



# International Journal of Contemporary Educational Research (IJCER)

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Sevda Dolapçiođlu<sup>1</sup>, Gülten Koşar<sup>2</sup>

<sup>1</sup>Mustafa Kemal University,  0000-0002-2707-1744

<sup>2</sup>Mustafa Kemal University,  0000-0002-4687-4382

Article History

Received: 02.03.2021

Received in revised form: 08.09.2021

Accepted: 10.10.2021

Article Type: Research Article

### To cite this article:

Dolapçiođlu, S. & Koşar, G. (2021). Thinking through arguments on comparative education topics: a contemporary learning approach in pre-service english language teacher education. *International Journal of Contemporary Educational Research*, Vol(No), 196-207. <https://doi.org/10.33200/ijcer.889521>

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## Thinking through Arguments on Comparative Education Topics: A Contemporary Learning Approach in Pre-service English Language Teacher Education

Sevda Dolapçioğlu<sup>1\*</sup>, Gülten Koşar<sup>1</sup>

<sup>1</sup> Mustafa Kemal University

### Abstract

Following Toulmin's Argument Pattern (TAP), this study was conducted to investigate the extent to which argument construction in comparative education topics enhances pre-service teachers' knowledge construction skills.-. This article is different because it synthesis research interests in comparative education and argumentation topics to facilitate pre-service teachers' learning in comparative education. The study was conducted with 22 senior university students studying in the Department of English Language Teaching during the 2018-2019 academic year. The data were collected via observation records and written documents from four pre-service teachers who had opposing claims and were selected from these students. In conclusion, it was found that TAP guided the pre-service teachers on the components of claiming an assumption, backing claims with evidence, applying scientific sources, rebuttal and generating new arguments on the topics of comparative education. The study also included implications for thinking through arguments.

**Keywords:** Toulmin's Argument Pattern (TAP), Comparative Education, Teacher training, Contemporary Approach

### Introduction

Cognitive structuring of information that can be put into practice is important for teacher education and all other branches of professional development. On the other hand, learning through argument is significant for thoroughly constructing pedagogical knowledge, including teacher education (Metaxas, Potari & Zachariades, 2016; Dinkelman, 2003). It has also been proved that teacher education based on argumentation contributes to self-regulation, cognitive awareness, reflective and evidence-based thinking, development of conceptual and pedagogical content knowledge (Dinkelman, 2003; Schwarz, Neuman, Gil & Ilya, 2003; Öztürk, 2017). Because of such contributions, learning through argument in teacher education ought to be investigated. As comparative education topics are in line with learning through argument, it is an area to be examined. While many disciplines have to "produce scenarios", comparative education contains content and scientific evidence directly suitable for argument structure. This stems from the fact that comparative education topics are in an approach that compares and evaluates the reforms affecting international educational systems.

On the contrary, new means of learning are also necessary for comparative education. It has been criticized (Broadfoot, 2000; Thomas & Mosselson, 2018) that comparative education topics are still being discussed with conventional educational concepts. Consequently, these criticisms have revealed a need for comparative education information as generating evidence on assumptions a need for comparative education information as generating evidence on assumptions, reasoning, and finding new solutions. Discussing comparative education topics by employing TAP can be a significant way to fill this gap.

One of the purposes of comparative education is to determine the country's educational problems the country's educational problems and to generate assumptions to eliminate them by benefitting from the educational systems of successful countries (Erdoğan, 2016). On the other hand, it contains information about developing different perspectives, interpreting, exploring new insights, discovering similarities-differences between educational systems of different countries and generating solutions (Türkoğlu, 2015; Balcı, 2018; Bakioğlu, 2018). However, most of the studies have been on the comparison of educational systems at different levels of two or more

\* Corresponding Author: *Sevda Dolapçioğlu*, [sdolapcioglu@mku.edu.tr](mailto:sdolapcioglu@mku.edu.tr)

countries. A great number of studies on comparative education have focused on characteristics of national fields and handled the subject subjectively. Several studies have implemented methods acquired from social sciences, and almost all of them have focused on comparing systems of countries by conventionally emphasizing qualitative educational outputs (Thomas & Mosselson, 2018). However, comparative education courses with new ways of learning can be a tool for developing thinking skills such as generating assumptions, developing different perspectives, interpreting, exploring new offers and generating solutions. One of these ways is producing arguments by using TAP in comparative education topics.

Studies on teacher education programs have revealed that argumentation in comparative education topics is important for reducing problems and backing solutions. Controversial problems can be handled as two important issues. The first is that teacher education has deficiencies in transferring theoretical knowledge into practice (Rincmond, Salazar & Jones, 2019; Eret-Orhan, Ok & Çapa-Aydın, 2018; Yeşilpınar-Uyar & Doğanay, 2018). The other important issue is that it has deficiencies in main skills such as reflective thinking and questioning (Adler, Zion & Rimerman-Shmueli, 2019; Lemley, Hart & King, 2019). Arguments are prominent in solving all of these problems in teacher education (Dinkelman, 2003; Öztürk, 2017). In addition, they present deeper meanings in interpreting teachers' knowledge, beliefs, decisions and practices. They can be used as an instrument for going deeper into teachers' decisions, practices and the rationale behind them (Metaxas, Potari & Zachariades, 2016). In summary, learning through argument in comparative education topics is one way to improve the competencies expected of today's teachers.

