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**Volume 10, Issue 3, Summer 2020****Contents**

Contents .....	249
Editorial Commissions.....	252
Indexed .....	254
From the Editor/Eyüp Artvinli .....	255

**Articles**

10.3.1. A Portfolio Model for the Teaching and Learning of GIS Competencies in an Upper Secondary School: A Case Study from a Finnish Geomedia Course Henna ANUNTI, Essi VUOPALA, Jarmo RUSANEN Research Article.....	262-282
10.3.2. Examining the Effects of using a Porphyrios-Tree Aided Constructive Teaching Approach with Pre-service Social Studies Teachers to develop Understanding about Ecological Interspecies Relationships Selami YANGIN, İlhan TURAN, Şule BİLGİN Research Article.....	283-300
10.3.3. Digitizing and Interpreting the World Map Drawn by Kashgarli Mahmud: Constructing Information Using Evidence Based Political Literacy Zekeriya Fatih İNEÇ, Erdal AKPINAR Research Article.....	301-327
10.3.4. Publication Tendency of Turkish Geography Journals Çağrı ÖZTÜRK DEMİRBAŞ Research Article.....	328-350
10.3.5. Teacher Opinions about Children's Awareness of Zero-Waste and Recycling in the Pre-School Education Years Ayhan BULUT Research Article.....	351-372
10.3.6. Reflection on Out-of-School Education Activities from the Textbooks to the Social Studies Curriculum Kibar AKTIN Research Article.....	373-399
10.3.7. A Search for a Method to Improve Critical Thinking Skills in Social Studies Teaching: Writing-to-Learn Fatih KAYAALP, Elif MERAL, Ufuk ŞİMŞEK, İbrahim Fevzi ŞAHİN Research Article .....	400-430

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10.3.8. Development of Civil Literacy Scale: A Study of Validity and Reliability Cengiz TAŞKIRAN, Zafer ÇAKMAK Research Article.....	431-444
10.3.9. Secondary School Students' Awareness of Environmental Education Concepts Selman ABLAK, Erkan YEŞİLTAŞ Research Article.....	445-466
10.3.10. Social Studies and Geography Teacher Candidates' Views on Coronavirus (COVID 19) and Online Education Process Tuğba Cevriye ÖZKARAL, Recep BOZYİĞİT Research Article.....	467-484

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## From the Editor

Dear readers of RIGEO,

Welcome to the third issue of Review of International Geographical Education-RIGEO for 2020. This is the twenty-ninth issue (Volume 10, Issue 3) of the RIGEO since 2011. In this issue we collected ten articles.

First paper is entitled “A Portfolio Model for the Teaching and Learning of GIS Competencies in an Upper Secondary School: A Case Study from a Finnish Geomedia Course” written by Henna ANUNTI, Essi VUOPALA and Jarmo RUSANEN from Finland. In this study, a design-based research (DBR) approach is used to develop a portfolio model for use in a Geomedia course in an upper secondary school setting. The design process occurred during January 2019 with pre-service teachers (n=8) and Geography teachers (n=2) at a university in Finland. There were six development cycles including problem analysis, design process and design solutions. The idea of a DBR approach is not only to create instructional materials to support students' in their learning and development of GIS skills, but also to be an educative process for pre-service teachers who have minimal experience in teaching GIS skills. The digital GIS portfolio model follows Bloom's taxonomy and includes progressively more demanding, inquiry-based activities for students. The digital GIS portfolio as a pedagogical practice was tested during Spring semester in 2019 with students (n=17) who were completing a Geomedia course at a local upper secondary school. It turned out that the use of a digital GIS portfolio is a very promising method for GIS education. Use of the portfolio improved student competence at using GIS; it developed student motivation to learn about GIS; and increased students' perceptions about the importance of GIS. However, a teacher-centered approach for teaching about GIS skills was also considered to be very important. The results of this study provide practical knowledge for Geography teachers and useful advice for developing teacher training in Geography.

