

A Review on Studies of Theme in Academic Writing

Min He

Department of Foreign Languages and Literatures, Tsinghua University; Department of Foreign Languages, Central South University of Forestry Science and Technology, China

Fund: This paper is funded by the 13th Five-Year Education Planning Project in Hunan Province, China: “Cultivating college students' academic literacy based on the micro-class of academic writing”, the project number is XJK17BGD087.

Abstract: Since Halliday's expounding on Theme, this concept has aroused certain research attention, both theoretical and empirical. Its connotations and functions have been elaborated and Theme choice has been compared across genres, disciplines and writers of different English proficiency levels. However, the limited data in existing studies led to some conflicting conclusions and inadequate interpretation of Theme use. A thorough understanding of Theme in academic writing is therefore expected before it could be incorporated successfully into writing instruction.

Keywords: Theme; Academic writing; Genres; Disciplines

Publication date: March, 2020

Publication online: 31 March 2020

***Corresponding author:** Min He, minhe2003@163.com

1 Introduction

The left to right linear order in English clause is crucial for information organization. Readers expect to get information that is already known or topic-relevant in the left-most position and gain new information in the right position. Fulfilling such expectation is a key element in successful writing. As Gopen and Swan in their oft-quoted article point out “the misplacement of old and new information turns out to be the No. 1 problem in American professional writing today”^[1]. Many scientific writers fail to follow the seemingly straightforward principle and thus burden their readers with too much new information in the left-most position of the clause. Worse still, they may confuse

their readers with which point they intend to emphasize. Positioning information appropriately in a clause involves knowledge of Theme, a critical yet not fully explored area in academic writing.

The concept of Theme was originally put forward by Prague School to reveal the relation between linear position of clausal elements and distribution of Communicative Dynamism (CD). Theme is the initial element of a clause. It is known information and context-dependent and therefore contains the lowest degree of CD^[2]. The remaining of the clause can be further divided into transition and Rheme. The former links the known and new information while the latter constitutes the new information of the clause. In 1960s, Halliday expounded on this concept and divided a clause into two: Theme and Rheme. Theme is what is being talked about, “the point of departure for the clause as a message”^[3:22], it is “the peg on which the message is hung”^[4:161] and is “that with which the clause is concerned”^[5:38]. Theme plays a crucial role in organizing information and enhancing coherence. Theme choice is the primary decision in developing sentences which includes putting what elements in the Theme position, choosing what kind of Theme to signal information transition or to indicate the author's attitude and how to proportion various Themes appropriately. Such choice is by no means made randomly but always constrained by factors like genre and discipline. Theme distribution in research articles (RA for short), a highly conventionalized genre, is thus predictable and learnable. Theme knowledge helps RA writers especially the struggling novice researchers to develop sentences

smoothly and write professionally in conformity with the norms and conventions of their discourse communities. Theme theory has therefore be applied to studies of academic writing. Before reviewing empirical studies of Theme in academic writing, it is necessary to have a thorough understanding on the connotations of Theme. In the following sections, I will elaborate on Theme connotations and then review current researches of Theme in academic writing. Limitations of current studies will also be examined so that research questions of potential value in this area may be spotted.

2 Connotations of Theme

Connotations of Theme may be interpreted from two aspects: its categories and functions.

2.1 Categories of Themes

Halliday grouped Themes from three perspectives. In terms of grammatical complexity, Themes can be divided into simple, multiple and clausal Themes. The simple Theme has no internal structure and cannot undergo further division while the multiple one can be further divided. The clausal Theme contains two or more than two clauses. From the perspective of metafunction, Themes can be classified into textual Theme, interpersonal Theme and topical Theme. To connect to the experiential world, Theme must contain experiential element, be it Circumstance, Participant or Process so that Theme may have “an anchorage in the realm of the experience... Once this anchorage is found the thematic grounding is completed”^[6: 85]. That experiential element is topical Theme. In Hallidayan Theme system, there must be one and only one topical Theme for each clause. Elements

preceding the topical Theme is either textual Theme or interpersonal Theme. Textual Themes comprise conjunctions and conjunctive adjuncts (e.g. *but, whilst, as a result*), which indicate the relationship of a clause to its preceding text. Interpersonal Themes involve expressions of modality, including not only modal adjuncts, but also personal and impersonal projecting (reporting) clauses which comment on the epistemic status of the proposition, and can thus be regarded as interpersonal metaphor^[7].

Depending on the mood class of the clause (i.e. declarative, imperative, or interrogative) and whether or not the Theme “conflates with the Mood structure constituent that typically occurs in first position in clauses of that Mood class”^[8: 318], a Theme can be labelled as marked or unmarked. For example,

You can't store protein.

In this clause, *You* is both the Subject and Theme of the clause as the grammatical role of Theme in a declarative clause is typically that of Subject. A declarative sentence generally begins with a Subject and the choice of Theme in this case is thus ‘unmarked’.

Protein, you can't store.

However, in this case, *Protein*, the Object, precedes the Subject and occupies the Theme position. Such Theme option is ‘marked’, as it is less typical to begin a declarative clause with an Object. The same principle can be applied to questions and commands. A question typically begins with Auxiliary Verbs or Modal Verbs (e.g., *Can you help?*) or WH elements (e.g., *How can I help you?*), whereas a command or a request typically starts with a verb that represents the desired action (e.g., *Help me!*). Table 1 shows the unmarked choices in the Theme system.

