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Research Paper

Exploring Nominalization Use in EFL Students' Argumentative Writing Over a Genre-Based Teaching and Learning Approach

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Abstract

This study explored grammatical and rhetorical complexity of a class of undergraduate EFL students' argumentative texts and its possible impacts on textual features and making arguments over a genre teaching and learning approach. A method of genre teaching and learning was adopted from the Sydney school genre. There are major stages in this method such as deconstruction, joint construction, and independent construction. The focus of this study was on independent construction in which the students produced their independent texts. The use of nominalization as a source of grammatical complexity was the focus of analysis before and after the application of this approach. The quantitative and qualitative analyses indicated improvements both in frequency and complex phrasal construction of nominals after the application of pedagogy in comparison with the students' prior texts. Findings have implications for teaching and learning of academic writing in EFL contexts.

Keywords: Genre-Based Pedagogy; Sydney School Genre; Systemic Functional Linguistics (SFL); Grammatical Metaphor; Nominalization; Academic Writing

1. Introduction

As an important construct in academic writing, the grammatical and rhetorical complexity has been the focus of attention by many influential scholars in linguistics (e.g., Biber, 2006; Ellis & Yuan, 2004; Halliday & Martin, 1993; Hyland, 2004). The syntactic complexity as the main construct in L2 writing and research (Ortega, 2003) has drawn the attention in current studies (Atak & Saricaoglu, 2021; Vyatkin, 2012). The increased use of complex phrasal constructions has been hypothesized as a sign of development in complexity of writing (Biber, Gray, & Poonpon, 2011), packing information (Biber, 2006; Ravelli, 1999) and making arguments (Halliday, 1993; Martin, 1993). Halliday (1998a) and Halliday and Matthiessen (2006, 2004) attribute the emergence of complex phrasal constructions to rank-shift from clause level to phrasal including nominal phrases/groups. The rank-shifted nominal groups include a head noun with premodifiers and, sometimes, is followed by postmodifier(s). In systemic functional linguistics (SFL), this grammatical complexity is called *nominalization*. There are many studies that have investigated the development of such a complex phrasal structures in the native English child language development (Derewianka, 2003, 2006) and the academic writing of native and EFL writers (Halliday, 1993; Jalilifar, Saleh, & Don, 2017b; Martin, 1993; Ravelli, 1999). However, there are paucity of studies investigating impacts of language pedagogies including genre teaching and learning approach on the development of complex nominal construction in EFL academic writings and how this complexity helps making argumentation. In this study, therefore, the focus was on possible impacts of a genre-based pedagogy in the development of grammatical and rhetorical complexity of EFL students' texts and the flow of argumentation.

2. Literature Review

The complex structural construction development in English academic writing has been the focus of attention by different linguists (e.g., Biber, 2006; Ellis & Yuan, 2004; Halliday & Martin, 1993; Hyland, 2004). The findings of studies show that this construct plays multifaceted roles in written academic discourses. For example, some studies have



investigated the significant role of this construct in developing complexity in academic language (Atak & Saricaoglu, 2021; Biber, Gray & Poonpon, 2011), some have discovered this construct as an appropriate tool for packing information (Biber, 2006; Ravelli, 1999), and still some studies have identified the role of such a construct in making arguments (Halliday, 1993; Martin, 1993). Considering the last functionality, this is confirmed that arguing about a certain proposition and its form is one of the important assignments at university and is an area where most of L2 students lag behind (e.g., Ballard & Clanchy, 1981; Connor, Gorman, & Vahapassi, 1987; Crowhurst, 1991; Grabe & Kaplan, 1996; Johns, 1993; Knudson, 1994; Lloyd, 1996). The reason for such a deficiency in L2 learners is related to the lack of linguistic and rhetorical experiences (Johns, 1993; Thompson, 2001). Martin's (1993) findings reveal that this pressure is more evident in disciplines such as humanities, where the main part of the activity hinges on developing reasoned arguments. Martin (1993) introduces genre teaching and learning approach as a gateway to overcome both linguistic and rhetorical deficiencies.

Martin (1985, 1992) introduces the notion of genre as a high-order-of-consciousness and adds this layer of meaning making to the SFL model of language above the context of situation. This model is adopted by some Australian educational linguists and included in the teaching and learning pedagogies (Christie, 1999; Feez, 1998; Knapp & Watkins, 2005; Martin & Rose, 2003, 2008; Rothery & Stenglin, 1997). There are developments in taxonomies and classifications of genres. Martin (1989), for instance, classifies types of genre into five taxonomies of procedure, description, report, explanation, and exposition. Butt, Fahey, Feez, Spinks, and Yallop (1997) extend this classification into seven taxonomies by including finer social perspectives to recount, procedure, informational report, narrative, explanation, exposition, and discussion. Martin and Rose (2008) expand these taxonomies even finer into 12 taxonomies by adding extra finer elements to the identification of genre types. In this study, however, because the focus was only on EFL students' argumentative writing, two exposition and discussion genres are selected for the teaching and learning practice (Butt et al., 1997; Martin & Rose, 2008). The exposition genre is defined as a genre which logically and sequentially presents one sided argument (Woodward-Kron, 2005) or a text for persuading to accept one particular point of view (Droga & Humphrey, 2002). And, discussion as a multifaceted genre with more than one evaluation (Knapp & Watkins, 2005; Martin, 2000). The social purpose of both exposition and discussion genres is to persuade to accept arguments.

