

Chapter Two

LITERATURE REVIEW

The literature review covers previous studies on conditionals, the research in language acquisition and error analysis.

2.1. Conditionals

2.1.1. Background Knowledge

Conditionals are used to express the cause-and-effect or temporal sequences of two events. The typical surface structure of conditionals is a bi-clause consisted of an antecedent clause and a consequent clause, that is, the protasis and apodosis, as they were termed technically (Traugott *et al.*, 1986). They often undertake the logical meaning -- “if p, then q” and perform various functions such as reasoning, making inferences and imaging correlations...etc (*ibid.*).

The expressions of conditionals can be manifested in different ways for different intentions. For this reason, the classification of conditionals can be described in various ways. Below a brief introduction to the syntactic and semantic classification

of conditionals will be shown and a comparison will be given.

2.1.2. Classifications of Conditional Types

English conditionals have been analyzed by the semantic relationships and syntactic structures into categories. We will summarize the schemes proposed by several researchers (see Appendix A.). To begin with, the schemes classified by the syntactic forms are listed first.

Syntactic Categorization Scheme

Conditionals in traditional grammar books are catalogued into three groups: (a) future (b) present and (c) past conditionals, in which the tense forms are oversimplified. Because the tenses and time references are not directly matched in English when expressing hypothetical events, whereupon the future denotation is performed by present tense, while the present conditional is manifested by past tense. This taxonomy is silent on this asymmetric situation, where confusion may arise from (Norris, 2003).

Other research in a formal approach is mainly conducted with corpus techniques.

Hwang (1979) surveyed both English written and spoken corpora, and made a frequency-ranking list, where seven patterns were identified. Hwang's results showed that generic factual, future predictive and present hypothetical or counterfactual are the top three frequent patterns in her investigation. In a purpose to identify the relationship between if-forms and text types, Fulcher (1991) also collected his corpus and found that "if + present simple, present simple/continuous" to be the most frequent pattern. Overall, Fulcher found 20 varieties of 'if-forms' from various written texts. Additionally, Partington (1998) investigated the distribution of conditionals as well. He distinguished the conditionals by the tense markers represented in the bi-structure. The three traditional types aforementioned were found more pervasive and other remote patterns were also noticed. Unfortunately, although it was a corpus-based study, the author just made a list with no further analysis.

Semantic Categorization Scheme

On the other hand, several researchers have attempted to categorize conditionals in terms of their semantic distinction. To begin with, we will draw on Schachter's (1971) models. There are two primary groups: reality and unreality conditionals. The

reality conditionals are “simple conditionals” which include present, past, and generic subtypes. Besides, the author also categorized two unreality conditionals, viz. “future predictives” and “imaginative conditionals”. The subtle distinction between present and generic simple conditionals sheds light on L2 learners’ language development.

Likewise, Katis (1997) also provided an alternative classification scheme. He sorted them into four categories: (a) Future predictions denote definite situations temporally located in the future. (b) Indefinite generalizations are atemporal or iterative. (c) Past conditionals refer to definite situation located in the past. And lastly, (d) Speech act conditionals are definite situation located in the present. In this model, Katis did not include the “hypothetical or counterfactual” conditionals (or the so-called “unreal uses”), he focused on the real uses of conditionals. His proposal of dimensions of time reference and definiteness betters comprehension on conditionals. However, definiteness is not a factor which affects the nature of conditionals (see the discussion in section 2.2).

In a broader view, Podlesskaya (1997) separated (a) temporal (b) habitual and (c) epistemic conditionals. Temporal conditionals are further divided into “past”, “present” and “future”. A habitual conditional may be either “unique” or “habitual”,

depending on its reference. Epistemic conditionals cover “real”, “counterfactual” and “hypothetical” ones. If we take “habitual” as part of “temporal”, then this model outlines two factors: range of time and degrees of possibility. Inasmuch, Podlesskaya’s proposal offers us a good take-off point to deal with conditionals.

In addition, Athanasiadou & Dirven’s article (1997) marked the first attempt to incorporate pragmatics into classifying conditionals. Pragmatic conditionals are real and interactional, transmitting factual, habitual and routine information. Course of Event Conditionals (CECs) can denote either potentially real, displaying course of event, or factual as “whenever”. Hypothetical conditionals are typified as counterfactuals and non-factual ones. Their model delineates the detailed discrimination criteria of each type, and also provides the connection with tenses.

Recently, some scholars have attempted to tackle the problem of teaching conditionals. Celce-Murcia and Larsen-Freeman’s (1999) grammar book is such an instruction guide. There are three primary types: (a) factual (b) future (predictive) and (c) imaginative (subjunctive) conditionals. The factual conditionals are further distinguished by their relationship with time, i.e., timeless or time-bound, representing habitual or being with implicit or explicit references. The predictives imply strong or

weak results while the subjunctives suggest hypothetical or counterfactual denotations.

Among these work, two corpus-based studies, Hwang (1979) and Fulcher (1991), are worthy of more attention. The contrast of NS and NNS is also one of the important issues in recent research. Since their results provide detailed percentages of the subtypes, the data of the Chinese learner corpus can be compared.

As shown, conditionals are strongly affected by tense, moods and modals, and their functions, which include temporality, hypotheticality. Accordingly, the importance of linking forms and functions becomes self-evident in investigating conditionals. In next section, we will try to develop an integrative classification scheme, which stresses both the forms and functions of four major conditional types.

