

# American Geography Teachers' Familiarity with and Knowledge of East Sea

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This study examines geography teachers' knowledge and perceptions on East Sea using a survey conducted at the annual conferences of the National Councils for Geographic Education (NCGE) in the United States in 2010 and 2012. Respondents were asked about their experiences with Korea or East Sea naming issue. This study analyzes how these experiences influence geography teachers' familiarity with and knowledge of issues concerning East Sea. The group that previously had attended educational programs on Korea and teaching about Korea showed higher degree of familiarity with and knowledge about East Sea naming issue than the group without experience. In particular, attending educational programs about Korea results in significant differences between two groups in both familiarity with and knowledge about East Sea naming issue. These findings indicate that East Sea naming issue can be useful educational materials for classes exploring Korea. Thus it is necessary to develop easily accessible educational materials about East Sea naming issue for geography teachers.

**Key word:** East Sea, American Geography Teacher, Korea

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## 1. Introduction

As regional tensions rapidly escalated over several issues with neighboring countries, the Korean government started to develop domestic public relations strategies targeting Korean nationals, as well as more outreach initiatives aimed at international communities. The Korean government can develop appropriate strategies for formulating and implementing its future practices on Korea or Korea-related issues by better understanding foreigners' knowledge or perception regarding Korea or Korea-related issues. Many studies have been conducted to understand foreigners' knowledge or per-

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ception of Korea (Yeom and O, 2003; Lee and Lee, 2006; Lee, 2010; Lee, 2012; Roh et al., 2012). Yoon and Choi (2012 and 2014) also suggested effective overseas public relations strategies for Korean territorial issues.

Modern geographic education has its earliest beginning in the 18th century when wars were frequent due to the territorial disputes among European countries. Besides passing on geographic knowledge to new generations, geographic education has taught concepts of territories and borders and has contributed to establishing national identities. This traditional goal of geographic education continues to be primary today. Considering the importance of geography teachers' role in educating the public on world regional geography, their knowledge about, familiarity with, and perceptions of Korea or Korea-related issues can influence the success of publicizing the Korean stance on these issues to the international communities. However, little has been documented about the knowledge or perception of Korea or Korea-related issues held by geography teachers around the world.

This study examines the United States' geography teachers' familiarity with East Sea naming issues by specifically evaluating their experience with Korea. Demographic information and years of experience teaching geography are also included to reveal the difference in respondents' familiarity with East Sea naming issues across demographic groups.

## 2. Materials and methods

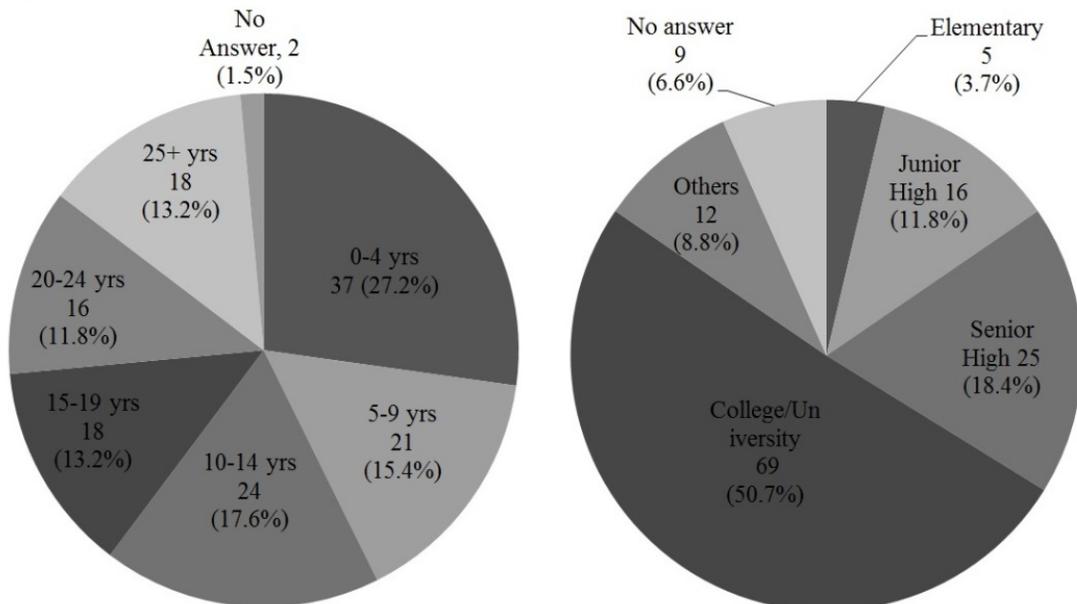
This study conducted surveys at two annual conferences of the National Councils for Geographic Education (NCGE) held in the United States in October in Savannah, Georgia in 2010 and in San Marcos, Texas in 2012. The survey questions were distributed at the conferences and a total of 136 valid surveys were collected: 81 in 2010 and 55 in 2012. The questionnaire asked respondents to rate their perception of territorial education and their familiarity with Korea or Korea-related issues, as well as their experiences visiting Korea, attending educational programs about Korea, and teaching about Korea or Korea-related issues in class. Respondents were also asked questions regarding demographic and years of experience teaching geography.