Table 1. Unmarked Themes^[6]

Mood class	Unmarked Theme	Example
Declarative	Subject	<i>She wants to read a book.</i>
Imperative	Predicator	<i>Give her the book.</i>
Polar interrogative	Finite	<i>Did you give her the book?</i>
WH-interrogative	WH element	<i>Why didn't you give her the book?</i>

Table 2. Classification of Themes according to different standards^[6]

Complexity	Metafunction	Typicality
Simple	Textual {continuative conjunction conjunctive Adjunct	Marked
Complex	Interpersonal {Vocative Modal comment Adjunct Finite verbal operator	Unmarked
Clausal	Ideational {topical Theme	

2.2 Functions of Theme

Although Theme in English is identified by its position in a clause, it is essentially a functional label. Being put in the sentence initial position, that element is given prominence as a special status is assigned to it^[6]. That special status enables Theme to: (1) orient new information; (2) foreground information; (3) set up a context for interpreting and developing Rheme; and (4) construct texture. As the ‘point of departure’, Theme is a device to organize the clause as a message. Generally, Theme establishes the common ground between the previous message and the following new message so that Rheme could develop ideas and arguments in the new messages based on this common ground. As the ‘leftmost part of a clause’^[6], Theme occupies the most prominent position of the clause, thus, Theme choice foregrounds or ‘thematizes’ the critical information. Foregrounding certain elements is essential in realizing the communicative effect of the message.

Another prominent function of Theme is establishing context. Halliday does not pinpoint that function, but his description of Theme as the ‘glue’ that constructs and hinges the ideational and interpersonal meanings and “locates and orients the clause within its context”^[6: 64] does imply the context-constructing function of Theme. It is Davies^[9] who details such function by naming elements preceding Subject as ‘context frame’ (CF). In her Theme system, CF provides information of time and space, the goal and process, the logical relations and the writer’s attitude. In this way, message is ‘framed’ so that the writer can develop information smoothly. By packaging parts of the message as prioritized or marginal and as given or new, the thematic selection also sets up an environment in which the reader can understand and interpret the message^[8]. To sum up, Theme can initiate new information, foreground meaning and provide context on clausal level. On textual level, it can enhance coherence.

Theme can enhance textual coherence by structuring the information flow in an understandable way. Although it had not been explicated by Halliday when he first expounded on Theme, he had indeed used the activity of ‘thematic scrambling’ in teaching to enhance coherence of students’ writing^[10]. In the third version of *An introduction to functional grammar*, he adds two texts to conduct thematic analysis and concludes: “the thematic organization of the clause and clause complexes, where relevant is the most significant

factor in the development of the text”^[6: 105]. All of these demonstrate that he had been aware of Theme’s contribution to text development. Fries coins the term “method of development” to describe Theme’s function of organizing information on the discoursal level and maintains that Theme works at two levels. On the sentence level (or clausal level, in SFL terminology), it triggers new message and on the textual level, all the Themes in the text work as a whole to structure text development:

(a) the lexical material placed initially within each sentence of a paragraph (i.e. the Themes of each sentence of a paragraph) indicates the point of departure of the message expressed by that sentence, and (b) the information contained within Themes of all of the sentences of a paragraph creates the method of development of that paragraph^[11: 135].

In the same manner, Martin, after exploring textual coherence achieved by Theme choice, identifies several predictable patterns of information flow. Theme helps to develop such patterns by locating, foregrounding or marginalizing information. He therefore states that Theme indicates “more than what the clause about”. With these ‘... significant patterns of information flow through Theme’, writers can develop the text in a coherent way and readers can better interpret the meaning in the text^[12: 338].

Theme, as a whole, enhances the text coherence. Yet different part of Theme contributes to the text development in its own way. Davies distinguishes CF from grammatical Subject (GS for short) as these two work differently in enhancing the coherence of text. GS is generally taken as a grammatical role and its discoursal functions had been given little attention. However, Davies points out that Subject is topic-related and certain Subjects tend to appear recurrently throughout the text and these recurrent elements contribute to continuity and cohesion in discourse. This view is supported by scholars like Kopple, Martin and Rose.

According to Kopple, occurrence or re-occurrence of the GS not only provides information regarding the ‘aboutness’ of a clause but also enhances continuity and cohesion in discourse: information in the GS slot stresses knowledge shared by the writer and reader in meaning making and interpreting^[13]. Martin also maintains that the GS serves both grammatical and discoursal functions^[12,14]. He interprets GS as a device to organize meaning by structuring the flow of

information in ways that allow the text to be understood as a whole: 'Theme functions as a recurrent point of departure of information that maintains text coherence by connecting the previous discourse and developing the next discourse, and therefore gives continuity to a phase of discourse^[15:22]'. Unlike GS, what CF signals is discontinuity. Such discontinuity improves coherence in another way by indicating changes/shifts or stages in the progression of the discourse^[16-18].

