Saudi EFL English Majors' speech comprehension and production: Does Explicit Instruction in Connected Speech Features Make a Difference?

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Abstract

Although connected speech is essential for listening comprehension and successful communication, it is rarely treated with proper attention and a few studies have been conducted on how best to teach it in the field of second and foreign language learning. Thus, the present study addresses this gap by examining the effect of explicit instruction in connected speech features on improving overall listening comprehension of the Saudi EFL learners, increasing their "reduced forms" understanding as well as enabling them to produce and use them in daily speech. The study also attempted to explore the EFL students' perceptions towards instruction of connected speech features. To this end, a group of 56 Saudi English majors studying at Qassim University were asked to participate in the current study. To homogenize the participants' level of proficiency, the Oxford Placement Test was administered to 56 English majors. Having taken the Oxford Placement Test, forty eight students with the intermediate level of proficiency were selected, and the other eight students were discarded due to their extreme scores. The participants were randomly assigned to two experimental and control groups, each comprising 24 participants. The experimental group received an explicit instruction in connected speech features, while the control group followed the regular instruction designed by the English Department Program. A pretest and posttest design was implemented to answer the research questions of the study. Data sources included three tests and questionnaire. The three tests were conducted before and after

the treatment, whereas the Questionnaire is only conducted to the experimental group at the end of the treatment. The participants' scores on the pre-posttests were compared via the paired samples t tests and independent samples t-tests. The quantitative findings confirmed that the experimental group's mean scores on the posttests were significantly higher than those of the control group. It was thus concluded that teaching connected speech features (i.e. elision, assimilation, and contraction) to Saudi EFL learners could positively affect their speech comprehension and production. In addition, the questionnaire findings demonstrated that the majority of the experimental group had positive perceptions towards the connected speech instruction. Finally, the findings of the study hold a number of pedagogical implications for EFL learners, language teachers, material developers, and those interested in researching connected speech.

Keywords: connected speech features, speech comprehension and production, explicit instruction

Introduction

Nowadays, none can underestimate the importance of listening in communication. Without listening skills, learners will not learn to communicate effectively. However, the importance of listening in language learning has only been recognized relatively recently (Carreria, 2008). In English as a foreign language (EFL) classes, teachers usually speak standard, clear, comprehensible English to get the message across to their students. Therefore, EFL learners are often shocked to find, when they enter a context in which native speakers are talking to each other or they listen to authentic materials such as movies and songs, that they have considerable difficulty in understanding what they hear (Wong et al, 2015; Sardegna, 2011; Melenca, 2001). One of the main reasons for this difficulty is connected speech. Connected speech can be defined as 'spoken language when analyzed as a continuous sequence, as in normal utterances and conversations' (Matsuzawa, 2006). Listening texts and recordings ought to contain naturally occurring stretches of connected spoken language. In a real language use, connected speech undergoes considerable phonological modifications (alterations) such as reduction, intrusion, elision, assimilation, and contraction which may cause comprehension difficulty when non-native speakers listen to it. (Carreira, 2008; Wickins, 2016; Alameen, 2014). Because of these modifications, words spoken in isolation are quite different from those spoken in context. Connected speech modifications or processes may change,

delete, or add sounds to words (e.g., are 't instead of are not), leave their sounds relatively intact, or result in drastic changes to the connected words (e.g. wouldjou instead of would you). Research on the issue of connected speech has indicated that normal speech flows containing simplified patterns such as contraction, elision, deletion, assimilation, and linking can pose challenges to the L2 listeners (Field, 2008). Seong (2008) reported that connected speech forms in listening input would decrease the saliency of the words and therefore make comprehension more difficult for ESL learners. Consequently, L2 and EFL learners who are unfamiliar with such connected speech modifications may encounter frustrating experiences when dealing with real-life English conversation. Similarly, Aquil (2012) agrees that foreign language learners are faced with a daunting task when they listen to native speakers using naturally occurring connected speech. Norris also (1995) found that foreign learners find that sounds are distorted, juxtaposed, or lost altogether when listening to native speakers outside the classroom. Norris adds that those with little experience of listening frequently fail to connect the sounds they hear with the words they have seen and recognized in their printed form, and find the whole experience confusing and discouraging. In line with this claim, Ahmadian and Matour (2014) report that non-native speakers might feel linguistically overburdened, frustrated, and agonized when taking a listening exercise or communicating with native speakers.

Additionally, the common presence of reduced forms, assimilation, contraction, elision, linking, and deletion are found to significantly affect learners' listening comprehension (Ito, 2006). Motivated by Ito's study, Khaghaninezhad and Jafarzadeh (2014) attributed the problems of EFL learners in listening comprehension to the fast connected speech with its accompanying features like assimilation, contraction and dissimilation and they concluded that the presence of connected speech was found to negatively influence learners' listening comprehension. In the same vein, several researchers have referred to connected speech, commonly found in spoken English, as the hurdle to comprehension (Shimazaki, 2016 Wickins, 2016; Sardegna, 2011; Brown and Hilferty, 2006; Ito, 2001; Rosa, 2002; Weinstein, 2001). Corimer et al (2013) also found that the existence of reduced forms impeded the listening comprehension of non-native speakers of English.

