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The Actual Status of Teachers' Utilization of Technologies for Elementary Social Studies Learning in the COVID-19 Era

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Abstract

This study aims to examine how the elementary social studies learning is currently carried out in the online environment two years later since the online learning was initially provided. Concretely, this study conducted a survey to see which tools the teachers were using for performing the online learning and what kinds of problems they were experiencing. The survey was conducted for about two weeks from November 15th, 2021, to November 30th, 2021, targeting total 116 teachers in charge of Grade3-6 of elementary schools in Seoul and Gyeonggi-do. After excluding four questionnaires with insincere responses, total 112 questionnaires were used for the analysis. The survey method was mail-back This study could find the characteristics of online social studies learning as follows. First, the technologies the teachers utilized the most were shown as Zoom, Padlet, and E-Learning Center in order. Second, the type of online social studies learning the teachers preferred the most was the real-time interactive learning. Third, regarding the biggest difficulties in online social studies learning, the teachers pointed out the decline of students' concentration on learning, no application of learning methods utilized for face-to-face learning such as simulation and role play, difficulty in cooperative learning between students, and gap of students' ability to utilize ICT. Also, as the strengths of online social studies learning, they mentioned the improvement of students' ability to utilize ICT, the students who would find the presentation difficult could even express themselves in writing, easiness to manage the individual portfolio of students, and the possibility of individualized learning for students. Lastly, as the measures for solving difficulties in online learning, they said the development/distribution of various teaching and learning materials necessary for online learning, securement of digital textbook that would be easy and convenient to utilize, and the improvement of teachers' ability to utilize ICT.

Keywords: Social studies online learning, COVID-19 era, Elementary social studies learning, Technology utilization

Introduction

The spread of the COVID-19 infectious disease has completely changed our everyday life. In March 2020, the World Health Organization declared the "pandemic" regarding the Novel Coronavirus. According to the government's social distancing policy, many companies introduced the working from home, and the non-face-to-face video conference has been routinized. It was also unavoidable to get some economic blows. Many industries like film industry and tourism industry were facing the path of decline while many self-employed people went through financial difficulties due to the social distancing policy.

The schools were no exceptions. The biggest change was the online learning. The teachers and students attended the non-face-to-face online learning instead of meeting with each other at school. In the COVID-19 pandemic situation, the Minister of Education ordered the school closure total four times. Thus, on March 2nd which was the first day of a new semester, the students could not go to school. The Ministry of Education established the guidelines for the operation of remote learning in which the remote learning would be recognized as the number of school days and instructional hours for online opening of school. Following the guidelines based on social distancing, the face-to-face learning and non-face-to-face learning were combined in every school.

In the lack of experiences or preparation for online learning, all the teachers, students, and their parents had to face the online learning, so it was unavoidable to have many trials and errors. Many researchers are continuously raising the problems with online learning situation such as insufficient interaction between teacher and student, educational gap, and educational evaluation.

In the COVID-19 pandemic situation, the transition to online learning many people anticipated as 'temporary' is now accepted as an irreversible change in the "untact new normal era." Some people also say the online learning that started all of a sudden is a test to prepare for the future public education. In order to accept the online learning as a change in the long-term educational paradigm, rather than a temporary educational change, we should diagnose the problems with the current online learning, and also understand the teachers' difficulties. Based on this, we can seek for the direction of education in the post-corona era.

Based on this consciousness of problem, this study aims to examine how the elementary social studies learning is currently carried out in the online environment two years later since the online learning was initially provided. Concretely, this study conducted a survey to see how the teachers were performing the online learning and what kinds of problems they were experiencing. Thus, the research question of this study is "How are the teachers utilizing technologies for elementary social studies learning in the COVID-19 era?" Understanding the actual status of elementary social studies learning in the COVID-19 era could contribute to getting prepared for the prolonged COVID-19 pandemic and also improving the quality of online social studies learning.

Theoretical Backgrounds

Social Studies Learning and Utilization of Technologies

Traditionally, the social studies has regarded technologies as important, which is related to the characteristics of social studies. First, in the aspect of goals of social studies, the goal of social studies is the cultivation of desirable citizenship. The desirable citizenship is destined to accept the requests of the time and society. With the recent advent of the 4th industrial revolution era, the importance of technologies like AI

(Artificial Intelligence) is more emphasized. This circumstance of the time requires the citizens equipped with problem-solving ability and information literacy ability using various technologies. This is the reason why this information literacy ability is emphasized as one of the core competencies that should be cultivated in the 2015 revised curriculum.

