

Full Length Research Paper

Exploring intercultural competence in teacher education: A comparative study between science and foreign language teacher trainers

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This study investigated the intercultural outcomes of short-term study visit programs for Foreign Language and Science teacher trainers. A mixed method including quantitative and qualitative data was used to compare the differences between the two groups' intercultural development in terms of their study field. Fantini's questionnaire was used for the quantitative data and as for qualitative data individual interviews were conducted. The results indicate significant differences in the formation of intercultural competence between the foreign language and science teacher trainers in terms of their study field. Outcomes will be discussed regarding the professional development of the educators in higher education.

Key words: Higher education, intercultural competence, study visit.

INTRODUCTION

The increase in cultural and linguistic heterogeneity and diversity in educational settings challenges contemporary education. Council of the European Union in 2009 states that greater responsibility should be taken by policy makers for supporting the learning experience of learners, teachers and trainers. It is necessary since each group has to develop, adapt and update their knowledge, skills and working practices based on the needs and changing context of education (Cedefop, 2011/2012). As a result of globalization, the changing context and diversity in education demands new notions in the literature of education and various disciplines like the concept of "intercultural communication competence (ICC)".

Towards an educational perspective intercultural competence of the teachers can be regarded as their professionalism in intercultural contexts. Instead of limiting intercultural competence as an additional or separate part of teachers' professionalism it is better to see it towards a more holistic perspective that affects all the preferences and attitudes of teachers in their classrooms, society and the world. Thus, educators need to develop intercultural competencies to adapt themselves to the requirements of an interculturalized curricula and teaching which will lead the next generation to interact more easily with the members of diverse cultures. Beginning with the globalization, cross-cultural contact is increasing at a rapid pace. In developing cultural

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sensitivity and intercultural competence, educational exchange and study abroad programs offer valuable opportunities especially for students and teachers, particularly in higher education. Exchange of academic practices in their fields, developing their language skills and intercultural communication have been the focus of these study visit programs, but there is a lack of research data illustrating their effects on intercultural competence in terms of professionalism in higher education. Whitchurch (2008, p. 394) defines professionalism in higher education as the staff who work across and beyond boundaries. He also re-defines the nature of their work which aims to contribute to the changes in working patterns in higher education (Whitchurch 2009b, p. 417).

They are expected to be international that have mutual relationships with a range of colleagues, internal and external to the university.

There are several studies which deal with intercultural competence particularly from the aspect of language learning. For instance, Sercu (2002) conducted a study with Flemish, English, French and German teachers. He investigated whether and to what extent the participants support intercultural objectives and are willing to develop the acquisition of intercultural communicative competence in their language learning classrooms. The results revealed that Flemish foreign language teachers supported the aim of interculturalizing foreign language. In a similar study, Castro et al. (2004) investigated whether Spanish teachers of English promote cultural objectives such as acquisition of intercultural competence. According to the findings, Spanish foreign language teachers were found to be willing to promote the objectives of culture learning in foreign language education. Though the cultural objectives were prioritized by the participants, intercultural objectives that aim at developing the acquisition of intercultural skills have not been found so important.

On the other hand, the studies which specifically assess the effects of study visit programs generally focus on pre-service, in-service teachers and students in terms of internationalization of higher education (Vande et al., 2012). After investigating semester-long exchange programs, micro-term sojourns, intensive summer programs, service-learning, and global internships, they advocated that the educators and students need to intervene - guided critical reflection and web-enhanced support - to get the utmost benefit from these visits.

Building upon previous research and in response to the lack of combined (qualitative and quantitative) case study research, this study specifically examines intercultural development of Turkish teacher trainers from different fields over the course of a study visit program. More specifically, the present study aims at investigating comparatively the benefits of study visit programs on the academic staff studying at the fields of foreign language and science in terms of the acquisition of intercultural

competence.

Theory and assessment of IC

Building on Fantini's (2006) framework, intercultural competence (IC) can be defined as "a complex of abilities needed to perform *effectively* and *appropriately* when interacting with others who are linguistically and culturally different from oneself" (p. 12). Theoreticians and researchers of the field have used a range of more or less related terms to discuss and describe *intercultural competence*, including *intercultural communicative competence* (ICC), *transcultural communication*, *cross-cultural adaptation*, and *intercultural sensitivity*, among others (Fantini, 2006).

