Using six thinking hats to raise intercultural awareness: A pre-experimental study

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ABSTRACT: Due to the increased mobility of the world population driven by technology, people in today's world are interacting more than ever. Globalization reveals the need for intercultural awareness. Therefore, this study aims to raise the intercultural awareness of EFL learners, aged between 12 and 13 through the use of Six Thinking Hats model with several modifications and presents an alternative way for the original model proposed by Edward De Bono. A purposive sampling method was used to select participants assumed to have less intercultural awareness as a result of the pretest. For close and in-depth observation, one group pretest-posttest design was preferred. To track the differences and similarities that occurred in the behaviors of participants during the treatment; qualitative data were collected and analyzed with the use of the constant comparison method. The findings suggested that the modified version of Six Thinking Hats model showed effects on participants' attitudes. Participants' approach to culture-based issues switches from personal judgments to questioning and understanding.
Keywords: intercultural awareness, intercultural communication, parallel thinking, six thinking hats

Usando el método de "los seis sombreros para pensar" para aumentar el conocimiento intercultural: Estudio pre-experimental

RESUMEN: Debido al aumento de la movilidad de la población mundial impulsada por la tecnología, las personas de todo el mundo interactúan entre sí más que nunca. Esta globalización revela la necesidad por el conocimiento intercultural. Este estudio tiene como objetivo aumentar el conocimiento intercultural entre los estudiantes de inglés como lengua extranjera que tienen entre 12 y 13 años mediante el uso del modelo "Seis sombreros para pensar" con varias modificaciones y presentar una alternativa al modelo original propuesto por Edward De Bono. Se utilizó un método de muestreo intencional para seleccionar a los participantes que se supone que tienen menos conocimiento intercultural como resultado de la prueba previa. Para lograr una observación cercana y profunda, se eligió un diseño grupal de preprueba-posprueba. Para rastrear las diferencias y similitudes que ocurrieron en los comportamientos de los participantes durante el tratamiento, se recopilaron y analizaron

datos cualitativos con el uso del método de comparación constante. Los resultados mostraron que la versión modificada del modelo "Seis sombreros para pensar" muestra efectos en las actitudes de los participantes. El enfoque de los participantes con respecto a los problemas de base cultural cambió sus juicios personales al cuestionamiento y entendimiento.
Palabras clave: conocimiento intercultural, comunicación intercultural, pensamiento paralelo, Seis sombreros para pensar

1. Introduction

Fading borders of the globalized world call for new skills in language teaching classrooms. One of these skills is intercultural awareness, which will be the focus of this study. Intercultural awareness is often misunderstood in language teaching since the word "intercultural" reminds people of only other cultures, especially the culture of target languages. However, in broad terms, intercultural awareness means recognizing all cultural differences including linguistic and nonlinguistic clues as a necessary condition in communication, therefore, it is a dynamic and fluid term in today's world where all cultures are closely intertwined. There have been many studies investigating intercultural awareness, competence, and communication in the literature and most of them have been published in recent years. Different techniques have been used in these studies such as the use of digital photographs, literature, poems, films, and technology in the classrooms (see Abida & Kuswardani, 2017; Kiss & Weninger, 2017; PM Ribeiro, 2016; Tomlinson, 2019). However, none of the studies have so far adopted a model originally used to improve parallel thinking. Six Thinking Hats was designed by Edward De Bono to train the thinking skills of people. In the present study, Six Thinking Hats model was adapted with some modifications to raise the intercultural awareness of adolescents. Since awareness-raising is a difficult concept to measure, a qualitative approach with the use of one group pretest-posttest design was implemented and observable changes have been analyzed through the constant comparison method. In sum, the purpose of this pre-experimental design is to identify the possible effects of Six Thinking Hats model on secondary school students' intercultural awareness.

2. Literature Review

2.1. Six thinking hats model

Six Thinking Hats is a highly popular model of thinking in the field of education and the use of this model goes back to the 1980s during which Edward De Bono conceptualized his ideas. The foundation of the model depends on the idea that thinking is the ultimate resource of humankind. As stated by De Bono, "If you act as if you were a thinker, you will become one" (1985, p.5). With this purpose in mind, the model was designed to create artificial contexts for the participants, using six colored hats literally or metaphorically, each of which represents different modes of thinking. The rationale behind Six Thinking Hats

