

The Effect of Extending Wait-Time on EFL Students' Use of Repair Strategies

Dr. Naser Abdul Hamid*
Vivian Dekirmenjian**

(Received 24 / 8 / 2021. Accepted 27 / 12 / 2021)

□ ABSTRACT □

This experimental study aims at examining the effects of extending WT (the pause after a teacher's question) on the students' performance, including the effect on their answers as well as their tendency to self-repair without teacher initiation.

The study is divided into two phases: WT1 (no manipulation of WT) and WT2 (WT is manipulated). Each phase consists of five English for non-specialists teaching sessions at the Higher Institute of Languages at Tishreen University, with a sample of 33 students. Results show an increase in the number of right answers in WT2 and a decrease in the cases of failure to respond. Students also tend to repair, and especially to self-repair, more in WT2 using a wide range of repair strategies.

Keywords: Wait Time 1 (WT1), Wait Time 2 (WT2), Repair Strategies (RSs), Self-Repair (SR):

* Assistant Professor of Applied Linguistics, English Department, Faculty of Arts and Humanities, Tishreen University, Syria. naserius@yahoo.com

**MA Linguistics student, English Department, Faculty of Arts and Humanities, Tishreen University, Syria. vivianjarrouj@gmail.com

تأثير زيادة وقت الانتظار على أساليب متعلمي اللغة الإنكليزية في تصحيح أخطائهم

الدكتور ناصر عبد الحميد*

فيفيان دكرمنجيان**

(تاريخ الإيداع 24 / 8 / 2021 . قبل للنشر في 27 / 12 / 2021)

□ ملخص □

تهدف هذه الدراسة التجريبية لفحص أثر زيادة وقت الانتظار (فترة الصمت بعد سؤال المعلم) على أداء الطلاب في الصف بما في ذلك أثره على أجوبتهم وعلى ميلهم لإصلاح أخطائهم بأنفسهم بدون مساعدة المعلم. تنقسم الدراسة إلى مرحلتين: وقت الانتظار 1 (بدون تلاعب بالفترة الزمنية) ووقت الانتظار 2 (تلاعب بزيادة الوقت)، وتتألف كل مرحلة من خمس جلسات لتعليم اللغة الإنكليزية لغير المختصين في المعهد العالي للغات بجامعة تشرين حيث بلغت العينة 33 طالبا.

وتظهر نتائج الدراسة زيادة في عدد الإجابات الصحيحة في فترة الانتظار 2 وتناقصا في حالات تعذر الإجابة عند الطلاب، كما يميل الطلاب أيضا لإصلاح الأخطاء أكثر، وأخطاؤهم بشكل خاص عند زيادة وقت الانتظار باستعمال العديد من الاستراتيجيات - استراتيجيات تصحيح الأخطاء.

الكلمات المفتاحية: وقت الانتظار 1، وقت الانتظار 2، استراتيجيات إصلاح الأخطاء، الإصلاح الذاتي للأخطاء.

* مدرس علم اللغة التطبيقي، قسم اللغة الإنكليزية، كلية الآداب والعلوم الإنسانية، جامعة تشرين، سورية. naserius@yahoo.com

** طالبة ماجستير، قسم اللغة الإنكليزية، اختصاص لغويات، جامعة تشرين، سورية. vivianjarrouj@gmail.com

Introduction

The time that teachers give to their students after asking a question may affect the quality as well as the length of the answer. Researches on wait time examine the effect of wait time given to students on their opportunity to reflect upon the statement made by the teacher, and its importance to student's thinking (Albergaria-Almeida, 2010).

When teachers ask a question, they usually give students less than one second to respond (Rowe, 1986). Also after a student replies, teachers typically reply within less than one second, either with another question or with a specific reaction. The pause after asking a question is called (wait time 1), and the pause after a student's response is called (wait time 2) (Rowe, 1986). Fowler (1975) relates wait time to the person having the primary control over the length of the silent pause. He presents four types of wait time: teacher reaction wait time (student talk- pause- teacher talk), student reaction wait time (teacher talk- pause- student talk), teacher initiated wait time (student talk- pause- student talk), and student initiated wait time (teacher talk- pause- teacher talk).