In the present study, prospective English language teachers were involved. In the field of language education there are numerous studies on the contribution of written argumentative skills to second language learning (Campbell & Filimon, 2018; Awada, Burston & Ghannage, 2019; Quin, 2013) and on the contribution of writing argumentative texts in a second language to critical thinking and collaborative work (Soodmand Afshar, Movassagh & Arbabi, 2017; Zainuddin & Rafik-Galea, 2016). Since having a good command of English is a basic quality that prospective teachers should have to be able to teach it, the ability to think through arguments can enhance teacher education concerning this component. Consequently, ways of learning through arguments need to be investigated in teacher education because of their contributions mentioned above and their role in helping eliminate the deficiencies of teacher education. Comparative education topics, because of their knowledge structure, can provide content that promotes argumentation. For these reasons, TAP was used in the present study to investigate pre-service teachers' practices in generating arguments in comparative education in order to explore new ways of learning in teacher education. The discourses and written documents of the four pre-service English language teachers making opposite claims were analyzed and presented as a case study. For this purpose, the research question to which answers are sought is:

What contribution does the use of Toulmin's model in comparative education topics make to the knowledge construction of pre-service teachers, what does it entail?

### **Comparative Education Topics**

The modern education system of the 20th and 21st centuries has become so national that alternative educational goals and visions have become incomprehensible. Comparative education is a significant area for solving this ambiguity because it is a comparative way that helps understand educational goals by examining retrospect and prospect. While basic information about books is meant by retrospect, social topics and creative thinking are meant by prospect (Broadfoot, 2000). Comparative education topics are important tools for understanding educational systems for teacher education. However, the understanding that merely focuses on comparing countries may cause standardized transfer in decontextualized educational policies (Afdal, 2019). In this case, developing the components of comparative education, developing different points of view, generating assumptions, interpreting, exploring new insights, discovering similarities-differences and generating solutions may become more complex. That is the reason why comparative education will find its value when it is structured with TAP. This is because the claim, the data on which the argument is based, the warrant for inference authorizing the step from the data to the claim, supporting the legitimacy of the warrant, the qualifier representing the strength of the data, the rebuttal pointing to the circumstances under which the claim would not hold true are important for comparative education topics. The claim is important for comparative education topics. These components are the elements of TAP (Metaxas, Potari & Zachariades, 2016; Erduran, Simon, & Osborne, 2004).

TAP in comparative education topics was first presented as a scientific paradigm here. We should go beyond traditional understanding for a modern and effective comparative education. For this, new modellings are needed. According to Khakpour (2012), comparative education topics are important in implementing and designing educational changes as modern and effective education systems depend on new techniques and ideas. Therefore, comparative education is necessary in all developed and developing countries because countries can benefit from the progress and reforms of other countries while they are struggling with a crisis. The problems mentioned above and crises shed light on how to deal with our own local or national problems (Watson & Wilson, 2018).

Other scientific subject areas (anthropology, sociology, etc.) belief, tradition, morals and social, ethnic characteristic issues, economic and political issues affect educational outcomes. Thus, another important issue to consider while making comparisons in educational systems is to holistically approach the issue (Khakpour, 2012). This approach provides more than one content for data, warrant, backings and rebuttal because comparative education topics depend on experiences, expertise, data and criticism obtained from various contents. They promote understanding and explain changes (Ginsburg, Massón Cruz, Rodríguez Alfonso, & García Isaac, 2019). In addition, there are three trends in comparative education topic. The first one is competitiveness, which is common among countries and organizations. The second one is increasing organizational, cultural and interdisciplinary cooperation, supporting educational studies and exploration. The third one is information comparing educational studies and policies. This necessitates deep comparative analyses. In short, researchers and leaders play an important role in shaping the educational perspectives of countries in the field of comparative and international education. Comparative education ought to be used to make a long-term impact on candidates who will be teachers, researchers or education politicians in the future. Additionally, TAP can enhance the role of comparative education courses in shaping the future of education as they are ignored in teacher education (Thomas & Mosselson, 2018). In a broader sense, questioning and reflection in teacher education are important for supporting thinking skills such as scientific thinking.

### **Toulmin's Theory and English Language Education**

Since Plato's time, argumentation has been considered as the centerpiece for constructing knowledge (Metaxas, Potari & Zachariades, 2016). Argumentation is an important potential tool for knowledge production through reflection. Toulmin (1958) identified the components of an argument and relationship between them in 6 basic elements. They are, the claim (C), the data on which the argument is based (D), the warrant for supporting the claim presented by the data (W);, backing the legitimacy of the warrant (B), the qualifier representing the level of strength of the inference and the data (Q), and the rebuttal indicating the circumstances under which the claim and the warrant are invalid (R). The focus of Toulmin's studies was logic and argument. Toulmin claimed that argumentation needs to be considered as a philosophical practice rather than a rational approach meeting formal logical criteria. Basically, Toulmin's rules aim to support and analyze these 6 elements of the argument (Greenwald, 2007). Each argument consists of three elements, namely the claim, the data and the warrant. Claim is the basic knowledge of the argument. The data provides evidence for the claim, and the warrant is the absolute value that links the data to the claim (Gholami, & Husu, 2010). The warrants in Toulmin's model (W) are crucial for the success of argumentation because they build a bridge between the claim and the backing. The other three elements of argumentation (W, Q, R) support the change of ideas and common foundations (Zainuddin & Rafik-Galea, 2016). During argumentation, the data becomes significant when it supports the claim. At this point, the argument writer needs to discuss W, they used, carefully; however, it is difficult to present W since debaters rarely do this in practical arguments (Hegelund & Kock, 1999). According to the authors, the rebuttal shows the level of awareness towards ideas generated against the claim, while Q reflects what students use for supporting the claim. Q deepens the claim.

Toulmin model is an effective tool in teaching argumentative writing in teaching both mother tongue and foreign language content in foreign language teaching (Qin, 2013). Some of these studies have put emphasis only on language teaching. For instance, Campbell and Filimon (2018) concluded that strategy-based teaching of writing supports the development of standard English and improves writing skills. Similarly, Zainuddin and Rafik-Galea (2016) stated that argumentative writing is a challenging area for language students but also for language students and for the majority of all native English teachers, as it requires critical thinking logical reasoning. When the study was used to support mind thinking and argumentative writing skills using Toulmin's model, language skills also improved. Awada, Burston & Ghannage (2019), studying internet-based collaborative argumentative writing practices in English classes, emphasized that this model developed the writing skills of especially students with low level of language skills.