Ruben's behavioral approach is one of the earliest comprehensive frameworks of the theorization and assessment of IC in the literature (Ruben, 1976; Ruben and Kealey, 1979). According to Ruben (1976), IC is the "ability to function in a manner that is perceived to be relatively consistent with the needs, capacities, goals, and expectations of the individuals in one's environment while satisfying one's own needs, capacities, goals, and expectations" (p. 336). He also adds that this ability can be best assessed by observing an individual's actions rather than reading an individual's self-reports.

Byram (1997) and Risager (2007) have also conceptualized multifaceted models of intercultural competence depending on their experiences in the European context. Byram (1997) underlines the importance of IC in foreign language education and defines it as "understanding and relating to people from other countries" (p. 5). Parallel to Byram's explanation of a successful intercultural learning, Bennett (1993), in his Developmental Model of Intercultural Sensitivity (DMIS), defines *intercultural sensitivity* as individuals' psychological ability to deal with cultural differences. For Hammer and Bennett (2001), "learners with basic intercultural sensitivity" are able to notice and acknowledge the complexity of cultural differences as "different constructions of reality" (p. 12). Grounded on Byram's theoretical foundation, Risager (2007) suggests an elaborated theorization of intercultural competence. Her conceptual framework of intercultural competence not only covers broad individual resources but also the narrow competences that can be assessed. Risager's model of intercultural competence is claimed to be broader in scope. She listed ten elements which are noticeable in linguistic developments and proficiencies:

1. Linguistic (linguastructural) competence
2. Languacultural competences and resources: semantics and pragmatics.
3. Languacultural competences and resources: poetics
4. Languacultural competences and resources: linguistic identity

5. Translation and interpretation
6. Interpreting texts (discourses)
7. Use of ethnographic methods
8. Transnational cooperation
9. Knowledge of language as critical language awareness, also as a world citizen
10. Knowledge of culture and society and critical cultural awareness, also as a world citizen (Risager, 2007, p.227)

Qualitative and quantitative IC assessment tools

Until 1996, several researchers designed their own questionnaires for survey research like Behavioral Assessment Scale for Intercultural Competence (BASIC) (Koester and Olebe, 1988; Ruben and Kealey, 1979) and the Intercultural Sensitivity Inventory (ICSI) (Bhawuk and Brislin, 1992). The Intercultural Sensitivity Inventory (ICSI) (Bhawuk and Brislin, 1992) was developed to assess to what extent an individual adapts to the differences between living in an individualistic culture (United States) and in a collectivistic culture (Japan). In the early 1990s, the Cross-Cultural Adaptability Inventory (CCAI) scales have also been developed to measure individual's level of adaptability to the cultures different from his/her own based on four dimensions: (1) emotional resilience, (2) flexibility and openness, (3) perceptual acuity, and (4) personal autonomy (Kelley and Meyers, 1995).

While assessing intercultural sensitivity and cross-cultural competence, Bennett's (1993) Developmental Model of Intercultural Sensitivity (DMIS) has been used among several assessment tools. Bennett's DMIS includes three ethnocentric stages (the individual's culture is the central worldview) and three ethnorelative stages (the individual's culture is one of many equally valid worldviews) (Bennett, 1993; Hammer et al., 2003; Paige, Jacobs- Cassuto et al., 2003). Intercultural competence, the ability to think and act in intercultural appropriate ways (Hammer et al., 2003 p.422), can be built on *intercultural sensitivity*, which is defined as the ability to incline relevant cultural differences and experience. The DMIS frames intercultural sensitivity as a cognitive developmental progression which combines ethnocentric worldview and ethnorelative worldview of the individual's behavioral and attitudinal changes.