Genre pedagogies place an equal emphasis on both explicit teaching of rhetorical structures at the level of context of culture and at the level of language, that is, lexicogrammar (Martin, 1993). There are different models for incorporating genres in the teaching and learning activities. Rothery (1984) is the pioneer in making the coordination between the theoretical concepts and its application to the teaching and learning pedagogy. She employs seven stages: introducing a genre, focusing on a genre, jointly negotiating a genre, researching for materials before writing, drafting, consultation between peers and teacher, and publishing as the main criteria for the genre-based pedagogy. Feez (1998) revisits these criteria and summarizes her model of genre-based teaching and learning cycles at five stages. The stages include building the context, modelling and deconstruction of text, joint construction of text, independent construction of text, and linking related texts. What is noteworthy in Feez's (1998) model is the formulation of stages according to the progressions both in genre theory in the Sydney school genre and SFL. For example, under the first two stages, writers are required to explore the context of culture, the context of situation, and the language features of a model text. The activity is carried out by highlighting the general social purposes of genre, its register, and the lexicogrammatical features, respectively. In turn, the production cycle is the reflection on the first two stages. That is to say, the stages are well arranged to accommodate the sequences of layers foreseen in the theoretical design. In the last stage, the comparison between similar genres within the same context or with other genres develops the domain beyond the model genre. In this study, all of the stages for appropriate use of rhetorical structures at macrogenre level and microlanguage level are adequately rehearsed during the teaching and learning cycles. However, the focus of data collection was only on complex phrasal construction development and the flow of arguments.

Based on the SFL model of language, the language features are realized through the ideational, interpersonal, and textual metafunctions, and they play out at field, tenor, and mode of discourse at the level of context, respectively. Martin (1993) argues that as the context is a pattern of the patterning of the language, genre is also a pattern of the patterning of the context of situation. In this study, I draw on this theoretical framework because it makes a systematic relationship between genre teaching courses, on the one hand, and the use of complex nominal construction at the level of lexicogrammar, on the other.

SFL identifies nominalization as a lexicogrammatical feature and locates it at the ideational metafunction (Halliday, 1994). The ideational metafunction by itself is divided into two semantic domains of experiential and logicosemantic relationship (Halliday & Matthiessen, 2006; Martin, 1992). It has both congruent and metaphoric realizations. In congruent form, our experiences of the world appear in the form of clauses and clause complexes. The structure of clause complex is an independent clause and all hypotactic clauses which are dependent on it. Fries (2002) and Hunt (1965, as cited in Fries, 2002) argue that clause-complex is very similar to the T-unit of American educational literature. Through the process of nominalization, clauses are converted into nominal, that is, they form metaphorical construction (Halliday & Matthiessen, 2004) and appear metaphorically in the construction of clauses instead of clause complexes.

According to Ravelli (1985, 1999), in the English language, we can identify nominalization through two devices of derivation and agnation. The former is related to the identification of derivational suffixes, which change the word base, for instance, from a verb (e.g., *invite*) to a noun (e.g., *invitation*) by addition of *-tion* suffix to the end of the verb. Halliday and Matthiessen (2006) argue that derivational morphemes provide a plethora of rich resources for expanding the domain of meaning making in the English language. The second device (i.e., agnation) is the domain of paradigmatics. It enables us to express the same meaning in different forms. For example, *a bomb was exploded*, which is a clause by itself can also be expressed as *an explosion of bomb*, which is now a nominal group. In the literature, this process is called rank-shifting, in which a clause shifts a rank to a lower position and forms a complex nominal construction. Apart from experiential dimension, Halliday and Matthiessen (2006) and Martin (1992) argue that nominalization constitutes logicosemantic relationship between clauses in congruent and metaphorical forms. In congruent, it realizes in the form of conjunctions between clauses, and in metaphoric, they make a cause and effect relationship. Halliday (1998a) calls the metaphorical form as “the favourite clause type” in the English language. This metaphorical realization of clause complexes can be a source for making arguments in academic writing.

There are some studies which have investigated the use of nominalization across academic genres. For example, inspired by Halliday and Martin’s (1993) notion of nominalization in the evolution of science writing, Banks (2003) explores the role of genre in the emergence of nominal styles in physical and biological sciences from 1660 to the end of 19th century and reveals that compared with the biological science the deployment of nominalization in the physical science remained almost static for over 150 years. Banks extends his investigation to the early and late 20th century, where he finds two different results: First, a continuous development in the rate of nominalization in biological science, and second, equal rate of nominalization in both physical and biological sciences in the late 19th century. He relates this phenomenon to two factors: the first one to the change of method in the biological science from the description to the experimentation, and the second to the shift of nominalization in the biological science from the head noun to modifiers.

