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Effects of Instruction on Chinese College Students' Use of Thematic Progression in English Essays

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Thematic progression (TP) patterns used in English leaner essays provide clues as to how they organize information and develop important concepts in their essays. This quasi-experimental research proved that instruction in TP produced positive effects on Chinese college students' use of linear progressions, constant progressions and new Themes. Linear progressions and new Themes were found to be significantly different between experimental group (CSE)'s pre- and post- essays; the use of linear progressions in their post-essays was found to be in accord with that in native speaker (NS) essays; the difference in constant progressions was also found to be less significant in CSE post-essays and NS essays than in CSE pre-essays and NS essays. These findings revealed that Chinese college students displayed similar performances as or moved closer to native speakers in linear progressions, constant progressions and new Themes in their post-essays. It is suggested that pedagogical efforts are needed to direct students' attention to properly relating Theme or Rheme to preceding and succeeding Themes and Rhemes to hold onto important information when writing in English.

Keywords: Thematic progression; instruction in thematic progression; Chinese college students; English essays

1. Introduction

Thematic progression (TP), first proposed by Daneš (1974, p. 114), refers to the way that the texts develop the ideas they present (Daneš, 1974; Eggins, 2004; Esser, 2006; Ghadessy, 1995; Hasan & Fries, 1995; Paltridge, 2012) in Theme-Rheme structure. The Theme is the starting point of a message and orients the reader to the message that is about to be perceived (Halliday, 2014, p. 89); it is followed by the Rheme, the remainder of the message in a clause where the Theme is developed (Daneš, 1974, pp. 114-115). As the text unfolds, the Themes connect to the Themes and Rhemes of preceding clauses in various ways, picking up or repeating the important concepts and developing them further (Author, 2014, p. 68). These connections form patterns of thematic progression, which constitutes a major aspect of "how speakers construct their messages in a way which makes them fit smoothly into the unfolding language event" (Thompson, 2014, p. 145).

While native speakers of English may have acquired the ability to produce coherent discourse by selecting Themes and relating them to other Themes and Rhemes of the text through exposure to thousands of hours in their mother tongue (Hawes & Thomas, 2012, p. 175), previous studies have shown that learners of English as a foreign language are yet to learn to make appropriate use of TP patterns (Bloor & Bloor, 1992; Christie & Dreyfus, 2007; Schleppegrell, 2004, 2009; Vande Kopple, 1991; Wang, 2007): they tend to use more unmotivated Themes that do not form progression than Themes that do and help develop the key concepts (Belmonte & McCabe-Hidalgo, 1998; Ebrahimi & Ebrahimi, 2012; Herriman, 2011; Jalilifar, 2010; Medve & Takač, 2013; Qian, Andrés Ramírez & Harman, 2007; Rørvik, 2012) when they write in English. However, there have been very few investigations regarding how teachers could draw on the literature about Theme (Author, 2014, p. 75), very few studies that have developed and studied teaching materials informed by Theme (Bonhnacker, 2010, p. 133), and a very limited number of studies trying to investigate with empirical evidence how instruction in TP could influence the way that English learners use TP.

Studies of learner English can provide a basis for pedagogical applications by describing one specific interlanguage and/or designing tailor-made pedagogical tools which will benefit similar types of learners (Granger, 2009, p. 20); therefore, the present research, by adopting a quasi-experimental research design which included the recruitment of an experimental group, a control group and a native speaker group, the implementation of 10-week instruction in TP, data collected before and after the instruction, and a combination of qualitative and quantitative data analysis, aims to investigate the effects of instruction on Chinese college students' use of TP patterns in their English essays. It specifically intends to answer the following three questions:

1) How do Chinese college students use TP patterns before the instruction?

- 2) How do Chinese college students use TP patterns after the instruction?
- 3) How does the instruction in TP patterns affect Chinese college students' use of TP patterns?

2. Related literature

English learners have a number of decisions to make in terms of text development when they write in English,

such as the choice of and ordering of themes, and repeating and developing key concepts to guide the readers effectively through the texts (Daneš, 1974; Eggins, 2004; Ghadessy, 1995; Hasan & Fries, 1995; Paltridge, 2012). However, studies reveal that English learners' deviation from English native speakers in their use of TP patterns leads to failure in signaling the maintenance or progression of "what the text is about" (Thompson, 2014, p. 165), partly because they are disposed to use Themes that do not form progression. For example, Spanish English learners tend to put a large stretch of text between a concept mentioned in a Rheme and its subsequent placement in Theme in addition to the overuse of "there" leading to inconsistency in discourse development and brand new Themes resulting in unmotivated Themes (Belmonte & McCabe-Hidalgo, 1998). French English learners and Swedish English learners, as compared to English native speakers, use proportionally more unmotivated Themes such as completely new Themes leading to rupture in progression (Fontaine & Kodratoff, 2003) and failure to promote text development (Herriman, 2011), which is believed to be the characteristic of low quality essays (Regala-Flores & Yin, 2015). Chinese English learners are found to have difficulties in drawing on the Rheme of a previous clause for the Theme of the next clause (Qian et al., 2007), and Iranian English learners use a lot of Themes for which the reader has to go back more than two clauses to find a previously mentioned concept, which is referred to as miscellaneous TP patterns that could not be categorized under any of the conventional TP patterns (Jalilifar, 2010).

English learners also seem to have problems with using certain types of TP patterns, such as linear progression or split Rheme progression. Spanish English learners, for instance, are reported to use fewer linear progression and split Rheme progression in their essays than English native speakers (Belmonte & McCabe-Hidalgo, 1998). It is also found in Qian et al. (2007) that the Chinese English learner was restricted in her ability to use linear progression as a cohesive strategy by the frequent use of circumstantial elements as marked Themes. Linear progression and split rheme progression expand on information introduced in the Rheme, and Medve and Takač (2013) argue that successful learners tend to use linear progression more often than unsuccessful learners. Some English learners' use of TP patterns show that they are not aware that different TP patterns are used in different text types. For example, Swedish English learners, when practicing expository writing, use fewer summative and split Theme/Rheme progressions which are typical of expository essays (Herriman, 2011). Norwegian English learners use all types of TP patterns differently from English native speakers, including simple linear, simple continuous, complex linear, complex continuous, extended reference, empty Theme and new Theme (Rørvik, 2012), and German English learners use more linear progressions but less constant progressions or back Themes (Medve & Takač, 2013) as compared to English native speakers.

