Research on Corrective Feedback in ESL/EFL Classrooms

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Abstract—Corrective feedback (CF) has been one research focus in Second Language Acquisition in recent years, the study of which helps second language learners to acquire the target language successfully. The paper is to present an overview of studies on CF in ESL/EFL classroom interaction from 2000 to 2015. Firstly, the conceptual issues of CF are analyzed, including its definition, process, and category. Secondly, theoretical development of CF is reviewed which can be divided into three stages. Thirdly, research content on CF is introduced from Chinese and foreign scholars. Finally, the author makes an overall conclusion in which problems in current studies are pointed and future development of CF research is discussed at the end of the paper.

Index Terms—corrective feedback, EFL/ESL classrooms, second language acquisition

I. Introduction

It is inevitable for learners to make errors during their second language acquisition (SLA) process. According to Corder, errors play an important role in SLA and indicate to what extent learners have grasped the target language as well as in what ways they still need help. Since the essay *Corrective Feedback* by Lyster and Ranta was published, the function of CF has been theoretically affirmed. Error correction is closely related to second language learning and teaching, and CF can help learners to recognize the gap between their interlanguage and the target language. With the deeper study of CF, scholars have gained some persuasive findings which are significant and enlightening for further study. However, there remain some controversial issues in CF research. For example, scholars haven't come to an agreement on the issue of CF effectiveness due to their different research methods. In China, researchers mainly introduce and analyze foreign research achievement and have conducted less empirical studies on classroom CF. Therefore, it is necessary to search for the latest Chinese and foreign studies about EFL/ESL classroom CF as well as make a review of what they have done and what still can be further done.

II. CONCEPTUAL ISSUES OF CF

A. Definition of CF

More than one scholar has defined CF. Here the author will first list some of the typical definitions of CF and then make a distinction of three similar terms.

According to Lightbown and Spada (2006), CF refers to any feedback that tells learners their target language output is wrong.

Ellis R. (2009) defines CF as response to learners' wrong sentences. The response is triggered by others and it includes telling learners their sentences are wrong, offering them the right target language form, as well as offering grammatical explanations about learners' errors.

Gao Lixin et al. (2008) think teachers' CF in the classroom refers to their brief comment or implications by gestures or expressions on students' performance in class. It is an essential factor in the process of SLA.

From the above definitions, classroom CF can be summarized as followings:

CF givers	Others (teachers or classmates)
CF receivers	Learners/students
Purpose of CF	To facilitate second language learning
Ways of CF	Being flexible and various due to differences of learners, teachers and types of errors

There are another two terms similar with CF, that is, negative feedback and negative evidence. The three terms are often used alternatively. Some scholars don't pay much attention to their distinction, which the author believes may cause confusion for later research. Hence, the present paper will attempt to point the minute differences among these three terms.

Negative feedback refers to any feedback that informs learners of their wrong sentences. The feedback giver just

intends to point that there are errors in the learner's sentence but not to suggest what the errors are. In contrast, CF aims to point what the learner's errors are and sometimes indicate how to correct the errors. The two terms are both in the perspective of teachers, the first used in the field of cognitive psychology and the second used in the field of SLA and language teaching. By comparison, negative evidence is in the perspective of learners and used in the field of language acquisition and psycholinguistics.

B. Process of CF

A simple CF includes three steps: trigger, feedback, and uptake. (Hong Yun, 2011) For example,

L: I will talked to you. (Trigger)

T: I will TALKED to you. (Feedback)

L: I will talk to you. (Uptake)

Sometimes, the procedure of feedback can be repeated when needed and teachers may strengthen learners' self revise. For example,

L: I will going to Shanghai on next Friday. (Trigger)

T: I will going to... (Feedback)

L: I will go to... (Uptake)

T: and on next Friday? (Repeated feedback)

L: next Friday (uptake)

T: Yes, it should be next Friday. (Strengthen)

C. Category of CF

In second language learning and teaching, feedback refers to any commentary information to learners' performance. It can be positive, like "good", "right", while it can be negative, that is, corrective feedback. According to different criteria, CF can be divided into various categories.