model is to direct participants' attention to whatever is chosen to discuss, thereby raising awareness. What pushes participants to think in a specific mode is the colors. Six colored hats take on a mission to switch on the cognitive thinking modes. De Bono (1985) explains the missions of colors as the white hat speaking the truths and numbers, the red hat speaking emotions and feelings, the black hat speaking the risks and disadvantages, the yellow hat speaking positivism and advantages, the green hat speaking creativity, and the blue hat speaking the thinking process by controlling the other hats. According to Payette and Barnes (2017), students using Six Thinking Hats model often get confused about how to start the thinking process, but the use of hats opens the gateway for these novice thinkers. Besides, the hats act as trainers of the thinking process as each goes with manageable missions. Thinking training with hats has been considered to have a great value since many other thinking models need solid arguments to start, "which is great but not enough" (De Bono, 1999, p.3). At this point, de Bono's six hats model brings the thinking process from "what is" to "what can be" (p.4), and he builds what he calls parallel thinking upon the model. According to De Bono (1999) in parallel thinking, each person looks from the same perspective at the same moment, and they work collaboratively to understand and gain an insight into the issue. De Bono avoids using different colors of hats at a time during the implementation of the model as he believes using different hats leads to a conflict, which might be a hindrance to parallel thinking. However, this present study has a different approach to Six Thinking Hats, not to disregard de Bono's work, but to be able to see in what other ways Six Thinking Hats can function successfully.

2.2. Intercultural awareness

Hymes' (1972) proposal of communicative competence transformed the way language teaching was viewed. His emphasis on sociocultural knowledge began the era in which situational variables were taken into consideration while communicating, and the prevailing use of English across the world resulted in an expansion in the definition of intercultural competence by including the local cultures displayed by Kachru's (1985) outer and expanding circles. Therefore, Byram's (1997) conceptualization of *Cultural Awareness*, which refers to "a conscious understanding of the role culture plays in language learning and communication in both first and foreign languages" (Baker, 2012a, p. 65), failed to satisfy the needs of the globalized world where each culture started to be independent (Chen & Starosta, 1998). While cultural awareness responded to the needs to a certain degree, it was mainly regarded as making a comparison between one's home culture and the target cultures. Soon after, instead of categorizing cultures, approaching culture as a dynamic and hybrid construct came forth. While English is spoken by non-native speakers more than native speakers, raising awareness for particular cultures will be beside the point. For this reason, *Intercultural Awareness* became the later version of cultural awareness. Followingly, Byram's (1997) model of *Intercultural Communicative Competence* has fit in the demands of globalization and the post-method era, which is the new language pedagogy giving significance to particularity, possibility, and practicality (Kumaravadivelu, 2006). In Byram's model, competence

is seen as a multi-dimensional concept including knowledge, attitudes, interpretation skills, interaction skills, and critical culture thought. Additionally, having intercultural awareness is regarded as a guiding step for the ability to negotiate and mediate between sociocultural-embedded communication modes. In this regard, language learners are expected to perform favorable attitudes while communicating with people who come from diverse cultural backgrounds and to acquire an ability to cope up with the challenges that they might face in intercultural communication. With Bennet's (2004) terms, learners should be moved from the stage of *ethnocentrism* (denial, defense, minimalization) to *ethnorelativism* (acceptance, adaptation, integration). Such a shift requires learners to hold a critical perspective, though (see Baker, 2012a; Kramsch, 2009). In order words, to be able to negotiate and mediate, they should perform inquiry-based and reflexive attitudes. In the light of new understanding, Baker (2012b) states that language teachers have positive attitudes regarding the integration of intercultural awareness into language teaching. Yet unfortunately, of all the mainstream approaches intercultural awareness seems to remain in the back. One possible reason might be that culture is not regarded as an essential skill in language classrooms, and the majority of the classroom work is done on behalf of improving core skills (listening, speaking, writing, and reading). Furthermore, Tomalin (2008) who named *culture* as "the fifth skill" of language teaching claims that culture always remains behind. Another reason might be related to teachers' lack of knowledge about the integration of intercultural awareness into their classroom. For classroom applications, Baker (2012a) suggests that exploring local cultures by creating classroom discussions can let learners build bridges between the local and the global, or vice versa. Evaluating language teaching materials can lead learners to critically approach the cultural norms. Besides these, with the help of technology today, a variety of genres representing different cultures can be presented in the classrooms, and intercultural interaction can be facilitated. Teachers can also bring their narratives of intercultural communication and ask students to reflect together. While integrating intercultural awareness into the classrooms, it should be noted by language teachers that raising awareness is a process, yet still, it is rewarding in that it will help learners lower their ambiguity and anxiety towards an intercultural environment and equip students with strengths to handle the fast-changing world (Ruben, 1976; Ruben & Kealey, 1979). Finally, awareness, indeed, cannot be set apart from cognition that underpins processing, knowing, remembering, understanding, and ultimately communicating. Hence, one of the goals of language teachers is to facilitate the cognitive processes of learners while making them acquire intercultural awareness and skills. Pedagogically, awareness-raising multimodal activities, reflections, and practices about intercultural communication will help learners to process information easily. However, teachers should remember that raising awareness is a process and it can require the cognitive readiness of learners. For this reason, classroom tasks should follow an orderly manner that smoothly moves learners from the awareness phase to the communication phase in intercultural contexts. This present study has been designed to contribute to the cognitive readiness of learners in the early phases of intercultural awareness by leading them to identify and understand.