2.1.3. An Integrative Scheme

Owing to the fact that the form and function mapping is not strictly one-to-one, we found there is extended overlapping area in these classifications. Moreover, the classifications in these categorization schemes do not explain the subtle distinctions between the tense, mood and their meanings. Due to these deficiencies, a new

classification scheme is necessary in this study.

We summarized the classification schemes above and then integrated them in a whole. Inspired by Schachter (1971), we also distinguish present and generic simple conditionals, thus the new scheme contains Type1: parallel (*viz.* generic or habitual) conditionals, and Type2: nonpast real (*viz.* present simple) conditionals. In addition, the typical “imaginative or hypothetical” types, i.e. Type3: non-past unreal (and past real) conditionals and Type4: past unreal conditionals are also included.

The formal features are easily identifiable, because the verb form changes can be discerned visually. With regards to the semantic functions², several scholars have pinpointed the key elements. For example, Podlesskaya (1997) approached the aspect of meanings from the vantage point of distinguishing ranges of time and degrees of possibility. In this light, we extract two crucial semantic components: temporality and hypotheticality. Furthermore, these two abstract notions are successfully specified by Celce-Murcia and Larsen-Freeman (1999). With their contribution, a more comprehensive and detailed classification, which considers both sides of forms and functions, is developed as below. Table1 illustrates the relationships of the conditional

² General functions may contain both semantic and pragmatic functions, but the so-called “functions” in this present work are only limited in “semantic functions”.

types and their content.

Table 1

Mappings of Forms and Functions

No.	Term	Form ³				Semantic Function	
		IF-C	TR of If-C	MC	TR of MC	Hypotheticality	Temporality
Type1(a)	Present parallel	If + [pre]	Now or always	[pre]	Now or always	Real, possible	time-less (generic)
		If+ [pre]	Present	[present continuous]	Present		
Type1(b)	Past parallel	If +[past]	Past	[past]	Past	Real, possible	past (habitual)
Type2	Nonpast real	If + [pre]	Present or future	[present modal] <i>will/must/can/may/should</i> [past modal] <i>would/should/could/might</i> [future] <i>be going to</i>	Present or future	Real, possible condition and probable result weaken result More certainty	Present or future time-bound: explicit

³ If-C means the if-clause, MC is the main clause; TR indicates time reference.

Type3(a)	Non-past unreal	If + [past] If + were/were to	Now or anytime	[past ,modal] <i>would/should/could/might</i> [past ,modal]	Now or anytime	Unreal, hypothetical condition with probable result	Present or future
Type3(b)	Past real	If + [past]	past	<i>would/should/could/might</i>	past	real	past
Type4⁴	Past unreal with past result	If + [past, perfect]	past	[past, modal, perfect] <i>would/should/could/might</i> <i>have + -en</i>	past	Unreal past condition & unreal probable past result	past

⁴ There is a subtype called “mixed conditionals”, which indicates past unreal conditionals with present results. However, no case was found in the data of our research, therefore, this subtype was not included in Table1.

As Table 1 displays, we summarize four conditional types. The Type 1 conditional is termed parallel conditionals, which suggests its parallel structure of surface forms and meanings of habitual and generic implications. The tenses of verb forms are quite consistent with the time reference.

Type 1 Parallel

1a. If he comes, she leaves.

If he comes, she is leaving.

1b. If he came, she left.

Type 2 conditionals are non-past real conditionals, which can be further classified into subcategories of future predictives with stronger or weaker results. There is no past time reference in this type, the modals in past form only suggest uncertainty.

Type 2 Non-past real

2. If he comes, she will leave.

If he comes, she would leave.

If he comes, she is going to leave.

The next two types – Type 3 and Type 4 are more complicated ones, because they are all involved with the concept of “unreality”. Type 3, with past-form verbs and modals, contains two kinds of conditionals: the non-past unreal conditionals and the past real ones (see example 3a & 3b). Maule (1988) stressed the notion that “past tense forms in conditionals may refer to real past or unreal non-past events.” (p.121). In other words, the Type 3 pattern can stand for both past and non-past. Moreover, there is a special construction in this type—the “were structure”. The sub-pattern in question can merely refer to a hypothetical or even counterfactual situation.

Type 3 Non-past unreal and past real

3a. & 3b. If he came, she would leave.

3a. If he were to come, she would leave.

Type4 is past unreal conditional, which is embedded by complex verb forms and conveys multi-meanings. In Type4, a counterfactual event or action is expressed in the protasis, and a possible proposition is also formed in the apodosis.

Type4 Past unreal

4. If he had come, she would have left.

Taken as a whole, we identified the conditional types by distinguishing the forms of tense and mood and the functions of temporality and hypotheticality. Tense signals the time reference of past or non-past, while mood expresses the degrees of hypotheticality from real to unreal. We will look into this part in detail later.

Table1 reveals several important points. First, it is essential to distinguish between real and unreal conditionals, that is, the difference between real and unreal conditionals needs to be clarified. Palmer (1990) claimed that “with real conditionals, the speaker merely states the propositions are linked without expressing his personal belief about the truth of either, while unreal conditionals he has doubts about their truth” (p.169). Secondly, there is no counterfactual conditional with future time reference. As regarding the distinction of hypothetical and counterfactual conditionals, Comrie (1986) argued that, counterfactuality is implied by conditionals with past time reference rather than those with future reference, because:

One should have greater certainty about past events than about future events, so that a past situation that is nonfactual will probably be counterfactual, whereas a future situation that is nonfactual is quite likely to be just left open (p.90).