According to its giver, CF can be divided into others-offering CF, like teacher-offering CF or classmate-offering CF, as well as self-offering CF. According to its purpose, CF can be classified as focus-on-meaning CF, which aims to achieve mutual understanding for successful communication, and focus-on-form CF, which intends to correct learners' errors in their language. According to its form, CF can be divided into verbal CF and non-verbal CF, like body language and written feedback. According to its offering ways, CF can be explicit or direct and implicit or indirect.

The above introduction presents the main category dimension of CF and these dimensions form a complex multidimensional space. Each specific form CF is decided by its position in the multidimensional space. For instance, a certain CF may be direct verbal teacher-offering feedback for a learner's grammatical errors. The present paper mainly discusses teachers' feedback in ESL/EFL classrooms, so the CF in this paper can be confined as the teacher-offering verbal CF.

As for specific CF forms, Lyster and Ranta put forward six forms: explicit correction, recast, elicitation, metalinguistic explanation, clarification request, and repetition.

Explicit correction refers to directly point the learner's errors and offer the right language form. For example,

L: On April.

T: Not on April, in April. We say "I will fly to America in April."

Recast refers to restate correctly the learner' wrong sentences without explaining what the errors are. It is usually implicit, but sometimes it can be kind of explicit. For example,

L: I went shopping two times.

T: You've been. You've been shopping twice by yourself?

Elicitation refers to guide learners to revise their sentences by questioning them. For example,

L: I'll go outside if it will not rain.

T: I'll go outside if it.....?

Metalinguistic explanation refers to teachers' grammatical explanation and metalinguistic comment or information. For example,

L: Yesterday I go shopping.

T: Use past tense.

Clarification request refers to requiring learners to clarify their discourse when their sentences are wrong or can not be understood by others. For example,

L: What do you spend with your wife?

T: What?

Repetition refers to repeat the learner's discourse and stress the error part often by raising the voice. For example,

L: I will talked to you.

T: I will TALKED to you.

L: I'll talk to you.

III. THEORETICAL FRAMEWORK OF CF

The theories of CF are developing with the theories of SLA, but there remain controversial issues. During the period of audio-lingual method, no one had questioned the function of CF, since audio-lingual method claimed to correct all the errors made by learners. However, it ignored learners' individual differences and their cognitive and psychological features. With the development of generative linguistic theory and children language acquisition theory in 1970s, the previous hypotheses were challenged. According to Chomsky's Universal Grammar, Krashen's Communicative Approach, and Terrell's Natural Approach, comprehensible input is enough and it can help second language learners grasp the target language, just like the children acquire their mother tongue. Krashen believes that the aim of L2 teaching is for communication. Direct error correction will influence the natural process of interaction and communication. Therefore, teachers should not correct learners' errors. With the increasing input of learners, errors in their interlanguage will disappear. They don't need CF. However, many scholars have questioned the opinion. They think only comprehensible input is not sufficient, since learners' incorrect hypothesis about target language cannot be corrected only with positive evidence. Explicit and implicit error correction is the core of Hypothesis Testing Theory and is part of SLA process. There exist controversies about the necessity and function of CF, which makes CF a hot topic in SLA research. Now the author will review the theoretical framework about CF from three linguistic schools.

