

*Full Length Research Paper*

# **Current situation and analysis of geography teachers' active learning knowledge and usage in Turkey**

**Fikret TUNA**

Department of Geography, Fatih University, Buyukcekmece, 34500, Istanbul, Turkey. E-mail: [ftuna@fatih.edu.tr](mailto:ftuna@fatih.edu.tr).

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**In parallel to the developments in the approach to education, the secondary education geography curriculum in Turkey was renewed in 2005. This new programme encourages the use of active learning methods and techniques in the classroom by adopting the idea that students should construct and interpret knowledge by actively participating in the process of learning. This study aimed to assess geography teachers' current knowledge, usage and evaluation of the most common active learning methods and techniques in Turkey. Data were gathered through a survey conducted at a vocational seminar organized by Ministry of National Education, with the participation of 90 geography teachers working in secondary schools throughout Turkey. Statistical analysis of the answers revealed that geography teachers' average knowledge of active learning methods and techniques was at the level of "heard of, but could not explain". The average usage rate of the techniques was 30%, and teachers' average evaluation grade was at the "moderate" level.**

**Key words:** Active learning, constructivist approach, geography education, secondary schools.

## **INTRODUCTION**

In today's world, we are experiencing rapid and fundamental changes more than ever before in every aspect of life. So there is a greater need than ever for individuals who have independent, critical and effective thinking skills; that is, they can solve problems by using analysis and synthesis, take responsibility for decision making, are eager for lifelong learning, take part in teamwork, have effective communication skills, and possess democratic attitudes and behaviors. Since the greatest task of education is equipping individuals with the skills and attitudes that are required today, education has experienced changes in mindset and training methods. Educational strategies, which promote teaching students how to access, assess and use information rather than just directly transferring information have become more important. Teaching methods and techniques based on a constructivist teaching approach within a student-centered learning environment have been widely accepted; and these emphasize students' inquisitiveness, practical orientation, critical thinking and skills in investigating, interpreting and synthesizing information (Açıkgöz, 2007; Jonassen, 1994; Tuna and İncekara, 2010).

Active learning, which can be placed within the constructivist approach to student learning, is a teaching approach in which learning is encouraged by actively engaging with the learning process, or put more simply, learning through doing. Active learning is used here as an umbrella term for instructional strategies, that contrasts with traditional approaches, wherein teachers do most of the work while students are passive receptors of knowledge. The term active learning covers a wide variety of learning strategies aimed at encouraging active student participation in learning. The active learning classroom is characterized by authentic learning tasks, collaborative learning, limited direct instruction from teachers and self-initiated individual learning activities. Many techniques can be used to get students involved, including experiential learning, cooperative learning, problem-solving exercises, writing tasks, speaking activities, class discussion, case-study methods, simulations, role-playing, peer teaching, fieldwork, independent study, library assignments, computer-aided instruction and homework. The method of active learning chosen will depend upon the particular situation and upon what is being taught to what level of student (Bonwell and

Eison, 1991; Gibbs, 1988; Houston, 1995; Meyers and Jones, 1992; Rotgans and Schmidt, 2011; Scheyvens et al., 2008).

A teacher-focused information transfer approach to education primarily involves information recall or fact recognition and thinking of the lowest order according to most taxonomies of thinking skills. However, a common goal of the strategies and methods of active learning is the facilitation of higher-order thinking skills, not just knowledge and recall of facts, but comprehension, application, analysis, synthesis and evaluation of knowledge (Bloom et al., 1984). In addition, active learning methods provide more opportunities to meet the needs of a variety of learning styles (Allen, 1995).

Active learning has been perceived as a radical change from traditional instruction and has received considerable attention over the past several years (Açıköz, 2007; Ercan, 2004; Jonassen, 1994; Prince, 2004). According to numerous studies, active learning methods of instruction are preferable to the more traditional and passive lecture approach (Bonwell and Eison, 1991; Chickering and Gamson, 1987; Dabbour, 1997; Felder et al., 2002; Felder and Brent, 1996; Simkins, 1999). Analogous studies have also been conducted in Turkey about active learning in different disciplines including math, physics, chemistry, biology, language and social sciences (Akkurt, 2010; Aksu and Tıǧlı, 2007; Aydede, 2009; Aydın, 2010; Aykaç, 2007; Arslan et al., 2011; Kalem and Fer, 2003; Kayalı and Tarhan, 2004). The results of these studies revealed that using active learning in classroom has a positive effect on educational outcomes.