These findings have led to a consensus that English learners should be trained in the choice and ordering of Themes so that they are able to write well-developed essays (Alonso and McCabe, 2003; Alvin, 2015; Park & Lu, 2015; Wang, 2007) as "discourse-driven word order patterns are ... largely ignored in descriptive grammars, teacher training and language teaching materials" (Bohnacker, 2010, p. 133). It is proposed that "coaching in thematisation...at least rudimentary thematisation theory" (Hawe & Thomas, 2012, p.182), or a genre-based approach to teaching deconstructing genre models for TP patterns (Christie & Dreyfus, 2007) is needed to give students practice "with an assortment of thematic options...based on our students' apparent inadequate familiarity with English information structure" (Hawe & Thomas, 2012, p.182). It is also proposed that thematic progression be included as an important index in scoring essays at high-stake exams (Soleymanzadeh & Gholami, 2014) or incorporated into the EAP curriculum through awareness raising activities, explanatory activities and productive activities (Blake, 2015).

However, only a limited number of studies probe into the effects of instruction in TP patterns on English learners' essays. These studies show that explicit teaching of TP patterns have positive effects on the quality of English learners' essays, confirming that explicit knowledge of language functions could sharpen students' awareness regarding the content, organization and language use (Cheng, 2008), and that TP analysis approach to instruction helps improve the structure and texture of English learners' essays in terms of the schematic and clause structure (Ho, 2009). The effects of instruction in English learners' use of TP patterns, though, would be better understood with the research design including a control group (Cheng, 2008; Ho, 2009). It is also pointed out that TP analysis, like many other methods of instruction, required time for instruction results to emerge and to expect positive changes overnight or instantly would be quite unreasonable (Ho, 2009), while only short-term instruction was adopted in existing studies.

3. Thematic progression

Daneš (1974) is the first to propose the formalization of thematic progression. He considers thematic progression to be one representation of the inner connectivity of texts, the way Themes interact with each other and with Rhemes in order to provide continuity in discourse and to organize the text. He defines thematic progression as follows:

...the choice and ordering of utterance Themes, their mutual concatenation and hierarchy, as well as their relationship to the hyperThemes of the superior text units (such as the paragraph, chapter...), to the whole

text and to the situation. Thematic progression might be viewed as the skeleton of the plot (p.114).

Thus, thematic progression concerns the way that the texts develop the ideas they present. More specifically, thematic progression concerns where Themes come from—how they relate to previous Themes and Rhemes of the text (Francis, 1989; Hasan & Fries, 1995). Patterns of thematic progression are formed by a systematic relation between the Theme-Rheme selections and experiential selections in a text (Eggins, 2004; Ghadessy, 1995; Yang, 2008).

3.1 TP patterns

Daneš (1974) postulates some basic TP patterns from analysis of scientific and other professional texts, among which are simple linear TP, TP with a continuous (constant) Theme and split Rheme progression.

Simple linear TP is where the Theme relates to the Rheme of the preceding utterance, in other words, the Rheme portion of each sentence becomes the Theme of the following clause. TP with a continuous (constant) Theme is where the same Theme appears in a series of utterances. Simple linear TP creates a "dynamic" style of essays and constant progressions a "static" style of essays (Enkvist, 1974). Certain correlations have also been found between these progressions and text type. Simple linear TP occurs frequently in expository and argumentative texts, for example in editorials (Francis, 1989; Hawes & Thomas, 1996) and popular medical texts (Nwogu & Bloor, 1991). TP with a continuous (constant) Theme occur frequently in narratives (Fries, 1995; Wang, 2007) and news stories (Francis, 1989, 1990; Gómez, 1994).

Split Rheme progression is a frequently occurring combination of simple linear TP and TP with a continuous (constant) Theme (Daneš, 1974, pp.120-121), the exposition where a Rheme is expanded by a series of subordinate Themes. This type of TP is characterized by the fact that a certain Rheme is explicitly or implicitly double or multiple, so that it gives rise to a pair of or multiple thematic progressions.

McCabe (1999, p.175) proposed a split Theme pattern where a Theme is expanded by a series of subordinate Themes. Split Theme progression means that a Theme may contain more than one idea, and these ideas are developed in different subsequent clauses. Split Theme and Rheme progressions such as these are expository in character as they provide a list of related information to illustrate a main point.

McCabe (1999, p.181) also observed a summative progression which summarizes a stretch of the preceding text. Summative progressions do not proceed from just one previous Theme or Rheme, and its Rheme serves either to wrap up the section with an overall comment, or to pave the way for a subsequent Theme. Examples are provided in Appendix 1 to illustrate different TP patterns.

3.2 Determining thematic progression

When it comes to determining whether and how the Theme of a clause is related to the Theme or Rheme of previous discourse, there are basically two considerations: whether there is presence of cohesive devices, and how far away two clauses can be decided to form thematic progression.

Cohesive devices refer to exact lexical repetition, synonyms, pronouns, substitutions, semantic inference which refer to shared knowledge between the writer and the reader (Nwogu & Bloor, 1991) and relationships involving antonym and hyponymy (McCabe, 1999, p. 176).

As for how far way two clauses can be decided to form thematic progression, some scholars have included gapped progressions, the difference being how far way these gaps extend (Herriman, 2011, p. 16). For example, some of the examples that Dubois (1987) gave have a gap between them of as many as 12 clauses. McCabe (1999) delimited progressions to connections with a maximum gap of three clauses, and Herriman (2011) only considered connections between contiguous T-units as linear or constant progressions with the exception of Themes in split and summative progressions.

3.3 Themes that do not form progression

Thematic progression concerns the relatedness of Themes and Rhemes in discourse, and it would be easy to make the links and establish if the Theme of a clause proceeds from a previous Theme or a previous Rheme. However, not all Themes form progressions (Herriman, 2011; Li, 2007; McCabe, 1999; Author, 2014), especially in English learners' essays. The Themes which do not form progressions have been regarded as peripheral Themes (McCabe, 1999, p. 180) or referred to as "unmotivated Themes" (Herriman, 2011). They are sometimes thought of as signs of bad essays (Mauranen, 1993a, 1993b), but it is pointed out by McCabe (1999, pp.180-189) that some of these Themes could contribute to the development of the text in different ways.

In this research, the Themes which do not connect immediately to the preceding text (with the exception of Themes in split and summative progressions) are divided into new Themes, contextual Themes and back Themes, in line with Herriman (2011, pp. 16-17). New Themes represent completely new information in the text which does not connect to either preceding Theme or Rheme. The information that can be derived from the context, as well as McCabe's (1999) grammatical Themes such as dummy subjects *it* and *there* and situationally-evoked extralinguistic Themes such as *we* referring to the writer and reader, or imperatives

addressing the reader, is categorized under contextual Theme. The Themes which do not connect to their immediately preceding T-unit but reintroduce meanings mentioned earlier in the essays are back Themes, with the exception of Themes in split and summative progressions which formed hierarchical relations of subordination and super-ordination over longer stretches of text.