Similarly, Soodmand Afshar, Movassagh, and Arbabi (2017), who investigated the effects of argumentative writing in the second language on the development of critical thinking skills, concluded that arguments particularly promote the development of analysis and evaluation skills. On the other hand, there are several studies that indicate that this model helps prospective language teachers to acquire effective writing skills (Qin & Karabacak, 2010). In addition, in a study examining the conversations between an English class and their teachers, it was concluded that the model improved their scientific thinking skills and facilitated the modeling of pedagogical knowledge for presenting information to the students. In another study revealing that argumentative reasoning studies in the Australian English language classes supported the social structuring, Love (2000) emphasized that arguments promoted higher-order mental functions. The current study investigated pre-service English language teachers' argumentation for constructing knowledge in comparative education topics.

## Method

### Research Design

The purpose of this case study was to examine the development of the pre-service English teachers' pedagogical knowledge, result that results from generating arguments based on speaking and writing. A case study examines a phenomenon in detail in its own context by collecting a wide range of data from different sources (Creswell, 2016; Yin, 2009). Holistic case studies could be used for justifying or refuting a well-structured hypothesis (Creswell, 2016, p.98). Since this study is the first to examine a topic that has not been studied before, and the possibility exists that it could serve as a guide for further research, it was designed as a case study. Additionally, now that gaining deeper insights into understanding the processes of and changes in the case of concern takes time, the present study lasted for 14 weeks. In this research, the cognitive developmental path in the pre-service teachers' learning style regarding comparative education topics was scrutinized.

### Lesson Process Based on Toulmin's Model in Comparative Education Topics:

Comparative education course is an elective course included in the teacher education program of Turkey and consists of two hours of credits. This course was taught by employing TAP model. In the first lesson, the pre-service teachers were given the names of five countries that were successful in PISA exam, and 22 of them were assigned to examine the educational system of a country they preferred.

- In the 2<sup>nd</sup>, 3<sup>rd</sup> and 4<sup>th</sup> lessons, information was obtained by comparing the educational systems of these countries and Turkey (educational levels and reforms, environmental and cultural features) was shared. In the 5<sup>th</sup> lesson, they were asked to write the factors affecting these countries' different PISA successes and share them with the classroom.
- Then, Toulmin's model was introduced in the 6<sup>th</sup> lesson. Its elements were explained (e.g.: how can you persuade the whole classroom and your teacher about the fact that international success stems from teacher beliefs?) A library containing articles' abstracts and course books on two claims prioritized by the majority (related to the variable affecting the educational system of the country at most) was created by the researcher. One of these was about the importance of teacher education, and another one was about the importance of teacher beliefs. The library was shared with the whole classroom through Google drive.
- On the 7<sup>th</sup> and 8<sup>th</sup> weeks, they were asked to write a paragraph report (up to 200 words) with Toulmin's model elements using these reading materials. Moreover, they were asked to write in a way to support their points of view based on the conclusions of the article abstracts. They were provided to present the results of a paragraph via in-class discussions. During the discussions, the students were guided to compare the countries' educational levels and present country reforms as evidence. As from the 9<sup>th</sup> week, 3 groups were created to discuss the elements affecting the international education system for two opposite topics. Then, 2 full articles were given to each group to rebut the counter-view. They were asked to analyze the evidence and research results that would support their claims by analyzing the articles using the TAP chart. They gathered to discuss how to rebut possible counter-views via TAP chart prepared in the 10<sup>th</sup> and 11<sup>th</sup> weeks. In-class group discussions were organized. During this process, the researcher gathered with and guided the members of each group on how to examine the articles and arrange them according to Toulmin's model. Each group found verified claims and evidence by analyzing the articles they read using Toulmin's model. In addition, verified claims for refuting views of the opposing group were determined. The students emphasized that "they had never analyzed a paper in that way before and reading according to TAP model affected their comprehension positively".
- In the 12<sup>th</sup> and 13<sup>th</sup> weeks, two opposing groups presented their ideas in a debate. In this stage, each group presented its counter-views to the other group. Then the other group had to rebut these counter-views. One group provided evidence that the most important effect was teacher beliefs when the educational success among the countries was compared. The other group provided evidence by comparing scientific results and country reforms on the idea that the quality of teacher education was the most important factor. On the other hand, the third group merely gave general information about the PISA exam. Finally, a final evaluation report was required with two questions which were "Compare the education system of any country with that of Turkey (maximum 200 words)" and "Based on the comparison of the countries' education systems, choose one of the most important factors influencing success at PISA and justify your claim". **Study Group**

The study participants are pre-service English teachers studying at a state university in Turkey in 2018-2019 academic year in the selection of criterion sampling, one of the purposive sampling techniques, was used. The comparative education course was chosen to take the content variable under control. All of these students took part in in-class discussions about comparative education topics. However, 4 of these pre-service teachers were monitored to observe thoroughly and record their verbal arguments. The criteria applied in the selection of the study participants are:

- Presentation of merely one claim without adequate reasoning and
- Stating two contradictory claims during the observation.

For instance, while two of the participants defended the efficacy of teacher beliefs, the other two claimed that the quality of teacher education was more important by refuting the others' claim. The researcher led the in-class discussions and took part as a participant in the whole process.

### Data collection and Analysis

The data of the research were collected through semi-structured observation and document analysis.

**Observation:** Observations included the records of four pre-service teachers' discourses during in-class discussions while the researcher was teaching. The researcher kept these records through note-taking.

**Document analysis:** The writing activities included the reports and final assignments required based on the pre-service teachers' analyses of the articles using Toulmin's model. Similar to oral discourses, these articles were analyzed by two different experts through FCAS. The written reports were written by the participants considering the following questions:

Compare educational system of any country you wish with educational system of Turkey (200 words maximum). Based on comparison of educational systems of the countries, choose one of the most important factors affecting the success of PISA and justify your claim.

