

argumentative task and their abilities to write argumentative texts did not increase with their age groups.

Conclusions and Implications

A general conclusion drawn based on the findings is that the current study presents empirical evidence regarding the diverse aspects of argumentative writing skill in graduate university level studies in an EFL context. First, this study revealed that the two variables under research, namely age and gender do not have any significant effect on the use of Toulmin elements of argumentation in written discourse of Iranian graduate EFL learners. This implies that the main contribution of the current study in terms of external factors including gender variations and age groups in L2 writing in general and argumentative writing in particular is that Iranian EFL graduate learners' tendency to employ the Toulmin adapted elements is not directly attributed to gender distinctions and age variations, and their performances on the written argumentation were independent of these external factors of differences in habitual thinking patterns and reasoning.

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A general conclusion drawn based on the findings is that the current study presents empirical evidence regarding the diverse aspects of argumentative writing skill in graduate university level studies in an EFL context

He maintains that gender-equality should be exercised more in the learners' writing performance. Another likely reason might be the notion of cultural matters (Cohen, 2011) of gender differentiations rather than biological sex which shed light on "neurological and hormonal differences in the brains of males and females" (Nyikos, 2008, p74). Therefore, the current finding in terms of the gender variations in L2 writing in general and argumentative writing in particular indicates that Iranian EFL graduate learners' tendency to employ the Toulmin adapted elements is not directly attributed to gender distinctions and their performances on the

written argumentation were independent of gender differences in critical thinking patterns and reasoning.

The results further indicated no significant differences in the frequency of Toulmin elements of argumentation perceived to be used between EFL graduate of age groups, which is in contrast with the finding by DeBernardi and Antolini (1996) who argued that as age increased, learners could support claim adequately and develop counterargument reasonably. It might be concluded that Iranian EFL graduate learners' tendency to use the adapted Toulmin model did not emerge later in their

Table 6. Multivariate Tests of Effects significance on Toulmin elements of argumentative writings

Effect	Value Label	Value	F	Sig.	Partial Eta Squared
Gender	Wilks' Lambda	.934	1.652	.137	.066
Age	Wilks' Lambda	.933	1.689	.128	.067
Age * Gender	Wilks' Lambda	.952	1.173	.324	.048

Discussion

The current study presents empirical evidence regarding the diverse aspects of argumentative writing skill in graduate university level studies in an EFL context. First, the results demonstrated no significant differences in the frequency of Toulmin elements of argumentation perceived to be used between EFL graduate males and females. This finding is in contrast with the earlier research in the literature, which asserted the existence of differences between males and females in terms of written argumentation (Bermudez & Prater, 1994; Kanaris, 1999; Meinhof 1997; Punter & Burchell, 1996). Nonetheless, it supports the recent research in the literature in the sense that no significant differences between males and females in terms of written argumentation have been reported (Atai & Nasser, 2010; Jeong and Davidson-Shivers, 2006). It might be inferred from the above-mentioned patterns of gender differentiation in gender-based argumentative writings studies that there has been a trend to probe the argumentative writing and gender variation (see Atai & Nasser, 2010) and the studies showed that these variations and recent ones identify no differences between the argumentative male and female writers.

Gender distinctions might be affected by factors such as inequality of assessment (Earl-Novel, 2001), and social, cultural, and educational issues (Schick, 1992). For example, Earl-Novel (2001) asserts that the main impetus for this differentiation between males and females in the writing task is inequality of writing assessment.

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argument claims in their argumentative essays. Also, males of 28-43 years used this element most frequently in their argumentative essays, while males of 22-27 years used the smallest number of counter-argument claims.

Depicted in Table 6, the Wilk's Lambda value for Gender is .93 with a significance value of .128 which is more than .05, revealing that gender did not have any statistically significant main effect on the type and frequency of Toulmin elements in participants' argumentative writing performance. Also, the Wilk's Lambda

value for age groups is .933 with a significance value of .128 which is more than .05, revealing that age did not have any statistically significant main effect on the type and frequency of Toulmin elements in participants' argumentative writing performance. Likewise, the results of the two-way MANOVA show that there are no statistically significant differences between the interaction of age and gender of the participants, and the elements used in their argumentative essays did not reveal any significant main effect (see Table 6).

the counter argument claim, there are no statistically significant differences in the analysis of the interaction of Gender*Age and Toulmin elements of arguments.