Considering the role of genre in the emergence of nominal style, Jalilifar et al. (2017b) examined the role of nominalization in the Introduction and Method sections of published applied linguistics academic articles. Their findings suggest that there are differences in deploying the identified nominal patterns across the two genres. In the Introduction genre, the academic writers deploy more abstract and complex style of writing through a more complex nominal pattern, whereas in the Method section they use more expanded nominal patterns which results in pervasive language style. Jalilifar et al. conclude that the use of nominalization in applied linguistics research articles is communicatively oriented, where the writers try to communicate within the discipline and meet the expectation of scientific discourses at large.

In another study, Jalilifar, White, and Malekizadeh (2017a) investigated the use of nominalization across the two hard and soft sciences: physics and applied linguistics. They identified 15 patterns of nominalization across the two disciplines. However, their findings suggest that there are differences in the distribution of such nominals. Whereas the academic writers in physics tended to use a more complex, lexically dense style of writing compressed in a single nominal pattern, in applied linguistics they mostly used simple nominals without complex pre/postmodifiers. They suggest that including the use of nominalization in language pedagogies across disciplines will add to students’ awareness in deploying abstract and complex style, where they can express more complex concepts in an authoritative and objective way.

Thus, taking the use of nominalization in language pedagogies and the fact that there is a paucity of research investigating the role of genre-based language pedagogy in developing the complexity of EFL students’ academic writing, this study aimed to investigate how the application of a genre teaching and learning approach can contribute to the

development of nominalization as a complex grammatical construct in academic writing of a class of Iranian EFL writers, and how such a development helps making argumentation. Therefore, the following research questions were postulated.

1. What are the differences between the distribution of nominalization across Iranian EFL students' pretests and posttest texts?
2. What are the major structural patterns of nominalization across students' texts before and after the application of a genre-based pedagogy?
3. What is the contribution of nominalized language use in the complexity of students' texts and making argumentation?

3. Methodology

3.1. Theoretical Framework and Syllabus Design

SFL is the theoretical framework of this study. Based on this, the Sydney school genre model was adopted for teaching and learning for its close affinity with SFL. This model has been under development along with the theoretical and applied progression represented in the primary curriculum model of Callaghan and Knapp (1989), Murray and Zammit (1992), and the secondary curriculum model of Rothery and Stenglin (1994). According to Martin (2005), in this model, equal emphasis is paid to the role of genre scaffolding consciousness and the knowledge about language. Martin (2005) argues that this dual consciousness helps the teachers and students to remove the hidden curriculum of writing. This pedagogy has been revisited by Feez (1998, 2002) under the same basic proposal, but with new additions to the model. This new model, which is adopted for the construction of syllabus in this study, is based on five stages: building the context, modelling and deconstruction of text, joint construction of text, independent construction of text, and linking to related texts.

Two exposition and discussion genres are selected for the teaching and learning cycles. Based on the selected model, in building the context, samples of authentic genres are introduced. Second, students are informed about the social purposes and language features of exposition and discussion genres. Consequently, they are asked to investigate structural patterns and language features of argumentative genres. In joint construction, students are encouraged to discuss the topic and start to write within their groups by receiving the peers' and later the teacher's feedback. Fourth, students construct their own texts independently. In the last step, it is expected that students can use their experiences from the course to judge similarities and differences between the argumentative genres by comparing with other genres.

Based on the curriculum, 14 sessions were allocated to the whole syllabus. The first session, which was before embarking on any teaching and learning activities, was used to check the students' proficiency in academic writing. The students were asked to attend a pretest session and produce their independently developed texts. Subsequently, the first six sessions were designated to practice the exposition genre, in which the first three sessions were set to the intake and the remainder for the out-put. Second, the second six sessions were allocated to the development of a discussion genre. The same cyclical pattern, which was carried out in the exposition genre, was revisited at this stage. The last session was considered for problem solving and the major issues related to the course. At the end of each cycle, the students were given the opportunity to produce an independent version of the exposition and discussion texts. Therefore, the students produced three independent texts: one at the pretest and two after the application of the pedagogy.

3.2. Data Source

The data contained 66 texts collected from the undergraduate English language and literature students' writing at three phases of pretest and two phases of the posttest writings. The age range of the students was between 18 and 23 at the time of the data collection. The posttest writings included two genres in the English academic writing: exposition and discussion. The collected texts from the pretest and posttest writings were independently produced by the students. In the pretest writing, 22 students produced their texts prior to any teaching and learning activities. On the posttests, the same students produced several independent texts after the teaching and learning cycles, but only one text was considered for the final analysis. The details of analysis will be dealt with in the next section.

