The Relation among the Proficiency Level and the Thematic Structure and Cohesion in Iranian English Students' Writing

Abstract

Systemic functional grammar, originally proposed by Halliday (2003), has been used in many disciplines, such as Applied Linguistics, Sociolinguistics, Composition and Rhetoric. It is the basis of this study to find the way in which a group of Iranian English students manage thematic structure and cohesion in their writing assignments.

     From all the students' essays, 120 essays written by female students (n=60) were selected for the analysis. The students were at the same academic level.

     The study shows that the students overused constant Theme pattern, and also made few use of linear Theme pattern[[1]](#footnote-1), two of patterns proposed by Daneš. Further, this study shows that their use of linear pattern and using lexical cohesive devices are correlated with their proficiency level, indicated by their scores on The Michigan Test. These can then serve as criteria by which to assess proficiency as an empirical fact, that is, the actual performance of given individual learners or groups of learners.

**Key words:** Theme, Rheme, Proficiency level, Lexical cohesion, Thematic structure

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Language is a semiotic system (Carter et al., 1997). This means that it is thought to be a system where the individual elements—“signs”—take their overall meaning from how they are combined with other elements. As a system of meaning, language is a medium in which meaning is created and meanings are exchanged (Halliday, 2003). Meaning is not made of words: It is constructed in grammar as much as in vocabulary (Halliday, 2003). Meaning, according to Halliday, is choice: "selecting among options that arise in the environment of other options; and the power of a language resides in its organization as a huge network of interrelated choices." Thematic choices, in the same way, make for the overall meaning of the text.

The Theme[[2]](#footnote-2)/ Rheme[[3]](#footnote-3) structure of the clause is an essential component in the construction of cohesive, coherent text. However, the implications of Theme go beyond the clause, in that the Theme/Rheme structure of the clause can be seen as the microlevel realization of the textual organization.

     Halliday (1994) affirmed that the choice of words can establish text continuity. This continuity may be realized by word repetition or by the selection of a word related to a previous one either semantically, as context-dependent continuity, or collocationally. Cohesive relations are relations between two or more elements in a text that are independent of the structure (Halliday & Hasan, 1976). Lexical cohesion is also related to the notions of Theme and Rheme and their connection to Given and New information. Theme is “often likely to be the summation of a fairly complex argument” which cannot be repeated as a whole, so it is often packed into a nominalization (Halliday as cited in Gosden, 1998). This kind of nominalization is an essential resource for the construction of scientific discourse.

     In this study, the researcher investigates the relation between the proficiency level of a group of English students and the thematic structures in their writing as well as the relation between this proficiency level and the lexical cohesion in their writing.

**Research Hypotheses**

**H01:** There is no significant relation between the students’ proficiency level and their choice of linear Theme pattern.

**H02:** There is no significant relation between the students’ proficiency level and their choice of constant Theme pattern.

**H03**: There is no significant relation between the students’ proficiency level and the use of lexical cohesion.

**Objectives of the Study**

One of the most serious problems that Iranian EFL students face in their field of study is their inability to communicate and handle English after graduating from university (Maleki & Zangani, 2007).

In this study the researcher investigates the essays of a group of Iranian English students to find the thematic patterns in their writing, and also the possible relation between their proficiency level and their use of thematic patterns and also the use of lexical cohesive devices in their writing. Some researchers have shown the Theme/Rheme construct as valuable in marking students' writing (Alonso & Hidalgo, 1998). One significant contribution that Theme makes is to the cohesion and coherence of a text, which has to do with how thematic relations succeed each other (Eggins, 1994).

**English Writing**

Richards and Renandya (2002) believed that writing is the most difficult skill for L2 learners to master. The difficulty lies not only in generating and organizing ideas, but also in translating these ideas into readable text. The skills involved in writing are highly complex. Writers do not simply encode ideational meaning (the meaning of their ideas); they also create textual meaning (the meaning that helps the readers navigate through the text) as well as interpersonal meaning (the meaning about the relation between the writer and the reader; Halliday as cited in Schmitt, 2002, p. 257).