4. Research design

4.1 Participants

Two classes of second year college students in the College of International Studies at Southwest University¹ in Chongqing, China together with one class of American international students taking an eight-week intensive Chinese course at the same university were recruited for this study.

The Chinese participants in this study were English majors in their sophomore year. They had received compulsory English education for at least six years and had practiced English paragraph essays at senior high school in preparation for the English writing task in the National College Entrance Examination before entering university. They were presumed to be at the same level of English proficiency as they were randomly assigned by the college to different classes when they were enrolled as first-year students. The American college students were third- or fourth- year college students who were taking an intensive Chinese course which lasted eight weeks at the same university. They were US citizens by nationality and their native language was English. Most of them majored in social sciences such as education, history and business, and a few of them majored in sciences such as engineering and biology.

This study was a "quasi-experimental design", as it was not possible to randomize all of the participants into new groups because of the school's policy and regular teaching program and thus the students remained intact in their regular classes during the study. Therefore, one class of Chinese students were assigned as the experimental group, the other class of Chinese students the control group, and the class of American students the native speaker group.

Only the participants who took part in all the phases of the study (i.e. the instruction, pre- and posttraining writing tasks for Chinese participants, and the writing task for American participants) were included in the final data pool. Initially, a total of 95 participants were recruited for this study. However, five participants were excluded from the final data pool, all of whom were Chinese participants: three being absent at either the pre- or post- training writing tasks and two being absent for the training sessions. The present study therefore involves a total of 90 participants from 3 groups: the experimental group comprising of 30 Chinese college students, the control group comprising of 30 Chinese college students and the native speaker group providing baseline data for the study comprising of 30 American college students.

4.2 The essays tasks

The American participants were asked to write on one of the two topics, and the assigning of the topic was random. The Chinese participants were asked to write on the following two topics, before and after the instruction. The two topics were taken from writing tasks for TOEFLE tests (Lee, 2005, p. 30 & p.138) and the students were given 30 minutes to write the essays. The assigning of the topics for pre-essays for Chinese participants was random and they were required to write on the other topic for post-essays, which means the participant who wrote on topic 1 in pre-essay task was assigned to write on topic 2 in post-essay task.

Topic 1: Trees are important to individuals, to countries and cultures. Explain what tree or trees are important to you and/or your culture. Use specific reasons and details to support your point of view.

Topic 2: Which room in the house would your family consider the most important? Describe the room and explain why it is more important than any other room. Use specific reasons and details.

4.3 The instruction

The instruction was given in the participants' regular classroom during regular class hours, which were scheduled for English lessons. The ten sessions of the instruction in T/TP were delivered by the researcher who was also the participants' regular classroom teacher. The schedule of the instruction can be found in Appendix 2.

The duration of the instruction was about eight hours (50 minutes for each of the 10 sessions) in 10 consecutive weeks. The instruction was only delivered to CSE group, i.e., the experimental group. During the same period of time, regular lessons in essay writing were delivered to CSC group, i.e., the control group, which included ten sessions on planning the writing, structuring paragraphs, writing introductions, writing conclusions, and the writing of one essay.

4.4 The data

The data in this research comprised 150 essays from five categories, with 30 essays from each category: to denote the identity of the student writer, essays from the experimental group of Chinese students before the instruction are referred to as "CSE pre" plus a number between 1 and 30, essays from the experimental group of

Chinese students after the instruction are referred to as "CSE post" plus a number, essays from the control group of Chinese students before the instruction are referred to as "CSC pre" plus a number, essays from the control group of Chinese students after the instruction are referred to as "CSC post" plus a number, and essays from the American students similarly are referred to as "NS" plus a number. The 150 essays, which were collected between June and November, 2013, totaled 33,134 words. All the essays were used with the permission of the participants concerned.

Table 1 provides information with regard to the total number of words written by the CCS and NS, the average number of words per essay, total number of T-units (which was used as the unit of analysis and is explained in detail in Section 4.5.1), and the average number of words per T-unit in the five essay categories. Table 1 An overview of the data

| Essays | Total number of | Average number of | Total number of | Average number of |
|------------|-----------------|-------------------|-----------------|-------------------|
| category | words | words per essay | T-units | words per T-unit |
| CSE (pre) | 6458 | 215.26 | 478 | 13.51 |
| CSE (post) | 6384 | 212.80 | 459 | 13.90 |
| CSC (pre) | 7146 | 210.00 | 519 | 13.77 |
| CSC (post) | 7134 | 237.80 | 506 | 14.10 |
| NS | 6012 | 200.40 | 454 | 13.24 |

4.5 Analytical framework

4.5.1 Unit of analysis

The T-unit was used as the basic unit of analysis in this research. A T-unit is a clause complex which contains one main independent clause together with all the hypotactic clauses which are dependent on it (Fries, 1995, p. 318). The T-unit was used in the present research because "analyzing Theme at the level of T-unit rather than the individual clause ... can ... be justified on the grounds that the thematic structure of a dependent clause is often constrained by the independent clause" (Fries & Francis, 1992, p. 6).

4.5.2 Division of Theme and Rheme

The division of Theme and Rheme was drawn, following Halliday (2014, p. 91), after the first experiential constituent, i.e., the constituent which represents a participant, circumstance, or process, which Halliday labels as the topical Theme. The Theme would also include any element preceding the topical Theme or the first experiential constituent. It should be noted, however, that an extended definition of the Theme which suggests that the subject be regarded as thematic has been proposed (e.g., Berry, 1995; Davies, 1994; Fawcett, 2008; Forey, 2002; Martin & Rose, 2003; North, 2005; Rose, 2001). Halliday's division of Theme and Rheme was adopted in the present research because it reflects better topic continuity (Davies, 1997; Fries, 1995; Gosden, 1992, 1993) and therefore provides a more sophisticated understanding of thematic progression as a texturing resource (Thompson & Thompson, 2009).

Thus, in the clause In every home, a kitchen sits in the middle of it and unites a family (NS-01), the adverbial In every home was classified as the Theme and a kitchen sits in the middle of it and unites a family as the Rheme, as shown in Figure 1.

| in minigare 1. | |
|----------------|--|
| In every home, | a kitchen sits in the middle of it and unites a family |
| Theme | Rheme |
| (| NS-01) |

Figure 1. Division of Theme and Rheme.