3.3. Data Analysis

The analysis of nominalization was conducted across three stages of writing: at the pretest and the two posttests texts. Ravelli (1985, 1999) classifies the ideational grammatical metaphor under two subdivisions of micro/macrometaphors. The microlevel metaphors have no metaphorical impact on other processes and are syntagmatically independent. According to Ravelli (1985, 1999), they form paradigmatic plurality. Halliday (1998a) states that this constitutes only the experiential aspect of grammatical metaphor. Considering the experiential aspect, Ravelli (1999) identifies five types of nominalization in her large construct of grammatical metaphor. For the first phase of analysis, her identification of nominals is adopted to investigate their use across students' texts. Table 1 depicts her classifications of such nominals:

Table 1. Ravelli's (1999) Classification of Nominalization

Type	Conversion	Example
1	Process → Thing	Translate → Translation
2	Adjective → Thing	Predictable → Predictability
3	Adverb → Thing	Securely → Security
4	Conjunction → Thing	Therefore → Result
5	Participant → Thing	Leader → Leadership

Furthermore, Ravelli (1999) classifies complex processes construed as Things into mental, verbal, relational, behavioural, and material processes construed as Thing. The rates of these nominals were estimated across the corpora.

Along with such an investigation, a finer statistical tallying of nominalization, that is, the subcategories of nominalization and nominalization of complex processes construed as Thing is carried out in the sample texts. The subcategories of nominalization include marked nominalisation, verbal nouns, nonmorphologically marked nominalisation, nominalization in theme, and nominalization in rheme (P. White, personal communication, January, 20, 2008).

The second phase of analysis uses Ravelli's (1999) notion of macrometaphors. The macrolevel metaphors are syntagmatically interdependent and their metaphorical impact is shared with micrometaphors. As Ravelli (1999) puts it, at this level, grammatical metaphor exhibits both the syntagmatic plurality and paradigmatic plurality. Ravelli (1999, p. 67) shows such an emergence through the following example:

.... [it] will have real impact on political thinking

Accordingly, four instances of grammatical metaphor are in this example, that is, real (epithet), impact (material process), political (classifier), and thinking (mental process). These four instances are clustered together and form two macro metaphors: real impact and political thinking. Ravelli (1999) argues that they can separately be deciphered into congruent versions without necessarily taking the other into the account. For instance, the congruent version of real impact (*really affect*) works independent from political thinking, and the congruent version of the latter (*the way politicians think*) is independent of the former. In this way, four micrometaphors and two macrometaphors, that is, patterns are in this example. Ravelli (1999) argues that the resultant metaphorical realization provides us with an alternative paradigm of meaning, that is, agnation. That is to say, the congruent version of the above example (i.e., *it will really affected the way politicians think*) has an agnate nominal form as *a real impact on political thinking*, where the clause rank-shifts to a nominal group.

Halliday (1998a) and Halliday and Matthiessen (2006) extend Ravelli's (1985, 1999) notion of syntagmatic plurality. Similarly, they argue that grammatical metaphor does not largely occur one at a time, but in a cluster called *syndromes*. The components of these syndromes are the individual elemental metaphors. Based on down rank-shifting movement, the syndrome of realization takes different forms. They classify the metaphorical reconstrual from top to bottom into three types: sequence, figure, and macrothings. The metaphorical realization, that is, sequence is construed not as a clause complex but as a clause. For example, *They shredded the documents before they departed for the airport* as a clause complex can metaphorically be realized *They shredded the documents before their departure to the airport*. The metaphorical realization is no longer a clause complex but a clause. Second, figure is metaphorically construed not as a clause but a nominal group. For example, *The glass is/was broken* can metaphorically be realized as *the fracture of*

glass. The metaphorical realization is no longer a clause but a nominal group. Third, the element is metaphorically construed not as simple things but as macrothings. The macrothings can be the consequence of the class shift or the process of down-ranking in the figures which their function has shifted from the congruent clause type into the metaphorical element. For example, *studying abroad has advantages* can incongruently be realized as *the advantage of studying abroad*. The circumstance in congruent form has class shifted from a simple form of a quality, that is, *advantages* to a noun and now functions both as quality and Thing, that is, quality of Thing. In this study, the concentration was on possible patterns of syntagmatic plurality of nominalization before and after the application of teaching and learning course. The emergent patterns in the pretest and posttest texts were compared and contrasted.