The analytical frameworks used in this study were the t-test and stepwise multiple linear regression. The t-test was used to find dissimilarities between two groups of re-

spondents regarding their familiarity with East Sea naming issues. Individuals were divided into two groups based on their experiences associated with Korea. Stepwise multiple linear regression was used to find the determinants that affected familiarity with Korea or Korea-related issues.

Figure 1 shows types of institution with which the respondents were affiliated at the time of the survey and years of service as geography teacher for all 136 respondents. About half of them work at institutions of higher education such as colleges or universities and approximately 30% work at junior and senior high schools in the United States. Others (8.8%) include institutions like publishers and private educational institutions or private education counselors. Among the 136 respondents, the proportion of junior teachers/professors with 0-4 years of service as geography teachers is the highest. Overall, the respondents are somewhat evenly distributed across years of service from 0-4 years to 25+ years of service.

Figure 1. Overview of respondents



(a) Types of institution that respondents are currently affiliated with

(b) Their years of service as geography teachers

### 3. Results and discussion

#### 1) Experience with Korea and familiarity with Korea or Korea-related issues

Of all 136 respondents, 15.4% percent visited Korea in the last 5 years from the year each survey was conducted in 2010 and 2012 (Table 1). Although the purpose of visiting Korea was not surveyed, an unexpectedly high percent of respondents have had their own experiences in Korea. About a third of all respondents have attended an educational program about Korea in the last 5 years (Table 1). Both results demonstrate many respondents get involved with Korea beyond the classroom environment. More than half (58.8%) of respondents have taught about Korea in their class (Table 1). It is unknown what subjects concerning Korea were addressed. However, 66.9% of respondents have taught about border and territorial issues in the classroom (Table 1). This result reflects that border and territorial issues are still being taught in the United States although other changes have been made to geography education. This result is also surprising because the United States has had no major territorial conflicts with neighboring countries in recent years.

Table 1 also shows respondents' familiarity with *East Sea* naming issues. Respondents were asked to answer questions either "yes" or "no." About 60% of respondents recognized issues concerning *East Sea*. This result indicates *East Sea* naming issues are topics already known to geography teachers. Of all respondents, a little over half of respondents saw a map naming the sea between Korea and Japan as the "*East Sea*" and "*Sea of Japan*," while 85.3% saw a map naming the sea as the "*Sea of Japan*" (Table 1). This indicates that familiarity with the sea name "*East Sea*" among the American geography teachers is already significant although familiarity with the "*East Sea*" is lower than familiarity with "*Sea of Japan*."

