Primary Tendencies in Research on Geography Education

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Abstract

The principal aim of this study is to classify research on geography education performed in the process from 2000 to present, shed light on research hereafter, and determine the fields of geography education which should be given priority. The items that constitute data of this research are obtained as a result of data scan. As a result of archive scan, 33 magazines and papers submitted in the 20 national and international congresses and symposia between 2000 and 2009 are examined. Furthermore, post-graduate and PhD theses prepared in the field of geography education between stated dates are determined. Then, the obtained data were subjected to analysis of frequency, percentage, application and content to evaluate. In the analysis of data, these articles, papers, and theses were encoded depending on place, date, and number of publication and classified under 9 different subject titles. Consequently, a large part of studies were determined to have been in the fields of learning activities, measurement-evaluation, and program development.

Key Words

Articles of Geography Education, Theses on Geography Education, Research Subjects in Geography Education.

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As in all fields of science, geography has undergone important developments in the process from the antique ages to present day. In the antique ages, many thinkers saw geography as a science of description (Efe, 1996, p. 1). This perspective towards geography is known to have continued until the 19th Century. In this process, in which knowledge was based on a method of discovery and classification with respect to practical use in daily life, geography is often defined as description of world and its sections (İncekara, 2007, p. 110). In the 1900's geography has turned into a discipline which has adopted the mission of problem-solving as an applied discipline in many countries, namely the North American and European countries. In this process, geographers made significant contributions to works related with various global subjects, primarily in land utilization (Hardwick & Holtgrieve, 1996, pp. 3-4). In fact, though subjects in geography are permanently focused on the location, place and environment dimensions of an event, they have been dealt with and interpreted in different forms particularly during the process they went through the 20th century (Öztürk, 2007, p. 4). In our present world, geography is no longer a branch of science that makes memorization of the names of mountains, cities, or countries but it has turned into a discipline that examines natural, human, and economic events by establishing relations with humans (Doğanay, 1993, p. 7). In view of Alexandre Von Humbolt, geography "is a discipline that interconnects, synthesizes whether specific and general, through measurement, mapping and a regional approach" (Stoddart, 1986). The subject of geography which considers the constitution of a geographical conscious in individuals as a significant aim is many things that we see with our eyes and that comes to our minds (Foley, 1996). Raising individuals who are sensitive to social problems, capable of transforming received data into knowledge, gained competence in problem resolution, and developed consciousness of savings can be considered among the most important targets. In this context, the science of geography deals with location solely as a field of work, considers location almost like a living organism with its seen and unseen characteristics; therefore, it attempts to understand, use, form, and manage it (Demirci, 2008, p. 1). Geography which was initially based on descriptive information; has now turned into a branch of science in which digital technical modeling are largely used by means of computers and computer technology (Üçışık & Demirci, 2002, p. 117). However, despite all these perspectives and developments it is also evident that desired standards have not been at-

tained in geography education. One of the most fundamental reasons of ineffective use of geography in many fields of present-day world is the insufficiency of geography education. In case of conduct of geography education in accordance with the definition of "examination of earth with regards human activities" it will be seen to have produced solutions to many problems and its importance will be understood better (Efe, 1996, p. 1). One of the most important studies to be conducted in order to release geography from being a science of memorization is to relate geography with life to use various methods and techniques in the teaching process. Doğanay (2002, p.187) expresses that the most important means to relieve teaching and education from being memorization is use of purpose-conformant means and tools. In the present day, geography education new technologies, strategies, methods and techniques are started to be applied more intensely. In fact, this is the requirement of structuralist education model. Most recent studies related with geography education in the world are intensified on digital game based education, adaptation of latest technology to geography lessons, development of competences in geography, CBS applications in secondary education and spread of CBS based social projects, environmental and citizenship education. When we consider Turkey from this perspective, despite the latest developments, like changes in curriculum, teacher education, the number and quality of geographical education studies, particularly secondary education institutes cannot be said to present any training or education in world standards (İncekara, 2007, p. 109). Failure to have brought geography education into an applied phase is an important deficiency. It is because the deficiency of implementation makes learning more difficult, and even makes it impossible under certain circumstances (Akınoğlu, 2006, p. 95).