**Thematic Structure**

     The concept of Theme progression (Daneš as cited in Alonso, 1998) is part of the theory of language known as *Functional Sentence Perspective* (FSP), propounded by scholars of the Prague School. This theory "deals with how the semantic and syntactic structures of the sentence function in fulfilling the communicative purpose intended for the sentence" (Firbas, 1998).

     Different patterns of thematic progression correlate with different genres, that is, patterns of thematic progression do not occur randomly but are sensitive to genre. Also, the experiential content of Themes correlates with what is perceived to be the method of development of a text or text segment (Iddings, 2008). Genre refers to a text type that has developed in response to a social or professional need. It generally has a predictable structure (Dudley-Evans & John, 1998).

     Most research in systemic linguistics include Halliday's metafunctions: topical, textual, and interpersonal. The metafunctions are the theoretical concepts that enable observers to understand the interface between language and what is outside language. Textual metafunctions include continuatives, conjunctions,

**Textual:** continuatives, conjunctions, and conjunctive adjuncts

**Interpersonal:** vocatives, modal or comment adjuncts, finite verbal operator

**Topical[[4]](#footnote-4):** participants, circumstance, process

Thematic structure, first studied by Daneš, tries to find the source of each Theme and thereby gain a better understanding of the interaction of Themes and Rhemes. This in turn gives us a way to elicit one of the structures used in building the text.

**Constant Theme pattern (Theme re-iteration)**: the Theme of one clause is derived from or the same as the Theme of the previous clause.

**Linear Theme pattern (the zigzag pattern)**: the Theme of one clause derives from the Rheme of the previous.

**Derived Theme pattern:** the Theme of one clause derives from a Hypertheme, which is not explicitly found in the immediate context of the Theme in question.

**Lexical Cohesion**

This is the cohesive effect achieved by the selection of vocabulary. On the borderline between grammatical and lexical cohesion is the cohesive function of the class of general noun. A general noun in cohesive function is almost always accompanied by the reference item *the*. This *the* is anaphoric, and the effect is that the whole complex '*the* + general noun' functions like an anaphoric reference noun. So the forms of lexical cohesion in the study are *direct repetition, synonyms or near-synonyms, superordination, antonyms,* and *ordered series*.

**Methodology**

In this study, the Hallidayan framework (Halliday, 1994) regarding the classification of Theme and Rheme is used. It is tried to keep gender and educational level of the participants the same to do away with variability as much as possible (Alison & Bloomer, 2006). The participants whose essays analyzed were female students (n=60) studying Teaching English as a Foreign Language at a university in Mashhad, and all of them were in the age range of 20 to 23. The researcher has selected the corpus solely from the female students (to avoid any possible inconsistency). Each student has written on two topics for their writing examination (as a final exam), so there are 120 essays to work on.

**Procedure**

The method of this research is descriptive/ analytical. Descriptive research is concerned with the existing status of a phenomenon (Farhady, 2001).

     In order to find the relation between the variables of the study, the researcher selected a correlational procedure. For this purpose, the Pearson Correlation (Hatch & Lazaraton, 1991) was used. The analysis of the texts is made at the clause level.

     The texts were of nearly the same length. First, the Themes and Rhemes of clauses in each essay are appointed using Halliday’s method of analyzing a text into Theme and Rheme, and then the patterns present were found by tracing it back through the text.

     In fact, in this research, the independent variable, the scores on the proficiency test, was correlated with (a) the method of development and its kinds in students' writing and (b) the frequency of lexical cohesive devices used.

     Each student wrote two essays on two different but familiar topics, as the term exam. They were to write 70 to 90 words for each essay. The time to perform the task was 90 minutes totally. The researcher administered a standardized Michigan Test (Michigan Test of English Language Proficiency, 2009) at the institute, prior to their writing course, as a tool to measure their proficiency level.

The Michigan Test and Pearson Correlation Formula (calculated via SPSS statistics software) were used as the instruments of this study. The topics the students wrote on were the following: (a) the importance of knowing another language and (b) problems in university.

As discussed earlier, the most appropriate method of development in the texts, it is expected as indicated in the literature, should be the cross-referential pattern, since this is the common pattern in academic writing. Following is a sample of students’ essays (the Theme is underlined, and the missing words, which are usually function words, are supplied in brackets), on (a) the importance of knowing another language and (b) problems in university:

(a)

In addition, we // are English students,

but we // have not English laboratory,

just we // have one computer...