Table 4. Test of Between-subjects Effect for the interaction of gender*age and Toulmin elements

Independent Variable	Dependent Variables	F	Sig.	Partial Eta Squared
Age* Gender	Claim	.365	.547	.002
	Data	1.509	.221	.010
	CA claim	4.679	.039*	.031
	CA data	.106	.745	.001
	Reclaim	.405	.525	.003
	Redata	.219	.641	.001
	CA claim= counterargument claim; CA data= counterargument data; Reclaim= rebuttal claim; Redata= rebuttal data			

*. Correlation is significant at the 0.05 level (2-tailed)

Table 5. Means for the counter-argument claim across age and gender

Dependent Variable	Gender	Age	Mean	SD	
CA claim	Female	22-27 years old	.51	.534	
		28-43 years old	.35	.485	
	Male	22-27 years old	.46	.505	
		28-43 years old	.71	.588	
	CA claim= counterargument claim				

As Table 5 revealed, the comparison of all the means of males and females in the two age groups showed that females of 22-27 years employed the highest

number of counter-argument claim in their argumentative writings among both females and males, and females of 28-43 years used the least number of counter-

Table 2. Test of Between-subjects Effect for gender and Toulmin elements of written argumentation

Independent Variable	Dependent Variables	F	Sig.	Partial Eta Squared
Gender	Claim	.506	.478	.003
	Data	.288	.592	.002
	CA claim	.776	.380	.005
	CA data	3.879	.051	.026
	Reclaim	3.528	.062	.023
	Redata	.049	.825	.00
	CA claim= counterargument claim; CA data= counterargument data; Reclaim= rebuttal claim; Redata= rebuttal data			

argumentation in the participants' writings.

Table 3 presents the results of age-based analysis of Toulmin elements in the six categories of argument structure in the learners' argumentative writing.

Moreover, different texts including persuasive play a significant role in "shaping and maintaining gender" (Verbiest, 1995; 825)

Table 3. Test of Between-subjects Effect for age and Toulmin elements of written argumentation

Independent Variable	Dependent Variables	F	Sig.	Partial Eta Squared
Age	Claim	.144	.704	.001
	Data	2.591	.110	.017
	CA claim	.020	.889	.00
	CA data	.989	.322	.007
	Reclaim	1.249	.265	.008
	Redata	.099	.753	.001
	CA claim= counterargument claim; CA data= counterargument data; Reclaim= rebuttal claim; Redata= rebuttal data			

As Table 3 illustrates, there are no statistically significant differences between the age of participants and the type and frequency of Toulmin elements of

argumentation. As Table 4 depicts, the results of the interactions of gender and age for the counterargument claims are significantly different. That is, except for

Iran does not pose a serious threat to the United States was finally selected as the topic of the argumentative writing task. The participants were asked to write an argumentative paper on the selected topic of no fewer than 300 words at home and return it within one week. All the argumentative writing essays, then, were graded holistically according to a 5-scale scoring rubric proposed by McCann (1989) and Nussbaum and Kardash (2005). To examine analytically argumentative writing essays, Qin and Karabacak's (2010) argument structure, which is based on Toulmin (1958, 2003) model of argument, was adopted as the main source for analyzing the structure of argumentative essays.

Results

The uses of Toulmin elements are examined across the gender. The descriptive profile of all elements of the Toulmin model of argument observed across gender is depicted in Table 1. As can be seen in the Table 1, claims and data are used more frequently than the other four elements of Toulmin model among males and females. The average number of claims used per each argumentative essay among males and females is 1.26 and 1.33, respectively. The average number of pieces of data presented among males and females is 2.34 and 2.25, respectively. However, the average numbers of counterargument claims, counterargument data, rebuttal claims, and rebuttal data among males are .53, .09, .43, and .09, respectively. The averages of these secondary elements for females are .46, .21, .29, and .08, respectively. These results show that males and females tend to use data and claim most frequently (the fundamental elements of Toulmin model),

and the secondary elements of Toulmin model least frequently. That is, the rank-order of the reported secondary Toulmin elements by the Iranian male and female graduate learners is: counterargument claim > rebuttal claim > counterargument data > rebuttal data.

Table 1. Descriptive statistics for the use of Toulmin elements across gender

Toulmin Elements	Male		Female	
	Mean	SD	Mean	SD
Claim	1.26	.58	1.33	.56
Data	2.34	1.1	2.25	1.02
CA claim	.53	.54	.46	.52
CA data	.09	.28	.21	.41
Reclaim	.43	.50	.28	.45
Redata	.09	.28	.08	.27

Note: CA claim= counterargument claim; CA data= counterargument data; Reclaim= rebuttal claim; Redata= rebuttal dat

Furthermore, the multivariate analysis of variance (MANOVA) was performed to investigate gender differences in Toulmin elements of argument structure. In this study, six elements of Toulmin model of argument were considered as the dependent variables and gender as the independent variable. Preliminary assumption testing was conducted to check for linearity, normality, univariate and multivariate outliers, homogeneity of variance-covariance matrices, and multicollinearity, with no serious violations reported. As Table 2 depicts, there is no statistically significant difference between EFL graduate males and females and the frequency of Toulmin elements of



Atai & Nasser, 2010). For example, in the context of argumentation in an on-line debate, Jeong and Davidson-Shivers (2006) revealed no differences in number of critiques posted in response to arguments. They show that females used fewer rebuttals to the critiques of other females than males, while males used more rebuttals to the critiques of females than female participants. Atai and Nasser (2010), in a gender-based study of informal fallacies of argumentation, indicated that gender does not have any significant effect on the use of informal fallacies of argumentation in written discourse of Iranian advanced EFL learners.