The third step is to estimate the accuracy and reliability of the analysis of nominalization. There are some nominals in the English language that do not truly function as nominalizations. Therefore, in the analysis of students' texts, the nominals are unpacked into a possible kind of congruent realizations. Moreover, there are instances of nominalizations that Ravelli (1999) excludes from her analysis of grammatical metaphor. They are frozen, general, technical, and taxonomic nominalization. In addition, there are instances of nominalization in EFL students' texts which stem from their mother tongue intervention. They are not appropriate forms of nominalization in the English language and are thus excluded from the analysis as unidiomatic nominalizations. In order to determine high degree of accuracy and reliability, 15% of the corpora was analyzed again. In order to recheck the intrarater reliability, each corpus is rechecked by the author within the interval of 1 month. The Kappa coefficient was deployed to obtain the results of reliability. The index of intrarater reliability was 0.84 (see Table 2):

Table 2. *Cohen's Kappa Intracoder Reliability*

Symmetric Measures					
		Value	Asymptotic Standard Error ^a	Approximate <i>t</i> ^b	Approximate Sig.
Measure of Agreement	Kappa	.841	.075	7.836	.000
N of Valid Cases		37			

a. Not assuming the null hypothesis.

b. Using the asymptotic standard error assuming the null hypothesis.

The results show that there was a strong agreement between the two ratings, $\kappa = .84$, $p < .001$.

4. Results and Discussion

In order to answer the first research question, Ravelli's (1985, 1999) categorization of five types of nominalization was used to analyse the 66 students' texts. The categories include the following: type 1 (process to thing), type 2 (adjective to thing), type 3 (adverb to thing), type 4 (conjunction to thing), and type 5 (participant to thing). The analysis revealed that types 1 and 2 were prevalent in the students' texts and showed steadily increase across the three writings contexts in the corpora. This finding is in parallel with Halliday's (1998a), Halliday and Matthiessen's (2004, 2006), and Ravelli's (1999, 2003) postulation that nominalization is the major type of grammatical metaphor. Second, the analysis indicated that there were fluctuations in the deployment of nominalization from the pretest to the exposition and discussion genres. This trend suggests possible contextual probabilities specific to the context of this study including genre types, impact of genre-based teaching and learning, and variations in nominalization between the Persian and English languages. Table w depicts the summary of findings:

Table 3. *Tokens and Types of Nominalization Across Three Genres in Students' Texts*

Genres	No. of Students	Tokens (Clause Complexes)	Total Nominals	Types of Nominalization				
				Type 1	Type 2	Type 3	Type 4	Type 5
Pretest	22	149	147	113 0.75	33 0.22	0 0.00	0 0.00	0 0.00
Exposition	22	244	314	262 1.07	53 0.21	0 0.00	7 0.02	0 0.00
Discussion	22	344	397	323 0.96	52 0.15	0 0.00	9 0.02	0 0.00
Total	66	1026	858	698 0.68	138 0.16	0 0.00	16 0.04	0 0.00

Because the most prevalent type of nominalization in the students' texts is the shift from process (verb) to Thing (noun), that is, the complex processes construed as Thing, a finer analysis of the types of such nominalization was carried out in the corpora. Ravelli (1985, 1999) divides the complex processes construed as Thing into five categories of material, mental, relational, verbal, and behavioural types. For the investigation of their use in the students' texts, three texts from each genre, that is, nine texts are randomly selected. The focus of analysis was on the rate of nominals used before and after the application of teaching and learning course across the students' texts. Table 4 shows the average rate of such nominalization:

Table 4. *Average Rate of Complex Processes Construed as Things*

Number of Students	Tokens (Clause Complexes)	Complex Processes Construed as Things			
			Pretest	Exposition	Discussion
3	18	Mental	0.78	3.07	0.55
3	37	Material	3.03	7.38	5.85
3	60	Verbal	0.33	0.47	0.27
		Relational	0.00	0.00	0.00
		Behavioral	0.16	0.00	0.74

The analysis indicated that there was largely improvement on the deployment of nominalization of the processes over the introduction of the genre-based pedagogy. The mental, material, and verbal processes construed as Things develop steadily from the pretest to the exposition genres. The values, however, decreased from the exposition to discussion genres. There was no sign of the relational type across the three genres. In behavioural processes construed as Things, the value decreased from the pretest to the exposition and again increased from the exposition to the discussion genres. Among the complex processes construed as Things, material and mental have the largest value in the students' texts. This might be concluded that specific deployment of complex processes construed as Thing is related to the specific role of genre at work. This finding is also alien with Ravelli's (1999) and Jalilifar et al.'s (2017b) findings that the material processes construed as Things is the mostly used type in the English academic writing.

In order to investigate which grammatical forms of nominalization are higher across the corpora, a finer analysis of the subtypes of nominalization were carried out. They are divided into marked nominalisation, verbal nouns, nonmorphologically marked nominalisation, nominalization in premodifier, nominalization in postmodifier, and their realization in theme and rheme. A sample of nine students' texts at the three phases of the pretest, exposition and discussion genres, that is, 27 texts were randomly selected. To investigate the subtypes before and after the teaching and learning cycles, a statistical tallying is run across the corpora (see Table 5):