As Geography for Life emphasized, geographic inquiry properly involves asking particular kinds of questions and using spatial data to answer those questions, rather than the rote memorization of isolated facts (GESP, 1994). So, active learning is also important for geography education. For this reason, some studies have also been conducted to design geography lessons according to the active learning approach. Scheyvens et al. (2008) have clearly listed 21 of these studies in their study. These studies range in scope from single class period active learning exercises to whole-course active learning implementations in human and physical geography.

In parallel to the developments in the mindset of education, the Turkish Secondary Education Geography Curriculum was renewed in 2005 (MEB, 2005). The new curriculum was designed on the basis of the constructivist learning approach. It encouraged the use of active learning methods and techniques in the classroom by adopting the idea that students should construct and interpret knowledge by actively participating in the process of learning. Therefore, the role of teachers as assistants or enablers to students' learning, rather than directly transferring the information, is emphasized in the new curriculum. Moreover, a special importance is given in the programme to skills that are required today such as

critical and creative thinking, communication, empathy, problem-solving, decision-making, and entrepreneurship. From this perspective, the 2005 Secondary Education Geography Curriculum has a content that supports the active learning approach.

In Turkey, the importance of using a constructivist approach and active learning methods in geography courses has been referred to in some studies (Akbulut, 2004; Akınođlu, 2004; Artvinli, 2010; Geçit, 2009). The findings of some studies have indicated that active learning methods and techniques make a positive contribution to geography education (Bekmezci and Ünlü, 2007; Coşkun, 2004; Gökçe, 2009; Köseođlu and Ünlü, 2006; Özgen, 2011). However, a comprehensive study investigating geography teachers' knowledge, perception and experiences of the use of active learning methods and techniques in the classroom has not been conducted since the new program was applied in 2005. This was an important gap in this field of research. Therefore, the aim of this study was to assess geography teachers' current knowledge, usage and evaluation of the most recognized (based on the investigation of studies done) active learning methods and techniques in Turkey.

## METHODOLOGY

The main data collection tool was an assessment survey. Data were gathered through a survey conducted at a vocational seminar organized by Ministry of National Education with the participation of 90 geography teachers working in secondary schools in each province throughout Turkey. This is a compulsory seminar which at least one chosen geography teacher attends from each province in Turkey. Based on the research questions of the study, the survey was prepared in four sections as follows:

(1) *Demographic questions*: This section included questions on gender, age, teaching experience, and the education level of the teachers.

(2) *Active learning education*: In this section, the teachers were asked three questions in order to establish whether they had attended any seminar or course about active learning methods and techniques. If yes, the time of the seminar or course as university or career years was asked. A third question asked them whether they wanted to attend such a seminar or not.

(3) *Active learning knowledge*: This section focused on the teachers' knowledge of the 39 most-common active learning methods and techniques in Turkey. The list of methods and techniques was prepared quite extensively after a comprehensive literature review of active learning in Turkey. Teachers' responses were given on the basis of a four-point Likert scale (1, not heard of; 2, heard of but could not explain; 3, have some knowledge to explain; 4, know enough to use in lectures).

(4) *Usage and grading of active learning*: In this section, the teachers were asked about the extent of self-usage of these 39 methods and techniques. Then, they were asked to evaluate them by choosing one grade out of three (1, poor; 2 moderate; 3, good).