3 Empirical studies of Theme analysis in academic writing

A thorough examination on connotations of Theme laid a solid foundation for empirical studies on Theme in academic writing. Theme choices and thematic progressions are compared between different genres and disciplines to detect generic features and disciplinary variations in Theme. Theme performance of writers of different English proficiency levels had also been investigated to identify learners' deviation from experts in academic writing.

3.1 Pedagogical value of Theme analysis

Owing to its significance to writing, Theme's pedagogical value has been well explored. Many empirical studies have illustrated the effectiveness of Theme analysis in diagnosing English learners' writing problems^[19-25]. Its usefulness in improving the quality of writing has also been demonstrated. Manipulating information in terms of Theme-Rheme structure is an essential device of successful redrafting in doctoral students' RA writing^[26]. Adjusting mis-occupied Theme position, removing inappropriate textual Theme and mitigating the too personal tone caused by overuse of interpersonal Theme greatly enhanced the readability of some Chinese medical doctoral students' RAs and contributed to their publishing^[27]. Indeed, skillfully handling Theme position and choosing suitable Themes according to the communicative purpose is an indicator of a writer's ability in meaning manipulation. Writing scores have been proved to correlate with a proficiency of Theme usage, such as the use of more multiple Theme, clausal Theme and effective thematic progression^[28,29]. Mellos^[30] reported that Theme/Rheme patterns can distinguish higher-scored ESL undergraduates' essays from lower-scored ones. Because higher-scored writers generally employ dense and complex nominal groups as ideational Theme, a wide variety of textual Themes, and different forms

of thematic progression to hinge parts of the text and appropriate interpersonal Themes to make comments.

Due to its effectiveness in improving writing quality, pedagogical application of Theme has attracted considerable attention. It is suggested that Theme should be incorporated into English writing instruction so that students may write more coherently and effectively^[19,20,23,31,32]. Different aspects of Theme in writing have been examined.

3.2 Theme choice in different genres

Theme choice or Theme structure has been investigated in texts across a wide range of genres, ranging from workplace texts like engineers' reports^[33], memos^[34], pedagogical texts^[35], to academic writing, such as RAs^[7,26,36,37,38,39], essay writing^[22-24]. Rationale behind such studies is that generic features of different texts will constrain Theme choice. The results indeed verify this. For example, tourist guides tend to thematize places, while biologists are likely to foreground agents and times^[40].

Among all the genres, academic writing has evoked growing attention and many Theme-related aspects had been examined. These studies have concentrated on Theme use^[22], length and lexical density of grammatical Subject^[13], strategies to improve cohesion and coherence, devices to convey interpersonal meaning in academic writing, evaluative 'that'^[41], types of grammatical Subject^[42], macro organization and first person pronoun usage and citation, self-mention and personal pronoun usage^[43-44]. Despite these studies, Theme choice in RA is underexplored and the limited number of such work concentrate on the distribution pattern of marked Theme(MT for short) and the choice of grammatical Subjects. Theme choice was compared between the four sections of RA (Introduction, Method, Result and Discussion) and it was found that the discourse function and distribution of Theme change progressively throughout the article. The textual flow structured by MT conforms to the specific rhetorical features of each section, forming the pattern of 'hour-glass'.

Grammatical Subject (GS) as the recurrent element helps to structure the information flow and maintain global coherence. Choice of GS involves decisions on which elements should be given prominence and which should be marginalized. Such decisions are closely related to the conventions and expectations of certain genre. For example, RA, a highly conventionalized genre is expected to exhibit its unique distribution of

GS. To verify this hypothesis, Gosden^[36] classified the GS of RA into four domains: Participant, Discourse, Hypothesized and Objectivized and Real-world Domains and examined the distribution of Subjects in the four rhetorical sections of 36 RAs. The results indicate that the discourse roles of Subjects keep changing throughout the RAs according to the altering rhetorical requirements of each section. By manipulating interactional and topic-based Themes, RA writers coordinate the local discourse goals and global generic requirements.

Generic constrains on genre was further proved by McKenna's^[33] work. He investigated both marked Themes and unmarked Themes of the engineering report, a genre exhibits some similarities to RA. It is found that like other scientific genres, engineering report relies heavily on linguistic devices to construe the real world entities into scientific concepts and then reconvert them into real-world phenomena. Finding that Gosden's classification of Subjects failed to fully describe the Subjects in engineering reports, McKenna added a new category, 'Analytical Concepts of Real-World Entities, Events, and Processes'. The newly added category indicates that engineers tend to foreground Events and Process when converting real-world entities into scientific concepts and this is the unique feature of engineering report. Low proportion of Participant Subject also reveals that in genre like engineering report, engineers are not likely to demonstrate their own visibility within the discourse domain.

Theme choice in RA's Abstract, Method and Result are examined to detect the influence of sub-genre on Theme. The thematic organization of RA abstracts was explored and large proportion of simple and unmarked Themes was identified as a noticeable feature of RA. When it comes to textual Theme, circumstances were used more frequently than processes^[45]. A dynamic thematic analysis on thematic progression and method of thematic development was applied to RA Abstracts. Variations of thematic progression were identified. Such variations were not random but determined by rhetorical goals of each move in Abstracts. A similar study was conducted by Ebrahimi and Khedri^[37] in which, thematic choices and thematic progression in Abstract was examined. It was found that writers tended to use interpersonal Theme less frequently to construct a more 'cohesive, factual, and impersonal tone' and more textual Theme to explicitly guide the readers to a

coherent interpretation of the text.