After these general explanations regarding historical course of geography and the science of geography, it is necessary to touch upon academic studies performed in the field of geography education in recent times in national and international arena. A research aiming at studies on geography education in geography magazines in the USA is very important in this respect. An academic discussion of contents and methodologies of geography education research are presented in this study (Bednarz, 2000). The study of Gerber (2000) evaluating international research in the field of geography education is a remarkable study. In another study of the same researcher, problems of international geography education

are discussed in the light of geography education programs of 31 countries (Gerber, 2001). In another study performed by Morgan (2002), the importance of geography education for a better world is taken up under critical perspective of geography. The study prepared by Kent (2000) and investigated the changing image and status of geography in a process in the light of some an international perspective is also remarkable. The same researcher takes up the history of geography education and dealt with potential mandatory fields (like international commissions, education programs, geographical resources) in geography education and submitted proposals for research on geography education in future (Kent, 2006). The research of Graves (2001) on geography education in France bearing deep marks of geographical concept of Vidal La Blache can be evaluated as an important academic study in this respect. Another study attempting to manifest general tendency in geography education research in Australia in the context of education of teachers gives important information regarding history of geography education process of stated country (Robertson, 2003). In another academic research with the subject of education on geography and environment in Europe, the importance of geography and environment education are emphasized (Papadimitrou, 2000). Works of Fisher and Binns (2000) on geography education are also remarkable.

A new period is entered in Turkey with the restructuring process in education faculties in 1998. Education faculties were made obliged to give priority to the field education of relevant disciplines within their structure. While studies were performed after this process in the field of education in relevant disciplines, other studies that gathered these studies under collection scan method and resorted to classification from various perspectives on the other hand were started to be performed. However, it is not possible to say sufficient research have been conducted towards the determination of fundamental tendencies towards field education of different disciplines. However, it needs to be mentioned that the studies performed by Akdeniz, Karamustafaoğlu, and Keser (2000) on physical education and the studies performed by Karamustafaoğlu (2009) on education of science and technology are important studies shedding light on research based on fundamental inclinations of different disciplines in field education. The research subjects determined as a result of study aiming at determining tendencies in education of science technology are grouped under 8 main titles and a significant portion of

studies are found to be intensified in fields of measurement-evaluation, education activities and program development (Karamustafaoğlu, 2009). In the outcome of another study including evaluation of post-graduate and PhD theses in fields of education in social sciences, it is concluded that prepared theses are varied with respect to subject and method in general, whilst method applications are most noticeable with regards subject (Aksoy, Sönmez, Merey, & Kaymakçı, 2009, p. 91). It is also necessary to draw attention to some studies that launched discussions on international platforms concerning historical process and current status of geography education in Turkey. One of these studies is the one dealing with geography departments in universities of Turkey, problems of these departments, their current potential and the history of geography education in our country under this perspective (Koçman & Sütgibi, 2004). In another study, a detailed evaluation is made on geography and geography education in Turkey (Şahin & Karabağ, 2005). The study discussing the place and importance of new education programs in the development of world perception of students on an international platform is remarkable (Karabağ & Şahin, 2007a). In fact, the most comprehensive and the most remarkable study among foreign publications is the one belonging to Öztürk (2005a). In this study, where various determinations are made regarding European Union and development of European dimension in geography education in Turkey, it is emphasized that candidates of teacher to become program implementers could not sufficiently experience active and structuralist learning methods in the process of their university education. Another study dealing with how and in what phases the notions required for an effective geography education should be provided has an important mission in the geography education collection in our country (Karabağ, 1998). The study (Özey, 1998) with the subjects of geography departments in the universities of Turkey, historical information about these departments, academic personnel and studies on these academics is also remarkable. Studies Özgüç and Tümertekin (2000) that made a great contribution to the development of this science as well as its geographical past are in the nature of being a masterpiece. The work that dealt with, examined problems related with geography education in Turkey and consequently suggested various proposals on these problems is an important study prepared following the process of restructuring of education faculties (Şahin, 2001). The study titled "Geography Educa-