Geography teachers' knowledge, experience, usage and evaluation of active learning were investigated in the study. The relationships between the demographic characteristics and answers the teachers gave to the different methods and techniques were analyzed with SPSS software. The reliability coefficient was 95% based on the factor reliability analysis of dependent variables

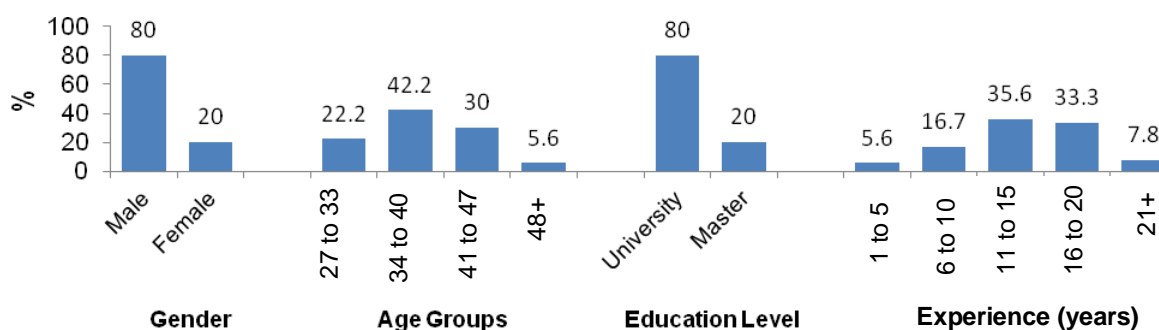


Figure 1. Distribution of respondents by gender, age groups, education level and experience.

(Cronbach's alpha = 0.950). In the study, descriptive statistics were used for demographic data and non-parametric tests were used, including the Mann-Whitney U and Kruskal-Wallis H tests, for the inferential statistics, because the data did not have a normally distributed interval variable according to a one-sample Kolmogorov-Smirnov test ( $P < 0.05$ ).

## FINDINGS

### Demographic data

According to demographic analysis of the respondents, out of 90 teachers, 20% were female ( $n = 18$ ) and 80% were male ( $n = 72$ ). This significant gender difference is related to the selection of representatives for each city. Analysis of the teachers' ages revealed that 22.2% of the teachers were between the ages 27 and 33 ( $n = 20$ ), 42.2% were between 34 and 40 ( $n = 38$ ), 30% were between 41 and 47 ( $n = 27$ ), and the remaining 5.6% were older than 48 years old ( $n = 5$ ). Analysis of the length of teachers' experience in their jobs revealed that 5.6% of the teachers had experience of between 1 and 5 ( $n = 5$ ) years, 16.7% had between 6 and 10 ( $n = 15$ ) years, 35.6% had between 11 and 15 ( $n = 32$ ) years, 33.3% had between 16 and 20 ( $n = 30$ ) years, and the remaining 7.8% had more than 21 years ( $n = 7$ ) experience. The question about the education level of teachers indicated that 80% ( $n = 72$ ) of them had university degrees and 20% ( $n = 18$ ) had masters degrees (Figure 1).

### Active learning education

Remarkable results were found according to the descriptive analysis of the answers given to the questions in the second part, which was about active learning education. In response to the first question, "Have you ever attended a seminar or course about active learning before?" it was revealed that 60% ( $n = 54$ ) of the teachers had attended a seminar or course about active learning

previously; and, 40% ( $n = 36$ ) of the teachers had not attended such training. Out of the 54 teachers who had attended, 9.3% ( $n = 5$ ) attended in their university years; 87% ( $n = 47$ ) attended during their teaching career and 3.7% ( $n = 2$ ) attended both in university years and in their career. Of the teachers with university degrees, 56.9% ( $n = 41$ ) had attended a seminar or course about active learning, while this rate was 72.2% ( $n = 13$ ) for teachers with masters degrees. Analysis of the answers given to the first question revealed that the proportion of females who had attended a seminar or course about active learning was 61.1% ( $n = 11$ ), which was higher than the proportion of males at 59.7% ( $n = 43$ ). Furthermore, the proportion who had attended a seminar or course was the highest for teachers with more than 21 years experience (100%;  $n = 7$ ). This was followed by 1 to 5 years (60%;  $n = 3$ ), 6 to 10 years (60%;  $n = 9$ ), 11 to 15 years (56.3%;  $n = 18$ ), and 16 to 20 years (53.3%;  $n = 16$ ).