The literature shows that Six Thinking Hats have been used for various purposes in education such as improving language skills (Bezir & Baran, 2014; Orhan et al., 2012),

creative thinking, empathy, cooperation, and collaboration skills of learners (Alexiou et al., 2015; Cioffi, 2017; Geissler et al., 2012), and assessing the quality of teacher training programs (Erişen & Katmer-Bayraklı, 2016), and these studies reported positive results for the use of the technique. However, no study has adopted the technique to raise intercultural awareness in language classrooms. In reference to Baker's (2010) classroom applications concerning intercultural awareness, technology-integrated methods have been often used in language teaching, such as photograph-mediated tasks, wikis and digital storytelling, etc. (Kiss & Weninger, 2017; Kusumaningputri & Widodo; PM Ribeiro, 2016; Tanghe, 2016; Vourdanou, 2017) and the studies yielded positive results. Yet still, when Byram's (1997) model is taken into account, a technique that can lead learners to question and reflect seems more appropriate. Therefore, Six Thinking Hats technique, originally a thinking technique, has been used in this present study, and a qualitative design has been selected to reach an in-depth understanding.

3. Methods

This present study adopts a pre-experimental research design, specifically the one group pretest-posttest design. This design was preferred to track the differences that were assumed to happen in participants' behaviors since the design is used to measure changes (Dimitrov & Rumrill, 2003). The data was collected qualitatively, and the analysis was led through the constant comparison method. This present research aims to answer the following question:

1. Is the modified version of Six Thinking Hats model effective in raising learners' intercultural awareness?

3.1. Participants

Fifteen voluntary students at a private secondary school in İstanbul, Turkey were invited to the research. As the private school was located in one of the most prestigious areas of Istanbul, all participants share similar backgrounds in terms of the educational level and income of their families. Initially, a convenience sampling technique was used in the selection of the participants. Six culture-based statements with photos were shown one by one, followed by an explanation of the cultural elements. Volunteers were asked to write what they thought about each statement in their native language. Papers were collected and analyzed by the researchers. Volunteers' comments to each statement were marked either as 0 or 1 (0 referring to no bias, 1 referring to culturally biased comments). Convenience sampling turned into purposive sampling after the analysis of initial data analysis as six students who made biased comments to the statements were invited to the study. The six culture-based statements, which were also used as pre-test, helped researchers select the sampling of the study. The initial data analysis for participant selection revealed two codes (*acceptance of indigenousness* and *drawing analogy*) from students who did not hold biases.

3.2. Instruments

To choose culture-based statements, an item pool with 30 items was created as the first step with the help of the Internet. Interesting customs, practices, and traditions of various cultures were taken into the pool. At this point, the word was carefully selected as the phrase "interesting customs, practices, and traditions" is subjective. Special attention was given neither to disrespect nor disregard any cultural practices mentioned in the instrument. Turkish culture is used as the base to decide on the interestingness and differentness of these statements through the eyes of participants. Statements in the item pool were chosen carefully, depending on the world knowledge of the participants. The statements from numbers 1 to 6 in Table 1 below were chosen randomly from the item pool to construct the pretest. The order of the statements that were used during treatment was also chosen randomly so as not to distort the experiment with our own cultural beliefs. However, the statements on the posttest were decided by the researchers since some culture-based statements are heavier for Turkish culture whereas some others can be mild. For instance, *bowing in Japan* may not create the effect that *eating spiders in Cambodia* has, which stems from the pre-existed cultural knowledge and beliefs of participants embedded in the home culture. Therefore, to set the balance between the pretest and the posttest, the statements used in the posttest were chosen carefully and similarly as much as possible.

Table 1. Culture-based statements used throughout the study

PRETEST	STATEMENTS
S1	Eating spiders in Cambodia
S2	Sticking tongue out to greet each other in Tibet
S3	Eating rice with hands in Sri Lanka and India
S4	Bowing in japan
S5	Wearing Kandora in Saudi Arabia
S6	Horn hand sign in Brazil, Columbia and Cuba
TREATMENT	STATEMENTS
S7	Wasp-filled crackers in Japan
S8	Tipping in the USA
S9	Slurping in Japan
S10	Drinking tea with milk in England
S11	Pointing with thumb in Malaysia
S12	Adding salt to the meal as a guest in Egypt
S13	Throwing teeth to the roof in Greece
S14	Chinese potty training
S15	Come over hand sign in the Philippines
S16	Tuna eyeball dish in Japan
S17	Arriving late at the host house in Chile