Respondents were also asked to rate their confidence in their knowledge regarding East Sea naming issues with five different levels of confidence, "not at all (1)", "not very (2)", "somewhat (3)", "very (4)", and "extremely (5)" (Table 2). 41.1% of respondents felt somewhat (3) to extremely (5) confident of East Sea naming issues. This result indicates that even respondents who saw a map naming the sea between Korea and Japan as the "East Sea" and "Sea of Japan," are not fully aware of East Sea naming issues. However, 27.2% of all respondents felt very (4) to extremely (5) confident that East Sea naming issues are vestiges of Japanese colonialism (Table 2). The percentage

becomes even higher (49.3%) when including 22.1% of respondents who answered “somewhat confident.” It is noteworthy that regardless of their level of awareness regarding East Sea naming issues, respondents believed that East Sea naming issues reflects a recent history of colonialism.

**Table 1.** Geography teachers' experience with Korea, experience teaching border and territorial issues, and familiarity with East Sea naming issues (N=136)

	Yes	No	No answer
<b>Experience with Korea</b>			
Have you visited Korea in the last 5 years?	21 (15.4%)	115 (84.6%)	0 (0.0%)
Have you attended any educational programs about Korea in the last 5 years?	42 (30.9%)	93 (68.4%)	1 (0.7%)
Have you ever taught about Korea in your class?	80 (58.8%)	54 (39.7%)	2 (1.5%)
Have you ever taught Korean students	61 (44.9%)	74 (54.4%)	1 (0.7%)
<b>Experience teaching border and territorial issues</b>			
Have you ever taught border or territorial issues in your class?	91 (66.9%)	41 (30.1%)	4 (2.9%)
<b>Familiarity with East Sea naming issues</b>			
I have heard about issues regarding “East Sea.”	81 (59.6%)	51 (37.5%)	4 (2.9%)
I saw a map naming the sea between Korea and Japan as the “Sea of Japan.”	116 (85.3%)	15 (11.0%)	5 (3.7%)
I saw a map naming the sea between Korea and Japan as the “East Sea” and “Sea of Japan.”	69 (50.7%)	58 (4.6%)	9 (6.6%)

## 2) Perception of education about national sovereignty

American geography teachers are interested in teaching border or territorial issues (Table 2). Respondents were asked to indicate the extent of their interest in teaching border or territorial issues with five different levels of interest from “not at all (1)” to “extremely (5).” A total of 94.9% of all respondents rated their interest in teaching border or territorial issues. Of all respondents, 68.4% believed that education about national sovereignty is either very important or extremely important. Including 22.1% of respondents who answer “somewhat important” indicates that a total of 90.5% agreed that information and issues about national sovereignty are worth teaching (Table 2).

**Table 2.** Geography teachers' knowledge of East Sea naming issues (N=136)

	Not at all	Not very	Some-what	Very	Extre-mely	No answer
Are you interested in teaching border or territorial issues	1 (0.7%)	6 (4.4%)	36 (26.5%)	39 (28.7%)	51 (37.5%)	3 (2.2%)
How important do you think education about national sovereignty is?	1 (0.7%)	7 (5.1%)	30 (22.1%)	46 (33.8%)	47 (34.6%)	5 (3.7%)
How confident are you in your knowledge about East Sea naming issues?						
Issues over the concurrent use of " <i>East Sea</i> " and " <i>Sea of Japan</i> "	45 (33.1%)	30 (22.1%)	24 (17.6%)	20 (14.7%)	12 (8.8%)	5 (3.7%)
Issues over the sea between Korea and Japan are vestiges of Japanese colonialism.	37 (27.2%)	20 (14.7%)	30 (22.1%)	23 (16.9%)	14 (10.3%)	12 (8.8%)

### 3) Effect of geography teachers' experiences on their familiarity with *East Sea* naming issues

Using the t-test, this study also examines the hypothesis that geography teachers' familiarity with East Sea naming issues varies according to their experiences visiting Korea, attending educational programs about Korea, and teaching about Korea or Korea-related issues in class (Table 3).

The importance of visiting Korea in the last 5 years relative to familiarity with East Sea naming issues is examined. Respondents who had visited Korea rated their familiarity with East Sea naming issues higher than those without the same experience. Significant F-probability (0.003) indicates that significant difference results from visiting Korea versus hearing about issues regarding East Sea, regardless their purpose in visiting Korea.