A. The Generative School's View

The generative school headed by Chomsky believes that language acquisition is decided by Universal Grammar. The principles and parameters of Universal Grammar have prescribed all human languages. Second language grammar also depends on Language Acquisition Device. It's enough to have positive evidence and CF hardly has influences on language learning. If any, it will only influence the language performance but cannot change language competence. The generative school's evidence is that when children acquire the first language, their parents seldom explicitly correct their errors. Even if their parents give CF, the children actually don't notice it. At last, children are still able to acquire the complex language. Therefore, they think second language learners also don't need CF. However, their opinion was challenged seriously in 1980s. A lot of empirical studies have shown that there are some implicit CF in the interaction between parents and children. (See Hirsh Pasek, Treiman, Schneiderman, 1984)

Influenced by the generative school, some researchers think Universal Grammar and Language Acquisition Device make language acquisition possible. Positive evidence can activate the device while negative evidence has less influence and only positive evidence can contribute to learners' language development. For example, according to Krashen's input hypothesis, language output is not a necessary condition for language acquisition. As long as we take enough comprehensible language input, language output will become successful. He thinks error correction itself is a serious error and he believes that CF is useless and even harmful, since it will interrupt the process of comprehensible input. Van Pattern also expresses the similar view that error correction hardly has any impact on most learners' language development. Schwartz supports the generative school's opinion. He thinks that CF can only influence language knowledge. The same as the first language, the second language competence is solely affected by natural positive evidence. Direct error correction can make second language learners understand the target language but cannot build up grammar system, which can only be built by positive evidence.

In conclusion, generative school and those researchers who are in favor of them maintain that comprehensible input is necessary and sufficient for language acquisition and positive evidence can activate language input. CF has little influence on language acquisition. If it has, it can only influence the peripheral aspects of language, such as morphology.

B. The Cognitive School's View

Cognitive psychologists devote to studying human beings' knowledge structure in the light of computer simulation system and they've created various models of knowledge representation, especially the connectionism, which is a theory of imitating cognitive process by computers with brain as imitation object. Rumlhat and MaClelland's connectionism is one of the important models of cognitive linguistics. The model regards human's cognition as a processing network where nodes are connected with each other and are working simultaneously. The network includes many processing units and these unites are called activation nodes which represent the independent neuron in the human's brain. These nodes are characterized with the same judgmental device as the neuron. They receive input in various length and weight from other nodes and then judge whether to activate it. The model of connectionism believes that the innate language device is not needed. Learning process happens in the interaction between cognitive ability and environment. Therefore, the cognitive school holds that language learning is based on the interaction between learning network and positive input and CF only has a little complementary function. (Zhang Kai, Wang Tongshun, 2015)

C. The Interactive School's View

Interactionists believe that language is acquired by co-function between language learners and the environment. Under the interactional model, researchers have approved the significance of CF on language acquisition. According to Sheen and Ellis's conclusion, the current CF research is mainly on the basis of focus-on-form theory by Long. Long holds that this teaching method is to instruct learners to notice the language form during the interaction process. The focus-on-form theory includes three hypotheses: the Interaction Hypothesis, the Output Hypothesis, and the Noticing Hypothesis. (Zhang Kai, Wang Tongshun, 2015)

Swain put forward the Output Hypothesis in 1985. According to Swain, language input plays a significant role in language acquisition, but is not adequate. If learners want their language to be fluent and accurate, they need not only comprehensible input but also comprehensible output. Swain emphasizes language output needs to reach three cognitive functions: 1) noticing function, because learners can notice the gap between their interlanguage and the target language when they have meaningful language expressions; 2) hypothesis testing function, only by communicating with others and receiving feedback from them can learners test the rule's limitation and reanalyze or reorganize their second language system; 3) metalinguistic function, learners can transform language material into systematic language system and bring it into second language system. When learners output language, they develop their interlanguage competence, and find their errors in their interlanguage through inner feedback (self psychological feedback and self-monitoring) and outside feedback (CF). CF can provide learners with opportunities for meaningful output in various ways. Thus, it can create conditions for successful language acquisition.