Table 5. *Statistical Tallying of Subtypes of Nominalization*

Number of Students	Tokens (Clause Complexes)	Subtypes Across Three Genres			
			Pretest	Exposition	Discussion
3	18	Marked nominalization	2.03	2.53	1.78
3	37	Verbal nouns	0.87	1.36	1.24
3	60	Nonmorphologically marked nominalization	2.2	2.2	4.56
		Nominalization in premodifier	1.28	1.47	1.37
		Nominalization in post modifier	0.25	1.7	1.58
		Nominalization in Theme	1.37	2.56	2.32
		Nominalization in Rheme	1.75	2.28	4.55

The findings revealed that there was fluctuation in the use of complex processes construed as Things from the pretest to the exposition and discussion genres. As indicated, there are steady development in all subtypes from the pretest to the exposition genres. In contrast, from the exposition to the discussion genres the value of some subtypes decreases, for example, marked nominalization, verbal nouns, nominalization in premodifier, and nominalization in Theme. This is

while except marked nominalization, the value of other subtypes was all increased from the pretest to the discussion genre. This fluctuation might be related to the positive role of genre-based pedagogy deployed in the context of this study or to the lack of teacher's ability in applying this method of teaching and learning in the EFL context of academic writing. A full investigation requires a comprehensive study of its own.

In order to answer the second and third research questions, Ravelli's (1999), Halliday's (1998a), and Halliday and Matthiessen's (2004) notion of syntactic complexity was deployed. According to Ravelli (1999), macrometaphors are syntagmatically interdependent and their metaphoric impact are shared with other elements. Thus, they produce a complex syntactic structure. The syntagmatic patterns were investigated across the students' texts at the pretest, the exposition, and the discussion genres. However, three types of nominalization were excluded from the analysis: First, the individual realization of nominalization which has no impact on the syntactic complexity of nominal structures. For example, in the following extract, taken from a student's pretest text, "*A person who want to complete or continue his or her studies abroad must have some qualifications*", the nominal *qualifications* is realized individually without creating a syntactic structure. Second, as Ravelli (1999) introduced, some instances of nominalization are unpackable, that is, they cannot be unpacked into their congruent realization. Ravelli (1999) identifies such nominals as frozen, general, taxonomies, and technical. Third, the analysis revealed that there were instances of nominalization which were not compatible with the idiomatic nominalization in the English language. They were instances of nominalization which stemmed from the students' linguistic deficiency or from the intervention of the students' L1, that is, translation from Persian into English. The following figure represents examples of unpackable and unidiomatic nominalization excluded from the analysis:

Table 6. *Instances of Excluded Nominals From the Analysis Across Students' Texts*

Frozen	fast food
General	Freedom; situation; case; condition; knowledge
Taxonomic	welfare; government; institutions; organization
Technical	RSI
Unidiomatic nominalization across students' pre/posttest texts	education system (for educational system); their major of studies (for specific major); their level of liveness (for higher satisfaction); nutrition value (for nutritious value); estimating skills (for skills evaluation); expenses related to food (for food expenses); expenses of transportation (for transportation cost); studies charges (for tuition fees); motivation factors (for motivational factors); wearing clothes (for dress codes); with difficulties of financial (for financial difficulties); barrier of language (for language barrier).

The unidiomatic nominalization can be related both to the students' lack of linguistic ability and the way nominalization is formed in Persian language. For example, *nutrition value* in the discussion text of a student, *because the nutrition value of fast foods are less and the children cannot absorb the vitamins and proteins* are examples of linguistic deficiency, where *nutrition* as a noun is confused with *nutritious* as an adjective in a classifier/epithet role of nominal pattern, that is, *nutritious value*. As listed above, there are similar examples such as *education system* for *educational system* and *motivation factors* for *motivational factors* across the students' texts. Considering L1 intervention, the literal translation from Persian to English can also result in an unidiomatic nominalization. In the nominal pattern of *wearing clothes* for *dress codes*, for instance, which is a literal translation of ("tarze push"), the author has simply made a word-to-word translation from Persian to English. Similar examples are *difficulties of financial* ("moshkelate malli") for *financial difficulties*, *barrier of language* ("maneh zabani") for *language barrier*, and *expenses of transportation* ("hazineh raft-o-amad") for *transportation cost*. Although the use of such nominals created complexity and carry metaphorical effects in the students' texts, however, they were not considered as the standard and idiomatic nominal patterns in the English language. In a longitudinal study of Chinese students, Liardét (2016) found out that there were similar instances of nominalization in writing corpora of her students. She confirmed that they were not idiomatic English nominalization but intermediate stages for producing full-formed nominalization and classified them into six patterns. The analysis revealed that the identified patterns achieved metaphorical effects such as complexity and cohesion. However, she concluded that there was a need for further instructional intervention, including feedback and raising consciousness to enable L2 students to achieve full-form control of nominalization.