Second paper of this issue is from Turkey entitled “Examining the Effects of using a Porphyrios-Tree Aided Constructive Teaching Approach with Pre-service Social Studies Teachers to develop Understanding about Ecological Interspecies Relationships” written by Selami YANGIN, İlhan TURAN and Şule BİLGİN. This study aims to find out the effects on pre-service teachers of a constructivist teaching approach aided by use of a Porphyrios-tree. Use of a Porphyrios-tree is thought to be the basis of and most principled conceptual teaching tool to aid meaningful comprehension about concepts of interspecies relationships. The study has a quasi-experimental design and uses a single-group pre-test and post-test model. The study group consists of 3rd Grade Social Studies pre-service teachers who are studying in the Faculty of Education at a university in Turkey. The study has a two-tier application, the

first of which is dedicated to conducting interviews with each participant for nearly 20 minutes in a suitable environment. Stage two is designed to conclude whether or not the responses from the individual or group interviews about the Porphyrios-tree drawings do help to resolve any misconceptions. A structured grid was used for data collection in these interviews. Data analysis was performed by analyzing the quantitative values obtained from the structured grid with SPSS 22.0. It was found out that pre-service teachers developed the most alternative conceptions in their learning about mutualism and commensalism. Also, after the application of Porphyrios-tree, the students' alternative conceptions about of "positive interaction (mutualism, commensalism)" was eliminated. More strikingly, the pre-service teachers' post-test scores are higher in all statements of the grid. Consequently, it is recommended to carry out further research with different variables to enlighten about whether the Porphyrios-tree is an effective teaching tool in other subjects.

Third article is entitled "Digitizing and Interpreting the World Map Drawn by Kashgarli Mahmud: Constructing Information Using Evidence Based Political Literacy" written by Zekeriya Fatih İNEÇ and Erdal AKPINAR from Turkey. In this study, a world map featured in Divan-ı Lugati't-Türk and drawn by Kashgarli Mahmud was made interactive through the use of Seyyah, a geographic information system (GIS) application developed in response to ADDIE, an instructional design teaching model. The geographical symbols and notes on the world map drawn by Kashgarli Mahmud were transferred to Seyyah's database so evidence-based learning could occur. The aim of the research is to evaluate the process of transforming the information obtained by the Social Studies teacher candidates with evidence into a jointly structured knowledge with the political literacy skill. The study is a qualitative action research project using a technical, scientific and collaborative approach. In this context, descriptive analysis was used to interpret the political literacy information which was interpreted and organized by Social Science teacher candidates into Seyyah's database. A standardized open-ended interview was conducted with the teacher candidates to detect the relationship between the use of Seyyah with evidence-based learning, political literacy and culture, the common structuring process and general status of information. Data from ten Social Science teacher candidates was analyzed by content analysis. The Social Science teacher candidates in the study were determined by the maximum diversity method which is a purposeful sampling method. According to the findings from Seyyah's database, Social Studies teacher candidates organized the political literacy information from the world map under four elements: cities; countries; regions and physical geography elements. There were three different categories of political knowledge in other geographical signs and



nations themes. Findings obtained from the opinions of candidates show that Seyyah requires the use of high-level thinking skills in evidence-based learning to jointly structure political literacy information in a database, and present and evaluate Turkish culture in a different form.

The fourth paper of this issue is about “Publication Tendency of Turkish Geography Journals” written by Çağrı ÖZTÜRK DEMİRBAŞ from Turkey. this study aims to reveal the publication policies of academic journals in Turkey which are categorized under the theme of Geography. For this purpose, academic Geography journals published in Turkey have been analyzed using a content analysis method. Also, a bibliometric analysis process has been applied to academics who publish in these journals and use the keywords geography education in their work as revealed by an academic search in Higher Education Institution (referred to as YÖK in Turkish). A Journal Review Form was used to analyze data from the study, which included seven journals. From this form, the aim, scope, index, frequency of publication, type of publication, and temporal change of journals can be determined and the general trends for these journals ascertained. As a result of the research, it is determined that six journals have been published over 20 years, albeit with interruptions, while one journal was in its 9th year of publication.