Therefore, there are future hypothetical conditionals but no future counterfactual ones in this sense. The non-past unreal conditionals (Type3) are not counterfactual *de*

facto, but only suggest possibility, with which learners may get confused. Thirdly, there are some overlaps in these four types. Because the overlapping parts may cause problems, the overlaps in the conditional constructions should be recognized. Some conditional types have some formal and functional overlaps, for example: the same past tense form may suggest past time or a hypothetical situation, and “unreality” is performed in different forms in past unreal and non-past unreal conditionals. Bearing those in mind, we could presume that great difficulties may generate from the discernible confusion from Table1.

2.1.4. Summary

We have summarized several classification schemes of conditionals above. Many scholars have subscribed to the views that conditionals can be classified into sub-groups according to their syntactic or semantic characteristics. However, giving undue emphasis to either of the two facets cannot round out the picture. The gaps between the surface forms and underlying functions should be filled. To achieve this goal, we further proposed an integrated classification scheme, which attempts to describe conditional types in terms of their syntactic and semantic characteristics concurrently, including the formal features: tense and mood, and functional features: temporality and hypotheticality. Since the components of the conditional construction have been identified, the next question we have to ask is how those elements affect the acquisition difficulty. We will discuss this issue in detail in the following section.

2.2. Learning Difficulties: Problems of conditionals

2.2.1. Preliminaries: Tackling the Problems

The problems of acquiring conditionals may result from two sources: inter-language and intra-language. The former is related to the differences between Chinese and English. Bloom (1981, 1984) ascribed Chinese speakers' inability of processing counterfactuals "naturally" to the absence of an explicit conditional marker in Mandarin. Nonetheless, Lardiere (1992) replicated Bloom's work and demonstrated that, even for a language with an overt connective, ex.: Arabic, the speakers also performed a similar pattern with Chinese. His finding confuted Bloom's assumption and incorporated the importance of culture-specific values. It seems that Chinese share the same underlying mechanism and processing strategies with English-speaking people. This being the case, the acquisition problem may be only partially attributable to the L1 transference effect for Chinese learners. Because the transference effect is marginal, it is out of our concern. This present work seeks to probe the acquisition sequence and sift the reasons of acquisition difficulties of different conditional types. As a result, it focuses on the factors, which cause various degrees of difficulty in one language, *viz.* the intra-language differences. The aim is to explore the L2 learners' performance of grammatical knowledge of the target language.

To investigate the difficulty degrees of conditionals in English, we will begin with the structures themselves. Conditionals are regarded as fairly problematic constructions, both in first and second language acquisition, due to their complexity and particular tense uses from other sentential patterns (Mindt, 1996). First of all, conditionals consist of a main clause and a subordinate clause. By and large, subordinate clauses are difficult for students to comprehend because of the syntactic complexity (Lord, 2002).

With an eye on the mismatches of formal constructions and meanings in the conditional domain, Fujii (1993) discussed not only the cross-linguistic semantic and structural divergence of English and Japanese conditionals, but also the subtle semantic distinctions in grouping conditional structures. She ascribed learning difficulty to many linguistic and cognitive factors, emphasizing the overlap between the sub-constructions of conditionals, each of polysemy functions, with different linking devices. The polysemous nature of conditionals was recognized and highlighted as the major gap where difficulties stem from.

As such, the nature of conditionals bears some distinctive characteristics, which carry difficulties, from other sentences in many ways. Covitt's (1976, cited in Norris, 2003) study showed that the serious problems pertaining conditionals include four aspects: oversimplified explanations, form, meaning, and time-tense relationship. The traditional grammar oversimplified conditionals into merely three types, but a survey conducted by Hill (1960, cited in Norris, 2003) reveals that there are nearly 324 distinct tense-modal sequences of conditionals. It shows the considerable varieties of conditional expressions. Nonetheless, focusing on the trivial phenomena will blur our targets, this present study centers on the four basic patterns as shown in Table1.

Based on a markedness framework, Berent (1985) imputed the increases of difficulty to the cognitive and structural complexity of conditionals, including the coordination of the verb forms in each clause, and their instability to retain the normal time reference. He concluded that markedness comes from different dimensions: time reference, unreality, uncertainty and the incorporation of "were".

Likewise, Nayef & Hajjaj (1997) summarized three points in teaching conditionals: "forms of the verbs, the time reference of the verbs, and the meaning of the condition in each of the patterns"(p.140). They also suggested that the difficulty of conditionals is due to that "the forms of the two verbs in the two clauses depend on

each other" (p.137), and both verbs contribute to the semantic meaning of the sentence. On the other hand, Celce-Murcia and Larsen-Freeman (1999) also claimed that "tense-aspect system", the "modal auxiliaries" and "negation" are the prerequisites to acquire conditionals.