Similar findings are also reported in Halliday's (1998b), Derewianka's (2003; 2006), and Painter's (2003) investigations of English native child language development. Similar to the developmental stages of complexity in EFL students' texts, there are intermediate stages for producing nominalization in the native child language development. Halliday's (1998b) findings from the analysis of Hal's language and reinterpretation of the same findings by Painter (2003) from the analysis of Stephan language development suggest that the early use of nominalization is observable as early as around 3 years old in the English child's speech. For example, citing from Stephan's speech, Painter (2003) shows that, in addressing a specific referent, lack of lexicon in Stephan's language led him to use a general word as a head noun and provided details in a postmodifying clause such as *Where is the thing [[go in there]]?* This is while in the case of a competent speaker, it would be replaced with a noun without further need for explanation.

The overall analysis of the patterns of nominalization was presented at the three phases of the students' writing. A list of most dominant nominalization at each stage is also provided. Table 7 indicates the patterns and their frequency of occurrence in three stages of writing processes. They are listed according to the most frequent ones from the pretest to the exposition and the discussion genres. The most prevalent and functional ones in terms of complexity of the students' texts, then, are explained by examples:

Table 7. *Nominalization Patterns Across Three Genres*

Patterns	Pretest	Exposition	Discussion
Premodifier + Nominalization	34	98	125
Premodifier + Nominalization + Prepositional Phrase	22	63	63
Nominalization + Prepositional Phrase	6	25	26
Preposition + Nominalization	0	7	12

As indicated in Table 6, four functional patterns in terms of complexity of the students' texts are identified. They are, thus, introduced according to their frequency in the corpora:

✓ Premodifier + Nominalization

This pattern is the most prevalent type of nominalization across the three stages of the students' writings. As indicated above, its frequency of occurrence shows a steady increase from the pretest to the exposition and the discussion genres. The overall premodifier include deictic, numerative, classifier, deictic + epithet, classifier + classifier, and deictic + adverb as classifier. In comparison to the pretest texts, the order of premodifier and its types are different in the corpora. The order increases and new patterns emerge on the posttests. On the posttest texts, the new patterns including classifier + classifier and deictic + adverb as classifier appear in the students' texts. Eggins (2004) argues that these modify the head noun and have different functions such as description, classification, and specification. The analysis reveals that this structure plays out differently across the corpora. In the pretest texts, they do not add complexity to the students' texts. The students deployed them almost aimlessly one here and one there without creating a cohesive pattern in the texts. This trend, however, changes drastically from the pretest to the posttest genres. For example, consider the following examples taken from the students' texts at each stage of writing processes:

[1]. I think, at first going abroad needs some perfect thoughts and **financial supporting**, then why not, it is good idea to improve and progress in developed countries. (pretest, S15)

[2]. First of all **financial problems** can be **one of the most important problems** because just some people can afford **the tuition**. (exposition, S3)

[3]. According to some studies, college students who are playing **violent games** had **more aggressive delinquent behaviors**. (discussion, S1)

In spite of some language deficiencies, the first example can congruently be deciphered as (*I think, at first If you want to go abroad, you need someone to help you financially, ...*) which indicates the author has been able to condense the given information. However, in the second and third examples, that is, in the posttest texts, other than condensation of information through the nominals *problems/problems* and *games/behaviors* another function is at play. According to Martin (1993), the encapsulated nominals here distills the information given in the previous texts, that is, *the disadvantages of studying abroad and playing video games*, respectively, and avoids their repetition. In turn, the distilled information

acts as the theme and given information in this clause. In comparison with the pretest writings, this functionality increases in most of the posttest texts. The result is a more cohesive exposition and discussion texts.

In the second and third examples, another functionality is also observed. The two similar patterns are connected via a verb and form a clause. Its structure is composed of nominals + verb + nominals. As Halliday and Matthiessen (2006) maintain, such constructions are logically but incongruently related to each other and they are metaphoric realization of a clause complex. Halliday (1998a) calls this structure as “the favourite clause type” in the English language. It creates a strong argumentative stance for making an argument in academic writing. The analysis reveals that the position of such structures in the posttest texts are located in the introduction sections or as the topic sentences at the beginning of body paragraphs. This is while such a systematic development is rarely observed in the pretest texts.

✓ Premodifier + Nominalization + Prepositional Phrase

This pattern is the second most frequent one in the corpora. Similar to the first pattern, the premodifier was composed of deictic, adverb as classifier, classifier, and epithet before the head noun. Halliday and Matthiessen (2006) call this pattern *multivariate structure*. As discussed above, each premodifier has a distinct function. Besides premodifier, in this pattern, the prepositional phrase functioned as postmodifier in the form of infinitives, relative clause, and prepositional phrase. It is argued that this is the major pattern in creating complexity in academic writing (Bhatia, 1993; Biber & Gray, 2013; Bloor & Bloor, 2004). A recent study by Jalilifar et al. (2017b) also supports the idea that this structure is a major pattern in creating complexity across different academic genres, that is, the Introduction and Method sections of published academic articles. The analysis of the students' texts across the three genres indicated that the deployment of this pattern developed almost three times from the pretest to the exposition and the discussion genres. The following examples are taken from the corpora:

[4]. Most of the people specially young people have **a dream of continuing their studies abroad**. (pretest, S10)

