams. About 14.3% of students were interested to work in the management sector followed by 4.1% in consolation. Nowadays, geography has concentrated within the curriculum for understanding and resolving issues about the environment and sustainable development (Dube, 2014).

Table 7. The most interesting branch of geography

Branch	%age
Urban Geography	29.2
Economic Geography	26.5
Population Geography	18.3
Others	26.0

Source: Field survey (2017)

Therefore, with changing global trends, sustainability should be the prime concern of teaching and learning of geographical education (Fien, 2005).

3.6. Most interesting branch of geography

Although physical and human geography is perceived as the two main branches of geography yet it is a highly diversified discipline having a variety of sub-branches of various aspects of life. In Pakistan, various branches of geography taught at master's level focusing on providing the foundations of themes such as cartography, urban and rural landscapes, population, settlements, urbanization, social planning, transport, and natural and historic environments. Feedback of the most interesting branches of geography could be greatly helpful to modify and design the syllabus at a higher level by introducing the applicable branches according to recent market trends. It also aids to bring innovation in that subject to make it more realistic and interesting for students.

Table 7 clears that human geography, one of the major branches of geography, was the most interesting branch of geography among the students and three top favorite branches among the students belonged to human geography. Among these, economic geography was the leading branch with a 26.5% interest of students. About 16.3% of students were shown interest in population geography while 11.2% of students considered urban geography as an interesting or favorite branch. Other 26% of students were interested in miscellaneous branches of geography including RS, GIS, environmental geography, regional geography, etc. In addition, the Higher Education Commission (HEC) of Pakistan has established a body of experts named National Curriculum Revision Committee (NCRC) who held an annual meeting to the up-gradation of the subject. NCRC has formulated a balanced curriculum for post-graduate (M.Sc. and M.Phil.) degree programs (Fatima et al., 2015).

3.7. Importance of RS and GIS

Computer-based geospatial information systems can help geographers to accelerate research, scholarship, and teaching and to enhance geography's

place within the higher institute like a university or college (Richardson and Solis, 2004). Geospatial technology is one of the emerging areas of modern geographical sciences. It includes Remote Sensing (RS), Geographic Information System (GIS), Global Positioning System (GPS) and modern mobile devices (Roy, 2014). RS is the technique to measure the object from a distance without a direct contact while computerized mapping and data analysis in the geographical environment is known as GIS, new frontiers in geography. Interpreting geographic or spatial information is one of the geographer's tasks. By creating the ability to analyze phenomena geographically, RS and GIS allow a better understanding of the world around us by handling a wide range of applications i.e. urban traffic management, municipal services management, fire and rescue services, weather information, soil mapping, and product marketing, etc.

Results show that 84.7% of students thought that perfection in RS and GIS can be helpful in getting a handsome job (Table 8). But 15.3% of students were not confident that perfection in these fields can bring them in the front line in the competition race. About 89.9% of students were interested in fields of RS and GIS, as they considered these branches as among the important emerging branches of geography. While 10.2% of students considered RS and GIS as much technical and difficult subjects and did not show any interest in these branches. It is evident that geospatial technologies (e.g. RS and GIS) allow an opportunity to the use of geography by students both in and outside the school. Moreover, interest in the utilization of geospatial technologies is on enlarging, as are the topics of spatial thinking and sustainable development (Stoltman, 2016; Stoltman, 2012).

Table 8. Importance of RS and GIS and students Interest

Importance	%age	Interest	% age
Yes	84.7	Yes	89.8
No	15.3	No	10.2

Source: Field survey (2017)

3.8. Applied geography

By studying geography, students meet various societies and cultures of the world and recognize the fact that nations depend on each other (Rawding, 2013). With constantly changing nature, geography considered an interesting subject and the place of geography in the whole curriculum can be justified in terms of the subject's vast potential as an educational resource (Lambert, 2004).