In sum, the key point of form lies mainly in the main verbs in the bi-clausal structures of conditionals. In English conditionals, the verb form is changeable by adding one or double [+past] markers, whereby forming the past and past perfect. The problem of meaning, which is close to the term "semantic function" defined in this study, contains two concepts—temporality and hypotheticality. Temporality is in relation to time reference, while hypotheticality is related to the degrees of unreality. Covitt (1976) noticed that time-tense relationship may beset learners, because of their deviated mapping; however, we suggest that the concept of "time-tense relationship" be regarded as the interactions of tense with temporality and mood with hypotheticality.

Since the difficulty of conditionals lies in the interaction of forms (verb form changes) and meanings (temporality and hypotheticality) as have been discussed, it is necessary to investigate their relations. Schwenter (1998) summarized results of past studies and commented that not only the conditional markers but also verbal tense and mood alternation all contribute to the interpretations. Those points will be dealt with respectively.

2.2.2. Temporality and Tense

Here we define “temporality” as an abstract notion as “the indication of time”, which is realized by the concrete term-- time reference. Time reference tells us when in relation to the moment of speaking things happen. However, time reference must be presented via verb tense. Tense is a grammatical category which affects the shape of verbs to signify time.

As the inter-relation of tense and time reference stands as a major barrier for Chinese English learners, this issue is worthy of exploiting first. Bull (1960) designed a framework to summarize the tense shifts in the bi-clausal structure of conditionals (cited in Celce-Murcia & Larsen-Freeman, 1999). His model revealed that the forms of tense are highly related to the temporal reference either explicitly or implicitly (cf. Table B1 & B2)⁵. Although this model accounted for the tense change well, there is something more to add. Norris (2003) revised Bull’s model by incorporating the concepts of hope and wish, which rendered the model more complete (also Table B3). In the sense of Bull, it is notably that tense interacts extensively with time reference. It suggests that a high priority should be assigned to paying attention to the time course and speaker's intention.

Some researchers have proposed that the inconsistent time-tense relationship be the primary reason of learning difficulty. However, precisely speaking, the inconsistency is resulted from the subjunctive expression of hypotheticality, which will be sketched in the next section.

2.2.3. Hypotheticality and Mood

⁵ As Covitt (1976), Bull mixed the notions of temporality and hypotheticality in “time-tense relationship”, but our study separates those two concepts.

If tense is used to refer to when the events occur, why is there an asymmetric time-tense relationship? Since it is a notorious fact that past tense does not behave like past tense in counterfactuals, the tense can't simply be a primitive element that refers to the past. There must be something more, that is, the concept of “hypotheticality”.

With respect to degrees of hypotheticality, Comrie (1986) took it as a continuum, which implies the speaker's scalar certainty of the probability in the protasis. It starts from uncertainty, tentativeness, and extends to hypotheticality or even counter-factuality. This concept also suggests that conditionals are the devices which speakers use to express their intention, or more specifically, their subjective-ness. In Comrie's words, he claimed that “hypotheticality is a continuum...the choice of form often being determined by subjective evaluation rather than by truth-conditional semantics” (p.88). As a result, the forms of the verbs (or modals) in the bi-clauses in conditionals display the speakers' degrees of doubt about the events.

For traditional grammar, the device used to express hypotheticality is the so-called “subjunctive mood”. According to the American Heritage (1996), subjunctive mood “is used chiefly to express the speaker's attitude about the likelihood or factuality of a given situation”. The present subjunctive is performed by changing the verb into a base form; while for past subjunctive, the verb is replaced by a past form. However, the ways to express the subjunctive in conditionals are quite different. As for the subjunctive mood in conditionals, hypotheticality is transmitted by adding a [+past] marker to the verbs, either with a present or past time reference. This procedure is termed as “back-shifting”, which only takes place in unreal conditionals.

Comrie (1986, p.94) defined “back-shifting of tense” as “the use of a morphologically past tense with present (or future) time reference and of pluperfect with past time reference”. “Back-shifting” is sometimes called “modal distancing”,

“expression of unreality”, and “distance from present reality” by other scholars (Salsbury, 2000). Comrie (1986) proposed that only greater hypotheticality involves back-shifting of tense while less hypotheticality does not, so back-shifting is used particularly when denoting unreality (James, 1982). Palmer (1986, p.189, cited in Salsbury, 2000, p.23) indicated that modality is uniquely reflected in conditionals with double marking. So he termed back-shifting with a past time reference as “past-past” with a claim that “There is both past time and unreality, and the past tense, therefore, needs to be marked twice” (1990, p170). It explains why the past perfect tense is used in the past unreal conditionals (Type4).

2.2.4. Modals and Verbs

Modality reflects the opinion and attitude of the speaker (Lyon, 1977, p.452), conveying possibility, necessity, desirability or reality...etc. Modals are a set of distinct forms used to signify modality. Although some scholars use these two terms in the same sense, we contrast them by referring modality as meaning expressed, and modals as the grammatical devices expressing it.

As known, the interpretation of a conditional is determined by the forms of the verbs, including modal auxiliary verbs. The form-change with the common verbs is less indirect; however, though the forms of modals are simpler, they also cause problems in conditionals. Since modality is performed by modals, and moreover, modals also make significant contribution to the interpretation of conditionals besides the tense and mood change of verbs, it is necessary to give an introduction of modals here.

In general, modals are deemed as devices used to express non-factivity (Lyon, 1977, cited in Salsbury, 2000, p.18). Quirk et al. (1985) defined some central modals, including *can (could)*, *may (might)*, *shall (should)*, *will (would)* and *must*. Then, what

makes the distinction of the modals and their past forms?