The fifth paper of this issue is about “Teacher Opinions about Children’s Awareness of Zero-Waste and Recycling in the Pre-School Education Years” written by Ayhan BULUT from Turkey. The aim of this study is to encourage the development of pre-school teachers by raising their awareness about zero-waste and recycling activities. The need for this research is linked to the lack of prominence about the concept of zero-waste in pre-school programs in Turkey, and also the limited inclusion of opportunities for pre-school students to learn about recycling strategies. This research uses a qualitative design and adopts a case-study approach. The study group was purposefully sampled using criterion-sampling. Interviews were conducted with forty pre-school education teachers who volunteered to support the research, had at least five years’ experience, and had received training about zero-waste and recycling activities. The interviews with pre-school education teachers were conducted once and took approximately fifty minutes. Content analysis and descriptive analysis approaches were employed. The research findings were based on each interview question, and tables were created under five headings. Research findings indicate that most of the pre-school education teachers stated the children’s awareness about zero-waste and recycling was insufficient during the pre-school education years. Teachers have stated that awareness about zero-waste and recycling can be enriched through the inclusion of specific content and the use of visual materials in pre-school education programs. It has also been determined that the use of abstract experiences based on concrete

experiences help pre-school education teachers to promote awareness amongst children about zero-waste and recycling. Additionally, pre-school education teachers emphasized that using an educational game will make the learning process about zero-waste and recycling strategies more enjoyable and will also be the most suitable method in terms of the children's age and levels of development. On the other hand, teachers have stated that in order to raise children's awareness about zero-waste and recycling, there should be further studies conducted about how such awareness will contribute to the social and emotional development of children as well as studies about how children can learn-by-doing.

The sixth paper of this issue is about "Reflection on Out-of-School Education Activities from the Textbooks to the Social Studies Curriculum" written by Kibar AKTIN from Turkey. This study aims to identify how the Social Studies Curriculum in Turkey (Ministry of National Education [MoNE], 2018) supports learning in environments outside of the school; the study also aims to determine the extent to which such learning opportunities are actualized in the activities found in the Social Studies textbooks published during 2019. The current study adopts a qualitative document analysis method. The textbooks to be examined for this study are the Social Studies 4th Grade to 7th Grade textbooks which are printed in 2019 and prepared by different authors and publishing houses. Such textbooks are also listed on Education Information Network (EBA), an official website affiliated with the Ministry of National Education, and the current Social Studies Curriculum (MoNE, 2018). It was determined as a result of the study that most of the activities related to out-of-school teaching and learning in the Social Studies Curriculum (MoNE, 2018) occur at 4th Grade and 5th Grade; also, the number of such activities gradually decrease across higher year or grade levels. The greatest amount of activities related to out-of-school education in the Social Studies textbooks are found in the 5th Grade. Homework activities, and other activities such as trip-observations, project assignments, oral history, local history, research assignments supported by family participation, and out-of-school activities including interviews were found in these textbooks. Homework is used the most among the out-of-school learning focused activities. Results from the study concludes that many out-of-school activities covered in the Social Science textbooks are carried out as classroom activities because of the uncertainty about how learning can be achieved in out-of-school learning environments. In contrast, numerous gains are specified by out-of-school education, therefore such gains have been transformed into out-of-school activities in the textbooks for the Social Studies curriculum.

The seventh paper of this issue is about "A Search for a Method to Improve Critical Thinking Skills in Social Studies Teaching: Writing-to-Learn" written by

Fatih KAYAALP, Elif MERAL, Ufuk ŞİMŞEK and İbrahim Fevzi ŞAHİN. The aim of this study is to investigate the effects of using multiple writing-to-learn activities on the critical thinking skills and dispositions of prospective teachers. For this purpose, the current study employed an embedded mixed-methods design and was carried out with 34 prospective Social Studies teachers who are studying at a public university. Research data were collected with the California Critical Thinking Disposition Inventory, developed by Facione, Facione and Giancarlo (1998), and adapted to Turkish by Kökdemir (2003); as well as using the Holistic Critical Thinking Scoring Rubric, developed by Facione and Facione (1994); and also, semi-structured interview forms developed by the researcher. In the research process, a variety of writing activities such as letters, diaries, columns and news articles were used for learning purposes. The quantitative data obtained in the research were analyzed descriptively and predictively, while the qualitative data were subjected to content analysis. The results of the study revealed that the writing-to learn activities led the prospective Social Studies teachers to do research, use evidence, get to know different ideas, and evaluate what they learned in a holistic way. Such a situation made a significant difference on the critical thinking skills and critical thinking dispositions of the prospective Social Studies teachers. Given such a result, it is recommended to draw upon writing-to-learn activities in order to develop different courses, subjects and higher-order thinking skills.