S18	Putting money in the hand of cashiers in Australia
S19	Long wedding parties in the Middle East
S20	Cutting off fingers in Dani tribe of Indonesia
S21	Bayanihan in the Philippines
S22	Amish people in Pennsylvania/the USA
S23	Taroof in Iran
S24	Bullfighting in Spain
Posttest	Statements
S25	Escargots in France
S26	Kneeling or lying prostrate to greet in Nigeria
S27	Giving a whale tooth to the father-in-law in Fiji
S28	Wai in Thailand
S29	Wearing Kilt in Scotland
S30	Crossed fingers in Vietnam

3.3. Procedure

As the aim was to raise participants' awareness and to do deal with the thinking ability, the whole procedure took place in the native language of the participants.

3.3.1. The modified six thinking hats model

De Bono (1999) claims that Six Thinking Hats model gives birth to parallel thinking in the cognition of hat wearers. Each wearer is required to have the same color at one time so that they can look through the same window. He also claims that colors provide artificial contexts for thinkers. As mentioned earlier, the model was modified to see whether or not it can be used alternatively. By using six different colored hats at one time, multiple artificial contexts for the participants of the study were created. The aim was to expose the participants to rich input so that the issue in question would be explicit from different angles and the participants would make use of each artificial context at once. The colors keep their missions from the original version; participants wearing the different colors at a time adapted their contribution to the issue as to the predetermined roles. In the original version, De Bono keeps the wearers stay away from conflict. However, in this modified version, six hats were used to push the wearers into a discussion and the blue hat was made responsible for the ongoing discussion process. The blue hat explains the culture-based issue and asks about the opinions of other hats in the order it wishes. After asking the opinions, it summarizes all the ideas expressed by the hats and he closes the discussion as a mediator. In the end, it is asked to find a way to finish the discussion by not hurting the other hats. For this reason, the blue hat is named the mediator. The blue hat has a similar mission in the original version, which is to control the thinking process. In Table 2 below, an example of a discussion on people *eating wasp-filled crackers in Japan*, taken from the treatment process is given.

Table 2. An example of discussion in the modified version of six thinking hats

WASP-FILLED CRACKERS IN JAPAN	
The blue hat (mediator)	"As you have heard, people in Japan are eating wasp-filled crackers, what do you think about it? The white hat?"
The white hat (truths and numbers)	"I am not sure if it is healthy or not. We can search on the internet but honey is healthy so wasps can be healthy, too."
The blue hat	"The red hat, please."
The red hat (emotions and feelings)	"It is an animal with a needle; I would not like to eat an animal with a needle."
The blue hat	"The black hat?"
The black hat (risks and disadvantages)	"I think people eating this cracker, they are causing wasps extinction."
The blue hat	"The yellow hat, it is your turn."
The yellow hat (positivism and advantages)	"I do not know exactly how a wasp tastes, but it can be full of vitamins and cheap."
The blue hat	"The green hat?"
The green hat (creativity)	"Instead, they can cook wasp-favored cookies, but not with real wasps. Something like food coloring."
The blue hat	"It must not be bizarre for these people, they do it; I mean it depends, so if you like, eat it. If you don't, you do not have to."

The implementation of the modified model took place after the participants received training on the model. The procedure reading the implementation of the model lasted for four weeks in total. The discussions took place after the lessons and each discussion for one culture-based statement took around 12 minutes. Two days in a week could be allocated for the treatment because of the busy schedule of the school. In total, the study lasted for six weeks.

3.4. Data analysis

As the aim of the study was to observe the changes happening over time, the constant comparison method was used to analyze the data. Searching for cues of behaviors that are under investigation for a period calls for the constant comparison approach (Janesick, 1994). The researchers start with existing knowledge, intuitions, beliefs, or research questions in mind. As the new data emerge, the researchers go back and revisit the previous data to compare the changes. Patton (1990) names this analysis procedure as a cross-case analysis in which researchers are to compare multiple issues at once, and such comparison leads to conducting an inductive approach to the data (Goetz & LeCompte, 1981). Data are examined in small quantities. Small quantities constitute data piles. Data bits are compared with data

piles that have been created before. In this comparison, emerging similarities and differences are examined (Dey, 1993). Interrater reliability was ensured with the help of a colleague and the themes emerged in the final step of the analysis.

4. RESULTS

4.1. The Pretest

The pretest was given after the training process constituted the first data set. Six participants were given six culture-based issues and asked to write their opinions about them. There was no restriction, they were asked to write as long as they wanted after showing them the culture-based statements with visuals. The data analyses revealed two different themes regarding the attitudes of participants towards other cultures. The themes represent how participants approach other cultures.