Nonetheless, the above-mentioned studies have been mainly concerned with general argumentative writings rather than with the ones grounded in the work of

Toulmin model. However, as the literature reveals, there exists a very few studies examining the structures of English argumentative papers written by male and female Iranian EFL graduate learners. More specifically, the following research questions guided this study:

1. Is there any statistically significant difference between Iranian male and female graduate EFL learners in their use of each of the adapted Toulmin elements?
2. Is there any statistically significant difference in terms of type and frequency of Toulmin elements between Iranian graduate EFL learners of different age groups?

Nonetheless, the above-mentioned studies have been mainly concerned with general argumentative writings rather than with the ones grounded in the work of Toulmin model

Method

The participants for this study were 150 male and female Iranian EFL learners studying English at the graduate level with the age range of 23-43 years old. They had passed the 'Advanced Writing course' of the graduate program of the universities in which TEFL courses are offered at both PhD and MA Levels. The participants were asked to write an argumentative essay on a topic in English. The topic *'Iran poses a serious threat to the United States vs.*

چکیده

هدف اصلی این مطالعه بررسی این مسئله است که آیا جنسیت و سن می‌تواند به‌عنوان عوامل مؤثر در نگارش استدلالی شرکت‌کنندگان با توجه به مدل تطبیق شده تولمین در نظر گرفته شود. به‌عنوان مثال، مجموعه‌ای از نگارش‌های استدلالی نوشته شده توسط ۲۵۰ نفر از دانشجویان ارشد رشته آموزش زبان انگلیسی جمع‌آوری شده است. سن و جنسیت شرکت‌کنندگان به‌عنوان متغیر غیر وابسته (مستقل) در نظر گرفته شده است. شش مقوله اصلی ساختار استدلالی در فعالیت‌های نگارش استدلالی فراگیران مورد بررسی قرار گرفته و تکرارهای مشاهده شده توسط تحلیل MANOVA مورد تحلیل قرار گرفته است. نتایج نشان می‌دهد که تفاوت معناداری بین سن و جنسیت و استفاده از مقوله‌ای اصلی نگارش استدلالی وجود ندارد. در ضمن مفاهیم آموزشی در نحوه استفاده از این عناصر مدل تولمین بحث شده است.

کلیدواژه‌ها: نگارش استدلالی، مدل تولمین، جنسیت، سن

Introduction

Matusov and Soslau (2010) argue that a structural approach to argumentative writing can be influenced by external factors including gender. Moreover, different texts including persuasive argumentation play a significant role in “shaping and maintaining gender” (Verbiest, 1995; 825). Gender differences have culturally situated in argumentative writing studies, with females usually reporting more engagement in argumentative writings than males (Bordelon, 2005; Schick, 1992).

Earlier research of gender impacts upon argumentative writings found the significant differences between males and females in relation to argumentative writing (Bermudez & Prater, 1994; Kanaris, 1999; Punter & Burchell, 1996). For example, Bermudez and Prater (1994), in their attempt to examine learners' argumentative writing, showed that female writers used more elaboration and clarity in terms of expressed opinions than males. Likewise, Punter and Burchell (1996)

revealed that females obtained higher scores when the writing was imaginative, reflective, and emphatic; males got higher scores in argumentative and factual writing. Meinhof (1997) further showed that females' writings were self-reflexive and evaluative, while males' texts were egocentric.

Earlier research of gender impacts upon argumentative writings found the significant differences between males and females in relation to argumentative writing (Bermudez & Prater, 1994; Kanaris, 1999; Punter & Burchell, 1996)

However, recent studies illuminate few or no differences between the writings of different genders in different cultures, particularly argumentative writers (e.g.



Using Toulmin's Elements of Argumentative Writing in an Iranian EFL Context: Gender Differences and Age Variations

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Abstract

This study attempts to examine whether gender and age could be considered as determining factors affecting the participants' argumentative writing with regard to the adapted Toulmin (1958, 2003) model of argument structure. As such, the corpus of argumentative essays written by 250 Iranian male and female graduate English language learners was collected. The participants' age and gender were considered as the independent variables. Six major categories of argumentative structure were examined in the learners' argumentative writing tasks and the observed frequencies were analyzed using MANOVA. The results revealed that there are no statistically significant differences between the age and gender of participants and the type and frequency of Toulmin elements of argumentation. The pedagogical implications on the use of these elements of Toulmin model are discussed.

Key Words: Argumentative writing, Iranian EFL learners, gender, age