The eighth paper of this issue is about “Development of Civil Literacy Scale: A Study of Validity and Reliability” written by Cengiz TAŞKIRAN and Zafer ÇAKMAK from Turkey. The purpose of this research is to develop a valid and reliable Civil Literacy Scale to measure levels of civil literacy demonstrated by pre-service teachers. The participant sample for the research was determined by a convenience sampling method from prospective teachers studying in the Faculty of Education at a university in Turkey. Exploratory factor analysis occurred on 242 pre-service teachers while a test-retest operation was conducted on 50 pre-service teachers and confirmatory factor analysis was performed on 231 pre-service teachers. As a result of the exploratory factor analysis, a 25-item Civil Literacy Scale emerged with a total variance value of 57.23%. The four-factor structure revealed by this analysis was confirmed by a confirmatory-factor analysis process. In the test-re-test operation, the internal consistency co-efficient was determined as .81 which is in accordance with the consistency of the scale between the first test and the re-test. According to Cronbach's Alpha reliability test (one of the reliability tests carried out for the overall and sub-dimensions of the scale) the overall scale of 25 items received a value of 0.92, which proved that the scale was highly reliable. In this context, it can be stated that a reliable and valid Civil Literacy Scale was obtained.

The ninth paper of this issue is about “Secondary School Students' Awareness of Environmental Education Concepts written by Selman ABLAK and Erkan YEŞİLTAS” from Turkey. The aim of this study is to measure secondary school students' level of awareness about environmental education concepts. A quantitative survey model is used in this study. The sample of the study was taken at several central secondary schools in the Sivas province for students in Grades 5 – 8. There is a total of 524 students in the study. The “Environmental education concepts awareness scale (ÇEKFÖ)”, developed by Ötün, Artun, Temur & Tozlu (2017) consists of 22 items and is a data collection tool for this study. The IBM SPSS statistical 23 package program was used to analyze the data. The results were analyzed by means of arithmetic-mean, standard-deviation, Mann-Whitney U test and Kruskal-Wallis test. The data was evaluated with a significance level of 0.05. As a result of the research, it was concluded that secondary school students who participated in this research had a high level of awareness about the concepts of environmental education overall. On the other hand, it was concluded that there was no significant difference in secondary school students' awareness of environmental education concepts compared to gender and family speech status variables on environmental issues. It was observed that there was a significant difference between variables such as class, mothers' education, fathers' education and family monthly income levels.

The tenth paper of this issue is about “Social Studies and Geography Teacher Candidates' Views on Coronavirus (COVID 19) and Online Education Process written by Tuğba Cevriye ÖZKARAL and Recep BOZYİĞİT” from Turkey. The aim of this study is to determine the views of Social Studies and Geography teacher candidates about COVID-19 and online education processes. To do so, a qualitative research method was used. The research working group, in the school year 2019-2020, were those studying to be Social Studies and Geography teachers at a Faculty of Education in a Turkish university. A total of 37 teacher candidates participated in the study and a questionnaire consisting of open-ended questions developed by the researcher was used to obtain their views. A content analysis process was used to analyse the data. According to the findings from the study, teacher candidates stated they were more affected by this process because they were in their final year of study. They explained the reason for this situation as being related to their internship being incomplete and their dreams of graduation being negatively affected. Furthermore, the lack of adequate internet access and connection problems experienced amongst the teacher-candidates had a negative impact on their experience of online education processes. Therefore, according to the views of teacher-candidates, the process of considering the services, systems and infrastructure offered by the university needs to occur for effective online



education processes to be developed. For example, providing training to Faculty members and providing facilities such as computers to minimize technical problems and solve problems related to lack of access. It is recommended that universities should improve their infrastructure and plan to train lecturers and teachers for online education processes. To do so will benefit both the experience of, and minimize concerns about, online education processes.

Hope to meet you in last issue of 2020.

**Prof. Dr. Eyüp Artvinli**

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