(b)

For example, when I // listen [to] music,

and I // know some words

I // can understand the feeling of [the] song, and [the] singer,

and I // can feel what [the] singer does tell about.

*I // don't like to listen to a [#] music…*

     This is a typical sample of the texts of this study, where the constant Theme pattern is overused and the linear pattern, although used, has a lower frequency of occurrence; but correlated with the proficiency level of the learners positively.

**Results**

**Results of the Correlation for the First Hypothesis**

The results for each of the hypotheses are provided and discussed separately. Table 1 shows descriptive statistics of clauses in essays:

**Table 1** Descriptive statistics of clauses

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
|  | Minimum | Maximum | Mean | Std. Deviation |
| Clauses | 15 | 53 | 29.12 | 7.605 |

     Table 2 shows the statistics of the linear Theme pattern. A comparison between the mean of the number of clauses and the mean of the number of linear Theme patterns used reveals that its use is not so common in students’ writing, as compared to the constant Theme pattern, which will come next:

**Table 2** Descriptive statistics of linear Theme pattern

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
|  | Minimum | Maximum | Mean | Std. Deviatio |
| Linear | 1 | 12 | 4.65 | 2.007 |

     Table 3 shows the correlational statistics for the scores on proficiency test and the method of development in essays, concerning the first hypothesis, calculated by statistics software:

**Table 3** Correlation of score and linear Theme pattern

|  |  |  |  |
| --- | --- | --- | --- |
|  |  | Score | Linear |
| Linear | Pearson Correlation | 1 | .554\* |
| Sig. (2-tailed) |  |  | .000 |
|  | N | 60 | 60 |

\*Correlation is significant at the 0.01 level

As table 3 shows, there is a significant correlation at a 0.01 level of significance. The table shows that there is a significant relation between the two variables, and the first hypothesis is rejected. This means that there is a significant relation between the proficiency level of the participants and their use of the linear Theme pattern, as an incidence in scientific and academic writing.

**Results of the Correlation for the Second Hypothesis**

Table 4 shows the descriptive statistics of the constant Theme pattern. A comparison between the mean of the number of linear Theme pattern and the mean of the number of constant Theme pattern reveals that its use is more common than that of the linear Theme pattern:

**Table 4** Descriptive statistics of constant Theme pattern

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
|  | Minimum | Maximum | Mean | Std. Deviation |
| Constant | 1 | 28 | 11.37 | 5.446 |

     Table 5 shows the correlational statistics for the scores on proficiency test and the method of development in essays, concerning the second hypothesis:

**Table 5** Correlation of score and constant Theme pattern

|  |  |  |  |
| --- | --- | --- | --- |
|  |  | Score | Constant |
| Constant | Pearson Correlation | 1 | .093 |
| Sig. (1-tailed) |  |  | .240 |
|  | N | 60 | 60 |

     The table indicates that the relationship is not significant and the second hypothesis is not rejected. This means that there is no significant relation between the proficiency level of the participants and their use of constant Theme pattern, although it is used more frequently.

     The constant Theme pattern is used more frequently, almost three times the linear pattern is used. This is not a convenient incidence, which was noted earlier and will be discussed more in the following sections. Table 6 shows the statistics for Derived Theme pattern. As mentioned earlier, this is when the Theme is completely or partly the reiteration of the text topic, the first time it appears in the text in Theme position. Usually the first sentence of the students' essay is derived from the topic.

**Table 6** Descriptive statistics of derived Theme

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
|  | Minimum | Maximum | Mean | Std. Deviation |
| Derived | 0 | 3 | 1.12 | .761 |

Mean of constant= 11.37

Mean of linear= 4.65

Mean of derived**=** 1.12

**Results of the Correlation for the Third Hypothesis**

Table 7 shows the statistics of lexical cohesion. It incorporates strands like use of synonyms, general nouns, etc. discussed above.