Respondents with experience attending educational programs about Korea also showed a significant difference in familiarity with East Sea naming issues (Table 3). This result indicates that geography teachers who have attended educational programs about Korea are well-informed about East Sea naming issues. The findings imply that any educational programs about Korea can make a difference in geography teachers' familiarity with and knowledge about East Sea naming issues. However, when respondents were asked whether they knew that East Sea naming issues are vestiges of Japanese colonialism, no statistical difference was found between respondents with and without experience attending educational programs about Korea.

**Table 3.** t-test results on geography teachers' familiarity with and knowledge of East Sea naming issues with their experiences of attending educational programs about Korea and teaching Korea or territorial issues in class (N=136)

t-test results		Visiting Korea	Attending educational programs about Korea	Teaching about Korea in class	Teaching about territorial issues in class	Year (2010 vs. 2012)	Gender (Male vs. Female)
I have heard about issues regarding "East Sea."	t df Sig. F	-3.071 130 0.003**	-3.259 130 0.001**	-2.910 129 0.004**	-1.731 127 0.086	1.176 130 0.242	-1.182 125 0.239
I saw a map naming the sea between Korea and Japan as the "Sea of Japan."	t df Sig. F	-1.047 129 .297	-0.408 129 .684	-2.868 128 .005**	-1.664 125 .099	1.154 129 0.251	-1.477 124 0.142
I saw a map naming the sea between Korea and Japan as the "East Sea" and "Sea of Japan."	t df Sig. F	-3.266 125 0.001**	-4.459 125 0.000**	-3.204 124 0.002**	-1.656 121 0.100	0.992 125 0.323	0.936 121 0.351
Issues over the concurrent use of "East Sea" and "Sea of Japan"	t df Sig. F	6.047 129 0.000**	4.656 129 0.000**	3.799 128 0.000**	1.469 125 0.144	-0.836 129 0.404	0.819 125 0.415
Issues over the sea between Korea and Japan are vestiges of Japanese colonialism.	t df Sig. F	2.358 122 0.020*	1.925 122 0.057	2.519 121 0.013**	2.325 118 0.022**	0.741 122 0.460	2.207 118 0.029*

\*: Correlation is significant at the 0.05 level.

\*\* : Correlation is significant at the 0.01 level.

Respondents were asked to rate whether experience with teaching about Korea in class makes a significant difference in their familiarity with and knowledge of East Sea naming issues. The results of the F-probability indicate that geography teachers' familiarity with and knowledge of East Sea naming issues are significantly improved by classroom experiences (Table 3). However, results of the F-probability indicate that experience teaching border and territorial issues does not improve geography teachers' familiarity with and knowledge of East Sea naming issues (Table 3).

In 2012 in Northeast Asia, territorial issues over the Senkaku/Diaoyu islands emerged and attracted public attention from the international community. This study also examines whether Senkaku/Diaoyu issues influence geography teachers' familiarity with and knowledge of East Sea naming issues by comparing 2010 and 2012 survey results. Results from the t-test between 2010 respondents and 2012 respondents show

no difference in their familiarity with and knowledge about East Sea naming issues (Table 3). This implies that East Sea naming issues are of less concern than Senkaku/Diaoyu issues, with which military conflict would be imminent. It is also turned out that gender is not a significant factor to influence geography teachers' familiarity with and knowledge about East Sea naming issues.

#### 4) Differences across experience concerning Korea

The results from the t-test allowed us to tell whether there were differences among experiences concerning Korea. The results, however, did not identify a difference in importance among experiences concerning Korea. Stepwise multiple linear regression is used to comprehensively analyze determinants that primarily affect familiarity with and knowledge about East Sea naming issues. The independent variables used here included experiences of visiting Korea, attending educational programs about Korea, teaching about Korea in class, and teaching border and territorial issues in class (Table 4). Three regression models for the following dependent variables were developed: I have heard about issues regarding “*East Sea*” (Model A), I saw a map naming the sea between Korea and Japan as the “*Sea of Japan*”. (Model B), and I saw a map naming the sea between Korea and Japan as the “*East Sea*” and “*Sea of Japan*.” (Model C). Table 4 presents the independent variables included in the regression models and their definitions. Table 5 shows the regression results for models tested. Overall, as shown in Table 5, the R<sup>2</sup>, F, and P statistics indicated that all four models tested were substantial. Among independent variables used in the models, attending educational programs about Korea in the last 5 years is the most significant determinant that affected familiarity with and knowledge about *East Sea* naming issues.