Table 3. The pretest findings

THEMES	CATEGORIES	CODES
Personal attitudes	Direct personal judgments (f=26)	Positive (f=4)
		Negative (f=19)
		Neutral (f=3)
Critical attitudes	Attempts to cope with the issue (f=9)	Acceptance of indigenousness (f=4)
		Drawing analogy between one's own culture and another culture (f=1)
		Looking for the reason behind the practice (f=4)

The pretest results state that the six participants selected through purposive sampling were assumed to have relatively less intercultural awareness, gave more personal judgments. A great number of personal judgments were negative. Only nine comments out of thirty-six comments represent critical attitudes. Additionally, it is found out that the categories emerging under personal attitudes are consistent with the categories that were used to select participants from a convenient sample to purposive sampling.

4.2. The treatment

As the participants acted as the hats required, themes or categories were not formed. Even though the participants' response to culture-based issues may not be what they think, they needed to respond according to the hat's missions so that each participant would be exposed to multiple thinking patterns. Using the constant comparison method, the findings that were observed in each hat over six weeks have been revealed. However, the individual improvement of each hat wearer could not be revealed with the assumption that all participants were affected equally because of the discussion period.

The person wearing the blue hat was asked to be a mediator and kindly reminded each time not to make any other hat upset about the last comment. When the comments of the blue hat wearer over six weeks were examined, the blue hat wearer started to close the discussion by offering something new over time. For instance, the discussions about *Tipping in the USA* in the first week and *Pointing with thumb in Malaysia* in the second week ends with similar comments as "This is their custom, they can do however they like." or "This issue is neither bad nor good." However, after the second week of treatment, blue hat wearers were under the influence of the green hat. Advisory and creative comments were observed. An example of this can be found in Table 4 showing participants' discourse.

Table 4. Sample of a discussion (the 19th culture-based statement)

Long Weddings in the Middle East	
The blue hat	Explaining the culture-based issue
The white hat	"People are having fun, but it may tire people in time."
The green hat	"They can organize a gorgeous wedding day on the first day, followingly I think they can throw up small parties, so they won't be so tired."
The red hat	"Well, weddings mean having fun, I would be happy to have fun if I were there."
The yellow hat	"Dancing is cool, they will probably dance a lot and it is fun. Also, it is healthy because you move every day like doing sports regularly."
The black hat	"Long weddings? It is definitely tiring people physically, I am pretty sure after that, people will not have any energy to live. Also, it is harming people financially, it will leave no money in the pocket."
The blue hat	"They can organize long weddings, this is their culture, but one thing that they can do is that they can stop holding the weddings long when the number of people attending the wedding decreases"

The only change observed in the yellow hat wearers over six weeks was the speech time. In the first and second weeks of the treatment, the yellow hat wearer finished their speech by only stating one advantage (see Table 2). However, towards the end, the yellow hat wearer began to speak about more advantages (see Table 4).

The black hat wearers were stable in their speech time from beginning to end. Surprisingly, the black hat wearers got very strict about their comments in time. In the early weeks, they were straightforwardly stating the disadvantages but in time, they started to use an artsy language. Some examples from the beginning weeks: "They should not cause animals to go extinct" or "people can have food poisoning after drinking milk with tea." Some examples from the last weeks of the treatment; "Does it matter if you put money in the cashier's hand or not? Why does she take offense? It is ridiculous." or "You lost one of your family members and you cut your fingers off? Anyway, you have pain, why do you add more pain on that?" (see Table 4).

In the first weeks of the treatment, it is observed that red hat wearers' comments were stating only how they felt as to the given issue such as "The sound of slurping is a relaxing

sound for me." "This gesture is quite awkward for me." "There is no tooth fairy, this is sad." Over time, it is found out that the red hat started to go under the influence of comments given by either the yellow hat or the black hat and the source of influence shifted to the acceptability of the cultural issue by taking the Turkish culture as a base or the yellow and black hats started to be influenced by the red hat as the order of the speakers changed in every discussion (see Table 5). Therefore, the effects of the hats were found to be mutual.

Table 5. Sample of a discussion (the 16ᵗʰ culture-based statement)

Tuna Eye Meatballs In Japan	
The blue hat	Explaining the culture-based issue
The green hat	"They can make tuna eye-shaped cookies or cakes and add the same flavor."
The yellow hat	"No matter what it is, food is food as long as it fills your stomach. Fish is full of protein, so I think it is healthy food to eat"
The white hat	"I know that tuna is healthy, full of vitamins, but the eyes can also be fatty."
The red hat	"I would never eat it, not my taste."
The black hat	"Yes, fish is healthy I know it, but I don't think it is healthy to eat the eye of the fish, that can make people sick maybe."
The blue hat	"You talked about good and bad things. It is up to people. If people want to eat it, they eat. If they do not like it, they don't have to eat. That's all."