The responses to the third question in this part, "Would you like to attend a seminar or course about active learning?" were quite encouraging as 97.8% ( $n = 88$ ) of the respondents wanted to attend. The analysis of the answers to this question revealed that 100% ( $n = 18$ ) of females wanted to attend active learning seminars or courses, while 97.2% ( $n = 70$ ) of the males wanted to attend such courses. Of the teachers with university degrees, 98.6% ( $n = 71$ ) wanted to attend, while the proportion was 94.4% ( $n = 17$ ) for teachers with masters degrees. The proportion expressing this wish was the highest (100%) for teachers with over 21 years of experience ( $n = 7$ ), between 1 and 5 years ( $n = 5$ ), and 6 and 10 years ( $n = 15$ ). This was followed by 96.9% for teachers with 11 and 15 years ( $n = 31$ ), and 96.7% for teachers with 16–20 years ( $n = 29$ ). These results are set out in Table 1.

In order to determine whether males and females differed significantly in their answers about attending active learning seminars or courses, the Mann-Whitney U test was performed. This was an appropriate procedure because the dependent variables were ordinal and

**Table 1.** Answers to the questions in the second part replied to by “yes”.

Question	Total	Gender		Education level		Experience in year					
		Male	Female	Univ.	MA	1 to 5	6 to 10	11 to 15	16 to 20	21+	
1	f	54	43	11	41	13	3	9	18	16	7
	%	60	59.7	61.1	56.9	72.2	60	60	56.3	53.3	100
3	f	88	70	18	71	17	5	15	31	29	7
	%	97.8	97.2	100	98.6	94.4	100	100	96.9	96.7	100

**Table 2.** Mann-Whitney U test results for the questions in the second part.

Question	Gender	N	Mean rank	Sum of ranks	U	Z	p
1	Male	72	45.63	3285.00	639.000	-0.107	0.915
	Female	18	45.00	810.00			
3	Male	72	45.75	3294.00	630.000	-0.711	0.477
	Female	18	44.50	801.00			

**Table 3.** Kruskal-Wallis test results based on experience.

Variable	Experience (years)	Number	Mean rank	Df	X <sup>2</sup>	p
Would you like to attend a seminar or course about active learning?	1 to 5	5	44.00	4	0.884	0.927
	6 to 10	15	44.00			
	11 to 15	32	45.39			
	16 to 20	30	45.48			
	21+	7	44.00			
Knowledge level of active learning methods and techniques	1 to 5	5	48.50	4	4.672	0.323
	6 to 10	15	45.60			
	11 to 15	32	39.09			
	16 to 20	30	46.62			
	21+	7	61.29			
Usage rate of active learning methods and techniques	1 to 5	5	30.88	4	1.988	0.738
	6 to 10	13	43.96			
	11 to 15	31	45.79			
	16 to 20	29	41.31			
	21+	7	36.79			

variances were unequal. The analysis of the responses (shown in Table 2) indicates that males and females did not differ in their answers ( $P>0.05$ ).

Correspondingly, the Kruskal-Wallis analysis of variance was performed to determine the differences between the career experiences of teachers in the third question about attendance at a seminar or course about active learning. The results (set out in Table 3) indicate that there is no statistically significant difference among the five experience groups ( $P>0.05$ ).

### Active learning knowledge

According to the descriptive analysis of teachers' self rating scores on 39 different methods and techniques used in active learning, the average knowledge level for all methods and techniques was 2.78 out of 4 (median = 2.71; standard deviation = 0.52; skewness = 0.342), which corresponded to “heard of but could not explain” but very close to “have some knowledge to explain”. The full results are set out in Table 4.