In 1996 Long put forward the Interaction Hypothesis that in order to avoid misunderstanding, two sides communicate with each other, the information receiver asking questions about the confusions and the information giver revising his/her expressions for smooth communication. The Interaction Hypothesis stresses the meaning negotiation's facilitation for language acquisition. CF can facilitate the meaning negotiation and form negotiation by ways of clarification request, recast, repetition, metalinguistic explanation, elicitation and explicit correction. It can offer learners opportunity to notice the gap between their interlanguage and the target language.

Schmidt came up with the Noticing Hypothesis in 1990. Noticing is not the only condition for acquisition, but is the necessary and sufficient condition to absorb the input. Learners will notice those prominent language features in their language input, especially those target language form different from their mother tongue. It is no doubt that this selective attention plays an essential part in language acquisition. Output can stimulate noticing. In the output process, learners can notice their errors. CF can immediately reflect learners' errors to themselves in various ways, which will not only make learners notice the error in their language forms, but also compare their interlanguage with the target language. Thus, they will realize the gap between their interlanguage and the target language and then have a metalanguage reflection. At last, they will master the correct target language form.

All in all, interactionists firmly believe the function of CF. The Output Hypothesis, the Interaction Hypothesis, and the Noticing Hypothesis are the three important hypotheses in interactionism. They all emphasize that interaction's importance in language acquisition, input's necessity for language acquisition and output's sufficiency for language acquisition. Interaction is an effective way to acquire a language. As an important part in interaction, CF has been a focal issue in research field of interaction.

IV. RESEARCH CONTENT ON CF

Nowadays, foreign researchers have done lots of theoretical and empirical studies on classroom CF. In China, however, CF research is still in the developing stage. Scholars mainly learn from foreign research findings. They introduce and analyze foreign theory research achievement. On the other hand, they've conducted a few empirical studies by imitating foreign experiment research, but the empirical studies are passive and lacking. After making a general survey of the latest research at home and abroad on classroom CF, the author concludes that it has been studied from 3 aspects: attitudinal research on CF, type and frequency of CF, effectiveness of different CF.

A. Attitudinal Research of CF

Renate A. and Schulz's research (2001) shows that most second language learners expect teachers to give CF as much as possible. In addition, teachers also admit the importance of CF, but they need to consider students' affective factors.

Lin Lilan's investigation (2006) shows that students hope their teachers to correct their errors, but they are worried about blowing their enthusiasm. Besides, most teachers prefer implicit CF, for which students don't present the preference.

Ge Xianru's research (2005) investigates 55 college English teachers and 200 college students by questionnaire. The result shows that both teachers and students think highly of error correction, and they are inclined to implicit feedback.

Considering all the factors, research findings show that both teachers and students approve the importance and necessity of CF. By comparison, students are stronger in requesting CF. However, there are different opinions among students themselves. Teachers are supposed to give error correction feedback with avoiding blowing students' passion and interrupting communication as the premise.

B. The Type and Frequency of CF

According to Iliana Panova and Roy Lyster's research (2000), the most common CF is recast, accounting for 55% of all the CF.

Hu Jian (2004) finds that clarification request and recast are most frequently used, with the former accounting for higher percentage of 32%. However, the study of Lyster and Ranta shows teachers give CF for almost 62% of the errors, and recast takes the biggest proportion. The result is inconsistent with Lyster's, which the researcher explains that the reason is the subjects' language proficiency levels are different.

Shi Guang (2005) explores how teachers employ different kinds of CF to correct students' different types of errors. By observing the class, he finds the teacher tends to recast students' grammatical and phonological errors. As for lexical errors, the teacher prefers to use form negotiation to correct them.

On the whole, the research shows that teachers prefer implicit CF, esp. recast. Therefore, research on recast is increasing these days. Besides, according to different type of errors, teachers will use different feedback. However, there exists argument about the relevance between error type and CF. In the aspect of the type and frequency of CF, researchers need to do more work to achieve consistent result.

C. Effectiveness of Different CF

Research on CF's effectiveness remains a disputed topic, since it's difficult to use objective way to evaluate it. Some researchers attach importance to students' uptake and treat it as evaluation criterion for CF's effectiveness.