At first, past forms generally stand for past tense. Indeed, modals are considered to carry tense. But besides tense, the modals with past forms seem to have their own distinct meanings *de facto*. Past-formed modals also have some properties to denote uncertainty, or to express responsibility.

Perkins (1983, cited in Salsbury, 2000, p.22) distinguished those modals into the primary modals and the secondary modals. The primary modals including *can*, *may*, *must*, *will* are less conditional, hypothetical and tentative than the secondary ones, which consist of *could*, *might*, and *would*. Other researchers held different perspectives. Some even made a stronger claim that the distinction between these two groups of modals is purely formal and by no means involved with present or past time (Leech, 1987). Roughly speaking, modals weight more on the central meanings, for example: possibility and responsibility...etc., than the peripheral meanings of tense.

2.2.5. Summary

Thus far we have discussed problems faced by L2 learners. Since the concepts of tense, mood and modal are not simple; this problem is certainly going to baffle L2 learners to a great extent.

The verbal form changes are changes on the tense of verbs, auxiliaries or modals. The meanings, both temporality and hypotheticality, can merely be reflected through the verb form changes. The [+past] marker is realized as past tense when referring to past time, whereas it undergoes back-shifting, which transforms present form into past and past form into pluperfect, when denoting unreality or tentativeness. Hence, the same formal changes may indicate totally different meanings, depending on the emphasis on time reference or unreality.

The time-tense relationship (temporality) and unreality-mood relationship (hypotheticality) of the four conditional types discussed in this thesis will be shown in section 2.3.2. The [+past] marker denoting past time occur in Type1, Type3 and Type4, while the same marker implying hypotheticality appear in Type2, Type3 and Type4. In the case of Type2 conditionals, the past modals *would/could* show tentativeness, whereas in Type3 and Type4, the back-shifting conveys the unreality⁶.

2.3. Acquisition Theories

2.3.1. Acquisition of Conditionals

2.3.1.1. Late emergence in childhood

Research in respect to conditionals has been largely confined to the early acquisition. Children were found able to express conditionality by juxtaposition, that is, denoting a causal or temporal relationship on the sequence of two clauses (Bowerman, 1986).

In most cases, previous studies have concentrated on the overall developmental order or children's ability to comprehend or use hypothetical conditionals (Kuczaj et al., 1979; McCabe et al., 1983). We believe that an integrative new scheme can offer us a detailed picture of language development.

Although *if* is the most explicit conditional marker in English, children do not acquire it with ease. Bloom et al. (1980) found that "if" is acquired by children in later stages- after 30 months. Furthermore, a report by O'Grady (1997) has given evidence that, *if*-connective, which links the so-called "tense adverbial clause", appears after age 2;6. Both work has shown the lateness of the "if" morpheme, but the record of first emergence may not equal to having the full control of the various conditional functions. And also, the occurrence of "if" and other connectives are found in variable

⁶ "Unreality" and "tentativeness" differ in their degrees of "hypotheticality".

order (Bowerman, 1979). More surprisingly, only later than 5 years of age can children understand “if” sentences, according to Amidon (1976). In fact, children cannot acquire the entire adult conditional system until age eight, as reported by Reilly (1982). What mentioned above implies that conditionals are manipulated by an intricate internal mechanism of cognition, and characterized by the complexity of the grammatical structures. The acquisition of one single form, however, does not mean the acquisition of the whole system. Children may acquire the forms without ability to comprehend or apply them as well as adults.

Conditionals can be used to describe events that occur in the real world or to assume hypothetical objects in an imaginative world. But children produce only real uses in early stages (Bowerman; Reilly, 1986), because they have difficulty leaving the authentic world aside.

Generally speaking, the emergence of conditionals was found quite late in children’s first language acquisition (Bloom et al., 1980; Amidon, 1976). Then what are the factors which, actually, result in this consequence? Some scholars (Cromer, 1974; Slobin, 1973) argued that it is not the syntactic characteristics of conditionals but the cognitive abilities, which make late acquisition. But Bowerman (1986) asserted that children have acquired the necessary language skills, e.g. inference, contingency and hypotheticality, before they actually produced a conditional sentence with its appropriate marker. Though she has argued convincingly, what factors that hinder the occurrence of the marker are still at great controversy. Since we cannot explicate the lateness of acquiring conditionals; however, research on the L2 acquisition order of conditionals may help to tell us something more.

2.3.1.2. Previous accounts for L2 development

The studies on second language acquisition of conditionals can be grouped as

two main kinds with different research concerns. Some studies were conducted in terms of pedagogy. Because most students learned their second language in the formal settings—classrooms, Mindt (1996) compared the differences of evidences from corpus and syllabuses from textbooks. He distinguished three types of conditionals (p.240-50):

Type 1 : real (or open) conditions
 sub-clause main clause
simple present simple present
 or *simple present will + infinitive*

Type 2 a: time orientation: present or future
 sub-clause main clause
simple present should/would/might...etc. + infinitive

Type 3 b: time orientation: past
 sub-clause main clause
past perfect should/would/might...etc. + perfect infinitive

Citing the results from Hasse's (1988) study on conditional clauses from the London-Lund Corpus, Mindt found that the sequence of these three types in German textbooks did not follow the authentic distribution in corpus. Type 1 is the most frequent type, and the tense sequence in Type 1 is as following (see Hasse, 1988: 72f):

<i>simple present- simple present</i>	32.9%
<i>simple present- modal(present)</i>	9.9%
<i>simple present- will + infinitive</i>	6.1%

Accordingly, Mindt concluded that the most optimal sequence to be displayed in textbooks should follow: Type *a* (*simple present- modal- will + infinitive*), Type *a*, and then Type *b*. This seems to be the optimal sequence for L2 learners to acquire conditionals, but do they really learn them in accord with this sequence? The answers will be shown in the section of results and discussions.