**Table 4.** Independent variables included in regression analyses (N=136)

Variable (Dummy)	Definition		
	Yes = 1	No = 0	
Experience visiting Korea in the last 5 years?	Yes = 1	No = 0	
Experience attending educational programs about Korea in the last 5 years	Yes = 1	No = 0	
Experience teaching about Korea in class	Yes = 1	No = 0	
Experience teaching Korean students in class	Yes = 1	No = 0	
Experience teaching territorial issues in class	Yes = 1	No = 0	
Interest in teaching border and territorial issues	Extremely = 5 Not very = 2	Very = 4 Not at all = 1	Somewhat = 3

In Model A, experience attending educational programs about Korea in the last 5 years and teaching about Korea in class in the last 5 years are significant determinants of respondents' familiarity with issues concerning East Sea (Table 5). Since East Sea naming issues are not major concerns for most Americans, including geography teachers, experience attending and teaching Korea-related subjects informs geography teachers about issues concerning *East Sea*. 81.0% of respondents who attended educational programs about Korea in the last 5 years had heard about issues concerning *East Sea*, whereas only 50.5% of respondents without the same experience had heard about issues concerning *East Sea*. Considering respondents' experiences teaching about Korea in class in the last 5 years, 70.5% who had this experience had heard about issues of *East Sea*, whereas 50.0% without the same experience know about issues concerning *East Sea*. A standardized coefficient ( $\beta$ ) value represents a regression coefficient if the model is fitted to standardized data and the value can be used to judge the relative importance of each variable to the model. Judging from  $\beta$  values, the effect of attending educational programs about Korea on the level of familiarity with issues concerning *East Sea* is greater than the effect of having taught about Korea in class.

In Model B, only experience teaching border and territorial issues is significant in explaining geography teachers' experience in seeing a map naming the sea between Korea and Japan as the "*Sea of Japan*" (Table 5). 89.0% of respondents who have had this experience saw a map naming the sea between Korea and Japan as the "*Sea of Japan*," whereas 78.0% of respondents without the same experience saw a map with "*Sea of Japan*."

In Model C, experience attending educational programs about Korea in the last 5 years and teaching about Korea in class in the last 5 years are significant determinants of respondents' experience seeing a map naming the sea between Korea and Japan as the "*East Sea*" and "*Sea of Japan*" (Table 5). 92.9% of respondents who attended educational programs about Korea in the last 5 years believe that they are from somewhat to extremely confident their experience seeing a map naming the sea between Korea and Japan as the "*East Sea*" and "*Sea of Japan*." However, the ratio drops to 39.8 for respondents without the same experience. Considering experience teaching about Korea in class in the last 5 years, 61.3% of respondents who have this experience saw a map naming the sea between Korea and Japan as the "*East Sea*" and "*Sea of Japan*," whereas only 35.2% of respondents without the same experience saw a map with both "*East Sea*" and "*Sea of Japan*."  $\beta$  values also indicate that the effect of attending educational programs about Korea on the level of experience seeing a map with both names is greater than that of the experience of teaching about Korea in class.

**Table 5.** Results of stepwise regression analyses for the familiarity with and knowledge of the issues regarding East Sea (N=136)

Dependable Variable	Effective Variable(s)	B1	$\beta$ 2	t	p
Model A3: I have heard about issues regarding "East Sea."	Attending educational programs about Korea	0.222	0.212	2.401	0.018
	Teaching about Korea	0.181	0.181	2.048	0.043
Model B4: I saw a map naming the sea between Korea and Japan as the "Sea of Japan."	Interest in teaching border and territorial issues	-0.081	-0.245	-2.803	0.006
Model C5: I saw a map naming the sea between Korea and Japan as the "East Sea" and "Sea of Japan."	Attending educational programs about Korea	0.335	0.310	3.365	0.001
	Teaching about Korea	0.191	0.187	2.157	0.033