Wait time might be an important factor in EFL classes. However, since most of the instruction is supposed to be delivered in English despite the limited competence of students in L2 (Cho, 2008), miscommunication problems can occur in the learning setting between teachers and their students; problems that students try to solve using several kinds of strategies. Schegloff, Jefferson, and Sacks (1977) call this kind of miscommunication solving "conversational repairs", defining them as strategies used by students for resolving miscommunication problems involving hearing, speaking, and understanding. They further classify four categories of repair based on who initiates the repair and who has taken steps to resolve it: self-initiated self-repair (SISR), other-initiated self-repair (OISR), self-initiated other-repair (SIOR), and other-initiated other repair (OIOR).

However, since students in EFL classes might not be competent users of the target language yet, there is general preference that teachers have to merely 'initiate' the repair to the students' errors or mistakes, which leads to the students' correction of their own mistakes. Researchers were interested in studying the role of self-repair in L2 learning, treating it as a process that a learner practices automatically as a result of monitoring and self-correction.

Literature Review

Wait Time

The concept of wait time 1 and wait time 2 was first introduced by Rowe in 1972. She defined wait time 1 as the pause after asking a question, and wait time 2 as the pause after a student's response. After asking a question, teachers usually wait for one second only; if no answer was given, the teacher either repeats the question or directs it to another student (WT 1). Also, if the student answers the question, the teacher normally waits for less than a second before giving his/her feedback, or before starting with a new idea (WT 2). (Rowe, 1974, p.3)

Fowler (1975, p.3) defines WT as "the silence in a conversation following a teacher or student utterance." Research on the effect of WT in classroom ranges from studying it as a dependent variable where it is examined in the classroom without any attempt to manipulate it, to considering it as an independent variable, i. e. manipulated by extending it to a threshold of 3 or more seconds.

Rowe (1974) notices that features of classroom discourse are related to WT 1 and WT 2. She conducts studies on teachers using WT with their regular classes, and teachers

teaching micro-groups, in which WT is manipulated to an average between 3 to 5 seconds. She reports remarkable changes with extended WT on students' performance reflected in:

- an increase in the length of student responses
- an increase in the number of unsolicited but appropriate student responses
- an increase in speculative thinking
- an increase in students' questions
- more student-student exchange, and less teacher-centered 'show and tell' practices
- less failures to respond
- less disciplinary moves
- an increase in students' confidence reflected in fewer inflected responses
- an increase in participation level, especially from students labeled as slow learners.

Most studies that examine WT effects at different levels, whether as a dependent or an independent variable, are performed in content areas (science, physics, chemistry, or mathematics). In an attempt to examine the effect of the content taught on the different kinds of questions asked by the teacher with extended WT, Tobin (1987, p.78) conducts a study to compare the use of extended WT in 20 mathematics and language arts classes of the 6th and 7th grades. By applying extended WT to mathematics classes, Tobin reports that a change occurs in the kinds of questions asked by teachers. He has also found that students in the extended WT classes have greater chances of participating in application tasks than those in the normal WT classes where questions are usually more directed towards checking their understanding of the concepts and procedures presented in the lesson. On the other hand, in the language arts classes, Tobin (1987) reports a similar result in the sense that when WT is extended, the questions directed to the students assess their understanding of the prose passage, whereas the students in the control group are asked questions to recall the ideas and information in that passage.

In an attempt to see if Rowe's (1974a, 1974b) application of WT in content areas works the same way for L2 learning, Shrum (1984: 29) conducts a study in which she examines post-solicitation and post-response WT of first year high school classes of French and Spanish. She tried to relate WT to "the teacher's predetermined assessment of student performance". The main purpose is to check whether additional WT after solicitations leads to longer and more meaningful communication. Also, high performers are expected to respond faster than slow performers. The study confirms the existence of WT after 94% of solicitations and after 90% of responses. Measured WT after solicitations is twice as long as the WT reported by Rowe (1.91 second compared to Rowe's 1.00s); thus, compared to science classes, WT in L2 classes is longer, which confirms the existence of WT as an important variable in language teaching. Considering the students' level, Shrum reports that surprisingly both high and low performers have significantly longer WT than average performers.