In Method sections, types and discourse functions of MT across three disciplines were analyzed and compared. The findings revealed that choices of MT types were constrained by both the disciplinary nature and the rhetorical functions of the Method^[39]. Method and Discussion were compared in terms of thematic structures^[46]. Differences had been pinpointed in the following aspects: simple unmarked ideational Theme dominated the Method and multiple Themes only accounted for a small proportion, among which, most of them were textual and temporal. More multiple Themes were found in Discussion; ideational and textual Themes were employed more frequently and the textual Theme tended to be more adversative. Such distributions conformed to the checklist nature of Method and the argumentative nature of Discussion.

All these findings highlight the pedagogical value of a genre-based Theme instruction in academic writing. By familiarizing students with the specific rhetorical requirement of the sub-sections of RA, this method can provide learners with some recurrent and predictable patterns of Theme choice and thematic progression, which will surely facilitate the novice writers' RA writing. However, limitation of existing researches in this area is obvious: the number is small and the sample is not big enough, which may reduce the persuasiveness of the studies. Therefore, a comprehensive investigation on interaction between Theme and RA genre is needed.

3.3 Theme performance across disciplines

Theme choice reflects the decision of prioritizing some information and marginalizing others. Such decision is expected to conform to the ideological and epistemological positioning of writers in certain disciplinary culture. Theme is thus supposed to embody some disciplinary norms and conventions. Theme choice was compared across disciplines and findings reveal a preference for certain Themes in some disciplines. Comparisons of Theme in academic writing are generally made between the so called 'soft' discipline such as Linguistics and History and 'hard' ones, like Biology and Chemistry. Comparison was also conducted among similar disciplines like English and Applied Linguistics. Other studies concentrated on a specific discipline to find the discipline-specific features of Theme.

North^[22] is an oft-quoted writer in disciplinary variations of Theme for his pioneering work in this

area. A comparison on the Theme in essays of art students and science students shows striking differences between these two groups. The 'art' students exhibit more proficiency in using the textual and interpersonal Themes, making their essays more persuasive and readable. It may be attributed to the epistemology of 'art' which is to present knowledge as a matter of interpretation. The 'science' students, however, use much less these two Themes and render a factual and less argumentative tone to their essays. This may be caused by the science discipline's convention of constructing knowledge in a straightforward and matter-of-fact way. This study demonstrates that the disciplinary orientations to knowledge can shape particular aspects of disciplinary writing. Ebrahimi and Khedri^[37] conducted a cross-disciplinary study on the thematicity in RA Abstracts and found that thematic selection illuminated the similarities and variations between the disciplines of Chemical Engineering and Applied Linguistics. This result verifies the hypothesis that RA Abstracts are shaped by writers' disciplinary background. In 2016, Ebrahimi^[38] conducted a further study between the two disciplines to examine the use of marked Theme in Method and suggested that frequency of marked Theme are guided and imposed by the nature of the writer's discipline. This finding demonstrated that discourse functions are determined by disciplinary nature and rhetorical functions of genre.

Disciplinary variations in Theme can be seen not only in different disciplines. Subtle differences between similar disciplines were also observed. Whittaker^[7] probed into the commonalities and variations in thematic choices between two similar disciplines: Economics and Linguistics, which can be both classified into Sociology and found that compared with Linguistic writers, Economics writers favoured relational processes to create an impersonal tone. Ebrahimi^[38] conducted a research on RA Abstracts of two disciplines: Applied Linguistics and Economics. The analysis revealed disciplinary differences concerning the discourse functions enacted by the application of grammatical Subjects. Writers of different disciplines have particular preference in using certain grammatical Subjects as Themes in text development. Findings of these studies facilitate understanding of the disciplinary variations in academic writing. However, the number of disciplines involved is limited and thus a comprehensive picture of disciplinary variations in Theme use cannot be presented yet.

3.4 Theme performance across proficiency levels

Researches in this area focus on comparison between non-native speakers (NNS for short) with native speakers (NS for short) to detect the formers' deviation in Theme performance from the latter so that Theme instruction will be more targeted and effective. Generally speaking, NNS deviate from NS in their overuse of certain Themes, mainly interpersonal Themes, textual Themes, and underuse of topical Themes. It was also found that regardless of language backgrounds, English learners exhibit some similar tendency in Theme use. Finnish writers' English writing was examined in terms reference to text participants and text organization. These learners exhibited some difficulties in coding references to text participant and a tendency to rely on some non-typical English thematic patterns. It is suggested that such problems are caused by interference of the Finish writers' mother language^[47]. Hong Kong university students' Theme use was investigated, especially certain topic-fronting devices (i.e., *for*, *concerning*) and logical connectors (*besides*, *furthermore*, and *moreover*). Some typical problems of Chinese students were identified such as foregrounding unimportant information thus leading to a deleterious effect on information structure and damaging text coherence^[48]. Chinese college students' essays were compared with those of their American counterparts in terms of Theme choice. It was reported that Chinese college students tended to overuse some textual Themes like '*and*', '*but*', '*however*' to construct overt cohesion and they also preferred to foreground less significant information in a clause, such as temporal Adjuncts and spatial Adjuncts^[49].