Later, Hammer and Bennett (1998) developed the Intercultural Development Inventory (IDI) to assess an individual's, group's, or organization's level of intercultural competence through developmental process. Hammer (2007, 2009) developed the Intercultural Development Inventory (IDI) version 3. It aimed to measure the level of the worldview orientation differences and intercultural sensitivity of the pre-service educators prior to the cultural immersion experience, before and after the process. In addition to the IDI scores, questionnaires, interviews and personal journals and the researchers' field notes were used to measure the changes in the pre-

service educators' intercultural sensitivity development over the time of the immersion experience. In other words, IDI utilizes both qualitative and quantitative assessment tools. Parallel to Hammer's (2012), considerations about combining qualitative and quantitative assessment tools, the researcher's comparing quantitative and qualitative assessment instruments (Fantini, 2006; Straffon, 2003) support that qualitative instruments can be beneficial to obtain more nuanced, personalized and detailed accounts of the process of IC development that cannot be assessed by quantitative assessments alone.

Researchers who deal with qualitative instrument designs of IC assessment have suggested that IC development may be best assessed in direct assessment designs such as performance assessment (Byram, 1997), portfolio assessment (Byram, 1997, Jacobson and Schleicher, 1999) or interviews (Fantini, 2006; Straffon, 2003). Performance assessment is a kind of the elicitation that displays one's IC ability in one-to-one conversations with interlocutors. In portfolio assessment, participants' reflections about the impact of intercultural competencies on their professions or personality are documented. Interview assessment includes in-depth interviews with the participants to elicit data on the essence and development of IC (Rucks, 2012). Rucks (2012) also assumes that direct and combined assessment designs potentially offer more complete assessments of intercultural competence, despite their time-consuming nature of collecting and analyzing data.

Present study

Given the importance of teachers being intercultural competent in today's diverse classrooms not only the FL teachers and learners need to develop an awareness of IC but also the teachers or trainers of the other fields such as science and maths should integrate aspects of intercultural competence into their classrooms. Intercultural competence should not be seen as an additional or separate part of foreign language teaching only.

For the last decades, national and international institutions in Turkey have encouraged and financially supported trainers' mobility especially in academic context, in order to facilitate efficient intercultural trainers. However, the success of these programs has not been assessed particularly in terms of the academic field. Thus, this study aims to search the differences among the two main groups' level of intercultural sensitivity regarding their departments at the beginning and at the end of a short term study visit program.

Research questions

What is the impact of academic study visit programs on

Table 1. Demographic information of the participants.

Gender	Science group	FL group
Female	17	20
Male	13	10
Total	30	30
Prior intercultural experience	15	20
Total	15	20
Any other languages known except English		
German	4	20
French	7	8
Total	11	28

Table 2. Percentage Responses for English Language Ability for the participants.

	FL group	Science group
Able to satisfy routine social & limited work requirements	14%	2%
Able to speak with sufficient structural accuracy	82%	25%
Able to speak with sufficient structural accuracy & discuss professional areas	3%	50%
Able to speak English fluently on all levels	1%	10%
Speaking proficiency sometimes equivalent to an educated native speaker	0	9%
Proficiency equivalent to an educated native speaker	0	4%
Total	100%	100%

the development of IC for FL and Science teacher trainers?

Is there any difference between the FL and Science teacher trainers' IC level as a result of academic study visit program?

Does the field of study has an impact on IC levels of teacher trainers?

METHODOLOGY

Participants

In this study, two sets of samples (30 in each group) are chosen from private and state universities of Turkey. As the aim of this study is to analyze comparatively the level of intercultural sensitivity of the teacher trainers regarding their department, the sample includes totally 60 Foreign Language (FL) and Science teacher trainers. According to the results of the demographic questionnaire their ages range between 25 and 45. They have been studying in their field between 6 to 22 years. Prior to their intercultural experience, some of them have been to some European countries between 5 days and 3-4 weeks for academic and other private purposes. In this specific study, all the participants stayed in the USA attending different programs: "Fulbright FTA, Ph.D. dissertation and post-doctoral research study visit, student and exchange visitor program and intensive English program." Their stay of duration in the host culture is between 3-6 months. The demographic information of the participants' is summarized in Tables 1 and 2. Before the study, all participants were provided with written information about the nature and purpose of the research. They volunteered to be involved in the survey and interview.