Baysen (2003) shows that when wait time is extended, it results in an increase in the average length of students' responses, the average number of students' questions per lesson, the average length of students' opinions, the length of student-student dialogue per minute, the length of teacher-student dialogue, and the length of teacher halting time. (as cited in Baysen & Baysen ,2010)

Repair

The study of speech production has gained great interest in both linguistic and psycholinguistic research. These studies attempt to examine the nature of speech production and "how an intention is turned into an utterance" (Ullenius 2015, p.1). During

these attempts, speakers might commit many errors, which they might or might not decide to repair. Schegloff, Jefferson & Sacks (1977, p.361) define "conversational repairs" as solutions to the problems that occur in conversations whether in speaking, hearing, or understanding.

Schegloff et al. (1977) identify four categories of repair based on who initiates the repair and who has taken steps to resolve it. These include self-initiated self-repair (SISR), other-initiated self-repair (OISR), self-initiated other-repair (SISR), and other-initiated other-repair (OIOR). In their study, they argue that self-repair is preferable over other-repair, stating that "even casual inspection of talk in interaction finds self-correction vastly more common than other-correction." (Schegloff et al. 1977, p.362).

Repair, self-repair (SR) in particular was first studied in L1 contexts where native speakers tend to correct their own mistakes due to their rich repertoire in their L1. However, studies of SR in L2 are very few compared to L1.

The study of SR is usually linked to the speakers' ability to monitor their own speech, and then to interrupt that flow of speech when a problem is detected (Levelt 1983, p.41). This can happen due to the fact that L2 speakers are more careful as they usually monitor their output much more than L1 speakers do. Berg (1986, p.134) calls this monitor the "mental eyes" that observe the production of speech.

Levelt (1983) presents a very detailed categorization of repairs dividing them into:

- D (Different Repairs) where the speaker feels the need to present his message differently, as in:

We have some er + er v... maybe you have vegetarians in your group. (Fincher, 2006, p.29)

- A (Appropriateness Repairs) when the idea or the information the speaker presents needs qualification. An A repair happens as a result of one of these cases:

a. The potential ambiguity of the message (AA), as in:

We start in **the middle with in the middle of** the paper with a blue disc. (Levelt, 1983:52)

b. The use of the appropriate level terminology (AL), as in:

with a blue **spot**, a blue **disc** at the upper end (Levelt, 1983, p.52)

c. The coherence with previously used terms or expressions (AC), as in:

go you one up, is uh... come you to yellow (Levelt, 1983, p.53)

- E (Error Repair) where the speaker doubts that an error occurred in spite of the appropriateness of the idea expressed and its formulation. E repairs also have subdivisions:

1. Lexical error (EL) where the speech contains an erroneous term: Levelt notices that this type of error is very common (369 cases in the corpus comprising 38%).

2. Syntactic errors (ES) where "the speaker starts a syntactic construction which leads into a deadlock" (Levelt 1983, p.54). However, this kind of repair is not very frequent (only 22 cases comprising 2%).

3. Phonetic error (EF), they were very rare in Levelt's data (8 cases comprising 1%).

On the other hand, researchers have identified nine types of repair strategies employed by most adult learners. Schegloff, Jefferson, and Sacks (1977) present five types of repair strategies including: unspecified, interrogatives, 'partial' repeat, partial repeat plus a question word, and understanding check. Egbert (1998) adds the request for repetition, and Liebscher and Dailey-O'Cain (2003) provide the request for definition, translation, or

explanation strategies. Also, Cho (2008) has two more – correction, and nonverbal strategies.

Egbert (1998) examines the types of strategies and repair initiation employed by German learners in dyadic interviews. She observes that learners use six types of repair initiation that include the five types observed by Schegloff (1977) in ordinary English conversation, and an additional type called request for repetition. She notices, however, that among the six types of repair strategies, partial repeats and understanding checks are the most common student-initiated repair types, since they are the simplest strategies to be transformed from learners' native languages. Strategies such as interrogatives and partial repeat with a question word are not employed since they require a combination of cognitive, linguistic and interactive skills that learners may not have developed yet.

Liebscher and Dailey-O'Cain (2003) examine the use of repair strategies in an applied linguistics seminar for advanced German learners. Adding one more from Egbert's (1998) typology; request for definition, translation, or explanation., they categorize seven types of repair initiation. They notice that students and the teacher use different strategies according to their different role perception within the classroom.