tion in Theory and Practice" published recently dealt with the following main subjects: Development, content, education of geography, geography education program (2005), learning-education processes in geography education, teaching materials in geography education, geography education and information communication technologies, measurement and evaluation in geography education, professional problems of geography teachers and finally obstacles before geography education and its future (Karabağ & Şahin, 2007b). One of the principal resources on the basis of geographical information systems in Turkey belongs to Turoğlu (2000). The work of Demirci (2008) titled "geographical information systems" for teachers includes information on CBS as well as presenting important data on the fields of utilization of this system and particularly on how they can be implemented in secondary education geography lessons. The study of the same author titled "Evaluation of secondary education geography teaching and education in Turkey and USA with respect to curriculums, methods and employed tools-devices" is considered to be very important for providing geography education level of our country in a comparative manner with USA (Demirci, 2004). Another study that deals with major methods to be employed for an effective geography education besides contemporary education approaches in geography education is remarkable study (Güngördü, 2006). The study titled "Methods and Approaches in Geography Education" published recently by Taş (2007) and discussing geography education in Turkey is one of the exemplary studies in this field. Published under editorship of Özey and Demirci (2008) and dealing with various dimensions (subjects like planning in geography education, laboratory studies in geography lessons, location technologies in geography education, projects, mental maps, internet, etc.) of geography education is one of the most updated resources.

Academic studies attempted to be mentioned briefly above regarding geography and geography education in national and international arena have provided significant contributions to the development process of geography education. This study aiming at exhibiting *fundamental inclinations and work fields in geography education research* is expected to provide an important contribution to geography education studies in the process hereafter under the perspective geography education studies over the last decade.

Purpose of Research

The principal aim in this study is to determine studies published in the field of geography education in the process from 2000 to the present-day, classification of them with respect to fields of subject to determine the research subjects preferred in priority with respect to geography education in our country. In this context, researchers should be encouraged to work more on attitudes towards geography not sufficiently examined, computer aided geography education, geography text book examinations and inter-disciplinary approaches in order to present a more effective geography education and to develop geographical perspective in individuals. This study is also expected to provide more benefit to academics in the selection of academic study subjects.

Limitations

Research is limited with the content of accessed number of 33 magazines most of which are publications of education faculty between 2000 and 2009 and content of 20 books of papers.

Method

Research Model

Meta-analysis is employed in this research. Meta-analysis is a method aiming at attaining common conclusions by employing statistical means in order to synthesize outcomes of studies by gathering research conducted in a certain field and therefore attempting to reduce limitations of individual studies (Büyüköztürk, Çakmak, Akgün, Karadeniz & Demirel, 2008). Meta-analysis which is a collection scanning method in scientific research is the analysis of other analyses. It is a research method collecting outcomes of research conducted previously in a harmonized manner (Cohen & Manion, 2001). The number of studies conducted in any field has increased significantly in our present-day. Examination of all these studies, evaluation of data collection tools, methods to resolve data, findings and results are all very hard. Meta-analysis is a method that emerges as a result of collecting all these information under one single frame by keeping them subject to analysis again (Sağlam & Yüksel, 2007, p. 181).

Content of Study

The content of our research is comprised of 166 articles and 90 papers and 113 post-graduate and PhD theses prepared in the field of geography education after the 2000. 166 referred articles are obtained from 514 scanned issues in total from 33 national and international magazines. The study of 90 papers is attained upon examination of paper booklets prepared after 20 congresses, symposia and conferences held nationally or internationally.

Data Collection Tool

Studies constituting the content of research are accessed as a result of collection scan. In our study, primarily magazines including studies based on field education, chiefly magazines of arbitration published by education faculties are determined. Then some of them were accessed through library scans via internet, furthermore 20 paper booklets pertinent to national and international congresses held between 2000 and 2009 have been examined. Finally post-graduate and PhD theses prepared in the field of geography education since 2000 have been accessed from meetings held with relevant units of the YOK and its webpage.

Analysis of Data

Studies reached as a result of collection scan were evaluated by making subject to frequency, percentage application and content analysis. During analysis of data, these published articles and papers were encoded according to place, date and numbers of their publication, theses according to university and years of their publication, so they were classified in 9 different titles of subject. This classification procedure has been performed on the basis of aims and contents of research subjects.

Findings

33 arbitrated magazines and 20 paper booklets and theses published between 2000 and 2009 were examined to determine studies towards geography education. As a result of obtained data, 166 geography articles and 90 paper studies and 113 theses were accessed. Of all these accessed studies (369), 100 are related with learning activities, 71 with meas-

urement-evaluation, 54 with program development, 46 with geography education philosophy, 38 with computer aided geography education, 22 with book surveys, 19 with teacher education, 14 with attitudes towards geography, 5 with inter-disciplinary relations. When looked at distribution of tasks, studies are seen to be intensified particularly in fields of learning activities, measurement-evaluation and program development. Nearly 70% of studies are collected in these three stated groups.