In the aspect of contents of social studies, its relation to technologies is more clearly shown. The social studies handles social phenomena or social changes as its main contents (Mo & Cha, 2021). In modern society, the newest technologies are quickly introduced, and the information using technologies is pouring in. Such technologies have an important meaning enough to take up a core axis of social change, so it is unavoidable for the contents of social studies to reflect this. Third, it is the aspect of teaching and learning methods of social studies. The social studies has traditionally regarded the inquiry learning or research learning as important. In the inquiry learning or research learning, the ability to collect and analyze the necessary data is essentially required for learners. What is used for collecting the necessary data is technology. Therefore, it is inevitable to emphasize technologies in the aspect of teaching and learning of social studies.

So far, many researchers have revealed the effects of utilizing technologies for social studies learning. Owing to technologies in social studies learning, the students can visit the actual place online without leaving their classroom, so the technologies is not only helpful for effective inquiry (Bolick, 2006; Doppen, 2004), but also helpful for the improvement of high-order thinking and long-term memory of learning (Saye & Brush, 1999). It is also possible to communicate with the state experts and colleagues in various regions by passing the limit of time and space (Berson, 2000).

However, Bolick et al. (2007) argued that the technology itself would not be a panacea for improving such ineffective teaching methods. What is more important than the function of technology itself is how the teachers perceive and utilize it for learning (Lee, 2018). Doolittle and Hicks (2003) also argued how to utilize technology would be more important than technology itself. They emphasized if the technology was used only as a tool for more effectively delivering the learning contents to students, it would be meaningless in social studies learning.

Thus, the teachers' role is more emphasized in the learning utilizing technologies. The integrated knowledge of content knowledge, pedagogical knowledge, and technological knowledge necessary when utilizing technologies for learning is called TPACK. Koehler et al. (2013) argued that TPACK would not be a simple mixture of content knowledge, pedagogical knowledge, and technological knowledge, but the interactive state of each knowledge area.

Social Studies Learning in the COVID-19 Era

In January 2020, Korea had the first confirmed case of the COVID-19 virus, and then in February, the government declared the level of "severity." Thus, on March 2nd when the new semester usually began, the Ministry of Education ordered the school closure, and postponed the day of school opening. Since then, total three times of school closure were announced. On April 9th, the high school students and Grade3 of middle school started attending the phased online school. Also, The Ministry of Education (2020) established the guidelines for the operation of remote learning to get ready for not being able to provide the face-to-face learning in classroom after school opening in the COVID-19 pandemic. The Ministry of Education classified the types of remote learning into three kinds such as real-time interactive learning, content-based learning, and task/assignment-based learning. In the real-time interactive learning, the teacher and students attend the real-time

video learning based on the real-time remote education. In the content-based learning, the students learn through the designated recorded lecture or learning contents while the teacher gives feedbacks to students after checking their learning situation. In the task/assignment-based learning, the teacher presents a task online based on the curriculum achievement standard while the students self-directedly perform the task.

The Ministry of Education focused on theories or individual activities if possible during the period of attending school. Once a confirmed case occurred, however, it was immediately changed to remote learning. Also, the extracurricular educational activities such as creative experiential activity and survival swimming were actively operated by utilizing various non-face-to-face methods. Following the social distancing level, they were flexibly adjusted (KEDI, 2020).

Korea is equipped with excellent infrastructure of information & communication technologies (ICT), and it also has made active investment in the relevant education field. However, the online learning in the COVID-19 pandemic is something different from the previous ICT project. Before the COVID-19 pandemic, the voluntary and sporadic online education was performed. After the COVID-19 pandemic, the large-scale online education was forced in the government level. Thus, the teachers, parents, and students faced the unprecedented online learning, which was led to the sudden transformational situation of education.

When the online learning was initially performed, many problems were exposed such as internet accessibility, selection of educational platform, and teachers' insufficient ability to utilize ICT. Also, in the unexpected situation, it was the teachers' duties to prepare the online learning. In such unfamiliar circumstances, the teachers prepared for online learning by mutually helping and depending on colleague teachers. Even though the confusing situation was continued, currently, the online learning and offline learning at school are combined by following the guidelines of the Ministry of Education and metropolitan/provincial offices of education. Also, the choice in attending school is given to students, so the home learning is also allowed.