**Table 4.** Teachers' knowledge levels of active learning methods and techniques.

S/N	Method/technique	Average*	S/N	Method/technique	Average*
1	Brainstorming	3.48	21	Finding slogan or title	2.99
2	Concept mapping	3.41	22	Writing poem or short story	2.96
3	Preparing crossword	3.34	23	Preparing ad	2.84
4	Project	3.32	24	Learning by teaching	2.77
5	Discussion	3.30	25	Making song	2.75
6	Fieldwork	3.29	26	Mental mapping	2.60
7	Learning thr. research	3.27	27	What characteristics?	2.48
8	Preparing newspaper	3.26	28	Court	2.43
9	Real-life application	3.20	29	Speech in order (flash)	2.40
10	Concept network	3.20	30	Flash card	2.33
11	Open forum	3.19	31	Thinking in reverse	2.30
12	Role-playing	3.19	32	Press conference	2.20
13	Case study (showcase)	3.18	33	Lotto	2.12
14	Preparing poster	3.16	34	Snowball	2.00
15	Demonstration	3.14	35	Buzz	1.94
16	Thinking out loud	3.11	36	Alternate learning	1.88
17	Drama	3.09	37	Metaphor (analogy)	1.78
18	Making pictures	3.07	38	Corner	1.61
19	Forum	3.03	39	Aquarium (inner circle)	1.59
20	Panel	3.01		Average for all	<b>2.78</b>

\* 1, not heard of; 2, heard of but could not explain; 3, have some knowledge to explain; 4, know enough to use in lectures.

There was no method or technique about which teachers stated, "know enough to use in lectures" if the average scores were taken into account. The average score for half of the methods and techniques corresponded to the statement, "has some knowledge to explain".

Some results on averages were 3.48 for brainstorming, 3.41 for concept mapping, 3.34 for preparing crossword, 3.32 for project and 3.30 for discussion. The areas where teachers had higher scores, corresponding to "have some knowledge to explain", were brainstorming, concept mapping, preparing crossword, project, discussion, fieldwork, learning through research, preparing newspaper, real-life application, concept network, open forum, role-playing, case study (showcase), preparing poster, demonstration, thinking out loudly, drama, making pictures, forum, and panel. Teachers' knowledge levels were low, corresponding to "heard of but could not explain", for the methods or techniques of finding slogan or title, writing poem or short story, preparing ad, learning by teaching, making song, mental mapping, what characteristics?, court, speech in order (flash), flash card, thinking in reverse, press conference, lotto and snowball. In addition, their knowledge level was lowest, corresponding to "not heard of", for buzz, alternate learning, metaphor (analogy), corner, and aquarium (inner circle).

Mann-Whitney U tests were performed in order to investigate whether there was a significant difference

between gender and teachers' knowledge levels about active learning methods and techniques. The same tests were also performed to investigate the difference between the teachers based on whether they had taken a seminar or course about active learning. Analysis indicated that males and females did not differ significantly in their knowledge level of the active learning methods and techniques ( $P > 0.05$ ). Furthermore, teachers who had taken part in an active learning seminar or course and teachers who had not taken part did not differ significantly by gender in their knowledge level ( $P > 0.05$ ). This is shown in Table 5.

Additional tests were performed to determine whether experience was a significant factor in the teachers' knowledge level of active learning methods and techniques. The Kruskal-Wallis analysis of variance (see Table 3) indicated that, there was no statistically significant difference between the number of years of experience (1–5, 6–10, 11–15, 16–20, 21+ years) with respect to teacher knowledge levels, due to the fact that the p value was not smaller than 0.05 ( $P = 0.323$ ).

### Usage and grading of active learning

In this section, the teachers were asked about self-usage of these 39 methods and techniques. Then, they were requested to evaluate them by choosing one grade out of three (1, poor; 2 moderate; 3, good). The full results are

set out in Table 6.

The analysis of the teachers' usage levels of active learning methods and techniques showed that the average usage of all methods and techniques was 29.67%. The highest rate, 53.57%, was for teachers who used brainstorming in their lessons, followed by the technique of preparing crossword (52.48%). Other usage rates were quite discouraging in the sense that, the remaining methods were used by less than half of the teachers. Moreover, out of 39 methods and techniques, 13 of them were used by less than 20% of the teachers. The usages rates for snowball and corner were 9.64%.

When the teachers' evaluation was graded to the methods and techniques (by only taking the evaluation of teachers who used them), it was observed that average grade was 2.08, corresponding to "moderate". Although no rating reached "good level", the evaluation grades of brainstorming, preparing crossword, concept mapping, learning through research, project, case study (showcase), and real-life application were quite high compared to the others. However, the scores for metaphor (analogy), aquarium (inner circle), and corner techniques were quite low.