Since the self-repair practice is preferred by most researchers to other-repair, Simpson, Eisenclas & Haugh (2013) try to check how L2 learners of Mandarin Chinese benefit from self-initiated SR in attaining a better proficiency level of L2, and whether SR affects the process of L2 learning in general. In their study, they examine SR from a learner-centered not a teacher-centered perspective; that explains the reason behind not adopting any of the previously used taxonomies. Instead, they explore SR as presented and viewed by L2 learners. The same perspective is adopted by the researcher in the recent study where the teacher allows students to interact freely in the classroom, encouraging them to discover new strategies to learn L2 skills. The teacher plays the role of a coach facilitating communication between students while assisting them in the self- and- other repairing and interacting processes.

Methodology

This study is an experiment that combines the concepts of WT and RSs in an attempt to uncover an assumed relationship between them. The assumption is that if students are given extra WT after the questions asked by their teachers, their performance will be better at different levels. They would give better answers and less incorrect ones, and display less failures to respond. This assumption is based on the idea that self-repair occurs more often when students are given extra time to think, using various types of RSs. Thus, this study aims to investigate the effects of extending WT (from 1.3 to 3.5seconds) on EFL students' answers and repair behavior in a naturally occurring English classroom setting. The scope of the study aims at examining WT1 only. It focuses on comparing students' answers in two phases of WT: phase 1 (normal WT), phase 2 (extended WT). It also examines the relation between various types of questions used by teachers and the students' answers in the two phases. Question types include closed/display questions, open/referential questions and yes/no questions.

Three repair categories are examined in both phases: **Error repair** including (translation, syntactic, lexical and phonological), **different repair** including (order and message replacement), and **appropriacy repair** including (level of terminology repair and repair for good language). Furthermore, eleven RSs are studied: request for translation, request for explanation and clarification, request for repetition, partial repeat, partial repeat plus a

question word, understanding check, guessing, checking, non-verbal resources, code-switching, and request for definition.

A special focus is also given to the concept of SR, in which students repair their own mistakes, with or without their teacher's initiation. SR is also examined in the two phases to spot any increase or decrease in its use by students.

Site & Participants

The study takes place at the Higher Institute of Languages at Tishreen University, targeting a pre-intermediate classroom course for language learning. This institute is an accredited institute for language teaching where students register voluntarily with the aim of learning English and, hence they have the incentive to learn language not as a university requirement; these reasons make this site suitable for the study objectives. Moreover, the sample of pre-intermediate students is chosen because they are assumed to have had enough contact with the language to be able to understand the questions in English, and to formulate good answers, as well as being able to communicate well with the teacher and with their colleagues. However, since they are not advanced learners, they are expected to commit errors that they will try to repair. This will create the best environment for error detection and correction, which is the main focus of this study.

Thirty-three 33 students participate in this study. Most of them are university students of different faculties who registered at the Higher Institute of Languages at Tishreen University to learn English as a foreign language. The researcher explains to them that they have to behave normally in the classroom, and not to answer any question unless they are named by the teacher. When a question is asked, to which the named student does not give a good answer, or fails to respond, the researcher then tries to initiate an answer to encourage students to repair their own mistakes and to formulate better answers.

This experiment consists of two phases of teaching. The first phase consists of five sessions (7.5 teaching hours) where the teacher has to proceed with the lesson at normal speed, without any special attention to the concept of WT.

After the end of *phase 1*, the classroom sessions are studied carefully, measuring the approximate WT that the teacher uses after every question. Depending on this, *phase 2* starts (5 sessions, 7.5 teaching hours). It is characterized by an attempt on the part of the teacher to extend the duration after every question. To achieve this, enough training has to be done by the researcher. With the aid of a timer/a stop watch, this training can help the researcher allow for extended WT, compared to the normal WT in *phase 1*.

WT is measured from the end of the teacher's question to her naming a certain student to answer. Average WT is calculated by dividing the overall duration of WT pauses by the number of questions asked in the sessions.