Data collection and analysis

In an effort to understand better what the 60 participants experienced during their study visit, mixed methods including quantitative and qualitative data analysis were used. The quantitative data for the present study were collected between the 2012-2013 academic years by means of a survey questionnaire developed by Fantini (2006). Among all the aforementioned assessment approaches, Fantini's model of combined assessment design was used in the present study to get as complete and accurate results as possible. Fantini (2006) in his Assessment of Intercultural Competence (AIC) specified different components of IC: "characteristics of intercultural competence, domains of intercultural competence (relationships, communication, and collaboration), dimensions of intercultural competence (knowledge, attitude, skills, and awareness), language proficiency, and developmental level".

In the present study we used the 54 itemed part of the questionnaire to rate intercultural abilities of the participants at the beginning and the end of the program for *knowledge, attitudes, skills, and awareness* components.

Awareness component is described by Byram (1997) as "ability to use perspectives, practices and products in another culture" (pp.50-53). An example item of the awareness dimension in the survey is:

"I realized the importance of my negative reactions to these differences (e.g., fear, ridicule, disgust, superiority, etc.)"

The attitudinal dimension is defined as adoption of intercultural attitudes by Castro et al. (2004). An example item from the attitude dimension in the survey is:

"I demonstrated willingness to interact with host culture members."

Table 3. Pre-test and post-test scores of FL and science group.

Group	Dimension	Pre-test		Post-test	
		Mean	SD	Mean	SD
FL	Knowledge	34.80	6.04	47.77	6.26
	Attitude	50.03	7.03	57.47	3.07
	Skills	36.70	5.99	38.30	3.88
	Awareness	41.87	10.70	76.27	4.28
Science	Knowledge	19.03	11.83	43.70	6.12
	Attitude	32.10	13.07	50.10	5.42
	Skills	22.93	10.97	35.03	5.46
	Awareness	31.90	22.67	73.83	7.83

The skills dimension is defined as the acquisition of behavior in intercultural situations (Castro et al., 2004). An example item from the skills dimension in the survey is:

"I adjusted my behavior, dress, etc., as appropriate, to avoid offending my hosts"

Questions on a 0-5 point scale had descriptors ranging from 0 = none/not at all to 5 =extremely high/well. To support the validity of these findings, Fantini reported reliability estimates of 0.70 and greater and factor loadings of 0.60 and greater for each item on each of the four dimensions of intercultural competence: knowledge, attitude, skills and awareness. In the present study the same format was followed. The questionnaire was piloted with 45 teacher trainers which were assumed to be similar with the study group for reliability purposes and the Cronbach coefficient was found to be .80; and for the current study the coefficient was determined as .88.

The data analysis was conducted using the Statistical Package for Social Science (SPSS) software, version 20. A general linear model of univariate test was applied for global comparisons between the two groups and the differences on sub-components of IC at the beginning and end of the study visit program.

After the survey results were gathered, qualitative data were collected through interviews with 10 participants (5 trainers from the FL group and 5 trainers from the Science group). The audio-recorded data were analyzed through content analysis technique and the results were presented descriptively. Interview questions, adapted from Fantini (2006) were designed to support the survey questions.

RESULTS

Analysis of the survey

Before conducting an analysis of variance, group means and standard deviations related to the pre and post-test scores were calculated and are provided in Table 3.

As demonstrated in Table 3, the FL group has higher initial scores compared to the Science group. However, when the post-test scores are analyzed, increases across all levels can be noticed. In order to see whether these differences are statistically significant, a general linear

model univariate analysis of variance tests were conducted, and the results indicate significant differences:

1. between the two groups namely FL and Science teacher trainers ($p < .001$);
2. between the pre-test and post-test results for all of the four sub-components (knowledge, attitude, skills and awareness) of IC ($p < .001$);
3. and between the participants' level of IC at the beginning and end of the study visit program ($p < .001$)

When the two groups of participants' IC development at the beginning and end of the study visit program were compared significant changes were found in all four components. The frequency values of the changes observed in the four components of IC for the two groups of participants are as follows:

1. Awareness component of IC for FL group increased by 82.2 %.
2. Awareness component of IC for Science group increased by 131.5 %.
3. Skills component of IC for FL group increased by 17%.
4. Skills component of IC for Science group increased by 70.2%.
5. Attitude component of IC for FL group increased by 14.9%
6. Attitude component of IC for Science group increased by 56.1%.
7. Knowledge component of IC for FL group increased by 37.3%.
8. Knowledge component of IC for science group increased by 129.6%.