In order to assess whether there was a significant difference between gender and teachers' knowledge levels of active learning methods and techniques, Mann-Whitney U tests were performed. The same tests were also performed to investigate the difference between the teachers based on whether they had attended a seminar or course about active learning. The p values did not refer to statistically significant differences in the mean ranks of males and females ( $P > 0.05$ ). The results also revealed that teachers who attended an active learning seminar or course and teachers who didn't attend did not differ significantly in their knowledge level ( $P > 0.05$ ); (Table 5).

In order to determine whether experience was a significant factor in the teachers' usage rates of active learning methods and techniques, the Kruskal-Wallis analysis of variance was performed. The results indicated that there was no statistically significant difference between the number of years experience (1 to 5, 6 to 10, 11 to 15, 16 to 20, 21+ years) with respect to teacher usage rates due to the fact that the p value was not smaller than 0.05 ( $P = 0.738$ ); (Table 3).

## RESULTS AND DISCUSSION

Analysis of the teachers' responses to the questions in the second part about active learning education indicated that 60% of the teachers had attended a seminar or course about active learning, mostly in their career years. The analysis of the second question, which asked about their wish to attend such a seminar or course, encouragingly suggested that almost all of the teachers (98%) wanted to attend seminars or courses about active

learning. More specifically, the analysis showed that there were no statistically significant differences among teachers by gender and experience. Males and females have similar attitudes towards active learning. Experience does not change these attitudes.

When the average self-rating scores of teachers for 39 active learning methods and techniques was considered, the teachers rated their knowledge at a level slightly lower than "have some knowledge to explain". According to average scores, no method or technique was "known a lot to use in lectures", but 20 of them (51%) were known at the level of "have some knowledge to explain". Among the teachers, the most known method or techniques were brainstorming, concept mapping, preparing crossword, project, discussion, and fieldwork. However, buzz, alternate learning, metaphor (analogy), corner, and aquarium (inner circle) were the least known among the teachers, where knowledge levels were under the level of "heard of but could not explain".

Looking at the usage rates for active learning methods and techniques in the lessons, the average usage rate was 30%. The results were quite discouraging in the sense that two teachers out of three did not use these active learning method or techniques in their classes. The most commonly used methods or techniques were brainstorming, preparing crossword, concept mapping, learning through research, project, case study (showcase), and making pictures. However, the usage rates of these methods or techniques were only between 40 and 54%. The least common methods or techniques that were used were lotto, alternate learning, aquarium (inner circle), snowball, and corner, where usage rates were lower than 15%.

When teachers' knowledge and usage of active learning methods and techniques was compared, it was observed that the three best known methods were also the three most commonly used methods. Looking at the first ten best-known methods, seven of them were also among the first ten most commonly used methods and techniques. Only, discussion, preparing newspaper, and real-life application were not among this list. In addition, open forum, forum and panel methods drew attention because of teachers' high knowledge levels of them, contrasted with low usage levels. Although they were known by the teachers at the level of "have some knowledge to explain", their usage rates were 20% and below. Conversely, writing poem or short story method had a low knowledge level corresponding to "heard of but could not explain" (2.96), compared to its high usage level with a rate of 40%. In addition, two of the three least-known methods were among the three least commonly used methods. Furthermore, eight of the least-known methods were also among the ten least used methods.

When the teachers' evaluation rates of the methods and techniques was assessed (by considering the evaluation of teachers who used it), the average

**Table 5.** Mann-Whitney U test results based on gender and seminar or course attendance.

Variable	Based on	Group	N	Mean rank	Sum of rank	U	Z	p
Knowledge level of active learning methods and techniques	Gender	Male	72	44.60	3211.50	583.500	-0.651	0.515
		Female	18	49.08	883.50			
	Active learning seminar or course attendance	Yes	54	49.42	2668.50			
		No	36	39.63	1426.50			
Usage rate of active learning methods and techniques	Gender	Male	69	41.27	2847.50	432.500	-1.349	0.177
		Female	16	50.47	807.50			
	Active learning seminar or course attendance	Yes	52	46.81	2434.00			
		No	33	37.00	1221.00			