Other studies regarding second language acquisition were set out on the basis of different theories. Based on the “Markedness Differential Hypothesis” (MDH) proposed by Eckman (1977; 1996), Berent (1985) made experiments on the production and comprehension of conditionals by ESL learners. In this study, he adduced Eckman’s (1996) statement that:

if the presence of a structure *p* in a language implies the presence of some other structure, *q*, but the presence of *q* in some language does not imply the presence of *p*, then the structure *p* is marked relative to structure *q*, and structure *q* is unmarked relative to structure *p*. (p.198)

This hypothesis provides the comparability of two linguistic structures so that different conditional types could be examined, but Berent’s results still showed an inconsistent pattern that the difficulty sequence in the production task was opposite to that in the comprehension task. Therefore, he concluded that form and function can be acquired at different times. The learners may not have fully acquired all the functions represented by one particular form.

Since MDH did not offer satisfying accounts, Chou (2000) attempted to improve the flaws in Berent’s research and revived the idea of exploring L2 acquisition of conditionals, on the basis of Brown’s (1973) “Cumulative Complexity Principle” and O’Grady’s (1997) “Developmental Law” (DL). O’Grady (1997, p.349) elaborated

Brown's (1973) "Cumulative Complexity Principle" (CCP): "X is cumulatively more complex than Y if X involves everything that Y does plus something else." And then he further addressed a "Developmental Law" (DL) that "if X is cumulatively more complex than Y, X cannot emerge before Y" (p.353). Chou utilized these two concepts to predict the acquisition order according to the syntactic complexity. Additionally, she also studied L1 transfer and systematic variations.

However, the outgrowth of her study runs counter to her expectation. There are some disadvantages in her study. To begin with, it is her method, which needs to be contested: she adopted a written cloze test and this elicitation task has brought on shunless mistakes. The answers of the testees were more or less artificial rather than spontaneous or natural, because their task was to fill in the possible verb forms but not to produce a complete sentence. Moreover, they might have enough time to revise the answers, so their original intentions were disguised. On the other hand, although Chou also discriminated the conditional types by "time reference" and "truth value", which were renamed "temporality" and "hypotheticality" in this present research; however, she did not include these two notions in her research design, nor did she give further explanation on their influence on acquiring conditionals.

Though the results do not concur with her hypotheses, still, the value of her work can be accredited. The foremost contribution is her analysis approach, which disengaged the grammatical features of conditionals and established some preliminaries to our study. She also suggested that syntactic complexity alone cannot account for the acquisition difficulty. This idea provides the motivation of this present thesis and opens the way for us to mull over the influence of semantic complexity.

To sum up, the fact that CCP and DL only focus on formal features implies the insufficiency of those principles. They merely attach importance to syntactic forms, which are unable to round out the picture, unless an equal emphasis is assigned to

semantic functions. The theories, on which previous studies depended, have laid particular stress on syntactic features and thus gave sparse concern on the multitude of meanings and their associations. Since conditionals are semantic-focused, the connection of the forms and functions becomes vital. Moreover, those assumptions have no basis of any learning theories, and lack the consideration of human minds, such as the mechanism of cognition. As a result, the traditional appeal based on the frameworks mentioned above needs a new twist.

2.3.2. An Alternative Account

Gorden (1985) proposed that the difficulty of acquiring conditionals is not from structural or cognitive complexity, but from the transparency of form-function correspondence. His idea sheds new insight on incorporating forms and functions at the same time when considering the acquisition difficulty of conditionals. Therefore, a theoretical framework of form-function mapping seems to be more appropriate and adequate to shed light on this situation.

The asymmetry between forms and functions may cause serious problems for L2 learners, and nowhere is this confusion more apparent in conditionals. Therefore, the study on conditionals needs a theory groundwork which stresses both syntactic and semantic features. The Functional-Cognitive model (FC model) proposed by Mellow and Stanley (2001) is such a new framework that caters to our needs.

Based on the Competition Model (Bates and MacWhinney, 1989), Mellow and Stanley (2001, p.55) listed four commitments the FC model contains, including that “(i) the interlanguage systems are hypothesized to be composed of form-function mappings (ii) language learning is incremental through associative learning process (iii) the processing is restricted by short-term memory (iv) developmental patterns are resulted from the frequency in input and functional properties of the mappings, that is,

a data-driven position.”