The statistical analysis of the data revealed that the most significant change was observed in the Science group when compared with the FL group. Science group's most significant change was observed in the awareness component with the rate of 131%. The least change was observed in the attitude component of FL group.

Analysis of the Interviews

The interview questions used in the study were aimed to gain a deeper insight into the participants' personal experience, personal feedback and reflection on the impact of intercultural experience during their study visit program. Content analysis was used for the analysis of the qualitative data.

Q.1. *What abilities do you think are important towards intercultural success?*

Specifically, 'awareness', 'using verbal- nonverbal language effectively', 'knowledge about culture and

cultural differences', 'appreciation of different cultures' are the most important abilities or key components mentioned by the participants. "Ability to communicate with people from host culture without any prejudice or cultural bias; being open to change and eagerness to learn more in a new cultural context; readiness to overcome the adaptation demands." "Integration, appreciation of multiculturalism, acceptance of the existence of other cultures"

Q.2. *To what extent did you develop these abilities? Why or why not?*

Generally the participants of both groups emphasized that they developed some skills of communication such as linguistic skills and personal skills. Although most of the trainers emphasized the importance of verbal skills, one of the science teacher trainers said that he developed non-verbal language skills more than the verbal language skills.

"I think I developed them a lot during my stay abroad, because I would describe myself as someone curious about other lives and open to communication"

"My stay in the USA created a large amount of awareness in my worldview. Target language exposure taught me a lot in terms of gaining new perspectives"

"I think personality and background also influence these abilities. I suppose I've developed such abilities to a great extent"

"I think my language skills are not so developed since I don't like learning FL. However, I like meeting with different people. Americans are so sympathetic people. I liked to be with them. I developed my non-verbal language more than verbal"

Q.3. *Was learning of the host language important to your success? Why or why not?*

They all agree about the importance of learning the host language both for academic and communication purposes. Interestingly, a participant from FL group mentioned that one can also interact interculturally with an average knowledge of the host language. Thus, we can conclude that there are other skills as important as language for intercultural communication.

"Yes, it played very important role even during my stay there, and my level of English eased my relations"

"Definitely. Without the knowledge of the target language, it is very difficult to talk about intercultural exchange."

"Yes. I am using the host language in my daily life while teaching, writing articles and my dissertation."

"It was a plus definitely, but I also came across people who are average target language users and perform quite well interculturally"

Q.4. *What impact did this intercultural service experience have on your life?*

'Comparison'- 'experience'- 'broader perspective'- 'richness of diversity', 'discovering new worlds', 'academic and personal development' are the most frequently mentioned terms uttered by the participants of both groups.

"Taught me a lot of things that cannot be learned in the classroom or through reading books."

"Firstly, I had a chance to see a different (and more professional) academic environment in the USA from which I can benefit from in my academic career. I got to know many people working in the same field, had a chance to take courses and counsel from professors in my field of study. Then, I developed my abilities to communicate with people from diverse cultures and countries and learned different cultural traits."

"It gave me a broader perspective of the world, of the existence of other cultures. Also, it is not easy to live alone in another country as it may bring many problems that you wouldn't imagine before your experience abroad. You learn to cope up with such situations in time. I'm sure anyone who goes abroad has a fear or the tension of the unknown at first, but I was able to overcome this feeling. It also contributed a lot to my academic development."

"I have become more tolerant and open-minded"

"It has a life-learning impact. You not only develop intercultural competence, but learning how to deal with as well in your life."

Q. 5. *How and to what extent have you utilized any of these abilities in your own life and work?*

"Vision" and "being a citizen of the world" is the framework that briefly summarizes participants' commentary about to what extent they utilized this experience in their life and work.