Theme performance was also compared between EFL (English as a foreign language) and ESL (English as Second Language) learners to see the influence of foreign language learning environment. Three groups of students, namely, Singaporean students from an English speaking background (SE), Singaporean students from a Chinese-speaking background (SC), and students from the People's Republic of China (PRC) was compared with an NS Group as the reference group. The results suggested that English learners exhibited commonalities when compared with NS. Topical Theme choices in Chinese and Swedish English learners' English writings were investigated, with NS as a base group. It is also reported that the two NNS groups shared similarities in topical Theme option rather than differences^[25].

Textual and interpersonal Themes in expository essays were explored and compared among three groups: EFL, ESL and PRO (professional groups membered by writing teachers). The results revealed that both ESL and EFL employed a distinct set of textual Themes more frequently than the PRO group. These two students groups show some subtle differences in that the EFL group preferred listing and adding devices to support their arguments while the ESL group used more adversative to sound more argumentative. Compared with these two learner groups, the PRO group relied less on textual Theme for cohesion and coherence but more on effective internal information flow and lexical chains to bind and develop their arguments^[50].

English learners of the same language background were compared in their Theme performance to detect the impact of proficiency levels on Theme use. The results suggested a correlation between the length of English learning and Theme performance. A comparison between first- and third-year college students' geography essays indicated that advanced learners were more skillful in using text-binding devices such as textual Themes and interpersonal Themes to better structure their essays and demonstrate the author's visibility. ESL undergraduates' essays of high and low coherence were juxtaposed and the reason for the unreadability and lack of coherence was uncovered: overused unmarked Themes of simple nominal groups and the monotonous constant Thematic progression. On the other hand, the coherence of essays may be attributed to dense and complex nominal groups of topical Themes, various textual Themes and thematic progression^[51]. As outlined above, it is clear that mother language interference, the length of learning English and proficiency levels influence Theme performance and some typical problems in Theme use exposed by these studies facilitate our understanding on learning of Theme.

3.5 Pedagogical application of Theme analysis

Given the prominence of Theme in writing quality, there is a consensus that Theme instruction should be incorporated in EFL teaching, particularly in writing instruction. Pedagogical implications and applications of Theme-Rheme research have been reported. Hawes^[52: 182] concerned about students' unfamiliarity with English information structure and suggested: "there is a need for coaching in thematisation ... teaching at least rudimentary thematisation theory and giving students practice with an assortment of thematic

options...". It is suggested that students' awareness of Theme should be enhanced^[47]. A genre-based approach to teach Theme and Thematic Progression is put forward^[20]. Theme instruction is incorporated in a genre-based pedagogy targeting at EFL learners. A Theme-Rheme analytical framework in academic writing is constructed^[30]. Ventola^[47] advocated that academic writing courses in a foreign language should develop learners' consciousness and linguistic skills of in organizing textual information in a way that is referentially and thematically cohesive. Alonso and McCabe^[53] pointed out that while there was knowledge of cohesive devices in ELT writing materials, little attention was given to the progression of information in texts. Wang^[24] maintained that Theme-Rheme theory was a valuable tool for teachers to diagnose writing difficulties and students could be taught how to arrange old and new information to improve cohesion in their writing. Christie and Dreyfus^[20] proposed a genre-based approach to teaching which included deconstructing genre models for Theme and thematic progression among other things.

Apart from these advocates, some teaching experiments had been conducted in Theme instruction. Cheng^[54] investigated the effects of genre based pedagogy on L2 student writing development by incorporating "analyzing Theme choices" as part of the three-staged EFL composition course in Taiwan with college freshmen learning how to write narrative texts. Mellos^[30] presented classroom activities inputting knowledge of Theme-Rheme in order to improve the coherence of students' writing with a model of Theme-Rheme analytical framework in the academic writing curriculum. Liu and Liu^[55] applied Theme theory to teaching English writing instruction in an experiment and found that writing coherence relied on the success of thematic structure of texts and that progress of writing coherence contributed to the significant improvement on overall writing proficiency.

3.6 Learners' problems in Theme usage

Due to the lack of explicit and effective instruction on Theme in academic writing, problems in Theme choice is common among EFL learners and even doctoral students often exhibit weakness in choosing Themes. These problems may be roughly summed up as: (1) inappropriate occupation of Theme position; (2) overuse of some Themes, especially textual Theme; (3) underuse of certain Themes; (4) monotonousness in Theme choice. For example, some EFL learners

majored in journalism were reported to usurp the Theme position with less important adjuncts, and thematize the unknown information, damaging the effectiveness of their writing^[51]. Hong Kong freshman students were found to frequently thematize certain logical connectors, overuse topicalizing devices (e.g., *concerning, as for*) thus making it difficult to draw on new information in a straightforward way. These problems are so common that they are taken as distinct features of Chinese-English interlanguage^[48]. English learners tend to occupy thematic position with circumstantial elements to thematize time and space. The foregrounding of less important information may restrain students from focusing on expounding essential information and key concepts^[57].