**Table 7** Descriptive statistics of lexical cohesion

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
|  | Minimum | Maximum | Mean | Std. Deviation |
| Cohesion | 27 | 98 | 53.65 | 16.488 |

     Table 8 shows the correlational statistics for the scores on proficiency test and the lexical cohesion, regarding the fourth hypothesis:

**Table 8** Correlation of scores and cohesion

|  |  |  |  |
| --- | --- | --- | --- |
|  |  | Score | Cohesion |
| Cohesion | Pearson Correlation | 1 | .249\* |
| Sig. (1-tailed) |  |  | .027 |
|  | N | 60 | 60 |

\*Correlation is significant at the 0.05 level.

     The table shows that there is a significant relation between the proficiency level of the participants and the incidence of lexical cohesion in their writing. So, the fourth hypothesis is also rejected.

**Discussions**

**Discussing the First Hypothesis**

Regarding the rejection of the first hypothesis, it is evident that there is a rather high relation between the two variables. Hatch and Lazaraton (1991) suggested that if we computed a test of grammar and a test of general language proficiency, for example, and the correlations turns out to be .71, we could say that the correlation is very strong. But if we want to show that the two tests measured basically the same thing, the correlation is not very strong.

     The correlation coefficient for the first hypothesis is .554. This means that there is more than 30 percent overlap between the variables:

r² = 0.3069 × 100 = 30.96

**Discussing the Second Hypothesis**

The second hypothesis was not rejected, because there is almost no correlation between the variables. The correlation coefficient for this correlation is .092. This means that the overlap between the two is less than 1 percent:

r² = 0.008649 × 100 = 0.8649

**Discussing the Third Hypothesis**

The fourth hypothesis is rejected. There is a significant relation between the variables, though, this correlation is not high. The correlation coefficient for this correlation is .249. This means that the overlap between the two is more than 6 percent:

r² = 0.062 × 100 = 6.20

**Findings**

The results of the study revealed that the proficiency level of the students is in relation with their use of linear Theme pattern to a rather high degree. This pattern adds to the development of the text. Once a new idea is presented and talked about, it is handled in the outset of the next unit of message, namely, the clause. The use of this pattern is essentially valuable in scientific and academic writing. But its use was limited almost by all the students. This may mean that the proficiency level of the students has nothing to do with knowing of and applying such a tactic in academic writing; instead, it must be taught.

     As mentioned, patterns of thematic progression do not occur randomly but are sensitive to genre. This means that different patterns of thematic progression correlate with different genres. This shows that the participants of this study did not draw on the genre-appropriate method of development. But, as the result for the first hypothesis exhibits, the more proficient learners managed to have a better control over their method of topic development.

     Few studies have reported findings on the relation between proficiency level and thematic structure. Another fact is that the participants of this study had not received any instruction regarding the way to manage the content within their texts. But this lack of instruction is not limited to these students, as Mauranen (as cited in Gosden, 1998) notes that research on Theme has not been widely applied to language teaching outside of the Hallidayan systemic-functional tradition.

     The constant pattern is the main structure observed in this study. The constant pattern, especially in the form of nominalizations, adds to the cohesion in written text (Eggins, 1994). However, this is not typical of academic writing, where new ideas are abundant and so it calls for bringing the Theme from the ideas just mentioned, keeping the writer away from sticking to the same proposition through the text.

    Most of the students used the constant pattern in their essays. The mean of the number of clauses for all the participants was 29.12, and the mean for the constant pattern is nearly half of that, 11.37. The mean for the linear pattern is not more than 4.65, which is less than one-sixth of the mean of all the clauses, and almost one-third the mean for constant pattern. This shows the underuse of linear pattern, and the overuse of constant pattern.

     Constant pattern is typical of a narration-type text in which Theme of one clause is often repeated into the Theme of subsequent clauses (Wang, 2007). This Theme reiteration adds to the coherence of the text. However, this abundance is not correlated with the proficiency level of the learners to a significant level. This is because all the learners more or less used this pattern in their writing.

     Lexical cohesion is different from its grammatical counterpart in that it deals with the open class of words, namely, content words, including the general noun class as the borderline between the two. It incorporates using synonyms, antonyms, general nouns, superordinates, complementaries, converses, and opposites. These, by and large, along with same word repetition, make up the lexical cohesion of a text. This same word could be in Theme position, Rheme position, with the same meaning, or just two or more words with the same form, *homonym* (Halliday & Hasan, 1976). More proficient learners have made more use of these devices in their writing. This embodies some how the concept of emergent texture, where interlanguage texts gradually extend their use and control of the grammatical and semantic means used to establish textual cohesion (Murphy, 2001).