Data for this study are collected during the Fall sessions of 2017, during October and November. 13 hours of teaching sessions is video-taped using a high quality camera. Data collection is divided to two phases:

- ❖ *Phase 1: 5 sessions; 7.5 teaching hours, with normal wait time.*
- ❖ *Phase 2: 5 sessions; 7.5 teaching hours, with extended wait time.*

Video recording starts two weeks after the beginning of the course, so that the researcher is familiar with the course and the students to know how to approach their tendencies and orientations, which, in turn, can help in creating suitable atmosphere to start talking freely, and to ignore the fact that their conversations are video recorded.

Results and Data Analysis

In relation to the three research questions of this study, data analysis displays the following results:

1. What are the effects of extending WT on students?

(on the number and type of questions asked by the teacher, the number of right and wrong answers by students, and the number of times when students fail to respond)

In both phases three question types are examined (open, closed, yes/no) to make sure that similar teaching experience is delivered in both phases, and also to check if any difference in the number of these questions may occur with the extension of WT. The number of open questions is approximately similar in both phases (WT1/376, WT2/378). However, closed and yes/no question types undergo some changes in number when WT is extended; closed questions (WT1/371, WT2/403), and Yes/No questions (WT1/210, WT2/118).

Table (1): Normal and Extended WT in Relation to Question Type

Contrast	Question type		
	Open	Closed	Yes/no
WT1 (normal)	376	371	210
WT2(extended)	378	403	118

The increase in the number of closed questions in WT2 is due to the fact that the teacher incorporates some extra material into the sessions in an attempt to encourage students to talk. This extra material includes discussing the meaning of some idioms and slang words, which are classified under the “closed questions” category. On the other hand, asking less Yes/No questions is a good sign of development when extra WT is given, since the teacher tends to focus more on the types of questions that motivate students to think and present their ideas in a creative way; open questions.

The number of right answers, wrong answers, and cases of failure to respond is measured in both phases. An answer is considered right when it addresses the question asked by the teacher in an acceptable way, regardless of any kind of lexical, phonological, syntactic or translation errors included. This is due to the fact that some answers display a complicated case of appropriate content, but mistakenly presented. An answer is counted wrong if the content is erroneous. However, if the named student fails to present an answer even after the teacher’s initiation, it is considered a case of failure to respond.

Table (2): Cases of Right, Wrong answers and Failures to Respond in Both Phases

Contrast	Right answers	Wrong answers	Failures to respond
WT1	379	74	80
WT2	408	98	46

As **Table (2)** illustrates, right answers increase in WT2 (WT1/379, WT2/408). Cases of students’ failure to respond decrease noticeably (WT1/80, WT2/46), which supports the study’s hypothesis that the amount of time given to students to think affects their performance. However, despite the fact that the number of wrong answers increases in WT2, it also results in a detectable rise in the number of repairs of those errors performed by students.

2. What are the repair types and strategies employed by EFL learners?

The repairs performed by students can be categorized into three different types: the first type is **error repair**, which incorporates four sub-categories translation, syntactic, lexical,

and phonological errors. The second type is **different repair**, which is illustrated below as the message replacement repair since it is the only repair type that surfaced in the students' production. The third type is **appropriacy repair** including the sub-categories level of terminology and repair for good language. **Table (3)** below illustrates the number and kinds of repair of both phases:

Table (3): Number & Kinds of Repair in Both Phases

Contrast	Error repair				Different repair	Appropriacy repair	
	Translation	Syntactic	Lexical	Phonological	Message replacement	Level of terminology	For good language
WT1	150 (41%)	116 (31%)	39 (10%)	60 (16%)	7 (1.8%)	0	0
WT2	164 (33%)	115 (23%)	78 (15%)	135 (27%)	9 (1.7%)	4 (1.1%)	1

As **Table (3)** shows, syntactic errors are similar in both WTs, but a measurable increase is noticed in the translation, lexical and phonological errors in WT2. Despite committing more errors, students in WT2 tend to repair more. Reasons behind this lie in the changed behavior of the teacher where she allows students more freedom to talk, which, in turn is reflected in committing more errors. The other repair categories (different- appropriacy) repairs display the benefit of giving students some extra time. This encourages them to creatively repair their message, taking into consideration that their percentage is not very high compared to the other categories since they require more creativity and competence in L2 that students may have not developed completely yet.