To determine the acquisition sequence, we need a more concrete theoretical underpinning to support our prediction. In order to depict the developmental sequence and illustrate the difficulty order, Mellow and Stanley (2001) addressed the “Compositionist Principle of Acquisition Orders” (CPAO) in a Compositionist and Connectionist view as an explanatory device in their FC model:

Form-function mappings will develop in a specific order according to the properties of which they are composed, including: (i) the aggregate processability of their formal and functional properties; and (ii) the cumulative ordering that results from the developmental interrelations of the forms and functions within each mapping. (p.55)

This principle stresses one crucial phenomenon that a construct with more features of forms and functions occur late due to the complex structural properties and functional loads. Mellow and Stanley (2001: 56) further attributed the reasons of the formal and functional complexities to “a greater quantity of required morphological or syntactic forms” and “complex semantic content that is a combination of semantic features or polyfunctionality of meaning”. As such, the FC model seems to reign over the previous accounts and may uncover what previous approaches have overlooked.

Following these postulations, it is plausible to reason that a linguistic item, which bears more formal or functional features, is supposed to go with more perplexity. In light of these, it is suggested that a linguistic construction with more features of functions and forms involved appears to bear more burden and thus is more difficult for learners to grasp. Hence, a syntactic and semantic feature analysis of conditionals is indispensable in successfully accounting for the inter-relations.

Table2 lists the syntactic and semantic features each conditional type contains and their mapping relationships. Those features are represented as the plus or minus of the two markers: [past] and [unreal].

Table 2

Syntactic and Semantic Features of Conditionals

Type	Mapping	Syntactic features	Semantic features
1(a)	Present parallel	-past# ⁷ -past	-past,-unreal
1(b)	Past parallel	+past#+past	+past,-unreal
2	Nonpast-real	-past#(+past)+modal	-past,-unreal
3(a)	Nonpast-unreal	+past#+past+modal	-past,+unreal
3(b)	Past-real	+past#+past+modal	+past,-unreal
4	Past-unreal	+past+past#+past+past+modal	+past,+unreal

We have summarized the form and semantic function mapping in Table1. Built upon the form-function mapping theory concretized as CPAO and the feature analysis in Table2, a hypothesis was formulated. Type1 conditional is posited as the easiest type, because of its parallel structure and corresponding meanings. Type2 conditional is ranked next to Type1 for the tentativeness it suggests, whose strength is not high enough to trigger a [+past] marker, yet implying more marked-ness than the parallel conditionals, which convey facts or habits.

Subsequently, Type1 and Type2 are obviously more unmarked than Type3 and Type4. The evidences of first language acquisition (see 2.3.1.1) have demonstrated that children acquire the ways to express temporality (the tense system) earlier than unreality (the subjunctive mood). Therefore, we assume that the concept of “unreality” be more difficult to comprehend and produce than that of “temporality”.

⁷ The number symbol # separates the if-C and the MC in a conditional structure.

On the other hand, in general, denoting factuality is easier than non-factuality for children as verified by the evidences from Bowerman's (1986) work. Therefore, Type 3 and Type4 are supposed to be more difficult than Type1 and Type2.

Type3 carries one more feature, both syntactically and semantically, than Type2. As Mellow and Stanley (2001) alleged in the CPAO that, the addition of syntactic and semantic complexity would increase challenge to learners and thus delay the emergence; hence, Type3 is mooted to cause more problems and occur later than Type2.

But there is one thing to be noted for Type2 and Type3. Although the non-past real and past real conditionals are termed as real ones, they are better interpreted as hypothetical conditionals in contrast to Type4 ones—counterfactual conditionals, which are placed on the extreme end of the continuum of unreality. As for the non-past unreal conditional, it may fall somewhere between the real conditionals and the past unreal ones.

Lastly, with the presence of all the syntactic and semantic features, Type4 uncontentiously surpasses other conditional types in complication. Type4 conditional is believed to convey most confusion for the large extent of “unreality” it carries, which implies a situation entirely countered to the past truth, along with the rule of “backshifting” being necessarily applied. In brief, the greatest quantity of features in Type4 conditionals suggests the greatest difficulty. Hence, it is without question the most difficult one among all the subcategories.

2.3.3. Summary

We have reviewed the relevant studies on first and second language acquisition of conditionals. The difficulty of conditionals over other sentence types was validated in the previous work, but we are more curious about the difficulty difference within

the conditional construction, viz. from the various subtypes.

In pursuit of a theory with great explanatory power, many researchers have attempted to propose new ideas to account for the acquisition of conditionals, but none has been proved successful. In order to find out how the types of L2 conditionals are ordered in the acquisition process, we took the perspective of FC model, which encourages reliance on decoding both syntactic and semantic features, to deal with the acquisition sequence. Therefore, we have attempted to analyze the formal and functional elements, which constitute the subtypes of conditionals. Furthermore, we also borrowed the CPAO to predict their developmental sequence.

As the literature discussed earlier shown, tense, mood and modal intertwine together; moreover, the disparity of form-function mapping brings on insurmountable obstacle to L2 learners. Consequently, we believe that the erroneous manner learners performed in the conditional structure will help the understanding of the sources of difficulty, so an error analysis was used as the means to deal with the corpus data.

2.4. Error analysis (EA)

Moffie (2000) emphasized on incorporating error analysis on verb forms, subordinate clause structure and other constituents of conditional forms, with a particular caution that "altering a single verb form may change the meaning or render the utterance incorrect." (ibid.,20). To answer his call, we will take up the work done in an error analysis (EA) approach. Next sections will outline its background and development, followed by the procedures of EA.