4.5.3 Identification of TP patterns and unmotivated Themes

In line with Section 3, this study only considered connections between contiguous T-units as linear or constant progressions with the exception of Themes in split and summative progressions. Five types of TP patterns² and three types of unmotivated Themes were identified and counted, following Daneš (1974), McCabe (1999) and Herriman (2011). Figures 2 and 3 provide an overview of the TP patterns and unmotivated Themes for analysis in this study.

| | Linear progression | | | | | |
|-------------|------------------------------|--|--|--|--|--|
| ТР | Constant progression | | | | | |
| patterns | Summative progression | | | | | |
| | Split Rheme progression | | | | | |
| | Split Theme pattern | | | | | |
| | Figure 2. TP patterns | | | | | |
| I.I | Back Themes | | | | | |
| Unmotivated | New Themes | | | | | |
| Themes | Contextual Themes | | | | | |
| | Figure 3. Unmotivated Themes | | | | | |
| | | | | | | |

4.5.4 Quantitative analysis

The quantitative analyses of the essays included the following statistical procedures: counting raw numbers of different TP patterns, calculating proportion of different TP patterns, descriptive analyses, independent t-tests and paired-samples t-tests analyses. The Statistical Package for Social Sciences (SPSS) software was used to analyze the data.

Independent t-tests were conducted to determine significant differences in the use of TP patterns between CSE and CSC pre- essays, CSE pre-essays and NS essays, CSE and CSC post- essays, and CSE post-essays and NS essays. Paired-samples t-tests were conducted to determine significant differences in the use of TP patterns between CSE pre- and post- essays, and CSC pre- and post- essays. For independent t-tests and paired samples t-tests in this study, a p-value ≤ 0.05 was considered statistically significant.

4.5.5 Procedures

The following procedures were used in the analysis of the English essays:

1) Locate and number each T-unit;

2) Identify the Theme/Rheme division in each T-unit with a slash "/";

3) Identify TP patterns and unmotivated Themes in each essay, an example of which is presented in Appendix 3;

4) Count the raw numbers of different types of TP patterns and unmotivated Themes, and calculate their proportion;

5) Conduct descriptive analyses, independent t-tests, and paired-samples t-tests.

5. Findings and discussion

5.1 TP patterns in CSE and CSC pre-essays

The first question explored in this study was how Chinese college students used TP patterns before the instruction. To this aim, raw numbers of different TP patterns were counted, the proportion of different TP patterns was calculated and independent t-tests were performed to decide if there were statistically significant differences.

5.1.1 Linear, constant, summative, split Theme and split Rheme progressions

Table 2 compares distribution of TP patterns in CSE, CSC and NS essays. The proportion of TP patterns was calculated by dividing the number of each type of TP with the total number of T-units minus 30³. CSE group and CSC group displayed similar performances in TP patterns. Twenty-one point eight seven percent of the Themes in CSE essays and 22.09% of the Themes in CSC essays formed linear progressions; 18.97% of the Themes in CSE essays and 16.97% of the Themes in CSC essays formed constant progressions; only 0.44% and 0.20% of the Themes in CSE essays and OSC essays respectively formed summative progressions; none of the Themes in CSE essays and only 0.61% of the Themes in CSC essays formed split Theme progression; and only 1.55% and 1.23% of the Themes in CSE essays and 41.10% of the Themes in CSC essays formed progressions that help text development.

It can also be seen from Table 2 that both groups of Chinese college students deviated from NS group in TP patterns. Both CSE group and CSC group used fewer linear progression (21.87% & 22.09% vs. 34.91%), constant progression (18.97% & 16.97% vs. 29.72%), summative progression (0.44% & 0.20% vs. 1.18%), split Theme progression (0.00% & 0.61% vs. 0.94%) and split Rheme progression (1.55% & 1.23% vs. 2.83%). On the whole, NS group (69.58%) used a lot more Themes that contributed to text development than both CSE group (42.83%) and CSC group (41.10%).

| | | 1 patterns | m cor | pre, coc | pre ui | 14 1 10 6 554 | |
|-------------|-----|------------|-------|----------|--------|----------------------|--|
| | CS | CSE pre | | SC pre | NS | | |
| Linear | 98 | 21.87% | 108 | 22.09% | 148 | 34.91% | |
| Constant | 85 | 18.97% | 83 | 16.97% | 126 | 29.72% | |
| Summative | 2 | 0.44% | 1 | 0.20% | 5 | 1.18% | |
| Split Theme | 0 | 0.00% | 3 | 0.61% | 4 | 0.94% | |
| Split Rheme | 7 | 1.55% | 6 | 1.23% | 12 | 2.83% | |
| Total | 448 | 42.83% | 489 | 41.10% | 424 | 69.58% | |

Table 2 Distribution of TP patterns in CSE pre-, CSC pre- and NS essays

Mean scores and t-test results for the distribution of linear, constant, summative, split Theme and split Rheme progressions in CSE essays and CSC essays are presented in Table 3. The t-tests revealed no statistically significant difference between the two groups in distribution of all the TP patterns investigated in this section.

| Table 3 Mean scores and t-test results for linear, constant, summative, split Theme and split Rheme progressions |
|--|
| in CSE and CSC pre-essays |

| | Туре | Ν | Mean | SD | t | df | Sig |
|-------------|------|----|--------|---------|--------|----|------|
| Linear | CSE | 30 | 3.2667 | 1.69143 | 360 | 58 | .720 |
| | CSC | 30 | 3.6000 | 1.88887 | | 58 | |
| Constant | CSE | 30 | 2.8333 | 2.29467 | .309 | 58 | .758 |
| | CSC | 30 | 2.7666 | 1.85571 | | 58 | |
| Summative | CSE | 30 | .0667 | .25371 | .584 | 58 | .561 |
| | CSC | 30 | .0333 | .18257 | | 58 | |
| Split Theme | CSE | 30 | .0000 | .00000 | -1.000 | 58 | .321 |
| - | CSC | 30 | .1000 | .54772 | | 58 | |
| Split Rheme | CSE | 30 | .2333 | .62606 | .163 | 58 | .871 |
| • | CSC | 30 | .2000 | .92476 | | 58 | |

Table 4 presents mean scores and t-test results for the distribution of linear, constant, summative, split Theme and split Rheme progressions in CSE essays and NS essays. The t-test revealed no statistically significant difference between the two groups in distribution of summative, split Theme or split Rheme progression. However, there were significant differences in linear progression [t (58) =-3.068, p=.001] and constant progression [t (58) =-2.216, p=.015]. There were significantly less linear and constant progressions in CSE essays than NS essays.