**The form for determining the level of comparative education argumentation skill (FCAS):** This form, developed based on Toulmin's model, was used to analyse the pre-service teachers' in-class discourses and worksheets. Two different experts interpreted both verbal and written argument records through descriptive analysis using this form. Bias in determining and evaluating the level of argumentation was prevented by the form, and the criteria were made clear. The form, consisting of four levels, was created by considering the codes used in the argument studies conducted in different subject areas by Metaxas, Potari and Zachariades (2016); Öztürk (2017) based on the elements of argument identified by Toulmin (1958). FCAS has explicit indicators for each argumentative level. These indicators were employed as evaluation criteria: Merely acceptable claim without justifications (1 level); The claims were supported with at least an acceptable justification (2 Level); Contains a verified claim and counter claim (3 Level); Contains verified claims and rebuttals (4 Level).

### Validity, Reliability and Ethics

Different data collection tools (observation-written documents) were used in the study. To prevent data loss, observation evaluations have been carried out by two teacher educators, one from the department of curriculum and instruction and the other from the English language teaching department, using FCAS forms. The research procedure has been described in detail and the study group criteria have been determined. The interrater reliability was found to be 86%.

### Findings

The elements of argument identified by Toulmin (1958) were analyzed in four levels through FCAS. Firstly, the development of argument based on observations was presented. Then analyses were performed on written responses related to the in-class scenarios of comparative education, and they were presented. The analyses were thoroughly presented to provide arguments of the participants better.

Table 1 : The findings related to the development in Spoken Arguments of P1 and P4

FCAS	THESIS	ANTI-THESIS
	Participant 1 (P1): Discourses	Participant 2 (P2): Discourses
Level 1: Merely acceptable claim without justifications	I think teachers' beliefs are more important in differentiating countries' education systems...  (3 <sup>rd</sup> week )	Teacher training is more important than teacher beliefs in differentiating countries' education systems...
Level 2	The most important factor affecting international success is teacher beliefs	

The claims were supported with at least an acceptable justification	because teachers choose teaching methods in which they believe efficacy rather than the ones they were taught.  (4 <sup>th</sup> -5 <sup>th</sup> weeks)	When educational systems of the countries are compared, it can be stated that the countries giving importance to teacher education succeed faster.
Level 3  Contains a verified claim and counter claim.	Driessen and Meinema stated in their study conducted in 2003 that teachers planned different course designs through the offered program in Dutch education. However, most of them were trained in the same teacher education. (6 <sup>th</sup> -7 <sup>th</sup> -8 <sup>th</sup> weeks)	The group defending the counter idea expressed that regardless of the teacher education curriculum, they would implement it differently based on their beliefs. However, it is teacher education that can shape beliefs. In 2017, the scientist Iş, who indicated the relationship between high levels of PISA exam success and teacher education in countries such as Finland, South Korea and Singapore, reported that the difference in success stemmed from the teacher training policies.
Level 4  Contains verified claims and rebuttals.	Especially in foreign language teaching, the education received is not enough for teachers to make a good assessment and evaluation. As Borg mentioned in 2003, teachers need to know how to transfer the knowledge into practice, that is, to use in the classroom. Their beliefs and thoughts shape teachers' knowledge. This philosophy of teachers is unobservable. Burns revealed the relationship between teachers' self-perceptions - beliefs and classroom roles in his study, based on classroom, in 1992. Therefore, rather than the education they receive, teachers' perceptions about their own and education are prominent for success. (8 <sup>th</sup> -13 <sup>th</sup> weeks).	The Segovia Ministry of Education Council reported in 1995 that teacher education has the most important role in the quality of education; the critics stressed that state-controlled educational systems destroy the professional partnership. For this reason, the Overseas Teacher Training Program in England proposed a pragmatic approach that prioritizes individual needs except for the European Economic Area. According to this approach, teacher philosophy and belief is important, but the most important thing shaping it is teacher education. Moreover, another researcher having compared teacher education in Finland and Turkey reported a relationship between the quality of teacher education and PISA success.

While the participants tended to convey their opposite ideas without justification in the first three weeks, they started to give justifications as of the 5<sup>th</sup> week. In the 6<sup>th</sup> week, they began to use scientific information since they read the concept of verified claim by understanding through TAP. As of the 8<sup>th</sup> week, they suggested more verified claims and used rebuttals. As a result, it can be stated that the ways of developing arguments led the pre-service English language teachers to construct their claims through evidence (verified justifications). This quest led them to examine scientific writings and sources to obtain information. This orientation diversified the teachers' ways of getting information. They began to increase the number of verified justifications as of the sixth week and to use rebuttals by evaluating each other's discourses from the eighth week. It was seen that they started to synthesize by gathering the results of more than one scientific writing as of the 9<sup>th</sup> week.

Table 2 : The findings related to the development in Speaking Arguments of P3 and P2

FCAS	THESIS	ANTI-THESIS
	Participant 3 (P3): Discourses	Participant 4 (P4): Discourses
Level 1: Merely acceptable claim without justifications	I think beliefs and philosophy are the most influential factors in differentiation of educational systems of the countries ...  (3 <sup>rd</sup> week)	Teacher education is the most important factor in the differentiation of educational systems of the countries ...
Level 2  The claims were supported with at least an acceptable justification	The most significant factor affecting international success is teacher beliefs because teachers attach priority to the elements they believe and attach importance. For example, if a teacher has a subject-based belief, they design teaching accordingly, but if he/she believes that skills are more important, they turn to skill-based teaching designs. In addition, every teacher undergoes an	When educational systems of the countries are compared, it can be seen that one of the factors affecting success is teacher education because a well-organized teacher education promotes the quality of education as well.