2.4.1. Introduction of EA

Following the spirit of contrastive analysis (CA), error analysis (EA) has had its heyday during 1960s. Though it has received criticisms in the early 1970s, the

application of EA has never ceased (James, 1998).

As pointed out by Cook (1993), error analysis is not a theory concerned with acquisition but an approach serves to deal with data. If so, then how can this tool be applied to language studies? Figure 1 below displays the relationships and differences of three learning paradigms: EA, CA and Transfer Analysis. Based on the “incomplete hypothesis” which regards errors as the reflection of learners’ partial attainment of the target language, EA is deployed to compare the mismatches between learners’ interlanguage and their L2, without referring to their mother tongue (James, 1998). Therefore, this study does not involve the L1 transfer effect, and only examines the L2 learners’ production manners of interlanguage.

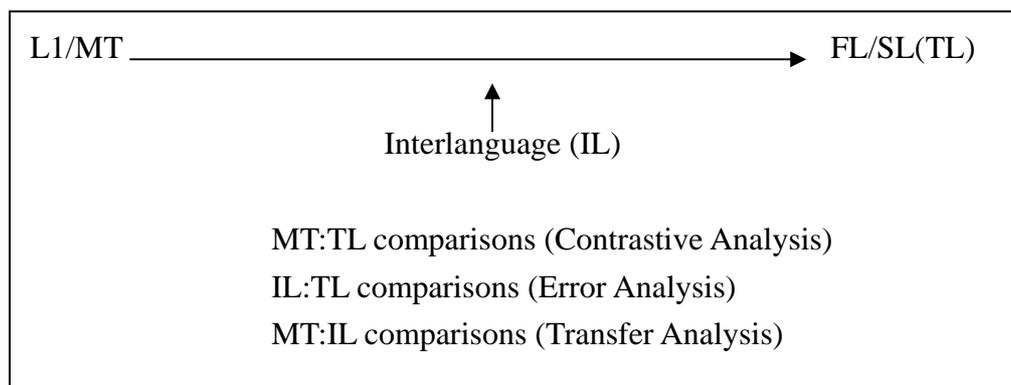


Figure 1. Comparison of learning paradigms (Adopted from James, 1998; p.3)⁸

Schachter (1974) exercised caution in analyzing the acquisition of syntactic constituents. She pointed out that the interpretation might be far beyond lucid, owing to the strategies learners use, such as avoidance and paraphrase they may rely on. The inevitable problem criticized most on EA is that “avoidance” being no way to be examined directly. Despite of this most-criticized problem, Bardovi-Harlig & Bofman

⁸ MT=mother tongue; TL=target language; IL= interlanguage; FL=foreign language.

(1989) reported that, in their study of morpheme acquisition on advanced English learners, an EA was more powerful than a quantitative form-focused approach.

In spite of the criticisms EA has received, its value was still fostered by appealing to the contributions to second language acquisition (James, 1998). On the other hand, facilitated by the modern technology, the development of EA has been applied on the Learner Corpus (LC). After this simple introduction of the history of EA, we will proceed to explore the principles to implement an EA.

2.4.2. Using Error Analysis

Since errors are the targets to be examined, a clear definition of errors is necessary. James (1998: 78) distinguished an error as “being an instance of language that is unintentionally deviant and is not self-correctible by its author.”, while a mistake takes the rest of this definition.

There are two tenets on which EA is constructed (Schachter, 1974, p.206-7):

The main assumption is that error analysis will reveal to the investigator just what difficulties the learners in fact have, that difficulties in the target language will show up as errors in production.

The second assumption is that the frequency of occurrence of specific errors will give evidence of their relative difficulty.

The first step to do EA is dividing errors and mistakes successfully. Taylor (1986) suggested “The only way we can reasonably determine whether a mistake is a slip or a genuine error is by reference to the writer’s semantic and structural intentions.” (p.154). Therefore, to make the distinction necessitates a careful inference on the whole contexts.

Afterwards, the errors should be identified, described and diagnosed. Identifying errors means to detect them, whereas describing errors means making classifications. An error taxonomy is often used to classify errors. A taxonomy is set according to some criteria that reflect the attributes of the entities. Dulay, Burt and Krashen (1982) proposed the “Target Modification Taxonomy”, in which four categories of divergences are identified: omission, addition, misformation and misordering.

After describing the errors, the next step is to explicate what significance these errors represent, that is, error diagnosis. The EA analyst has to find out the error sources and tries to explain them. Many reasons of error formation have been suggested (Corder, 1974; Richards & Sampson, 1974), but the classification of James’ (1998) is found more appropriate for our purpose. He enumerated several kinds of error categories, including ignorance and avoidance, interlingual, intralingual, communication strategy-based, induced, and compound errors. Among these, only the “intralingual” category (i.e. developmental errors) is relevant to this study. James (1998) analyzed it into several sub-categories: false analogy, misanalysis, incomplete rule application, exploiting redundancy, overlooking co-occurrence restrictions, hypercorrection (monitor overuse), and overgeneralization (system simplification).

2.4.3. Summary

Although Error Analysis has its own weaknesses, it is still a useful approach to probe learners’ linguistic behaviors. When incorporated into Learner Corpus (LC), it becomes more powerful. The combination of EA and LC can be approached via error-tagging. In Chapter 3, we will describe the steps how we analyze the data with corpus techniques and error analysis.