Table 4 Mean scores and t-test results for linear, constant, summative, split Theme and split Rheme progressions in CSE pre- and NS essays

| | Туре | Ν | Mean | SD | t | df | Sig |
|-------------|------|----|--------|---------|--------|----|--------|
| Linear | CSE | 30 | 3.2667 | 1.69143 | -3.068 | 58 | .001** |
| | NS | 30 | 4.9333 | 2.22731 | | 58 | |
| Constant | CSE | 30 | 2.8333 | 2.29467 | -2.216 | 58 | .015* |
| | NS | 30 | 4.2000 | 2.24990 | | 58 | |
| Summative | CSE | 30 | .0667 | .25371 | -1.201 | 58 | .117 |
| | NS | 30 | .1667 | .37905 | | 58 | |
| Split Theme | CSE | 30 | .0000 | .00000 | -1.439 | 58 | .077 |
| - | NS | 30 | .1333 | .50742 | | 58 | |
| Split Rheme | CSE | 30 | .2333 | .62606 | 889 | 58 | .189 |
| - | NS | 30 | .4000 | .81368 | | 58 | |

indicates statistical significance at the 0.05 level.

** indicates statistical significance at the 0.01 level.

5.1.2 Back, contextual and new Themes

The remaining Themes (57.17% in CSE essays, 58.90% in CSC essays and 30.42% in NS essays) are back, contextual and new Themes (see Table 5). CSE group and CSC group displayed similar performances in these Themes. Thirteen percent point two zero of the Themes in CSE essays and 13.91% of the Themes in CSC essays were back Themes; 18.08% of the Themes in CSE essays and 13.91% of the Themes in CSC essays were contextual Themes; and as many as 25.89% and 31.08% of the Themes in CSE essays and CSC essays were new Themes.

It can also be seen from Table 5 that both groups of Chinese college students deviated from NS group in back, contextual and new Themes. Both CSE group and CSC group used proportionally less back (13.20% & 13.91% vs. 16.51%), more contextual (18.08% & 13.91% vs. 6.13%) and more new (25.89% & 31.08% vs. 7.78%) Themes than NS group.

Table 5 Back, contextual and new Themes in CSE pre-, CSC pre- and NS essays

| | CSE | | (| CSC | NS | | |
|------------|-----|--------|-----|--------|-----|--------|--|
| Back | 59 | 13.20% | 68 | 13.91% | 70 | 16.51% | |
| Contextual | 81 | 18.08% | 68 | 13.91% | 26 | 6.13% | |
| New | 116 | 25.89% | 152 | 31.08% | 33 | 7.78% | |
| Total | 448 | 57.17% | 489 | 58.90% | 424 | 30.42% | |

The t-tests showed no statistically significant difference between CSE and CSC group in distribution of back, contextual or new Themes, as shown in Table 6.

Table 6 Mean scores and t-test results for back, contextual and new Themes in CSE pre- and CSC pre-essays

| | Туре | Ν | Mean | SD | t | df | Sig |
|------------|------|----|--------|---------|--------|----|------|
| Back | CSE | 30 | 1.9667 | 1.95613 | 927 | 58 | .358 |
| | CSC | 30 | 2.2667 | 1.32570 | | 58 | |
| Contextual | CSE | 30 | 2.7000 | 1.83077 | .499 | 58 | .620 |
| | CSC | 30 | 2.2667 | 1.79046 | | 58 | |
| New | CSE | 30 | 3.8667 | 2.32527 | -1.976 | 58 | .053 |
| | CSC | 30 | 5.0667 | 2.37806 | | 58 | |

However, the t-tests showed statistically significant differences between CSE group and NS group in their use of both contextual Themes [t (58) =4.193, p=.000] and new Themes [t (58)=-5.667, p=.000]: CSE group (M=2.7000, SD=1.83077) used significantly more contextual Themes than NS group (M=.8667, SD=1.33218); they (M=3.8667, SD=2.32527) also used significantly more new Themes than NS group (M=1.1000, SD=1.18467). No significant difference was found though, between these two groups in the use of back Themes in spite of perceived proportional differences.

Table 7 Mean scores and t-test results for back, contextual and new Themes in CSE and NS essays

| | Туре | Ν | Mean | SD | t | df | Sig. |
|------------|------|----|--------|---------|-------|----|-------------|
| Back | CSE | 30 | 1.9667 | 1.95613 | 794 | 58 | .215 |
| | NS | 30 | 2.3333 | 1.60459 | | 58 | |
| Contextual | CSE | 30 | 2.7000 | 1.83077 | 4.193 | 58 | $.000^{**}$ |
| | NS | 30 | .8667 | 1.33218 | | 58 | |
| New | CSE | 30 | 3.8667 | 2.32527 | 5.667 | 58 | $.000^{**}$ |
| | NS | 30 | 1.1000 | 1.18467 | | 58 | |

** indicates statistical significance at the 0.01 level.

Back Themes do not connect to their immediately preceding T-unit but reintroduce meanings mentioned earlier in the essays. Back Themes are found, for instance, at the beginning of the concluding paragraphs to remind the reader of the essay topic. Back Themes were proportionally more usual in the NS essays (16.51%) than either CSE essays (13.20%) or CSC essays (13.91%), which is partly due to Chinese college students' overuse of contextual Themes and new Themes. Contextual Themes represent information which is situationally evoked (Prince, 1981, p. 236) and therefore does not interrupt the flow of information (Herriman, 2011, p. 22). There were a greater proportion of contextual Themes in both CSE essays (13.91%) than NS essays (6.13%).

New Themes were much more frequent in both CSE (25.89%) and CSC essays (31.08%) than NS essays (7.78%). New Themes are either brand-new and have to be created by the reader. When new information is placed in the Theme, it is backgrounded, and as a result more difficult to challenge. In this way, the writer is able to "smuggle" more information into the message and to present it as shared knowledge (Herriman, 2011, p. 22)

In summary, Chinese college students used less Themes that promoted thematic progression, as compared to native speakers (42.83% & 41.10% vs. 69.58%) and more Themes that did not form thematic progression, especially new Themes (57.17% & 58.90% vs. 30.42%). The t-tests revealed that there were no significant differences in any type of the TP patterns or unmotivated Themes between CSE essays and CSC essays, while significant differences were found between CSE essays and NS essays in linear progression, constant progression, contextual themes and new themes.

5.2 Thematic progression in CSE and CSC post-essays

Research question 2 concerns how Chinese college students use TP patterns after the instruction. This question was answered by comparing thematic progression in CSE post-essays, CSC post-essays and NS essays, as well as CSE pre- and post- essays and CSC pre- and post- essays.

5.2.1 Linear, constant, summative, split Theme and split Rheme progressions

Table 8 shows that after the instruction, CSE group used more TP patterns that contributed to text development than CSC group (54.08% vs. 39.08%) in that CSE group used more linear (29.14% vs. 19.54%), constant (21.44% vs. 18.07%), summative (0.70% vs. 0.21%), split Theme (0.47% vs. 0.00%) and split Rheme (2.33% vs. 1.26%) progressions. However, CSE group still used less linear (29.14% vs. 34.91%), constant (21.44% vs. 29.72%), summative (0.70% vs. 1.18%), split Theme (0.47% vs. 0.94%) or split Rheme (2.33% vs. 2.83%) than NS group.