[5]. Studying abroad nowadays is one of the desires of young people in developing countries. (exposition, S17)

[6]. Furthermore psychologists believe in the bad effects of video games on children's mental health. (discussion, S11)

Apart from some language problems, the examples show that the students were successful in deploying this pattern. Similar to the given examples, the analysis divulges that after the teaching and learning cycles, some students developed further ability of nesting other prepositional phrases to modify the head noun or convert processes to concepts. For example, in example 5, it is observable that the two prepositional phrases modify the head noun. Example 6, [*children's mental health*] can congruently be represented as [*video games affect the mental health of children*]. Halliday and Matthiessen (2006) call this rank shifting from a clause to a nominal group as figure, where the information is given through a nominal phrase. Jalilifar et al. (2017b) show that this style of writing is specific to academic genres, where the writers use noun phrases than clauses for presenting the information.

✓ Nominalization + Prepositional Phrase

This pattern is the third most dominant one in the students' texts. Its frequency of occurrence in the posttest texts is almost four times higher than the pretest writings. This pattern shares lots of features with the second pattern discussed above. In this pattern, however, there is no premodifier before the head noun. The prepositional phrases appear in the form of infinitive, relative clauses, and prepositional phrases. The following examples are taken from the students' texts across the corpora:

[7]. In my opinion studying abroad is the best chance for us to be familiar with other countries culture—**way of thinking, way of living**, economic, education and so on. (pretest, S16)

[8]. Lack of emotional support is another drawback of studying abroad. (exposition, S1)

[9]. Their memories become more active and clever by trying to solve and find **solution for complex actions in the games**. (discussion, S1)

The analysis identifies only six instances of this pattern in the pretest texts. Its frequency of occurrence increased almost three-folds in the posttest texts. As shown in the examples above, their functional roles also change across the corpora. In example seven, it seems that the author translates his or her L1 (“tarzeh fekr, tarzeh zizstan”) to show the

benefits of studying abroad. This is while in example 8, the author uses this pattern to argue against the disadvantages of studying abroad. It is positioned in the topic sentence of a paragraph, where *lack of emotional support* acts as the main idea and *drawback of studying abroad* as the controlling one. It has a referential power (Fontaine, 2018) and refers back to *the disadvantages of studying abroad* highlighted in the introduction paragraph. It creates an argumentative stance because the congruent form (*If you study abroad, you will receive no emotional support*) is realized in the metaphorical form, that is, the favorite clause type (Halliday, 1998a).

✓ Preposition + Nominalization

This is the fourth and the last dominant pattern deciphered in the students' texts. The frequency of occurrence of this functional pattern also increased from the pretest to the posttest writings. There was no sign of this pattern in the pretest writings and it emerged after the application of the genre-based pedagogy. The number of the students who deployed this pattern also increased from the first round of teaching and learning in exposition to the second round of writing activities. In some posttest texts, such as example 11, this pattern helped the students to guide the readers to the assumed assumptions and functions as a facilitator for further guidance/explanation. In fact, this pattern creates a predictional power, and complement to Fontaine's (2018) notion of referential power of nominalization, it provides the reader with the predictional power:

[10]. **In conclusion**, I think living abroad may be very good for everyone. [i]t can broaden one's knowledge of the world, customs and people. (exposition, S13)

[11]. **In addition**, some researchers assert that some of the video games must be take place in the school curriculum because they think that video games are as rich as some books. (discussion, S12)

In some other instances, such as example 10, the position of this pattern was observed in the concluding paragraphs, where the students reiterated their positions taken in the thesis at the introductory paragraph. In this way, this pattern of nominalization mediates between the thesis, macrotheme, that is, thesis in the introduction and macronew, that is, reiteration of the thesis (Martin, 1993, p. 281) in the conclusion paragraph. In turn, this adds to the coherence of the students' texts.

5. Conclusion

In this study, the complexity of the students' writings was investigated in terms of normalized language use before and after the application of SFL genre pedagogy. The findings indicated that following the application of the genre pedagogy, some EFL students were successful in developing packed nominal construction in their argumentative texts in comparison with their pretest writings. The shift in elemental metaphors and down-ranking grammatical movements were found to be the driving force behind the construction of such a new style of writing in the students' texts. This has contributed to the relative development of syntactic patterns of nominals from the pretest to the posttest texts. The students were able to develop more control on packing the information in four major patterns, textual features, and argumentative stance in comparison with the pretest texts. Because such changes have taken place after the application of the genre teaching course, it is plausible to conclude that this pedagogy plays a role in the emergence of this system of writing in EFL students' texts. However, there are still rooms for L2 students to develop further nominal patterns identified in published academic genres. The findings have implications for teaching and learning academic writing in EFL contexts. EFL teachers of academic writing courses and syllabus designers can deploy SFL genre pedagogy in their contexts.

Conflict of Interest

The author declares that there is no conflict of interest.

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