"Developed my vision and perspective towards life"

"I think this experience made me a more resourceful person, never sticking blindly to one solution but looking for some other alternatives with a free mind, and I became a more tolerant person to differences which improved my communications"

"All I can say is that I am still in the process of adapting and using what I have learned during my stay in the USA in the context that I am working right now"

"I could draw attention to cultural awareness and abilities in my home country during talks with friends, colleagues and family. I developed my communication skills with people from different cultural backgrounds. I understood (tried to raise awareness about) the dangers of discrimination on the basis of gender, race, ethnicity, religion or sexual orientation, etc. although there is no satisfactory non-discrimination policy in universities in Turkey and in social life in general."

"I have many friends from many countries now, and I try

to keep in touch with them as it makes me feel more like a citizen of the world. A famous novelist/scholar attended a conference we organized in Turkey as our keynote speaker. I'm quite proud and happy as I was the link between the two universities for inviting him to Turkey. Academically, now I have access to many resources in England, which wouldn't be possible if I didn't have that experience"

Q. 6. *Any additional comments?*

For most of the participants, language is regarded as the first step of experiencing cultural differences. However, they mention the role of world view and personality in experiencing and facing the cultural differences in both native and host cultures.

DISCUSSION AND CONCLUSION

The present study has certain limitations that are needed to be taken into account before considering the conclusions and their contributions to educational context. First, the size of the group for quantitative analysis is not large enough to generalize the results and findings. It only covers Turkish teacher trainers in an academic context.

Secondly, as the purpose of this study is to investigate the impact of a short-term study visit program on teacher trainers regarding to their field of study, factors such as personality, prior cultural experience, age, gender, the study time in their field and foreign language proficiency are the variables that cannot be completely controlled .

A third limitation may be found in the the scope of IC components examined in the present study. Intercultural communication researchers mainly advocate that the concept of intercultural competence is complex and includes cognitive and affective domains of behavior that is difficult to assess completely through a survey instrument (Deardorff, 2006; Spitzberg and Changnon, 2009). Although a mixed method of qualitative and quantitative research data was used, the present study assesses only IC components related to the affective domain (awareness and attitude), the cognitive domain (knowledge) and skills rather than the whole concept with its all dimensions.

Besides these limitations, the present study has some significant results. First of all, regarding the first research question, the results of both qualitative and quantitative data revealed that all the participants progressed and developed in the four components of IC during their study visit. They all indicated that they gained significant life skills: appreciation for others; open-mindedness, a deeper level of self-knowledge, new perspectives, language skills, confidence, communication both in academic and non-academic field, observation skills, a non-prejudicial attitude, patience, understanding, reasoning, self-

development, and independence. These findings are parallel with the studies of Byram (1997, Fantini (2006), Pruegger and Rogers (1994), Ruben (1976) and Straffon (2003) who also observed significant improvements in their participants on various domains of intercultural competency.

Next, the impact of academic field of the teacher trainers on IC development was investigated comparatively through four components. There are only a few studies about the teacher education study visit programs and they generally focus on students' outcomes and depend on data collected after the study abroad experience was over. The main focus of these studies is the impact of such programs on intercultural development in terms of immersion, reflection, and issues of re-entry; however, they lack the observation of the processes that the participants experience comparatively at the beginning and end of the intercultural programs (Kauffman et al., 1992; Stachowski, 1994; Taylor, 1994a, 1994b). Thus, the findings of this study might shed light to the particular issue of the comparison between the beginning and end of the study visit programs on the IC development of trainers in terms of their study field. When we rate intercultural abilities of the two groups at the beginning and end of the program, the most significant changes were observed in the Science group especially for the components of awareness and knowledge.

Actually, the most powerful change is observed in the awareness component for not only the Science group but also for the FL group. Self-awareness is an important domain of human development that will serve participants to be aware of both themselves and everything in their environment for the rest of their lives. This finding is similar to the study of Barfield (1994) who indicates that foreign language teachers in a study-abroad teacher training program became more aware of themselves, diversity in their classrooms and communities.

On the other hand, the least change was observed in the "attitude" dimension for both of the groups. Attitudinal change is described as adoption of intercultural attitudes such as showing interest in new cultural aspects (e.g., to understand the values, history, traditions, etc.). The low change of this dimension can be explained with the higher beginning level of the participants to the attitude dimension of IC experience.