Table 8 Distribution of TP patterns in CSE post-instruction essays, CSC post-essays and NS essays

| | 1 | 1 | | | <i>J j j</i> | |
|-------------|-----|--------|-----|--------|--------------|--------|
| | (| CSE | (| CSC | NS | |
| Linear | 125 | 29.14% | 93 | 19.54% | 148 | 34.91% |
| Constant | 92 | 21.44% | 86 | 18.07% | 126 | 29.72% |
| Summative | 3 | 0.70% | 1 | 0.21% | 5 | 1.18% |
| Split Theme | 2 | 0.47% | 0 | 0.00% | 4 | 0.94% |
| Split Rheme | 10 | 2.33% | 6 | 1.26% | 12 | 2.83% |
| Total | 429 | 54.08% | 476 | 39.08% | 424 | 69.58% |

The t-tests revealed statistically significant differences between CSE post-essays and CSC post-essays in distribution of linear progression [t (58) =2.302, p=.012]. CSE group (M=4.1667, SD=1.89525) used significantly more linear progression than CSC group (M=3.1000, SD=1.68870) after the instruction. No significant differences were found in constant, summative, split Theme or split Rhme progression although CSE group used proportionally more of these too.

Table 9 Mean scores and t-test results for linear, constant, summative, split Theme and split Rheme progressions in CSE post-instruction essays and CSC post-essays

| | Туре | Ν | Mean | SD | t | df | Sig |
|-------------|------|----|--------|---------|-------|----|-------|
| Linear | CSE | 30 | 4.1667 | 1.89525 | 2.302 | 58 | .012* |
| | CSC | 30 | 3.1000 | 1.68870 | | 58 | |
| Constant | CSE | 30 | 3.0667 | 1.96404 | .378 | 58 | .353 |
| | CSC | 30 | 2.8667 | 2.12916 | | 58 | |
| Summative | CSE | 30 | .1000 | .30513 | 1.027 | 58 | .154 |
| | CSC | 30 | .0333 | .18257 | | 58 | |
| Split Theme | CSE | 30 | .0667 | .36515 | 1.000 | 58 | .16 |
| | CSC | 30 | .0000 | .00000 | | 58 | |
| Split Rheme | CSE | 30 | .3333 | 1.09334 | .510 | 58 | .306 |
| | CSC | 30 | .2000 | .92476 | | 58 | |

* indicates statistical significance at the 0.05 level.

As for CSE group and NS group, the t-tests revealed only significant difference in constant progression [t (58) =-2.078, p=.021]: CSE group (M=3.0667, SD=1.96404) used less constant progression than NS group (M=4.2000, SD=2.24990). No statistically significant difference were found between the two groups in distribution of linear, summative, split Theme or split Rheme progressions, which shows that CSE group displayed similar performances to NS group in their post-essays in TP patterns.

Table 10 Mean scores and t-test results for linear, constant, summative, split Theme and split Rheme progressions in CSE post- and NS essays

| | Туре | Ν | Mean | SD | t | df | Sig |
|-------------|------|----|--------|---------|--------|----|-------|
| Linear | CSE | 30 | 4.1667 | 1.89525 | -1.436 | 58 | .078 |
| | NS | 30 | 4.9333 | 2.22731 | | 58 | |
| Constant | CSE | 30 | 3.0667 | 1.96404 | -2.078 | 58 | .021* |
| | NS | 30 | 4.2000 | 2.24990 | | 58 | |
| Summative | CSE | 30 | .1000 | .30513 | 750 | 58 | .228 |
| | NS | 30 | .1667 | .37905 | | 58 | |
| Split Theme | CSE | 30 | .0667 | .36515 | 584 | 58 | .28 |
| | NS | 30 | .1333 | .50742 | | 58 | |
| Split Rheme | CSE | 30 | .3333 | 1.09334 | 268 | 58 | .395 |
| | NS | 30 | .4000 | .81368 | | 58 | |

* indicates statistical significance at the 0.05 level.

5.2.2 Back, contextual and new Themes in CSE post-, CSC post- and NS essays

The remaining Themes (45.92% in CSE post-essays, 60.92% in CSC post-essays and 30.42% in NS essays) were back, contextual and new Themes (Table 11). CSE group used less Themes that did not form progression than CSC group after the instruction. To be specific, they used less back Themes (10.95% vs. 13.02%) and new Themes (16.32% vs. 29.83%) than CSC group.

| Table 11 Back | , contextual and new | Themes in CSE | post-essays, CSC | post-essays and NS essays |
|---------------|----------------------|---------------|------------------|---------------------------|
| | | | | |

| | | F | | , -, - - - | | J | |
|------------|-----|--------|-----|--------------------------|-----|--------|--|
| | (| CSE | (| CSC | NS | | |
| Back | 47 | 10.95% | 62 | 13.02% | 70 | 16.51% | |
| Contextual | 80 | 18.65% | 86 | 18.07% | 26 | 6.13% | |
| New | 70 | 16.32% | 142 | 29.83% | 33 | 7.78% | |
| Total | 429 | 45.92% | 476 | 60.92% | 424 | 30.42% | |
| | | | | | | | |

The t-tests revealed no statistically significant difference between the two groups in back or contextual Themes. However, there was significant difference in new Themes [t (58) = 4.083, p=.000]: CSE group (M=2.3333, SD=1.70867) used significantly less new Themes than CSC group (M=4.7333, SD=2.72831) in post-essays.

Table 12 Mean scores and t-test results for back, contextual and new Themes in CSE post-essays and CSC postessays

| | Туре | Ν | Mean | SD | t | df | Sig |
|------------|------|----|--------|---------|--------|----|-------------|
| Back | CSE | 30 | 1.5667 | 1.27802 | -1.278 | 58 | .103 |
| | CSC | 30 | 2.0667 | 1.72073 | | 58 | |
| Contextual | CSE | 30 | 2.6667 | 1.49328 | 466 | 58 | .321 |
| | CSC | 30 | 2.8667 | 1.81437 | | 58 | |
| New | CSE | 30 | 2.3333 | 1.70867 | 4.083 | 58 | $.000^{**}$ |
| | CSC | 30 | 4.7333 | 2.72831 | | 58 | |

** indicates statistical significance at the 0.01 level.

CSE group used significantly less back Themes than NS group [t (58) = -2.447, p=.022] while they used significantly more contextual Themes [t (58) = 4.927, p=.000] and new Themes [t (58) = 3.249, p=.001] than NS group, as revealed by the t-tests (Table 13).