There is also a tendency to overuse brand new Themes and empty Themes. Learners prefer to use certain conjunctive adjuncts and explicitly connect arguments^[56], leading to unreadability of their writing^[57-58]. Chinese sophomore English majors are likely to use more modal adjuncts to express opinions (e.g., *I think* and *in my opinion*), persuasion (e.g., *As we all know*), evaluation (e.g., *most importantly*), and mood-marking Themes (e.g., posing questions) which conveyed an undesired colloquial tone.

Besides, English learners are likely to employ ideational Theme less frequently thus reduce the essays' information density^[37-38,47-49]. A narrow range of Theme choice is another noticeable problem of Chinese students' writing. For example, they rely heavily on 'and' to express additive relation. When they express meaning of contrast, they resort mainly to 'however'. The monotonousness of Theme type reflects their limited linguistic repertoire. Other problems may be induced by inappropriate input from teachers and textbooks. For instance, their overuse of textual Theme may result from teachers' overemphasis on overt cohesive devices^[48-49].

4 Limitations of current studies on application of Theme theory

Collectively, these studies have yielded a range of substantial findings in respect to the role of thematic structure in academic and non-academic writing; the relationship of thematic structure to such factors as genre and disciplines; and the gap between non-native/novice writers and native/professional writers. Despite the fruitful findings, some noticeable limitations of current studies in this area cannot be ignored.

4.1 Limited data

First, data adopted in these studies are not large enough. Most of the researches based on no more than 30 articles and some of them just analyze sub-sections of RA like Abstract, Method, Result and Introduction. Thus, a comprehensive picture of the Theme choice in RAs cannot be displayed. Second, the number of disciplines involved in these studies is limited. Comparison is generally made between a soft discipline and a hard one. The resultant general picture is not revealing enough in understanding the complicated and subtle discipline variations.

4.2 Conflicting conclusions

Additionally, the limited data and varied methodologies produced some conflicting conclusions. It is reported that EFL learners tend to overuse some textual Themes like "and," "but," "however". Lu's^[59] comparison of EFL, ESL learner however, shows a different picture in which the EFL group membered by Chinese students used the least number of textual Themes. Chang's^[50] study further complicated the picture by showing that the PRO (Professional writer) group use 'and' as cohesive device most frequently compared with EFL and ESL groups. In terms of interpersonal Theme, Jalilifar's^[61] investigation indicates that EFL undergraduates used around only half as many interpersonal Themes compared with the NS, while Wei's^[57] comparison between EFL and NS groups shows that the former use interpersonal Theme significantly higher than the latter and rendered an inappropriate colloquial style to their essays. As for the use of multiple Themes, the case is also confusing. Some investigations of thematic selection indicated that the EFL group used more multiple Themes than simple Themes, whereas in other studies, the ratio of simple Theme used by experts exceeded that of multiple ones. Skillful employment of marked Theme seems to be an indicator of higher proficiency, while Mello's^[30] study demonstrated a tendency of overusing marked Theme among learners of low proficiency. Wei's^[57] also reported that compared with NS, Chinese college students were likely to use more adjuncts of manner and contingency as marked Themes. Learners' overuse of interpersonal Theme is evidenced by some studies; while in other studies, ratio of that Theme adopted by advanced user is much higher. Wei^[57]'s study indicates that novice writers use more textual Theme while Chang^[50]'s research reports contradictory result. Therefore it is

necessary to conduct a Theme choice investigation based on larger scale of data covering more disciplines.

4.3 Little specific instruction on effective teaching of Theme

Moreover, pedagogic application of Theme theory is still underexplored. Most researches in this area are merely advocates, providing little specific instruction on effective teaching of Theme or guidance in developing teaching material.

4.4 Inadequate interpretation

Finally, in contrast to the detailed description on learners' deviation from experts, generic differences or disciplinary differences of most studies, interpretation on them is not enough. For example, writers of Chemistry were found to use marked Themes much less than their counterparts of Applied Linguistics but explanation for this was that Chemistry writers had lower language proficiency^[46]. Another study observed that Chemistry writers seldom use the relation of contrast but gave no interpretation to this phenomenon^[37]. Some even based their interpretation on speculation. This tendency resonates with Swales^[62] recent exploration on the problems of current EAP studies. He concerns about the trend of 'full description, but less interpretation'. It is therefore necessary to probe into the culture, norms and epistemology of involved disciplines to elucidate the items mentioned above.

As has been illustrated, Theme is now recognized to be an optimal tool to facilitate writing, and it was therefore a site of research interests with its connotations and functions being fully explored. Many attempts have been made to embed it into teaching practice. Comparison of Theme choice has been conducted across genres, disciplines and learners of different levels of English proficiency. Despite all these efforts, effective and applicable incorporation of Theme into writing instruction is still scarce. This may be attributed to the limited data of existing researches in this area. Large size corpora of academic writing are more readily available nowadays and large-scaled investigation on Theme use in writing among learners of different language backgrounds, disciplines and proficiency levels is both possible and necessary to gain a thorough understanding on Theme in use and then shed light on writing instruction.