According to Lyster and Ranta's study, recast is used most frequently but the least effective, since it has the lowest rate of students' uptake. In contrast, elicitation can lead to the most students' uptake. On the contrary, Long (2007) thinks that recast is the most effective, since in the recast there are correct target language forms and communication won't be interrupted. Besides, Lyster (2004b) holds that elicitation is the best way of CF, because it can help learners to improve their control ability for language forms which they have mastered. Their results are not consistent with each other. Russel and Spada (2006) admit CF contributes to language acquisition, but they say that the current research hasn't found which the most effective way of CF is.

Alison Mackey, Susan Gass and Kim Madonough (2007) have studied 10 English learners and 7 Italian learners' CF. According to students' self review, it shows that they notice teacher's CF for lexical, phonological and semantic aspects, but CF for syntax is neglected.

Yang & Lyster have conducted an experiment on 72 college students whose foreign language is English. They test CF effect about learners' use of past tense rule. There are three groups. For students' grammatical errors, students in group one are given prompts and students in group two are given recast. Students in group three are given CF only when their content is wrong. It finds that prompt is more effective than recast and group three in the use of regular past tense rule. But prompt and recast are similar in their effectiveness for the use of irregular past tense rules. (Zhang Kai & Wang Tongshun, 2015)

Ellis, et al. (2006) has conducted an experiment towards 34 low level English learners. He has found that explicit CF is more effective than implicit CF, since explicit CF can be easily noticed and uptaken.

Shi Guang (2005) has compared CF's prompt effect and found that students gain more uptake for phonological errors after teachers' recast and form negotiation, while they receive more uptake for grammatical and lexical errors from after form negotiation.

Shi Guang and Liu Xuehui (2008) have conducted questionnaire investigation, classroom observation and interview towards 6 English teachers and 240 students. They've found that the ways of CF that both teachers and students acknowledge are most effective, such as form negotiation. Those that students acknowledge but teachers don't agree are in the middle, like explicit correction. Those that teachers acknowledge but students don't agree are the worst, like recast.

Although the importance and function of CF have been approved, which way of CF is more effective hasn't been tested nowadays. Research on effectiveness of CF is observational and kind of subjective, so the real objective experiment is needed to test CF effectiveness and more work is expected in this aspect.

V. CONCLUSION

A. Problems in Current Studies

It is true that the current theoretical and empirical studies on CF's role in SLA have reached a high level. However, there remain controversial issues in both theoretical and empirical research.

Theoretically, without a leading theory, a new theory always criticizes or overthrows the previous theories. At present, theories in SLA field are numerous, which is due to its interdisciplinary property. Researchers with different academic background and different belief try to explain SLA phenomena from different perspectives. Thus, various theories are coming into being. It may prevent the development of the discipline if the confused situation continues.

Empirically, experiment results are not consistent with each other, even opposite from each other. On one hand, researchers use different experiment methods and different criteria to evaluate the results, which will lead to different conclusions. On the other hand, there are various variables in this kind of research, such as learners' individual difference, etc. Some experiments are conducted in labs, where some variables are difficult to control and can not be taken into consideration.

B. Implications for Future Research

After the overall review of the latest research on classroom CF, the author comes to the conclusion that more work is needed and can be done in this aspect in order to achieve more convincing results. Therefore, future study can be developed in the following aspects.

First, the relation between different types of errors and ways of CF can be further explored;

Second, researchers can analyze the individual differences' influence on their preference for and effectiveness of CF, such as their language proficiency, learning strategy, and even gender;

Third, more real empirical studies are needed to provide objective analysis for the topic;

Fourth, the environment for second language learning is changing, expanding from the traditional classrooms. With the development of technology, SLA is increasingly studied in the environment assisted by computers. Therefore, CF can be studied in a new environment, computer-mediated communication.

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