Table 13 Mean scores and t test for back, contextual and new Themes in CSE and NS essays

| | Туре | Ν | Mean | SD | t | df | Sig. |
|------------|------|----|--------|---------|--------|----|-------------|
| Back | CSE | 30 | 1.5667 | 1.27802 | -2.447 | 58 | .022* |
| | NS | 30 | 2.3333 | 1.60459 | | 58 | |
| Contextual | CSE | 30 | 2.6667 | 1.49328 | 4.927 | 58 | $.000^{**}$ |
| | NS | 30 | .8667 | 1.33218 | | 58 | |
| New | CSE | 30 | 2.3333 | 1.70867 | 3.249 | 58 | .001** |
| | NS | 30 | 1.1000 | 1.18467 | | 58 | |

*indicates statistical significance at the 0.05 level.

** indicates statistical significance at the 0.01 level.

5.2.3 Linear, constant, summative, split Theme and split Rheme progressions in CSE pre-/post- and CSC pre-/post- essays

Table 14 compares the distribution of linear, constant, summative, split Theme and split Rheme progressions in CSE and CSC pre- and post- essays. CSE group used proportionally more linear (29.14% vs. 21.87%), constant (21.44% vs. 18.97%), summative (0.70% vs. 0.44%), split Theme (0.47% vs. 0.00%) and split Rheme (2.33% vs. 1.55%) progression in post-essays than pre-essays. And CSC group used proportionally more constant progression (18.07% vs. 16.97%), more split Rheme progression (1.26% vs. 1.23%), less linear progression (19.54% vs. 22.09%) and less split Theme progression (0.00% vs. 0.61%) in their post-essays. Table 14 Thematic progression in CSE and CSC pre- and post- essays

| i i i inematie proj | Grebbion | in CDL unu | ese pre | und post et | 55 a j 5 | | | |
|---------------------|----------|------------|----------|-------------|-----------------|--------|-----|--------|
| | CSE pre | | CSE post | | CSC pre | | CSO | C post |
| Linear | 98 | 21.87% | 125 | 29.14% | 108 | 22.09% | 93 | 19.54% |
| Constant | 85 | 18.97% | 92 | 21.44% | 83 | 16.97% | 86 | 18.07% |
| Summative | 2 | 0.44% | 3 | 0.70% | 1 | 0.20% | 1 | 0.21% |
| Split Theme | 0 | 0.00% | 2 | 0.47% | 3 | 0.61% | 0 | 0.00% |
| Split Rheme | 7 | 1.55% | 10 | 2.33% | 6 | 1.23% | 6 | 1.26% |
| Total | 448 | 42.83% | 429 | 54.08% | 489 | 41.10% | 476 | 39.08% |

Paired-samples t-tests revealed significant differences between CSE pre- and post- essays in distribution of linear progression (t = -1.736, df = 29, n = 30, p =.046, 95% CI for mean difference -1.7426 to .14261): there were significantly more linear progressions in CSE post-essays (M=4.1667, SD=1.89525) than in their pre-essays (M=3.2667, SD=1.69143). However, there were no significant differences in constant, summative, split Theme or split Rheme progressions although CSE group also used proportionally more of these in their post-essays.

| Table 15 Descriptive statistics and t test results for | TD patterns in CSE pre and past accoust |
|--|--|
| Table 15 Descriptive statistics and t-test results for | IF patients in CSE pre- and post- essays |

| | Pre-instruction Post-instruction | | | 95% C Mean Dif | | | | | | |
|-------------|----------------------------------|---------|--------|-------------------|----|----------|--------|--------|----|------------|
| Outcome | М | SD | М | SD | n | | | t | df | Sig. |
| Linear | 3.2667 | 1.69143 | 4.1667 | 1.89525 | 30 | -1.74261 | .14261 | -1.736 | 29 | $.046^{*}$ |
| Constant | 2.8333 | 2.29467 | 3.0667 | 1.96404 | 30 | -1.24571 | .91238 | 316 | 29 | .372 |
| Summative | .0667 | .25371 | .1000 | .30513 | 30 | 18786 | .12120 | 441 | 29 | .331 |
| Split Theme | .0000 | .00000 | .0667 | .36515 | 30 | 20302 | .06968 | -1.000 | 29 | .163 |
| Split Rheme | .2333 | .62606 | .3333 | 1.09334 | 30 | 59373 | .39373 | 414 | 29 | .341 |

^{*} indicates statistical significance at the 0.05 level.

There were, however, no significant difference between CSC pre- and post- essays in any of the five types of thematic progressions, as revealed by the paired-samples t-test results (Table 16)

| Table 16 Desc | riptive stat | istics and t- | test results | for TP patt | terns in | CSC pre- an | nd post- essa | uys ⁴ | | |
|---------------|----------------------------------|---------------|--------------|-------------|----------|------------------|---------------|------------------|----|-------|
| | Pre-instruction Post-instruction | | | | | 95% (Mean Di | | | | |
| Outcome | М | SD | М | SD | n | | | t | df | Sig. |
| Linear | 3.6000 | 1.88887 | 3.1000 | 1.68870 | 30 | 36743 | 1.23410 | 1.107 | 29 | .277 |
| Constant | 2.7666 | 1.85571 | 2.8667 | 2.12916 | 30 | 75919 | .49252 | 436 | 29 | .666 |
| Split Theme | .1000 | .54772 | .0000 | .00000 | 30 | 10452 | .30452 | 1.000 | 29 | .326 |
| Split Rheme | .2000 | .92476 | .2000 | .92476 | 30 | 09806 | .09806 | .000 | 29 | 1.000 |

5.2.4 Back, contextual and new Themes in CSE and CSC pre-/post- essays

The remaining Themes were back, contextual and new Themes, as can be seen in Table 17. CSE group used less Themes that did not form progression in post-instruction essays than in their pre-instruction essays: they used proportionally less back (10.95% vs. 13.20%), and new (16.32% vs. 25.89%) Themes. However, CSC group used proportionally more Themes that did not form progression in post-essays than in pre-essays mainly because they used more contextual Themes (18.07% vs. 13.91%).