Discussion

With this research conducted towards determination of studies performed in the field of geography education following restructuring process in education faculties performed in 1998-1999 teaching-education season, grouping them from various perspectives and shedding light to those who will perform academic studies, important findings are obtained.

As a result of analysis of data, research subjects in geography education in our country are classified as stated below and explanations are found towards them:

Learning Activities

Approximately 27.1% of studies are performed in this field. Subjects like various methods and techniques primarily modern education methods, structuralist learning, cooperation based learning, application of multiple intelligence theory in courses and use of various tools-devices and material development are dealt with. One of the important studies accessed in this field belongs to Cin and Öztürk (2002), the other to Efe (2002).

Measurement-Evaluation

The second area where most studies are performed after the field of *learning activities* is the subject field of *measurement and evaluation*. The studies in this field constitute 19.2% of all study subjects. One of the reasons of studies in this field holding a significant share is that measurement and evaluation is an indisputable factor of education process and it provides feedback (Karamustafaoğlu, 2009, p. 104). Another factor is submission of important objective findings to researchers with

various surveys. As known, measurement and evaluation in conventional education methods is generally based on result and instead of evaluating comprehension, it measures remembering (Demiralp & Öztürk, 2007, p. 266). On the contrary, the 2005 *Geography Course Education Program* has a structure that evaluates not only the result but also the process (Öztürk, 2008, p. 43). For these reasons, there is need for fields of academic study that examine and process different dimensions of evaluation for an effective and permanent education process. One of the most remarkable studies among studies dealt under the title of measurement and evaluation is an article (Cin, 2004) on how a group of students comprised of case study on Giresun province primary education 1.year students perceive the concept of sea in their close vicinity. Again, the study of the same researcher towards the determination of opinions of Turkish students on solar system is a remarkable study (Cin, 2007).

Program Development

This area constitutes the area with the highest rate after measurement activities and measurement-evaluations. 54 of 369 studies performed, approximately 14.6% covers this field. As known, education programs perform a very important mission. Though preparation of these programs is a serious process, one of the fundamental reasons of requiring an expert team is that they give functionality to official ideologies and national education policies of nations only by means of these programs (Geçit, 2008a). Criticism towards programs with such an important role should be conducted in a scientific, impartial, and academic framework (Karabağ & Şahin, 2007b). The study of Yaşar and Seremet (2009) from among studies related with education programs that investigates the 2005 geography education program prepared within the framework of structuralist education theory and evaluates under perspective of various matters is a remarkable study. Other important studies related with this field belong to Karabağ and Şahin (2007a) and Geçit (2008b).

Education Philosophy in Geography

On the basis of the fact that studies related with this field are not sufficient, it seems mandatory to spread geography education philosophy research from different perspectives and to conduct studies towards realization of real mission of geography. It is because geography is

not solely a science that makes people memorize names of mountains, cities, and rivers. In fact, the science of geography has gradually developed and has been enriched from 2200 years ago when its name was first started to be used until the present-day with respect to fields, methods of research and employed tools-devices (Demirci, 2008). On the other hand, in recent years, it has been comprehended better that education and educators have a more important role in establishing a sustainable future, a sustainable world. In this context, the subject of sustainable development has also been emphasized in the 2005 geography course education program (Alkış, 2007). Though geography holds a mission more important than many other sciences with regards preparing a world worthy of living, academic studies in this field are observed to be insufficient. Besides the mission of constituting an academic culture of education to facilitate expression of critical opinions on the discipline of geography and geography education should not be forgotten (Kaya, 2008, p. 337). One of the most important studies related with this field belongs to Öztürk (2005a), the other to Koçman and Sütgibi (2004).

Computer Aided Geography Education

With regards the 2005 geography education program prepared on the basis of structural approach, teachers should make tools like photographs, maps, films, CD's and simulation programs, multimedia and hypermedia; telecommunication services (like internet) a part of geography courses (Millî Eğitim Bakanlığı [MEB], 2005, p. 11). However, geographical locations which cannot be visited in this way can be moved to class environment and virtual trips could be made. In fact, an important implementation supported by structuralist theory is the use of technology in classes (Yanpar, 2007, p. 102). In our present-day world, it seems impossible to refer to any geography education without being computer aided. It is because that there has emerged the possibility to apply computers in many fields of geography. The evaluation of statistical data and drawings are the primary items (Seyhan, 1995). Unfortunately it is not possible to say that studies in this field are sufficient. One of the studies which could be considered important regarding this field belongs to Duman and Atar (2004), the other to Karatepe (2007).