     Another point regards the use of Textual and Interpersonal Themes. These two kinds of non-experiential Themes add to the texture of a text. The learners made little use of them, especially the interpersonal Theme. However, this does not mean that the students did not make use of textual and interpersonal Themes at all. Especially in the case of textual Theme, which its mean of use through the essays is 13.15, while the mean for all the Themes used, almost the same as the mean of the clauses used is 29.12. This means that relatively, nearly half of the topical Themes have been preceded by a textual Theme.

     There were some other problems in the essays of the students revealed after their analysis, which were not hypothesized in the study. They are a brand new Theme and overuse of personal pronoun as Theme.

**Brand-new Theme**

Sometimes the Theme used for a clause is completely new, without a previous mention in the text itself or present in the situation. In this case, the writer introduces a theme which is not shared by the reader, which is named the problem of Brand New Theme (Bloor & Bloor in Alonso Belmonte, 1998). The following extract is part of the essay on *problems in university* from student 2:

Coffee shop // is not clear

and [the] food // doesn't have good quality.

Usually my instructors // [are] not very good.

     One problem which is the result of brand new Theme, or seeing it from another view, is that when the Theme is new and emergent, it is not related to the previous clauses in constant or linear way of organizing the text. In fact this is viewing the same problem from another angle. Because it is typical to lay the New in Rheme position, its laying in Theme position both makes the flow of information paralyzed and also makes the clause depart from the ones behind.

     Another point which is not the concern of this study is that some words in the texts are dropped in students' writing. But most of them are content words, over structure words. They are supplied by the researcher in brackets. In fact the writer has tried to communicate the experiential meaning, but sometimes not very successfully.

**Overuse of Personal Pronouns**

Research has shown that the extensive use of the first or second person, especially in thematic position, is typical of personal narratives and speech, rather than of formal essay writing (e.g. Brown & Yule, 1983).

     One of the elements which has been put in Theme position most in this study is the personal pronoun, especially first person singular and plural. As mentioned earlier, in conversation, personal pronouns are one of those elements which are thematized frequently. The following extract is part of the essay of a student on *The importance of knowing another language:*

For example, when I // listen [to] music,

and I // know some words

I // can understand the feeling of song, and singer,

and I // can feel what [the] singer does tell about.

     Besides this over-use of personal pronouns, some researches like Alonso & Belmonte (1998), have reported the over-use of 'there' in Theme position, in a constant pattern. But 'there' was not found to be over-used in this study.

**Conclusion**

     Studies in this domain of functional grammar show that teachers need to look beyond the traditional grammar of the clause in teaching writing. Some researchers have shown that Theme Rheme patterning can be effectively applied in classrooms to diagnosis students' weaknesses.

     An awareness of the types of thematic progression as expounded by Danes may help the learners in academic writing. As mentioned earlier, the way of making use of thematic patterns is genre-specific. This implies that in teaching writing, educators should consider the purpose of learners in learning to write. The analysis of the essays showed that, for the most part, students have no idea how to put which they are to write about within each clause. As the brand new Themes depict, the new ideas have been usually foregrounded in initial part of the clause, and also some fixed elements repeatedly appear in initial position. From the point of formal grammar, the clauses are usually well-formed when taken separately.

**Implications for Further Research**

Results of this research suggest a number of areas for additional research. To minimize unintentional variation, I selected the essays solely from female learners, so a similar study with male participants could provide informative results and possibly suggest a gendered difference among writing structure among Iranian EFL students.

     Still, another point for further research could be finding about the *cause* of this correlation between the proficiency level of the learners and their use of lexical cohesive devices and managing topic structure. This descriptive study dealt with the existence and correlation of such constructs like the method of development and lexical cohesion and Hallidayan metafunctions.