1. B is an unstandardized coefficient.
2.  $\beta$  is a standardized coefficient.
3. R2 = 0.098, F = 6.699, and P = 0.002
4. R2 = 0.060, F = 7.858, and P = 0.006
5. R2 = 0.158, F = 11.095, and P = 0.000
6. R2 = 0.265, F = 14.511, and P = 0.000

#### 4. Discussion and conclusions

This study identified American geography teachers' experiences with Korea and their familiarity with and knowledge of *East Sea* naming issues. 15.4% of respondents have visited Korea in the last 5 years. About a third of respondents have attended educational programs about Korea in the last 5 years. More than half of respondents have taught about Korea in their class. These values imply many American geography teachers have had experiences with Korea in various ways.

American geography teachers' familiarity with and knowledge of issues concerning *East Sea* are also identified. They are largely familiar with issues concerning *East Sea*. About 60% of respondents aware issues regarding East Sea and more than 85% of respondents saw a map naming the sea between Korea and Japan as the "*East Sea*" and "*Sea of Japan*." However, respondents reported a low level of knowledge regarding East Sea naming issues. Only 23.5% of all respondents are confident about their knowledge regarding the issues over the concurrent use of "*East Sea*" and "*Sea of Japan*" and 27.2% of all respondents are well aware of the fact that the issues over the sea between Korea and Japan are vestiges of Japanese colonialism.

Attending educational programs, teaching about Korea, and interest in teaching border and territorial issues greatly influence geography teachers' familiarity with and knowledge about issues concerning *East Sea*. However, no significant gap is found in familiarity with and knowledge about issues concerning East Sea between 2010 when the first survey was conducted before the Senkaku/Diaoyu island issue occurred and 2012, after the issue broke. It is also turned out that gender is not a significant factor to influence geography teachers' familiarity with and knowledge about East Sea naming issues.

It is noteworthy that experiences attending any educational programs about Korea in the last 5 years and teaching about Korea are the most significant determinants of familiarity with and knowledge about issues concerning *East Sea*. This study identified that providing opportunities to learn about Korea and Korea-related issues can maximize geography teachers' accessibility to issues concerning East Sea, regardless of their interest in teaching border and territorial issues.

Based on the above empirical study, some implications of American geography teachers' familiarity with and knowledge about issues concerning *East Sea* can be drawn from the regression results. First, experience attending any educational programs about Korea is the key to enhancing American geography teachers' familiarity with and knowledge about issues concerning *East Sea*. Considering the importance of a geography teacher's role in educating students about world regional geography, it would be a very useful policy for the success of international public relations to provide them the opportunity to join various educational programs to engage with Korea-related issues. Second, experience teaching about Korea is also significant to their familiarity with and knowledge about issues concerning *East Sea*. Since *East Sea* can be covered only within larger Korea-related topics, the success of publicizing the Korean stance on issues over *East Sea* depends largely on how necessary geography teachers feel it is to teach about Korea in class. It is useful to develop Korea- and East Sea-related course materials including accompanying teaching aids such as lesson plans, illustrations, and visual materials. Third, it is also necessary to pay attention to geography teachers' interest in teaching border and territorial issues. No significant difference exists between their interest in teaching border and territorial issues and experience teaching border and territorial issues in class. Thus, it is necessary to find a way to connect issues concerning *East Sea* with their interest in teaching border and territorial issues.

These findings will help Korean government decide better strategies for formulating and implementing future international public relations practices. A future study may

consider finding better ways of assessing American geography teachers' needs, advertising Korea's stance on issues over *East Sea*, and getting the international community involved in these issues. Besides geography, several sub-disciplines are also included in the discipline of social studies including history, civics, economics, political science, sociology, and law-related education. In addition, teaching social studies in classes should follow the guidelines in the National Curriculum Standards for Social Studies. Thus, further examination of these sub-disciplines and the standards will provide additional perspectives on implementing future pedagogical approaches.

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