References

- [1] Gopen, G. D., & Swan, J. A. (1990). The science of scientific writing. *American Scientist*, 78(6), 550-558.
- [2] Firbas, J. (1992). *Functional sentence perspective in written and spoken communication*. Cambridge: Cambridge University Press.
- [3] Halliday, M. A. (1967). Notes on transitivity and theme in English: Part 2. *Journal of linguistics*, 3(2), 199-244.
- [4] Halliday, M. A. (1970). Language structure and language function. *New horizons in linguistics*, 1, 140-165.
- [5] Halliday, M. A. (1985). *An introduction to functional grammar*. London: Edward Arnold.
- [6] Halliday, M. A., & Matthiessen, C. (2004). *An Introduction to Functional Grammar* (3rd ed.). London: Arnold.
- [7] Whittaker, R. (1995). Theme, processes and the realization of meaning in academic articles. In M. Ghadessy (Ed.), *Thematic Development of English Texts*. London: Pinter, 105-128.
- [8] Eggins, S. (2004). *Introduction to systemic functional linguistics*. New York: Continuum.
- [9] Davies, F. (1993). Theme Analysis as a Heuristic for Analysing Genres and Text-Types. *Revised Draft for ESP Journal, University of Liverpool*.
- [10] Halliday, M. A. (1970). Language structure and language function. *New horizons in linguistics*, 1, 140-165.
- [11] Fries, P. H. (1995). Methods of Development. In R. Hasan & P. H. Fries (Eds.), *On the Subject and theme: a discourse functional perspective*, (Vol. 118). Amsterdam: John Benjamins Publishing Co.
- [12] Martin, J. R. (1995). More than what the message is about: English Theme. In M. Ghadessy (Ed.), *Thematic Development of English Texts*. London: Pinter, 223-258.
- [13] Kopple, W. J.V (1994). Some characteristics and functions of grammatical subjects in scientific discourse. *Written Communication*, 11(4), 534-564.
- [14] Martin, J. R. (1992). Theme, method of development and existentiality: the price of reply. *Occasional Papers in Systemic Linguistics*, 6, 147-184.
- [15] Martin, J. R., & Rose, D. (2003). *Working with discourse: Meaning beyond the clause*. London: Continuum.
- [16] Davies, F. (1988). Reading between the lines: thematic choice as a device for presenting writer viewpoint in academic discourse. *The ESP specialist*, 9(1/2), 173-200.
- [17] Matthiessen, C. M., & Halliday, M. A. K. (2009). *Systemic functional grammar: A first step into the theory*. Beijing: Higher Education Press.
- [18] Brown, G., & Yule, G. (1983). *Discourse analysis*. Cambridge: Cambridge university press.
- [19] Bloor, M., & Bloor, T. (1992). Given and new information in the thematic organization of text: An application to the