	educational process, but their beliefs affect success by shaping their classroom practices.  (4 <sup>th</sup> -5 <sup>th</sup> weeks)	
Level 3  Contains a verified claim and counter claim.	According to Fang (1996), teachers' thoughts about their roles, philosophies and values shape their theoretical beliefs. Hence, I think teacher beliefs play an important role in the quality of education. (6 <sup>th</sup> -7 <sup>th</sup> -8 <sup>th</sup> weeks)	Teacher education reforms are of great importance. Beatrice Avalos claimed in her research that changing teachers' philosophies and contributing to their development is directly related to teacher education.
Level 4  Contains verified claims and rebuttals.	I can provide two important evidences revealing that teacher beliefs shape educational success.  According to Buehl and Beck (2015), scientists admit that belief and practice are interdependent and affect students' school experience.  According to Raths and McAninch (2003); on the other hand, beliefs affect teachers' practices, interactions with their students and the classroom setting.  In this case, we see that teachers' beliefs cannot be broken with the teacher education received. All in all, the teachers in this study are the outcomes of teacher education. (8 <sup>th</sup> -13 <sup>th</sup> weeks).	How can a teacher create their philosophy? Of course they can create it with the education he/she has received until now... we cannot say that the teacher is only made up of the belief that he was born with and that a person creates his philosophy without an effort. Beatrice Avalos reported in her article that an uneducated philosophy cannot be considered. T. The fact that teachers, universities and researchers use and develop resources and tools in collaboration significantly affects the quality of education. Hargreaves (1994) stressed that recent studies have argued that teacher education reforms should be a priority. Teachers should be given such an education that they can raise good individuals. Think about it; a teacher cannot express their views, how can they teach an effective lesson? What is more frightening is that they have defend this by regarding it as their own belief. So teacher training should be of high quality so that teachers can try to be useful to their students.

When the arguments were examined, it was seen that the pre-service teachers tended to use evidence-based expressions and tended to use evidence-based expressions and make use of evidence while asserting counter-claims. The pre-service teachers' exemplary explanations and scientific evidences indicating the importance of the evidences for their claims, especially from the sixth week, were presented. As the TAP model was introduced and the studies on the importance of verified claims (evidence) were conducted in the sixth week, the students sought evidence. In addition, the researcher provided some examples on how to find a few arguments to support their own claims among sample scientific sources presented by the researcher. They had great difficulty selecting evidence from what they had read and analyzing what they had read because they tended to express what they read exactly. It took their time to develop a habit of finding a few important justifications from what they read. Comparative education topics and resources are important tools for producing arguments in the elements of claim + justification, claim + justification + verified claim, and they facilitated the process. TAP, containing all of these elements, facilitated the analysis of comparative education topics. Information on the pre-service teachers' development in written argument was presented in Graphic 1.

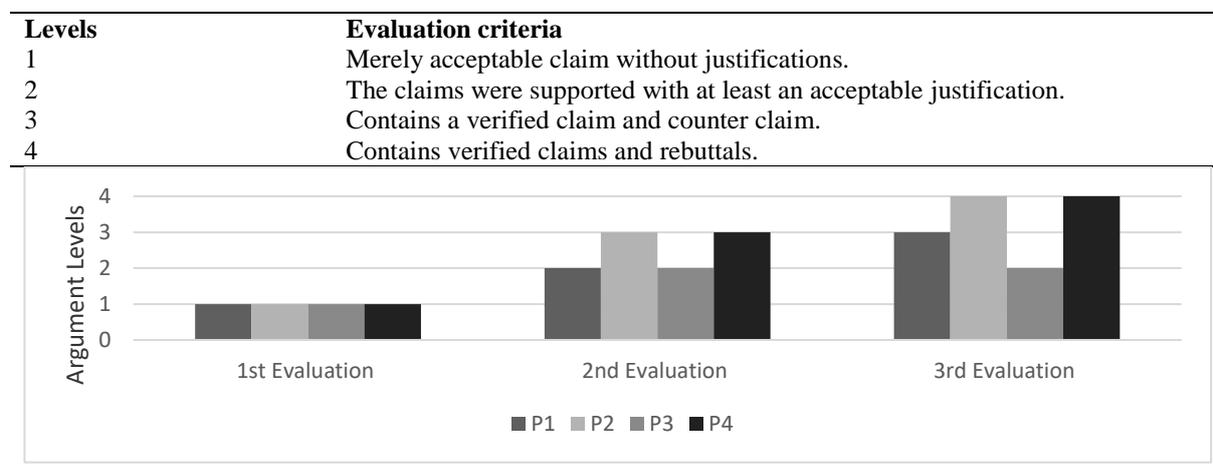


Figure 1: The findings regarding development in Written Arguments

When the development in written argument was examined, it was understood that the writing skills of P1, P2 and P4 in comparative education topics were improved by using Toulmin's model. In the first evaluation (pre-evaluation), all pre-service teachers presented acceptable arguments, but they had argument structures without justifications. For the second evaluation (7<sup>th</sup> week), arguments including at least one claim and counter claim were presented. At the end of the process, the number of claims (evidence) started to use rebuttals. This is crucial for the development of scientific thinking ways in teacher education. On the other hand, P2, who made process in the fourth level, included more than one verified claim and rebuttals at the end of the process:

*"I understood very clearly that teacher education affects success much earlier than beliefs when I compared the educational systems of Turkey and Denmark. Danish preschool teachers and primary school - secondary school teachers are required to do a master's degree after finishing 3,5 and 4 years of undergraduate program, respectively. In Turkey, on the contrary, teachers can be appointed via a central examination after completing four years of undergraduate education. On the other hand, while teacher education tries to raise teachers based on the criteria sought by the local government in Denmark, teachers are appointed based on Public Personnel Selection Examination (KPSS) and oral examination in Turkey. Teacher Education Program in England apart from the European Economic Area; on the other hand, proposed a pragmatic approach giving priority to individual needs. In this case, it can be suggested that the countries that satisfy the needs by focusing on teacher education rather than teacher beliefs are more successful. As a result, a well-designed teacher education can affect teacher beliefs as well (P2)."*