Table 17 Back, contextual and new Themes in CSE and CSC pre- and post- essays

| | CSE pre | | CS | CSE post | | CSC pre | | SC post | | | | |
|------------|---------|--------|-----|----------|-----|---------|-----|---------|--|--|--|--|
| Back | 59 | 13.20% | 47 | 10.95% | 68 | 13.91% | 62 | 13.02% | | | | |
| Contextual | 81 | 18.08% | 80 | 18.65% | 68 | 13.91% | 86 | 18.07% | | | | |
| New | 116 | 25.89% | 70 | 16.32% | 152 | 31.08% | 142 | 29.83% | | | | |
| Total | 448 | 57.17% | 429 | 45.92% | 489 | 58.90% | 476 | 60.92% | | | | |
| | | | | | | | | | | | | |

CSE group used significantly less new Themes (t = 2.843, df = 29, n = 30, p = .004, 95% CI for mean difference .41173 to 2.52160) in their post-essays (M=2.3333, SD=1.70867) than pre-essays (M=3.8667, SD=2.32527), revealed by the paired-samples t-test (Table 18), but no statistically significant difference were found in back or contextual Themes.

| Table 18 Descriptive statistics and t-test results for back, contextual and new The | mes in CSE pre- and |
|---|---------------------|
| post- essays | |

| | Pre-ins | struction | Post-in | struction | | | CI for ifference | | | |
|------------|---------|-----------|---------|-----------|----|--------|---------------------|-------|----|--------|
| Outcome | М | SD | М | SD | n | | | t | df | Sig. |
| Back | 1.9667 | 1.95613 | 1.5667 | 1.27802 | 30 | 38816 | 1.18816 | 1.038 | 29 | .154 |
| Contextual | 2.7000 | 1.83077 | 2.6667 | 1.49328 | 30 | 92117 | .78784 | 160 | 29 | .437 |
| New | 3.8667 | 2.32527 | 2.3333 | 1.70867 | 30 | .41173 | 2.52160 | 2.843 | 29 | .004** |

** indicates statistical significance at the 0.01 level.

However, the t-test results revealed no statistically significant difference in any of these three types of Themes used in CSC pre- and post- essays, as shown in Table 19.

Table 19 Descriptive statistics and t-test results for back, contextual and new Themes in CSC pre- and postessays

| | Pre-instruction | | Post-instruction | | 95% CI for Mean Difference | | | | | |
|------------|-----------------|---------|------------------|---------|-------------------------------|----------|---------|--------|----|------|
| Outcome | М | SD | М | SD | n | | | t | df | Sig. |
| Back | 2.2667 | 1.32570 | 2.0667 | 1.72073 | 30 | 40815 | 1.00815 | .866 | 29 | .393 |
| Contextual | 2.2667 | 1.79046 | 2.8667 | 1.81473 | 30 | -1.24520 | .24520 | -1.372 | 29 | .181 |
| New | 5.0667 | 2.37806 | 4.7333 | 2.72831 | 30 | 44001 | .97334 | .772 | 29 | .446 |

5.3 Effects of instruction on TP patterns in CSE essays

Research question 3 concerns the effects of instruction on TP patterns in CSE essays. This question will be answered by examining the differences between the statistically significant differences found in the paired t-tests of CSE pre- and post- essays, and those found in the paired t-tests of CSC pre- and post- essays. The difference

found thereof will be further compared first with the differences found in the independent t-tests of CSE pre- and NS essays, as well as those found in the independent t-tests of CSE post- and NS essays, then with the independent t-tests of CSE pre- and CSC pre- essays and those found in the independent t-tests of CSE post- and CSC post- essays. An overview of the differences are presented in Table 20.

| | CSE pre/post | CSC pre/post | CSE pre/NS | CSE post/NS | CSE/CSC pre | CSE/CSC post |
|------------|--------------|--------------|------------|-------------|-------------|-----------------|
| Linear | p=.046 | / | p=.001 | / | / | p=.012 |
| Constant | / | / | p=.015 | p=.021 | / | / |
| Summative | / | / | / | / | / | / |
| Split T | / | / | / | / | / | / |
| Split R | / | / | / | / | / | / |
| Back | / | / | / | p=.022 | / | / |
| Contextual | / | / | p=.000 | p=.000 | / | / |
| New | p=.004 | / | p=.000 | p=.001 | / | p=.000 |

Table 20 An overview of the differences⁵

The differences found in the paired t-tests of CSE pre- and post- essays reveal that the instruction affected CSE group in three aspects: linear progression, constant progression, and new Themes. CSE group used significantly more linear progressions and less new Themes in their English essays after the instruction, and no significant differences were found between CSC pre- and post- essays in any of the five types of TP or three of the unmotivated Themes.

The effects of the instruction in linear progression was further supported by the differences found in the independent t-tests of CSE pre- and NS essays, as well as those found in the independent t-tests of CSE postand NS essays. Before the instruction, CSE group used significantly less linear progressions than NS group; however, after the instruction, they displayed similar performances as NS group in linear progression: there were no significant differences in their use of linear progression after the instruction as compared to NS group.

The effects of the instruction in both linear progression and new Themes was also corroborated by the differences found in CSE pre- and CSC pre- essays and CSE post- and CSC post- essays. The t-tests revealed no statistically significant difference between CSE and CSC pre-essays in the distribution of all the TP patterns or unmotivated Themes investigated in this section. However, significant differences were found between the two groups in distribution of linear progressions and new Themes: CSE group used significantly more linear progressions and less new Themes than CSC group after the instruction.

Finally, CSE group moved closer to NS group in their use of constant progressions, though not as significantly as they did in linear progression or new Themes. They used more constant progression in post-essays, the difference of which was less significant in the comparison of CSE post-/NS essays (p=.021) than CSE pre-/NS essays (p=.015).

Two essay extracts are provided in Appendix 4 to illustrate the differences.

6. Conclusion

The present research adopted a quasi-experimental research design which included the recruitment of an experimental group (CSE), a control group (CSC) and a native speaker group (NS), an implementation of 10-week instruction in TP, data collected before and after the instruction and a combination of qualitative and quantitative data analysis, to answer the questions whether and how the instruction in TP could affect Chinese college students' use of TP.

The research findings reveal the instruction in TP proved to have produced positive effects on their use of linear progression, constant progressions and new Themes. Linear progression and new Themes were found to be significantly different between CSE pre- and post- essays as well as CSE post- and CSC post- essays; the use of linear progression in CSE post-essays was found to be in accord with that in NS writing; the difference in constant progressions was also found to be less significant in CSE post-essays than in their pre-essays as compared to NS essays. These findings reveal that instruction in TP is able to change how English learners use TP in a positive way: the Chinese college students who received the instruction in TP exhibited similar or closer performance to English native speakers in linear progressions, constant progressions and new Themes while those who did not receive the instruction remained the same in use of TP in their writing after the same period of time.

The majority of English learners feel secure only with knowledge of grammar in isolation, and they believe grammar is the only tool they can use in writing an English composition. A pedagogical focus is thus seriously needed to shift students' attention from sentence-level grammar to discourse, the influence of which on communication should not be dismissed out of hand if we want our students to be able to use language in a way that honors their intentions and draw inferences about the intention of others.

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