- teaching of academic writing. *Occasional Papers in Systemic Linguistics*, 6(1), 33-43.
- [20] Christie, F., & Dreyfus, S. (2007). Letting the secret out: Successful writing in secondary English. *Australian Journal of Language and Literacy*, 30(3), 235-247.
- [21] Kopple, W. J. V. (1991). Themes, thematic progressions, and some implications for understanding discourse. *Written Communication*, 8(3), 311-347.
- [22] North, S. (2005). Disciplinary variation in the use of theme in undergraduate essays. *Applied linguistics*, 26(3), 431-452.
- [23] Schleppegrell, J. (2004). *The language of schooling: A functional linguistics perspective*. London: Routledge.
- [24] Wang, L. (2007). Theme and rheme in the thematic organization of text: Implications for teaching academic writing. *Asian EFL Journal*, 9(1), 164-176.
- [25] Wei, J. (2013). Corpus-based research on the development of theme choices in Chinese learners' English speech. *Journal of Education and Practice*, 4(16), 38-45.
- [26] Gosden, H. (1995). Success in research article writing and revision: A social-constructionist perspective. *English for Specific Purposes*, 14(1), 37-57.
- [27] Qi, C. (2019). Theme-Rheme structure in Chinese doctoral students' research writing--From the first draft to the published paper. *Journal of English for Academic Purposes*, 37, 154-167.
- [28] Ma, J. (2001). Thematic progression, cohesive devices and coherence in English writing--Analysis of CET-4 and CET-6 writing papers. *Foreign Language Education*, 22(5), 45-50.
- [29] Wang, Y. (2001). The preferred information sequences of adverbial linking in Mandarin Chinese discourse. *TEXT-THE HAGUE THEN AMSTERDAM THEN BERLIN-*, 22(1), 141-172.
- [30] Mellos, V. D. (2011). *Coherence in English as a second language undergraduate writing: A theme-rheme analysis*. (Master's Thesis). Retrieved from San Diego State University Library & Information Access. <http://sdsu-dspace.calstate.edu/handle/10211.10/1287>.
- [31] Rørvik, S. (2012). Thematic progression in learner language. In S. Hoffmann, P. Rayson, & G. Leech (Eds.), *English corpus linguistics: Looking back, moving forward*. Amsterdam: Rodopi.
- [32] Wei, J. (2014). Theme and thematic progression in learner English: A literature review. *Colombian Applied Linguistics Journal*, 16(1), 67-80.
- [33] McKenna, B. (1997). How engineers write: An empirical study of engineering report writing. *Applied linguistics*, 18(2), 189-211.
- [34] Forey, G. (2017). Textual metafunction and Theme: What's 'it' about? In T. Bartlett & G. Grady (Eds.), *The Routledge handbook of Systemic Functional Linguistics*. New York: Routledge.
- [35] Martin, J. R. (1993). Literacy in science: Learning to handle text as technology. *Writing science: Literacy and discursive power*.
- [36] Gosden, H. (1993). Discourse functions of subject in scientific research articles. *Applied linguistics*, 14(1), 56-75.
- [37] Ebrahimi, S. F., & Khedri, M. (2011). Thematicity in research article abstracts: A cross-disciplinary study. *Educational Quest-An International Journal of Education and Applied Social Sciences*, 2(3), 287-292.
- [38] Ebrahimi, S. F., & Chan, S. H. (2015). Research article abstracts in applied linguistics and economics: Functional analysis of the grammatical subject. *Australian Journal of Linguistics*, 35(4), 381-397.
- [39] Ebrahimi, S. F. (2016). Across Disciplinary Study of Marked Theme in Method Sections. *Journal of Teaching English for Specific and Academic Purposes*, 4(3), 689-699.
- [40] Lavid, J. (2000). Contextual constraints on thematization in written discourse: An empirical study. In Bonzon, P et al, (Eds). *Formal aspects of context*. Springer, 37-47.
- [41] Tse, P., & Hyland, K. (2008). 'Robot Kung fu': Gender and professional identity in biology and philosophy reviews. *Journal of Pragmatics*, 40(7), 1232-1248.
- [42] MacDonald, S. P. (1992). A method for analyzing sentence-level differences in disciplinary knowledge making. *Written Communication*, 9(4), 533-569.
- [43] Harwood, N. (2009). An interview-based study of the functions of citations in academic writing across two disciplines. *Journal of Pragmatics*, 41(3), 497-518.
- [44] Hyland, K. (2005). Stance and engagement: A model of interaction in academic discourse. *Discourse Studies*, 7(2), 173-192.
- [45] Ghadessy, M. (1995) Thematic development and its relationship to registers and genres. In M. Ghadessy (Ed.), *Thematic development in English texts*. London: Pinter. 129-146
- [46] Martínez, I. A. (2003). Aspects of theme in the method and discussion sections of biology journal articles in English. *Journal of English for Academic Purposes*, 2(2), 103-123.
- [47] Ventola, E. (1994). Finnish writers' academic English: Problems with reference and theme. *Functions of Language*, 1(2), 261-293.
- [48] Green, C. F., Christopher, R., & Mei, J. L. K. (2000). The incidence and effects on coherence of marked themes in interlanguage texts: A corpus-based enquiry. *English for Specific Purposes*, 19(2), 99-113.
- [49] Hu, H. (2008). On textual cohesion in Chinese students' English writing. *Journal of Zhejiang Normal University (Social Science)*, 33(3), 113-116.
- [50] Chang, P., & Lee, M. (2019). Exploring textual and interpersonal Themes in the expository essays of college students of different linguistic backgrounds. *English for Specific Purposes*, 54, 75-90.
- [51] Hewings, A. (2004). Developing discipline-specific writing: an analysis of undergraduate geography essays. Retrieved from <https://www.researchgate.net/publication/42788644>.
- [52] Hawes, T. (2001). *Thematization in the editorials of The*

- Sun and The Times*. Unpublished PhD Thesis. University of Liverpool.
- [53] Alonso, S., & McCabe, A. (2003). Improving text flow in ESL learner compositions. *The Internet TESL Journal*, 9 (2). Retrieved from <http://iteslj.org/Articles/Alonso-ImprovingFlow.html>.
- [54] Cheng, F.W. (2008). Scaffolding language, scaffolding writing: A genre approach to teaching narrative writing. *The Asian EFL Journal*, 10(2), 167-191.
- [55] Liu & Liu. (2013). An Empirical Study on the Application of Theme Theory in the Field of Writing Pedagogy. *English Language Teaching*. 6(5):117-128.
- [56] Qian, Y., Ramirez, J. A., & Harman, R. (2007). EFL Chinese students and high stakes expository writing: A theme analysis. *Colombian Applied Linguistics Journal* (9), 99-125.
- [57] Wei, J. (2016). Thematic choice in Chinese college students' English essays. *English for Specific Purposes*, 41, 50-67.
- [58] Crossley, S., & McNamara, D. (2010). *Cohesion, coherence, and expert evaluations of writing proficiency*. Paper presented at the Proceedings of the Annual Meeting of the Cognitive Science Society.
- [59] Lu, A. (2013). A functional grammar approach to analysing Asian students' writing. *American Journal of Educational Research*, 1(2), 49-57.
- [60] Plakans, L., & Gebril, A. (2017). Exploring the relationship of organization and connection with scores in integrated writing assessment. *Assessing Writing*, 31, 98-112.
- [61] Jalilifar, A. (2010). Thematization in EFL students' composition writing and its relation to academic experience. *RELC journal*, 41(1), 31-45.
- [62] Swales, J. M. (2019). The futures of EAP genre studies: A personal viewpoint. *Journal of English for Academic Purposes*, 38, 75-82.