Similarly, P4 stated the verified justifications from the sources she read as follows:

*"New Zealand addresses teacher competencies in a special framework. Universities and local governments provide continuous education for teachers to acquire these competencies. The teacher council has organized teacher trainings based on these qualifications since 1989. When we consider the success of this country in PISA, isn't this evidence sufficient to directly claim that the quality of teacher education is the main factor affecting the success among countries? ... teachers aim to achieve these competencies regardless of their educational purposes (P4)."*

As can be seen, Toulmin's model improved the pre-service teachers' ability to provide evidence and to rebut the counter claim. Comparative education topics have rich scientific evidence and argument production content. However, P3 could not reach the fourth level in the process of written argument, contrary to the spoken argument. She supported her arguments with at least one justification, yet she provided arguments without verified claims-rebuttals. When we questioned the reason for this, it was seen that she changed her initial claim about the most important factor affecting international educational success during the written argument and admitted the counter group's claims. However, her improvement was in the second level as she provided a new argument. While, in the first evaluation, she defended the claim that teacher beliefs were more important than teacher education, her written argument after the second evaluation was as follows:

*"When educational systems of the countries are compared, it can be seen that teacher education affects success more than teacher beliefs. Due to the quality of teacher education in the countries, teacher practices of each country are different, too. Even though teacher beliefs are important, a good teacher education can change these beliefs. For example, since Spain has a learner-centred teacher education, professional development of the individuals is significant (P3)."*

This fact suggests that argument development methods promote the generation of new arguments in teacher education and the ability to make evidence-based argument rebuttal. The pre-service teacher was convinced by the evidence. Her claim was rebutted through arguments. Another important point was that while P1 provided more than one verbally verified claim during in-class discussions, she provided only one verified evidence in the activity of written argument. The main reason for this situation may be the teaching based on in-class discussion activities to generate spoken arguments. Since written arguments are usually used for evaluation purposes, the ability to generate spoken arguments may have improved to a higher level. *In the final evaluation, the same participant presented a claim + evidence of the importance of teacher education: Especially in foreign language teaching, the education received is not enough for teachers to make a good assessment and evaluation. As Borg mentioned in 2003, teachers need to know how to transfer the knowledge into practice, that is, to use in the classroom. Their beliefs and thoughts shape teachers' knowledge. This philosophy of teachers is unobservable (P1)."*

As it can be concluded, Toulmin's model fostered the pre-service teachers' ability to provide evidence and to rebut the counter claim. The content of comparative education topics has rich scientific evidence and argument production content. Thus, argument production on comparative education topics using the TAP model led the pre-service teachers to seek scientific evidence and present their claims via these verified claims.

## Results and Discussion

The research findings revealed that the pre-service teachers' argumentative discourses and writings on comparative education topics contributed to the development of scientific thinking skills such as making assumptions by questioning the reasons for educational success of the countries, supporting these assumptions with evidence and rebutting. Afdal (2019), who investigated the benefits and limitations of international comparative education, stressed that involving this issue in teacher education has developed an international understanding. Still, it can lead to standard transfers in developing non-content educational policies. Broadfoot (2000), discussing how comparative education topics should be in the 21st century, stated that comparative learning can make it easier for individuals to understand the learning opportunities that have been the last century's features. Considering that the pre-service teachers may not only be teachers but also managers or politicians of the future, not only as teachers, argument production in comparative education topics is of great importance for professional development, as comparative education provides a transfer of knowledge based on advances and reforms in other societies (Watson, & Wilson, 2018). Thus, it gives individuals the opportunity to benefit from professional experience on overcoming regional problems. Broadfoot (2000) stated that comparative education should be based on experiences, expertise and criticism from different contents in the century of collaboration and competition. In this study, the teachers examined the variables affecting the PISA success among countries and questioned the reasons. While some pre-service teachers discussed country education reforms to improve teacher education, others focused on what to be done when the teacher changes their own beliefs and philosophy. While this provided evidence for the claims, it expanded the process of the pre-service teachers' structuring knowledge. Nikolaos, Despina and Theodossios (2009), who stressed that argumentative discussions about pedagogical knowledge should be an important part of teacher talk, discussed the importance of the relationship between argument and pedagogy. Metaxas, Potari, and Zachariades (2016) similarly provided an in-depth understanding of teacher arguments and pedagogical issues by examining in-class teacher discourses and stressed the importance of arguments in structuring and obtaining knowledge. In addition, Khakpour (2012) argued in his research on comparative education topics that it was helpful in providing educational changes by comparing the content and process of successful educational systems. In addition, the author argued that comparative education topics should focus on studies with in-depth interpretations rather than quantitative studies. In this study, as suggested by the author, a small number of people in the light of thorough qualitative findings were included.

In conclusion, it can be stated that the ways of developing arguments led the pre-service English language teachers to construct pedagogical knowledge claims through evidence and to study scientific sources. Similarly, Dinkelman (2003) revealed that arguments are generated spontaneously in the classroom environment when the component of supporting reflective learning for self-regulation in teacher education practices. Öztürk (2017), who examined whether socio-scientific argumentation processes of the pre-service teachers with high and low socio-scientific argumentation skills in teacher education differ in terms of cognitive awareness, concluded that the pre-service teachers with higher socio-scientific argumentation skill levels exhibited higher cognitive awareness behaviors (planning, decision making, evaluation, monitoring, and organization organizing). Similar to our study, Qin (2013), who investigated the effectiveness of argumentation on the pre-service English language teachers using Toulmin's model, concluded that the pre-service teachers' argumentative responses reached a higher level in relation to the teaching process and that they willingly participated in teaching during the lesson. The author stated that elements such as rebuttal and opposing the idea developed in later steps. It was possible to see similar results in this study. Orientations on rebuttal were seen at the end of the study, and development of argumentative writing took more time. It was observed that the counter claim defensive arguments rebutted the first claim of the participant 3. In addition, evidence-based statements on comparative education topics led the pre-service teachers to analyze scientific sources to provide evidence. Evidence-based thinking and using scientific sources are important for developing the pre-service teachers' critical thinking skills. According to Reed (2005), Toulmin's model has been a frequently used method in teaching critical thinking skills.