Table 9. Chi-square results of students views about selection and scope of geography

	Subject Self- interest	Family encouragement	Students' job confidence	Interest in Teaching as	Importance of RS & GIS	Bright future	Application of geography
Chi-Square	13.333	3.333	13.333	8.533	16.133	8.048	13.762
df	1	1	1	1	1	1	1
Asymp. Sig.	0.000**	0.068	0.000**	0.003*	0.000**	0.005*	0.000**

* = Significant at 95% level of Confidence ** = Significant at 99% level of Confidence

Geography education is also much important to foster current global perspectives i.e. development geography can intensify and significantly contributes to global citizenship and grow personal expertise (Klein et al., 2014; Miller, 2013). In this regard, an interdisciplinary approach allows geographers to examine issues relating to land and water use for different purposes.

Results show that 89.9% of students positively considered geography as a multidisciplinary subject. Geography, no doubt, is an interdisciplinary science often overlapping between natural sciences, social sciences, and humanities (Holloway et al, 2003). Whereas, 10.2% of students were not looking positive and hopeful as the role of geography in different fields is concerned. It is also strongly evident that students gain substantial experience and knowledge when they engaged and participate in real problems of the world beyond the limits of classrooms of their educational institutes. Hence they achieved the experiences of quality and effective research having long term impacts on their future research careers (Lindsey, 2013; Ryser et al., 2013). Learning geography and its basic concepts through community involvement and in informal circumstances such as field trips, museums, and exhibitions is also significant (Noor et al., 2016). As geography has many practical and useful branches, it has a wide area of applications and dealt with man interaction with his environment. Geography proves its worth in all the disciplines of life. Additionally, the study of geography helps in better planning and making effective policies of any area.

3.9. Future of geography in Pakistan

Future of any subject can be predicted from the precepts and thoughts of students regarding that subject. Particularly at the undergraduate level, the registration, participation, and performances of female students to geography education are not satisfactory (Aderogba, 2012b). In Pakistan, geography still conceived a minor and less important subject as compared to other scientific subjects (Fatima et al., 2015). However, the discipline

geography has gradually been recognizing in Pakistani higher education yet it needs some effective steps to be taken by professional leadership for the emergence of discipline on a scientific basis. In this regard, the vacant posts of geography teachers (particularly at intermediate and degree levels) immensely need to be filled by recruiting talented and young geography graduates.

Results clear notable fluctuations regarding what is the future of geography in Pakistan? Before this question, the ratio of positive and negative aspects was almost 89:11 in many questions. But about this question, only 71.4% of students were confident about the bright future of geography. Considerably, 28.6% of students were not aspirer about the bright future of geography in Pakistan.

3.10. Application of Chi-Square technique

After finding the views of students about the geography education, its brief scope and study being as a discipline the attempt had been made to test the most convincing factors that motivated and highly influenced students' perceptions and their way of to choose the subject geography at master's level. In this regards, chi-square technique applied to compute the statistical significance of respondents' views as it sought the preferable technique to unveil the significance of prominent factors (or variables) (McHugh, 2013), about students' selection the subject geography and its scope and value. The selected variables that have been tested are displayed in Table 9. Chi-square results suggest that self interest to study the subject ($p < .000$), students' confidence about getting the job ($p < .000$), importance of RS and GIS ($p < .000$) and area of application of geography ($p < .000$) were highly significant views of students about discipline geography and its scope at a 99% level of confidence. While teaching as a field of interest ($p < .003$) and bright future of geography in Pakistan ($p < .005$) were also significant at 95% level of confidence.

Whereas family encouragement to opt the subject was not significant as it is discussed earlier. These

results proved that students have positive views and prospects about the selection of geography as a master's level subject and they were hopeful with its scope, future, and area of application in Pakistan nevertheless the fact that they were not fully encouraged and pushed by the family members. The applications and employment chances are numerous in geography even in Pakistan. Particularly the emerging geospatial fields (RS and GIS) have a wide array of jobs opportunities. Geographers are serving and could be served in many fields i.e. teaching from primary to post-graduate levels, GIS analyst, municipal corporations, an urban unit of Punjab, land survey and department, oil and gas development authority, water, soil, forest resources conservation and management, various NGOs and many others.