The mission of the green hat is to generate new ideas. Even though the change is not very obvious and restricted to several comments, when compared with the first weeks, some comments made by the green hats wearers towards the end of the treatments seem to be more innovative. In the beginning, the comments included "Instead of milk, people can use milk powder." or "Instead of pointing with the thumb, they can point people with five fingers, it would seem normal for us, then.", however, the content of the comments seemed richer in time (see Table 4). Additionally, the ideas of the green hat wearers were highly affected by the disadvantages stated by the black hat wearers as the order of the speech allowed (see Table 2).

The mission of the white hat is to make objective comments. The hat was commenting on both advantages and disadvantages at the same time. No difference was observed in the comments from the beginning to the end. The white hat appeared to be the most stable in the discussion. However, the same findings that also came out in the analysis of the other hats happened here, too. The white hat was affecting the yellow hat and black hat, at the same time, he was affected by them (see Table 2, 4, and 5).

4.3. The posttest

Six culture-based issues are given, and the participants were asked to write their opinions again. The same themes and categories in the pretest data were emerged after coding. However, several different codes were identified within critical attitudes. The results of the posttest were tabularized in Table 5.

Table 4. The posttest findings

THEMES	CATEGORIES	CODES
Personal attitudes	Direct personal judgments (f=13)	Positive (f=5)
		Negative (f=5)
		Neutral (f=3)
Critical attitudes	Attempts to cope with the issue (f=23)	Acceptance of indigenousness (f=6)
		Attempts to make a comparison with one's own and the other cultures (f=4)
		Looking for alternative practices (f=4)
		Thinking about the results of the practices (f=9)

Out of thirty-six comments, twenty-three comments fit in the theme of critical attitudes, which is highly remarkable when compared to the results of the pretest. In the pretest codes, under critical attitudes, it is seen that *"drawing analogy between cultures"* appeared as one code, however, in the posttest, this code turned itself into *"making a comparison with one's own culture and other cultures"*. Also, *"thinking about the reasons behind the practice"* turned itself into *"thinking about the results of the practice"* and one extra code came out as *"looking for alternative practices"*. Acceptance of indigenousness still stayed as one of the codes after the treatment.

5. DISCUSSIONS

5.1. The effects of six thinking hats on participants

As stated by Geissler et al. (2012), Six Thinking Hats can be used to foster cooperation, creativity, empathy, problem-solving, critical thinking, and even class participation. The benefits mentioned by the technique are overlapping with 21st-century skills. In the literature, very few findings have stated disadvantages. According to Ayaz Can's observation (2005),

the technique can cause doubt and chaos in crowded classrooms. Therefore, the use of the technique in small groups is suggested. According to the researchers' observation during the treatment with a small number of participants, students got excited about hats and could not wait for the following issue to discover. Therefore, the selection of issues to discuss is of great importance to manage the classroom during the implementation of the method.

As the model was originally designed to take conscious attention to the issue, it has been found to raise awareness of the wearers by leading them to think about the context and go deeper into thinking (Halx & Reybold, 2006). The hats also trigger creative thinking and critical thinking. The modes are led by the pre-determined roles of the hats. The emerging codes of the pretest and posttest data supported this claim. In the posttest data, a new code emerged as *"looking for alternative practice"*, which is interpreted as the effect of the green hat on the thinking skills of the participants in time. Additionally, in the posttest data, it was seen that participants changed the way they dealt with the issues. In the beginning, there was a tendency to draw an analogy between their own culture and the culture under discussion, but the posttest displayed that, instead of drawing analogies, they started to compare different cultures altogether. This might be a result of their increasing knowledge of different cultures, and it can be seen as an indicator of critical thinking. One more finding regarding critical thinking can be, the previous code *"thinking about the reasons behind the practice"* turned into *"thinking about the results of the practice"*. This finding indicates that participants started to accept the indigenousness of the cultural issues and focused on the effects of the issue in a specific context.

Emerging codes of the posttest were used as the source of discussions about the findings. As well as the codes, emerging themes can be the signs implying that participants might have changed their personal attitudes and become questioners. They had attempted to cope up with the new cultural information.

5.2. The modified version of six thinking hats

De Bono (1999) claims in his work that different colors of hats should not be used at the same time as it can create conflict and prevent the wearers from thinking in the same way. However, the modified version used in the present study made the participants wear different colors of hats at a time to increase their awareness, it was assumed that being exposed to rich input would be beneficial. Also, it was the reason why the blue hat was introduced as a mediator, a hat that can control the fierceness of the discussion and end the discussion fairly.