Research Methods

Research Subjects

First, this study conducted a survey to understand how the elementary school teachers were carrying out the online social studies learning in the COVID-19 pandemic era. The survey was conducted for about two weeks from November 15th, 2021, to November 30th 2021, targeting total 116 teachers in charge of Grade3-6

Table 1. Contents of survey

Contents of survey
Tools utilized for online social studies learning
Types of learning preferred for online social studies learning
Difficulties felt in online social studies learning (multiple response)
Strengths of online social studies learning (multiple response)
Measures for solving teachers' difficulties in online learning (multiple response)
Characteristics of online social studies learning performed in the COVID-19 era(descriptive)

of elementary schools in Seoul and Gyeonggi-do. After excluding four questionnaires with insincere responses, total 112 questionnaires were used for the analysis. The survey method was mail-back.

Research Tools

The questionnaire used for this study was drafted by the researcher, and then completed after going through review by two holders of doctoral degree in social education. The concrete contents are as Table 1.

Teachers' Perception and Actual Status of Elementary Online Social Studies Learning

Tools Utilized for Online Social Studies Learning

The online learning tool that was currently the most utilized for online social studies learning was Zoom (78.3%), which was followed by Padlet (53%), E-Learning Center (37.4%), and TinkerBell (24.3%) in order. Both Zoom and Padlet are tools utilized for real-time interactive learning while both E-Learning Center and TinkerBell are tools used when uploading online tasks or video learning. Besides them, various tools were utilized including Google Workspace, Google Quiz, EBS Online Class, and Classting. Viewing the technologies used by teachers, the real-time interactive learning is the most carried out.

Types of Learning Preferred for Online Social Studies Learning

When asking about the most preferred type of learning for online social studies learning, the 75.7% of teachers preferred the "real-time interactive learning". The 12.6% of teachers preferred the "content-based learning" for uploading the designated recorded lecture or video, and the 11.7% of teachers preferred the "task/assignment-based learning" for presenting a task online and then providing students with feedbacks on the task. To the descriptive question asking about the reason why they responded like that, the most responses included "It is possible to interact with students', 'It is possible to observe the learning process of students," and "It is possible to immediately give feedbacks to students." In other words, the teachers regard the communication and interaction with students in social studies learning as important, so they prefer the real-time interactive learning the most.

Table 2. Difficulties Felt in Online Social Studies Learning

	Frequency (%)
Difficulty in control of students	27.8
Decline of students' concentration on learning	57.4
Teacher's insufficient ability to utilize ICT	5.1
Gap of students' ability to utilize ICT	29.6
Difficulty in interaction between teacher and students	16.9
Difficulty in cooperative learning between students	31.3
Teacher's excessive workload related to online learning	15.3
Lack of teaching and learning materials for online learning	16.1
Not able to utilize the learning methods like simulation and role play	32.3
Others	5.7

Difficulties Felt in Online Social Studies Learning

When asking about the difficulties felt by teachers in online social studies learning, the decline of students' concentration on learning (57.4%) was the most, which was followed by not able to utilize the learning methods like simulation and role play (32.3%), difficulty in cooperative learning between students (31.3%), gap of students' ability to utilize ICT (29.6%), and difficulty in control of students (27.8%) in order. The concrete contents are as Table 2.

Strengths of Online Social Studies Learning

Regarding the strengths of online social studies learning, the 51.8% of teachers said the improvement of students' ability to utilize ICT; the 36.8% of teachers said the students who would find the presentation difficult could even express themselves in writing; and the 36% of teachers mentioned the easiness to manage the individual portfolio of students. Besides them, there were also responses such as the possibility of individualized learning for students (35.1%), improvement of teachers' ability to utilize ICT (14.9%), and the possibility of process-focused assessment (14%) in order. The concrete contents are as Table 3.

Table 3. Strengths of Online Social Studies Learning

	Frequency (%)
Possibility of individualized learning for students	35.1
Improvement of students' ability to utilize ICT	51.8
Possibility of process-focused assessment	14.0
Easiness of student mutual assessment	5.1
Easiness to manage the individual portfolio of students	36.0
The students who find the presentation difficult can even express themselves in writing.	36.8
No strengths	2.6
Others	5.4

Measures for Solving Teachers' Difficulties in Online Learning

Regarding the measures for smoother online learning, the 56.5% of teachers said the development/ distribution of various teaching and learning materials necessary for online learning; the 34.8% of teachers said the securement of digital textbook that would be easy and convenient to utilize; the 33.9% of teachers said the improvement of teachers' ability to utilize ICT; and the 28.7% of teachers said the improvement of students' ability to utilize ICT. Besides them, there were also responses including the establishment of automated assessment system (24.3%) and increase of training for the utilization of technology in social studies learning (19.1%). The concrete contents are as Table 4.