Book Surveys

Text books are printed materials of teaching and education comprised of rich texts equipped with cognitive and perceptive competences conforming with age and knowledge level of student, prepared in line with principles formed on the basis of education programs that transfer contained information to student (Çiftçi, Çeçen, & Melanlıoğlu, 2007, p. 206). According to a research conducted, 85%-90% of content of applications in social sciences are provided from text books and source books (Myers & Savage, 2005: 18). Inclusion of all constituents of education program leads to this resource becoming the most preferred resource (Büyükalan, 2003, p. 117). The most remarkable study related with this field belongs to Yaşar and Seremet (2007).

Raising Teachers

Geography teachers often execute an important function with regards perceiving the location where children live, and the global world (Karakuyu, 2008, p. 341). The issue of how to raise persons (teachers) to teach geographical knowledge and competence and which competences they should have, are very important (Ünlü & Alkış, 2006). One of the most noticeable studies related with this field is the study with the subject of perception of global heating concept by candidates of teacher and their learning styles (Demirkaya, 2008). Another study which could be considered important is the study in which education of teacher is inspected in a process location becomes globalised on one hand, and becomes subject to localization on the other (Öztürk, 2005b).

Attitudes towards Geography

Although findings obtained as a result of surveys applied by Akengin (2008) on teachers, Geçit (2009) on students manifest predominance of positive opinions towards a new program (year 2005), there is need for more comprehensive research for determinations regarding true essence of geography. One of the most important studies conducted with the purpose of determination of attitudes towards geography is the study performed on 136 candidates of geography teacher from 6 different universities (Alkış, 2009). Another study examining perceptions of candidates for class teachers towards purpose of geography education in geography and primary education is very important (Öztürk & Alkış, 2009).

Inter-Disciplinary Relations

Only 5 studies have been determined on this area, which corresponds proportionally only to 1,3% of all studies in rate. When the studies are examined, they are seen to be related largely with pre-school education programs and historical geography.

Results

Consequently an important part of studies are seen to be intensified in the fields of learning activities, measurement-evaluation and program development. As a result of content analysis, it is seen that, generally, descriptive method and pre-test last test experimental design with control group is implemented in these studies as research model.

Another point determined as a result of our research is the truth that conducted academic studies are similar largely on content basis; they are not in complementary characteristic. Another important determination is that there exists no geography field research study in any of large number of magazines, chiefly publications of education faculty, while there are only 1-2 articles in some of them. A similar situation is also applicable for congress and symposium paper booklets.

Though the number of education faculties in Turkey has proliferated with the universities established in recent years, it is hard to say these faculties have sufficient number of experts. In fact, even though their number has increased in recent years, low number of arbitrated magazines to publish field education studies is found to be another determination.

Consequently, proposals are being presented against these stated problems:

1. Regarding *learning activities*, more studies to manifest implementation outcomes of modern education methods and techniques should be performed and development of different materials should be enabled.

2. Applicability and reliability levels of *measurement and evaluation* tools-devices provided for a more effective education process are highly important. For this reason, it needs to program measurement and evaluation process better and to perform more comprehensive studies.

3. Academic research on *education programs and text books* which are

extremely important for raising individuals and development of their perception of the world should not be similar to each other but complementary, more specific and more scientific.

4. Research needs to be increased on *geography education philosophy* that would manifest development and variation of geography in historical process from different perspectives towards causing perception of real mission of geography.

5. Academic studies need to give even more emphasis to *computer aided geography education* research in the academic studies hereafter, to follow developing technologies and to realize these studies in fields that teachers and candidates of teacher could find the possibility to implement.

6. In order to realize targeted earnings and to reach designed targets in students, it is highly important to raise teachers who are program implementers. With this purpose, it needs to increase academic research that would serve raising teachers of higher quality. Besides attitudes of teachers, candidates of teacher and students towards geography courses should be displayed rationally.

7. It needs to send a higher number of *academics abroad* for education experts under cooperation and coordination between YÖK-Universities and sufficient number of *post-graduate programs* are launched in our universities to provide resources in this field.

8. Finally, the *number of arbitrated magazines* to perform geography field education studies should be increased. However it seems to be a requisite that editorship and arbitration of these magazines are conducted by academics performing studies in the field of geography education.

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