With the help of the constant comparison method, it became possible to discover the effects of hats on participants over time. Therefore, some hats affected each other mutually while some others had a one-way effect. Based on the findings, a conceptual framework was constituted in which one can track the effects of hats in the new model of six thinking hats.
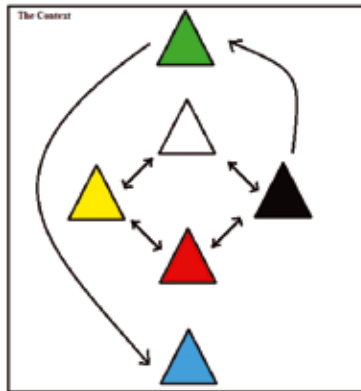
Figure 1. The conceptual framework of the modified version of six thinking hats model

The hats made use of each other's opinions while discussing the culture-based issue. The context in Figure 1 refers to the discussion. The green hat tries to find solutions for the disadvantages that the black hat mentions and the blue hat uses the solutions that the green hat puts forwards while ending the discussion. The other hats are centered in the middle as they have a mutual influence on one another. That the yellow hat began to speak more in time and the black hat started to use an artsy language might result from the fact that wearers got used to the model. The red hat was commenting by approving or disapproving the situation with the claims put forward either by the yellow or the black hat. The approval or disapproval depended on the acceptability of the issue in the home culture. The same occurrence is applicable for the yellow and the black hat if the red hat speaks earlier than them. The most stable hat was the white hat; almost no difference had been observed, but for mutual effects, this might stem from the fact that the white hat has the mission of stating both pros and cons of the issue by being a mediator between the black and the white hat. There is almost nothing new to put on and also, this is how the mutual effect of the white hat comes out. In sum, the hats affected each other almost in a circular way, and they started to contribute to one another in time, this is probably what might have affected critical thinking, creative thinking, and empathy skills in participants. Last but not least, participants' responses seem to go further than denial, defense and minimization phases to acceptance according to the Bennet's (2004) study. However, the results are inconclusive because of the small sampling size and the selected design.

6. CONCLUSION

Findings indicated that the modified model of Six Thinking Hats could function well to raise intercultural awareness by supporting participants' critical thinking, creative thinking, and empathy skills. While participants were holding personal attitudes before the treatment during the evaluation of the other cultures; after the treatment, the posttest findings revealed that participants began to hold more critical attitudes. However, all culture-based issues

do not have the same effect on the participants, which is one limitation of this study. For instance, *wearing Kandora in Arab cultures* is not something very different because of the existing cultural knowledge of the participants, while *eating fried spiders* is getting a lot of personal reactions, which is quite different from the home culture. This unequal effect of issues calls for a longitudinal design. Other limitations of the study are the selection of design, the duration of the treatment, and sampling size. Because of the contextual limitations such as the busy schedule and accessibility of participants, a pre-experimental design was adopted. Therefore, a true experimental design with a large number of participants can offer more reliable results, which will contribute to the findings of this study.

7. References

Abida, F.I.N., & Kuswardani, R. (2017). Developing intercultural awareness through poems in EFL Classrooms. *Advances in Social Sciences, Education and Humanities Research, 108*, 235-239.

Alexiou, A., Mysirlaki, S., Souki, A., Koroneuo, L., Geomelou, A., Chatziiliou, A., & Paraskeva, F. (2015). The development of creative thinking through Six Thinking Hats and Web 2.0 technologies. *The International Journal of Technologies in Learning, 22*(2), 15-28.

Ayaz Can, H. (2005). *Altı şapkalı düşünme tekniğinin ilköğretim altıncı sınıf öğrencilerinin sosyal bilgiler dersindeki akademik başarısına etkisi* [Master's thesis, Fırat Üniversitesi].Ulusal Tez Merkezi.

Baker, W. (2012a). From cultural awareness to intercultural awareness: Culture in ELT. *ELT journal, 66*(1), 62-70.

Baker, W. (2012). *Using online learning objects to develop intercultural awareness in ELT: A critical examination in a Thai higher education setting*. British Council Teacher

Development Research Papers. http://www.teachingenglish.org.uk/publications

Bennet, M.J. (2004). Becoming interculturally competent. In J. Wurzel (Ed.), *Toward multiculturalism: A reader in multicultural education* (pp. 62-77). Intercultural Resource Corporation.

Bezir, Ç. & Baran, B. (2015). Foreign language teaching through the Six Thinking Hats technique in second life. *Education and Science, 39*(171), 392-406.

Byram, M. (1997). *Teaching and assessing intercultural communicative competence.* Multilingual Matters.

Chen, G.M., & Starosta, W.J. (1998). A review of the concept of intercultural awareness. *Human Communication, 2*(1), 27-54.

Cioffi, J. (2017). Collaborative care: Using six thinking hats for decision making. *International Journal of Nursing Practice, 23*(6), e12593. https://doi.org/10.1111/ijn.12593

De Bono, E. (1985). *Six Thinking Hats: An essential approach to business management.* Little, Brown, & Company.