**References**

Alonso, I., & McCabe, A. (1998). Theme-Rheme patterns in L2 writing. Retrieved from <http://www.ucm.es/BUCM/revistas/edu/11300531/articulos/DIDA9898110013A.PDF>

Borsinger, A. M. (2003). A comparison of thematic options in novice and expert research writing. *Estudios de Linguistica Aplicada, 21*(37*)*. Retrieved from <http://redalyc.uaemex.mx>

Brown, G., & Yule, G. (1983). *Discourse analysis*. New York: Cambridge University Press.

Carter, R., Goddard, A., Reah, D., Sanger, K., & Bowring, M. (1997). *Working with texts: a core book for language analysis*. London: Routledge.

Dudley-Evans, T., & St. John, M. J. (1998). *Developments in English for specific purposes*. Cambridge, U.K.: Cambridge University Press.

Eggins, S. (1994). An introduction to systemic functional linguistics. London: Printer Publishers.

Farhady, H., & Hatch, E. (2001). *Research design and statistics*. Tehran, Iran: Rahnama.

Firbas, J. (1998). On some basic issues of the theory of Functional Sentence Perspective. Retrieved from <http://www.phil.muni.cz/angl/bse/archive/BSE_24_03.pdf>

Gosden, H. (1998). An aspect of holistic modeling in academic writing: Propositional clusters as a heuristic for thematic control. *Journal of second language writing, 7*(1)*.*

Green, C. F., Christopher, E. R., Lam, J., & Mei, K. (YEAR?). The incidence and effects on coherence of marked themes in interlanguage texts: a corpus-based enquiry. *English for Specific Purposes, 19*, 99-113.

Guijarro, L. M. (2003). Thematic and topical structuring in three subgenres: a contrastive study. *Miscellanea, 27,* 131-153. Retrieved from: <http://dialnet.unirioja.es/servlet/fichero_articulo?codigo=1037453&orden=82207>

Halliday, M. A. K. (2003). *On Language and linguistics*. New York: Continuum.

Halliday, M. A. K., & Hasan, R. (1976). *Cohesion in English*. London: Longman.

Iddings, J. (2008). A functional analysis of English humanities and biochemistry writing with respect to teaching university composition. *Novitas-ROYAL, 2*(1), 60-87.

Murphy, T. (2001). The emergence of texture: An analysis of the functions of the nominal demonstratives in an English interlanguage corpus. *Language Learning and Technology, 5*(2), 152-173.

Richards, J. C., & Renandya, W. A. (2002). *Methodology in language teaching*. Cambridge, U.K.: Cambridge University Press.

Schmitt, N. (2002). *An Introduction to applied linguistics*. London, U.K.: Arnold Publication.

Wang, L. (2007). Theme and rheme in the thematic organization of text: Implications for teaching academic writing. *Asian EFL Journal, 9*(9).

Wray, A., & Bloomer, A. (2006). Projects in linguistics: A practical guide to researching language. London, U.K.: Hodder Education.

Appendix

**Symbols Used in Analysis**

**1- Bold**: marked T

2- Highlighted: inferred T

**3- Underlined**: related to another T/ R

**4- //**: the boundary between T and R

**5- []**: used for words the student should have supplied

**6- [→  …]**: used to show the correct/ better form of a word supplied

**7- [#]**: used to show the preceding *italic* constituent(s) should not have been used

**8- *Italics***: used to show the incorrect use, followed by the [#]

**9- (You)**: according to Halliday, an ellipted “you” takes the Theme place in Imperative Mood

**Contractions used in tables**

**1- N**: number of clauses

**2- Mar**: marked Theme

**3- Unmar**: unmarked Theme

**4- Cons**: Constant Theme pattern

**5- Lin**: linear Theme pattern

**6- Inf**: inferred Theme

**7- Same**: same word repetition

**8- Ant**: antonym

**9- Syn**: synonym

**10- Series**: series/ non-series words

**11- Sup**: superordinates

**12- G**: general noun

**13- Interp**: interpersonal Theme

**14- Tex**: textual Theme

**15- Comp**: complementaries

1. Explained in the following [↑](#footnote-ref-1)
2. The first constituent of a phrase (a entity, attribute, or process) for which the rest of the clause is a news [↑](#footnote-ref-2)
3. The latter constituent of a phrase, i.e. the part excluding rheme [↑](#footnote-ref-3)
4. Also subsumed under Personal Theme [↑](#footnote-ref-4)