4. Conclusion

Geography being as a discipline is gaining increasing importance and acceptance in academia. The role of geography manifested and is wide spreading with the invention of geospatial technologies to monitor, analyze and solve serious environmental and climatic concerns. The finding of the present study elucidated that geography is being introduced as an interesting branch of knowledge among undergraduates and they choose this subject on the master's level. Majority of the students have studied geography in intermediate and undergraduate levels and created self-interest for the study of geography at higher level although they didn't receive proper encouragement from family. Students were confident about getting a job after masters in geography and most of them desired to select teaching as a profession. Human geography was the most preferable branch of students instead of physical geography, having a keen interest in its branches like urban, economic and population geography. Vast numbers of students were affectionate in the emerging fields of the discipline like RS and GIS and they were confident that expertise in RS and GIS professional skills greatly helps them in getting a handsome job. Majority of the students were argued that geography has a wide area of applications and the bright future of geography in Pakistan where the trend is shifting with the increasing enrolments of students at mater level. Chi-square results also affirm these findings strongly.

Besides the importance and practical implementation of the geography, the role of the geographers seems improper in our society and geography is not gaining that place which it deserves. Although, evolving branches like RS and GIS has

caught the rapid adoptions yet overall progress of the discipline is lagged behind the expectations particularly in Pakistan. The academics and authorities are needed to take various revolutionary steps to alter the mindset of students and society by highlighting the discipline importance in the context of present world environmental challenges and sustainable management of resources.

5. Suggestions and future research directions

The study suggested following a few suggestions to bring betterment in geography as a prime discipline and blazing its significance and scope. First, discipline geography should be given due recognition as a science subject. Second, there is dire need to modify and update the syllabus at intermediate and degree levels. Third, provision of concerned teachers, practical instruments and presence of proper lab should be mandatory in higher institutes' particularly in the private sector and monitored strictly. Fourth, the vacant posts of geography teachers should be filled at a higher level and new seats should be created where they required in government institutes. Fifth, promotion of the skills in geospatial branches of the discipline like RS and GIS should be emphasized. In this context, modern and well-furnished labs should be established. Sixth, training and workshops sessions should be arranged for the teachers of both secondary and higher level for learning the new skills and innovative trends in the discipline. Seventh, Teachers at a higher level (university, college) should try to groom the students' practical geographical skills and raised their research potential. Eighth, satisfactorily, geography is being introduced at primary level in Pakistan but required to make sure that the subject is being taught by a geography teacher. As a result, not only the base of students will be stronger but also employing more geography graduates will be possible.

In the end it is acknowledged that the current research would be proven an initiative and will open new doors in geography as a scientific discipline by conducting further research in order to affirm its significance and authoritative place. The discipline now is not merely the description of places, cities, mountains, rivers, seas, etc. rather it provokes the curiosity and inquires nature to search out facts scientifically. Particularly, its applied fields like RS and GIS applications, its role in current educational systems, policy formulation and decision making and its usefulness to combat contemporary climatic and

environmental crises need to be realized and explored.

List of Abbreviations: B.A: Bachelor of Arts; B.Sc: Bachelor of Science; F.A: Faculty of Arts; CSS: Central Superior Services; GEES: Geography, Earth Science and Environmental Science; GIS: Geographic Information System; GPS: Global Positioning System; HEC: Higher Education Commission; IUB: The Islamia University of Bahawalpur; M.Phil: Master of Philosophy; M.Sc: Master of Science; NCRC: National Curriculum Revision Committee; NGO: Non-Governmental Organization; RS: Remote Sensing; S.E: Sadiq Egerton.

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Author's Contribution: M.M. initiated the idea of the research, designed the questionnaire, performed analysis and wrote the whole manuscript; S.S. conducted the survey and arranged the data; A.A.K. assessed and supervised throughout the research with useful suggestions. All authors have discussed the results and revised manuscript.

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