De Bono, E. (1999). *Six Thinking Hats*. Back Bay Books.

Dey, I. (1993). Creating categories. *Qualitative data analysis* (pp. 94-112). Routledge.

Dimitrov, M.D. & Rumrill, D.P. (2003). Pretest-posttest designs and measurement of change. *Speaking of Research, 20*(2), 159-165.

Erişen, Y. & Katmer-Bayraklı, V. (2016). Six Hat Thinking technique in program evaluation: The evaluation of the quality of mathematics teacher training program in Turkey. *International Online Journal of Educational Sciences, 8*(4), 31-45.

Geissler, G.L., Edison, S.W., & Wayland, J.P. (2012). Improving students' critical thinking, creativity, and communication skills. *Journal of Instructional Pedagogies, 8(July)*, 1-11.

Goetz, J.P., & LeCompte, M.D. (1981). Ethnographic research and the problem of data reduction. *Anthropology and Education Quarterly, 12*(1), 51-70. https://doi.org/10.1525/aeq.1981.12.1.05x1283i

Halx, M., & Reybold, L. (2006). A Pedagogy of Force: Faculty perspectives of critical thinking capacity in undergraduate students. *The Journal of General Education, 54*(4), 293-315.

Hymes, D. (1972). On communicative competence. In J.B. Pride & J. Holmes (Eds.), *Sociolinguistics: Selected Reading* (pp. 269-293). Penguin.

Janesick, V.J. (1994). The dance of qualitative research design: Metaphor, methodology, and meaning. In N.K. Denzin, & Y.S. Lincoln (Eds.), *Handbook of qualitative research* (pp. 209-219). Sage.

Kachru, B.B. (1985). Standards, codifications and sociolinguistic realism: The English language in the outer circle. In R. Quirk & H.G. Widdowson (Eds.), *English in the world: Teaching and learning and the language and literatures* (pp. 11-30). Cambridge University Press.

Kiss, T., & Weninger, C. (2017). Cultural learning in the EFL classroom: The role of visuals. *ELT Journal, 71*(2), 186-196. https://doi.org/10.1093/elt/ccw072

Kramsch, C. (2009). *The multilingual subject*. Oxford University Press.

Kumaravadivelu, B. (2006). *Understanding language teaching: From method to postmethod*. Routledge.

Kusumaningputri, R., & Widodo, H. (2017). Promoting Indonesian university students' critical intercultural awareness in tertiary EAL classrooms: The use of digital photograph-mediated intercultural tasks. *System, 72*, 49-61. https://doi.org/10.1016/j.system.2017.10.003

Orhan, S., & Kırbaş, A., & Topaş, Y. (2012). Six Thinking Hats Technique supported visuals effects of students' speaking skills develop. *International Periodical for the Languages, Literature and History of Turkish and Turkic. 7*(3), 1893-1909.

Patton, M. Q. (1990). *Qualitative evaluation and research methods (2nd ed.)*. Sage.

Payette, P., & Barnes, B. (2017). Teaching for critical thinking: Edward de Bono's Six Thinking Hats. *The National Teaching & Learning Forum, 26*(3), 8-10. https://doi.org/10.1002/ntlf.30110

PM Ribeiro, S. (2016). Developing intercultural awareness using digital storytelling. *Language and Intercultural Communication, 16*(1), 69-82. https://doi.org/10.1080/14708477.2015.1113752

Ruben, B.D. (1976). Assessing communication competency for intercultural adaptation. *Group & Organization Studies, 1*(3), 334 354. https://doi.org/10.1177/105960117600100308

Ruben, B.D., & Kealey, D.J. (1979). Behavioral assessment of communication competency and the prediction of cross-cultural adaptation. *International Journal of Intercultural Relations, 3*(1), 15-47. https://doi.org/10.1016/0147-1767(79)90045-2

Tanghe, S. (2016). Promoting critical racial awareness in teacher education in Korea: Reflections on a racial discrimination simulation activity. *Asia Pacific Education Review, 17*(2), 203-215. https://doi.org/10.1007/s12564-016-9424-y

Tomalin, B. (2021, May 23). *Culture – the fifth skill*. British Council, Teaching English. https://www.teachingenglish.org.uk/article/culture-fifth-language-skill

Tomlinson, B. (2019). Developing intercultural awareness through reflected experience of films and other visual media. In C. Herrero & I. Vanderschelden (Eds.), *Using Film and Media in the Language Classroom: Reflections on Research-led Teaching* (pp. 19-29). Multilingual Matters.

Vourdanou, K. (2017). Integrating the CLIL approach: Literature and wikis in the Greek EFL classroom as a means of promoting intercultural awareness. *Research Papers in Language Teaching and Learning, 8*(2), 103-119.