The Biggest Characteristics of Online Social Studies Learning Performed in the COVID-19 Era

The teachers were asked to tell the biggest characteristic of online social studies learning performed in the COVID-19 era. As a result, many teachers mentioned the smooth performance of research learning and inquiry learning in social studies. Some teachers mentioned the possibility of individualized learning for students. On the other hand, as its weakness, they mentioned it was not smooth to carry out activities required

Table 4. Measures for Solving Teachers' Difficulties in Online Learning

	Frequency (%)
Improvement of teachers' ability to utilize ICT	33.9
Improvement of students' ability to utilize ICT	28.7
Establishment of automated assessment system	24.3
Securement of digital textbook that is easy and convenient to utilize	34.8
Increase of training for the utilization of technology in social studies learning	19.1
Development/distribution of various teaching and learning materials necessary for online learning	56.5
Others	4.0

for communication with others just like cooperative learning regarded as important in social studies. In the characteristics of social studies, the research learning or inquiry learning to collect and analyze many materials in online learning was easily carried out while it was difficult to perform the problem-solving learning or cooperative learning to solve problems by communicating and cooperating with other students. Thus, it would be necessary to find the measures for complementing the fact in which the important teaching and learning methods for online social studies learning are not realized.

Conclusion & Suggestions

This study aims to examine how the elementary social studies learning is currently carried out in the online environment two years later since the online learning was initially provided. Concretely, this study conducted a survey to see which tools the teachers were using for performing the online learning and what kinds of problems they were experiencing. Through this, this study aimed to diagnose the online learning as a measure for future education, and also to seek for the right direction. Thus, the research question of this study is "How are the teachers utilizing technologies for elementary social studies learning in the COVID-19 era?"

In the results of conducting a survey targeting total 112 elementary school teachers in Seoul and Gyeonggi region, this study could find the characteristics of online social studies learning as follows. First, the technologies the teachers utilized the most were shown as Zoom, Padlet, and E-Learning Center in order. Second, the type of online social studies learning the teachers preferred the most was the real-time interactive learning. The teachers responded it was because the teachers were regarding communicating with students and providing them with suitable feedbacks as the most important. Third, regarding the biggest difficulties in online social studies learning, the teachers pointed out the decline of students' concentration on learning, no application of learning methods utilized for face-to-face learning such as simulation and role play, difficulty in cooperative learning between students, and gap of students' ability to utilize ICT. Also, as the strengths of online social studies learning, they mentioned the improvement of students' ability to utilize ICT, the students who would find the presentation difficult could even express themselves in writing, easiness to manage the individual portfolio of students, and the possibility of individualized learning for students. Lastly, as the measures for solving difficulties in online learning, they said the development/distribution of various teaching and learning materials necessary for online learning, securement of digital textbook that would be easy and convenient to utilize, and

the improvement of teachers' ability to utilize ICT.

In order to provide more effective online social studies learning to get ready for the post-corona era, this study aims to make suggestions as follows. First, the online platform suitable for the characteristics of social studies should be constructed. In case of online learning, the research learning or inquiry learning of social studies can be more easily performed than face-to-face learning. However, in case when many students should communicate like cooperative learning and simulation, it is hard to do it in online learning. Compared to other subjects, the social studies has many learning methods to create outcomes by going through the process of discussion, debate, and arrangement with other people. Therefore, it would be necessary to establish the measures like the establishment of online platform for realizing this online learning method.

Second, the teachers' training related to the utilization of technologies for social studies learning should be expanded. The improvement of teachers' ability to utilize technologies does not mean the effective utilization of technologies for learning. The teachers' perfect utilization of technologies in daily life is an issue different from the utilization suitable for the goals of learning. The teachers should be able to utilize technologies suitable for the purpose of social studies learning. Therefore, it would be necessary to expand the teachers' training related to how to utilize technologies for learning and what are the effective measures for online social studies.

Third, it would be necessary to develop/distribute various teaching and learning materials that the teachers could utilize for online learning. Due to the sudden COVID-19 pandemic, all the teachers, students, and parents faced the online learning with no preparation. Until today, without any sufficient preparation, the online learning has been continued thanks to teachers' competencies and passion. Actually, the teachers' ability to utilize ICT has been improved. However, to cope with the prolonged COVID-19 pandemic or changes in the future education, more systematic online learning system should be established. Therefore, the office of education should develop various teaching and learning materials for online social studies learning, and then distribute them to teachers.

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