Similarly, Soodmand Afshar, Movassagh and Arbabi (2017) concluded that arguments particularly supported the development of analysis and evaluation skills. On the other hand, Chen, Park and Hand (2016) investigated the contribution of speaking and writing to the development of scientific conceptual knowledge through structuring knowledge and argumentation. It was concluded that participation in the arguments provided opportunities for learners to support scientific knowledge. Similarly, in the present study, making the in-class discussions analytical via Toulmin's model led the learners to use scientific knowledge. On the other hand, comparative education topics are an opportunity for discussion-based learning. According to Bulut (2019), Argument is an output produced as a result of discussion to support a claim. Discussion-based learning is also an effective approach that can be used to discuss ideas on sociological issues.

Like the present study, Qin and Karabacak (2010) studied argumentative writing with the pre-service foreign language teachers and evaluated the developments using Toulmin's model. As a conclusion, it was revealed that the evidence-based structure of Toulmin's model promoted argumentative writing skills. Teachers who learned to

use Toulmin's comparative education model can use it while teaching English to their students. Simon (2008) concluded in his study conducted with English language students and teachers that Toulmin-based argument conceptualization is a guiding teaching model especially for inexperienced teachers. In addition, the author concluded that the model supported teacher pedagogy and provided professional development. Toulmin-based materials were found to be advantageous for teachers to conceptualize arguments and to model for students.

Similarly, Love (2000), who argued that argument modeling was an opportunity in language teaching for argumentation on texts on reasoning in English language classes, stated that the model also offered a sociological learning environment to learners. Gholami and Husu (2010), who carried out a study on making arguments on English teacher practices, sought the answer to the question "how do teachers reason between their practices and knowledge?". The results showed that teachers used practical arguments. According to the author, the practical argument was carried out as follows: firstly, the teachers asserted claims about different pedagogical subjects. Secondly, they supported their claims with different conceptual information, and thirdly, they connected their conceptual foundations to practical knowledge with two steady warrants (W). These two warrants are related to information's applicability and ethics (pracsjol). Thus, if teachers assert their claims in accordance with moral values (pracsjol), the information is implemented. When the benefit of the action is evaluated, practical information is gained. In another study (Zainuddin & Rafik-Galea, 2016), which investigated the effectiveness of the Toulmin model on argumentative writing and critical thinking of ESL students, it was emphasized that structured models are especially needed for completing argumentative writing drafts, which require higher-order thinking skills. It was even emphasized that argumentative writing requires critical thinking and logical reasoning and is challenging not only for students but also for teachers whose native language is English. Since our study has supported argumentative writing in comparative teaching, it can also be a basis for promoting English writing competence. There are many studies that demonstrate the contribution of argument to the development of English writing competence (Campbell & Filimon, 2018; Zainuddin & Rafik-Galea, 2016; Awada, Burston & Ghannage, (2019).

## Conclusion

In conclusion, supporting teacher education through arguments is important for pre-service English language teachers as it is in all subject areas. For this reason, ways of argumentative learning should be investigated and presented in comparative education as a part of professional development courses and field education courses. Toulmin's model was used in learning through arguments on comparative education topics in the present study. Similarly, the courses in teacher education should be examined. It should be noted that the courses including topics that can be applied with argumentation models are an opportunity for teaching pre-service teachers thinking skills. Further studies on different ways and models can be studied in this context. Comparative education topics have an important content for argument development.

## References

- Adler, I., Zion, M., & Rimerman-Shmueli, E. (2019). Fostering teachers' reflections on the dynamic characteristics of open inquiry through metacognitive prompts. *Journal of Science Teacher Education*, 30(7), 763-787. <https://doi.org/10.1080/1046560X.2019.1627060>
- Afdal, H. W. (2019). The promises and limitations of international comparative research on teacher education. *European Journal of Teacher Education*, 42(2), 258-275. <https://doi.org/10.1080/02619768.2019.1566316>
- Awada, G., Burston, J., & Ghannage, R. (2019). Effect of student team achievement division through WebQuest on EFL students' argumentative writing skills and their instructors' perceptions. *Computer Assisted Language Learning*, 1-26. <https://doi.org/10.1080/09588221.2018.1558254>
- Bakioğlu, A. (2018). *Comparative education management. Education systems of successful countries in PISA*. Nobel publishing, Ankara.
- Balçı, A. (2018). *Comparative education systems*, Pegem Publications, Ankara.
- Broadfoot, P. (2000). Comparative education for the 21st century: retrospect and prospect. *Comparative Education*, 36(3), 357-371. <https://doi.org/10.1080/03050060050129036>
- Bulut, B. (2019). Argumentation-Based Learning in Social Studies Teaching. *Journal of Education and Learning*, 8(3), 89-94.
- Campbell, Y. C., & Filimon, C. (2018). Supporting the argumentative writing of students in linguistically diverse classrooms: An action research study. *RMLE Online*, 41(1), 1-10. <https://doi.org/10.1080/19404476.2017.1402408>
- Chen, Y. C., Hand, B., & Park, S. (2016). Examining elementary students' development of oral and written argumentation practices through argument-based inquiry. *Science & Education*, 25(3-4), 277-320.