Not only for "awareness" component but also for the other components of IC (knowledge, attitude and skills), the IC level of the Science group has increased more than the FL group. It may seem surprising since most of the scholars emphasize interculturality especially for FL educators as "intercultural speakers who will be capable, adaptable actors and mediators in globalised contexts" (Buttjes and Byram 1991; Byram and Zarate 1994; Kramsch 1993 and 1998). This judgment can only be confirmed when the participants' IC levels at the beginning of the study visit program are compared. FL groups' level of IC at the beginning of the study visit

experience was higher than the Science group in all four dimensions. This can be interpreted as their readiness to the intercultural differences and situations. The linguistic advantage of FL group was observed especially at the beginning of the study visit experience. However, the significant changes observed in the Science group between the beginning and end of the intercultural experience supports the idea that trainers from different fields may also develop intercultural adaptability and language proficiency alone is inadequate for IC competence. For Buttjes and Byram (1991), Byram and Zarate (1994) and Kramersch (1993, 1998) most communication is "holistic and also requires knowledge of the ways culture and language interlock and an understanding of how interaction across cultures operates". Although language proficiency is reported as an important predictor of IC and interaction with different cultures the Science teacher trainers also gained intercultural awareness despite their lower language skills they reported in the demographic information. During the interviews, some participants from the Science group highlighted the importance of non-verbal communication in intercultural adaptability. This finding is in parallel with Daniels and Redebaugh (2004) who suggest that foreign language knowledge solely is not enough to communicate with different cultures; one should also know the non-verbal language such as mimics, gestures, kinetics, colors, distance, attitudes and even perception.

Finally, this study reveals that academic field has an impact on developing IC components of attitude, skills, knowledge and awareness for Turkish university teacher trainers. It should also be known that beyond the components of IC assessed in this particular study it has a broader spectrum such as 'identity development', 'psychosocial development' (can be described as personal), 'moral or values development', 'intellectual development' and 'holistic development' conceptualized as self-authorship (Dolby, 2004; Milstein, 2005; Jurgens and McAuliffe, 2004; Lindsey, 2005; McKeown, 2009; Braskamp et al., 2009). Now that four of the IC components have been dealt with in the current study, it is obvious that further studies related to the rest of the components are needed.

Implications

The findings of the study hold important implications for educational policy makers, higher education institutions, and study abroad advocates in Turkey. Cross-cultural experience aids teachers not only to develop cultural awareness and competencies, but also reflect upon their experiences in order to broaden their vision about pedagogical approaches and methods. From this perspective, the results of the current study add new insights to the personal commitment of Vande Berg (2003) who states that the traditional goals of study abroad have historically been linguistic and intercultural-

since they have traditionally been developed for students majoring in the humanities, arts, languages, and social sciences. The new dimension of education makes IC more than the sub-field of foreign language education as it has been frequently perceived by most people. Thus, teachers and teacher trainers, not only from social sciences, humanities, arts and languages but also from all disciplines should develop an intercultural awareness in order to adapt themselves to the requirements of multicultural educational contexts. University students majoring in the fields other than humanities, arts, languages, and social sciences should also be encouraged to participate in such programs with an aim to develop their IC skills which are comparatively low. Higher educational institutions when selecting appropriate participants for sending abroad to cross-cultural mediation, when determining learning outcomes associated with a variety of educational experiences or identifying aspects of the experience that challenge and support intercultural growth should consider the requirements of a culturally responsive pedagogy.

Teachers and trainers from different disciplines should be encouraged to benefit from mobility experience in other cultures to become more culturally responsive change agents. As indicated particularly from the qualitative data, before sending educators abroad, the higher education institutions should inform them about the stages of culture shock. They should also be prepared about the ways of dealing with the difficulties emerged out of cultural, ethnic or religious differences as Jackson (2010) assumes that intercultural sensitivity competence or intercultural competencies can be taught just as the foreign language can before participants go abroad.

However, it is also significant to understand that intercultural competence should be perceived as an ongoing, lifelong process rather than as the additional part of teacher education content. Higher education institutions should encourage the teaching staff to develop their cultural experiences for professional development.

Conflict of Interests

The authors have not declared any conflict of interests.

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