**Table 6.** Usage and evaluation of active learning methods and techniques by teachers.

	Method/technique	Usage (%)	Evaluations*		Method/technique	Usage (%)	Evaluations*
1	Brainstorming	53.57	2.45	21	Making song	31.33	1.92
2	Preparing crossword	52.38	2.44	22	Preparing ad	27.71	2.07
3	Concept mapping	49.40	2.39	23	Speech in order (flash)	22.89	2.11
4	Learning through research	48.78	2.45	24	Court	22.89	1.94
5	Project	46.34	2.60	25	Flash card	20.48	2.11
6	Case study (showcase)	43.37	2.41	26	Open forum	20.24	2.00
7	Making pictures	40.48	2.27	27	Thinking in reverse	19.28	2.00
8	Writing poem or short story	40.00	2.14	28	What characteristics?	19.28	1.94
9	Fieldwork	39.76	2.29	29	Mental mapping	19.28	1.81
10	Concept network	39.29	2.35	30	Panel	18.07	1.95
11	Role-playing	38.55	2.29	31	Press conference	17.07	1.90
12	Preparing newspaper	38.55	2.34	32	Buzz	16.87	1.80
13	Drama	38.55	2.21	33	Forum	15.29	1.77
14	Preparing poster	38.10	2.26	34	Metaphor (analogy)	14.46	1.40
15	Discussion	36.90	2.09	35	Lotto	13.25	1.90
16	Learning by teaching	35.71	2.28	36	Alternate learning	13.25	1.91
17	Real-life application	34.94	2.41	37	Aquarium (inner circle)	12.05	1.33
18	Demonstration	34.52	2.09	38	Snowball	9.64	1.70
19	Thinking out loud	32.53	2.24	39	Corner	9.64	1.50
20	Finding slogan or title	32.53	2.14		Average for all	29.67	2.08

\* For evaluations: 1, poor; 2, moderate; 3, good.

evaluation score corresponded to “moderate”. The average evaluation rate was not at “good” level and even project method, that had the highest score, had an average of 2.60. The evaluation scores were the highest for project, learning through research, brainstorming, preparing crossword, and concept mapping. These methods or techniques were also the most commonly used ones. According to average evaluation rates, aquarium (inner circle), metaphor, corner, snowball and forum had the lowest scores, for which usage rates are also below 15%. A parallel

ranking was also observed after comparing the usage and evaluation rates of active learning methods and techniques. However, project method, which had the highest evaluation score, was interestingly at the fifth place in the usage rate list. In addition, discussion, demonstration, and making song had low evaluation rates compared to their quite high usage rates.

Results also indicated that, teachers’ knowledge levels and usage rates did not statistically differ when analysed on the basis of gender and experience. However, the knowledge levels of female teachers with

over 21 years of experience and teachers who took a seminar or training were higher than others. For usage rates, the average levels of females, 11 to 15 year experienced teachers, and teachers who took a seminar or training were higher than others.

In conclusion, the following remarks can be underlined. Geography teachers' average knowledge about active learning methods and techniques was at the level of "heard of but could not explain". Therefore, geography teachers surveyed did not have enough knowledge about the usage of active learning in the classroom, despite 60% of them having an active learning education background. One of the reasons may be the poor quality of active learning education that teachers have taken before. However, the reasons of this strange situation should be investigated well in further studies. Furthermore, the average usage rate of active learning techniques was quite low at 30%; and the usage rates were not more than 54% even for the most used methods. In addition, teachers' average evaluation grade for the methods and techniques was at "moderate" level. This grade should be seen normal for the teachers who don't know the usage of the methods and techniques well. Therefore, some key steps taken by authorized institutions could help teachers to fully understand the usage of active learning methods and techniques. Since almost all of the teachers surveyed were eager to attend seminars about active learning, such vocational seminars should be made available to the teachers. Equipping the teachers with the knowledge of active learning, not only in theory, but also in practice may help design lessons, which are in accordance with the objectives and guidelines of the new geography curriculum.

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