The repair strategies performed by students fall into 11 categories as shown in **Table (4)** below:

Table (4): Repair Strategies in Both Phases

Repair strategies	WT1	WT2
Request for translation	5	19
Request for explanation and clarification	6	14
Request for repetition	4	7
Partial repeat	2	4
Partial repeat plus a question	1	0
Understanding check	3	12
Guessing	1	3
Checking	2	11
Non-verbal resources	2	1
Code-switching	0	1
Request for definition	0	3
Total number	26	75

Data on the number of repairs performed in WT1 & WT2 show that students use the request for translation and clarification strategies more than the other strategies in both phases. Students most of the time consider that checking the meaning of an expression and

its equivalent in their mother language helps them better understand and evaluate the question asked and, hence formulate a more cohesive answer. This can be the reason behind their usage of the request for translation strategy more than other strategies in both phases of WT. The request for explanation and clarification strategy undergoes a noticeable change in WT2 which supports the hypothesis that students utilize this extra WT to make detailed inquiries about the questions.

Besides, measurable increase occurs in the checking and understanding check strategies with the extension of WT. When given additional time after the questions, students show a tendency to assure that they have heard and understood the question properly before giving an answer. Other categories (request for repetition, partial repeat and guessing) cases reflect some changes in WT2. However, these repairs do not reflect a great change since they are the least creative strategies that depend merely on repetition and guessing. Two repair categories surface only in WT2 (code-switching and request for definition) with no specific value.

Results related to the number of repairs performed in WT1 & WT2 strongly support the study's hypothesis, that giving extra seconds after a question clearly helps students re-think about their answers, and detect any mistake with an attempt to fix it.

3. Do the students use more SR strategies with extended wait time?

Besides, the study questions whether extending WT will have an effect on the students' self-repair. Analysis of data on self-repairs shows significant increase, in the sense that in WT1 54 self-repair cases occur, compared to a 76 case of self-repair in WT2.

Table (5): Self-Repair in Both Phases

Repair type	WT 1	WT2
Self-repair	54 (11 without T- initiation)	76 (35 without T- initiation)

Extending WT also displays a tendency on the part of other students in the classroom to repair and sometimes to initiate repairs for each other, hence playing the role of the teacher in the classroom. As the data show beneath; Students initiated for their friends 52 times in WT2, compared to 26 cases in WT1.

Table (6): Self and Other Repairs with Different Repair Kinds in Both Phases

Repair kind	Self-repair		Other-repair	
	WT1	WT2	WT1	WT2
Translation	8	16	9	15
Syntactic	25	23	9	11
Lexical	6	19	3	10
Phonological	9	14	5	13
Different	6	4	0	3
Appropriacy	0	0	0	0
Total	54	76	26	52

The traditional English language teaching at schools that focuses more on correcting grammatical structures, learning words and pronunciation affects the students' learning habits later on, which is reflected in their tendency to self or other repair errors, more than appropriacy and different repairs. Moreover, students' interest is directed to whether their message is delivered even with an error; if the listener gets the message, it is not necessary to creatively present it.

Significance and Recommendations

The study's results highlight the importance of timing in the teaching process providing evidence of the students' changed behavior and performance at more than one level. When students are allowed some extra seconds to think, they can present more creative answers, be more confident in re-evaluating their answers as well as playing the role of the teacher in some cases by helping their colleagues repair their own mistakes. The repair strategies performed by students in both WT phases reflect their tendency to repair errors related to comprehension questions more than those requiring repetition or memorization.

This study aids teachers in getting familiarized with their students' deficiencies, be them syntactic, phonological, semantic or errors related to the effect of the students' mother language on his/her L2 progress. Moreover, teachers can view the creative variety of error or repairs produced by their students, which helps in devising different teaching strategies to achieve the teaching objectives in a better sense. Instructors who share a similar background may then provide some remedial procedures that can help in solving these problems.

Further studies can be performed, however, to measure WT after each student's response (WT2) to check any value of the time given by the teacher before evaluating and reacting to the student's response and whether any relation occurs between the teacher's reaction to the answer and the performance of students, as has been suggested by some other studies in the literature.

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