- Creswell, J. W. (2016). Beş nitel araştırma yaklaşımı (M. Aydın, Çev.). M. Bütün ve S. B. Demir (Ed.), Nitel araştırma yöntemleri beş yaklaşıma göre nitel araştırma ve araştırma deseni içinde (s. 69-110). Ankara: Siyasal Kitapevi.
- Dinkelmann, T. (2003). Self-study in teacher education: A means and ends tool for promoting reflective teaching. *Journal of teacher education*, 54(1), 6-18. <https://doi.org/10.1177%2F0022487102238654>
- Erdoğan, İ. (2016). Comparative education systems, Sumer Kitapevi, İstanbul.
- Erduran, S., Simon, S., & Osborne, J. (2004). TAPping into argumentation: Developments in the application of Toulmin's argument pattern for studying science discourse. *Science education*, 88(6), 915-933.
- Eret-Orhan, E., Ok, A., & Capa-Aydin, Y. (2018). We train, but what do they think? Preservice teachers' perceptions of the adequacy of their teacher education in Turkey. *Asia-Pacific Journal of Teacher Education*, 46(2), 183-198. <https://doi.org/10.1080/1359866X.2017.1355050>
- Gholami, K., & Husu, J. (2010). How do teachers reason about their practice? Representing the epistemic nature of teachers' practical knowledge. *Teaching and Teacher Education*, 26(8), 1520-1529. <https://doi.org/10.1016/j.tate.2010.06.001>
- Ginsburg, M., Massón Cruz, R. M., Rodríguez Alfonso, E., & García Isaac, Y. (2019). Teaching Comparative Education in Cuba and the United States. *Encyclopedia of Teacher Education*. Singapore: Springer. Disponible en: <https://doi.org/10.1007/978-981-13-1179-6>.
- Greenwald A.R (2007) Learning how to argue: experiences teaching the Toulmin model to composition students. Ph.D. thesis. Iowa State University.
- Hegelund, S., & Kock, C. (1999). Macto-Toulmin: the argument model as structural guideline in academic writing. Paper presented at the Argumentation at the Century's Turn, Ontario, Canada.
- Khakpour, A. (2012). Methodology of comparative studies in education. *Contemporary Educational Researches Journal*, 1, 20-26.
- Lemley, S. M., Hart, S. M., & King, J. R. (2019). Teacher inquiry develops elementary teachers' disciplinary literacy. *Literacy Research and Instruction*, 58(1), 12-30. <https://doi.org/10.1080/19388071.2018.1520371>
- Love, K. (2000). The regulation of argumentative reasoning in pedagogic discourse. *Discourse Studies*, 2(4), 420-451. <https://doi.org/10.1177%2F146144560002004002>
- Metaxas, N., Potari, D., & Zachariades, T. (2016). Analysis of a teacher's pedagogical arguments using Toulmin's model and argumentation schemes. *Educational Studies in Mathematics*, 93(3), 383-397.
- Nikolaos, M., Despina, P., & Theodossios, Z. (2009, July). Studying Teachers' pedagogical Argumentation. In of the 33rd conference of the International Group for the Psychology of Mathematics Education (p. 121).
- Öztürk, A. (2017). An investigation of prospective science teachers' socio-scientific argumentation processes in terms of metacognition: A causal-comparative study. *Pegem Journal of Education and Instruction*, 7(4), 547.
- Qin, J. (2013). Applying Toulmin model in teaching L2 argumentative writing. *The Journal of Language Learning and Teaching*, 3(2), 21-29.
- Qin, J., & Karabacak, E. (2010). The analysis of Toulmin elements in Chinese EFL university argumentative writing. *System*, 38(3), 444-456.
- Reed, C., & Rowe, G. (2005). Translating Toulmin diagrams: Theory neutrality in argument representation. *Argumentation*, 19(3), 267-286.
- Richmond, G., Salazar, M. D. C., & Jones, N. (2019). Assessment and the future of teacher education. *Journal of Teacher Education*. 86-89. <https://doi.org/10.1177%2F0022487118824331>
- Schwarz, B. B., Neuman, Y., Gil, J., & Ilya, M. (2003). Construction of collective and individual knowledge in argumentative activity. *The journal of the learning sciences*, 12(2), 219-256.
- Scruton, R. (1996). The eclipse of listening. *The New Criterion*, 15(30), 5-13.
- Simon, S. (2008). Using Toulmin's argument pattern in the evaluation of argumentation in school science. *International Journal of Research & Method in Education*, 31(3), 277-289.
- Soodmand Afshar, H., Movassagh, H., & Radi Arbabi, H. (2017). The interrelationship among critical thinking, writing an argumentative essay in an L2 and their subskills. *The Language Learning Journal*, 45(4), 419-433. <https://doi.org/10.1080/09571736.2017.1320420>
- Thomas, M. A., & Mosselson, J. (2018). Advancing the Teaching of Comparative and International Education. *Annual Review of Comparative and International Education*, 89-95.
- Türkoğlu, A. (2015). Comparative education with examples from world countries. What is comparative education ?, Anı publishing, Ankara.
- Watson, K., & Wilson, R. (Eds.). (2018). Contemporary Issues in Comparative Education: A Festschrift in Honour of Professor Emeritus Vernon Mallinson. Routledge.
- Wilkinson, I. A., Reznitskaya, A., Bourdage, K., Oyler, J., Glina, M., Drewry, R., & Nelson, K. (2017). Toward a more dialogic pedagogy: changing teachers' beliefs and practices through professional development in

- language arts classrooms. *Language and education*, 31(1), 65-82.  
<https://doi.org/10.1080/09500782.2016.1230129>
- Yeşilpınar Uyar, M., & Doğanay, A. (2018). A School-Based Curriculum Development for the Teaching Principles and Methods Course. *Croatian Journal of Education: Hrvatski časopis za odgoj i obrazovanje*, 20(2), 621-672.
- Yıldırım, A., & Şimşek, H. (2016). *Qualitative research methods in social sciences* (10th ed.). Ankara: Seçkin Publishing..
- Zainuddin, S. Z., & Rafik-Galea, S. (2016). Effects of training in the use of Toulmin's model on esl students' argumentative writing and critical thinking ability. *Malaysian Journal of Languages and Linguistics (MJLL)*, 5(2), 114-133.