According to many researchers, the nonnative English speakers' agony in comprehending and producing connected speech spoken by native speakers is attributable to many reasons. For example, Kuo (2012) attributes EFL learners' difficulty in comprehending spoken language to the limited exposure to connected speech. Students, who do not receive instruction or exposure to this type of 'real', naturally occurring language, are "going to have a very rude awakening when they try to understand native speech in natural communicative situations" (Rosa, 2002). Another reason for EFL learners' inability to decipher native

speech is due to the language teachers who speak clearly and provide listening materials that are full of clearly pronounced and articulated speech (Rogerson 2006). Some researchers believe that EFL learners would not be able to improve their listening skill, because most of the instructional materials used in the classrooms are simplified and unnatural (Aquil 2012 and Rosa 2002). Language learners, in turn, develop their listening and speaking skills based on this adapted English speaking style. Then EFL learners are shocked and dismayed to find that native speakers don't actually speak in the way their teachers and listening materials represent the language (Kodera 2012). What prevents EFL learners from comprehending speech is their weak ability to segment speech and recognize words (Aquil 2012). As mentioned, because phonological changes alter speech greatly, learners may fail to recognize words they have already learned because they are not familiar with the way the words sound in connected speech. Connected speech takes place in real time, hence; a learner does not have the time to search his or her memory for the meaning of words when processing connected speech. Besides, recognition of a word might be linked to learners' particular knowledge of what the word looks like on paper, or what it sounds like in citation forms (in isolation). In her recent study, Aquil (2012) discussed the problem of connected speech and found that learners were not able to recognize words that have undergone the phonological modification. This was despite the fact that the learners knew the words in their citation forms.

Ahmadian and Matour (2014) also ascribed students' difficulties in understanding natural real language to the main focus of most English classes on introducing words in isolation which are presented in their citation forms (Ahmadian and Matour 2014). Similar to this, Liang (2015) reports that the pronunciation of some English sounds is notably different between its occurrence in isolation and that in connected speech. In writing, there are spaces between words, however, in speech words run into one another with no spaces between them, which makes deciding where one word ends and another begins more difficult (Aquil 2012). In other words, the way in which English is written onto the page can mislead learners. Wang (2005) states that learners of English often learn with their eyes rather than their ears, and this leads learners to believe that words should be pronounced as they appear on the page. They believe that words should be separated by blank space. This, however, is not the way that native speakers conver.

In addition to above, many researchers report that the negligence of teaching connected speech features in L2 and EFL classrooms is one of the potential reasons for impeding listening comprehension (Yang, Lin, and Chung, 2009; Rogerson 2006). Many EFL teachers felt that it is very difficult for them to teach connected speech in spoken language (Norris 1995). In line with this claim, Kuo et al (2016) state that most instructors did not teach connected speech in class due to time constraints and lack of suitable materials. Similarly, Melenica (2001) points out that most ESL textbooks guide students to learn the lexical, semantic and

syntactic rules of the English language, yet give students little instruction in pronunciation. However, according to Seong (2008) in English classes, students are not given connected speech instruction but only given learning materials with CDs to study at home. This is due to the lack of effective ways to teach listening comprehension in English classes. So, we have seen the extent to which listening comprehension of naturally occurring connected speech can be problematic. This is because of the presence of the connected speech features (i.e. elision, assimilation, and contraction). Pedagogical tasks pertaining to teaching listening need to consider these changes in order to improve learners' listening skill.

Brown (2012) argue that comprehending and producing connected speech can be beneficial in many ways because it enables the speaker to not only improve his or her intelligibility by developing overall speech rhythm, but also brings psychological relief and confidence as it causes speech to sound more natural. Similarly, several research studies have shown that connected speech instruction can help learners to more easily comprehend rapid speech used by native speakers (e.g., Brown and Hilferty, 2006; Celce-Murcia et al., 2010; Matsuzawa, 2006). Moreover, use of connected speech features can make learners sound more comprehensible and natural with less marked foreign accent (Brown and Kondo-Brown, 2006). On the other hand, the inability to use connected speech might even cause a non-native speaker's speech to sound unnatural and choppy, and could bring about frustration to the listener (Brown, 2012; Celce-Murcia et al., 2010).

The key to improving listening comprehension for EFL learners, therefore, lies in the learning of connected Speech aspects. A number of research studies have shown that learning connected speech can help learners comprehend authentic natural speech used by native speakers (Brown and Hilferty, 2006; 2006; Ito, 2006; Matsuzawa, 2006). Moreover, knowing how to produce connected speech could also help make the learners' speech more comprehensible and natural (Brown and Kondo-Brown, 2006). Since connected Speech has been identified as an important characteristic of spoken English, some researchers (Ting and Kuo 2012; Rogerson, 2006; Rosa, 2002) have advocated the importance of teaching connected Speech. Hence, several educators and researchers tended to examine the effectiveness of connected speech instruction on phonological awareness and listening comprehension (Wickins, 2016; corimer et al, 2013; Sardegna, 2011; Brown and Hilferty, 2006; Carreira, 2008; Ito, 2006; Ting and Kuo, 2012; Matsuzawa, 2006; Wang, 2005; Norris, 1995; Seong, 2008), and the findings reveal that explicit instruction is effective in improving learners' perception of reduced forms. They also find that that teaching connected speech does facilitate listening comprehension and improve learners' ability to identify words in connected speech. Furthermore, they propose to teach connected speech patterns as an aid to enhance English learners' listening comprehension.

On the other hand, very few researchers have investigated the efficacy of instruction in connected speech processes on the speech production of EFL learners (Ashtiani and Zafarghandi, 2015; Underwood and Wallace, 2012; Sardegna, 2011; Kuo, 2012; Melenca, 2001; Fan, 2003). Some phoneticians (Celce Murcia et al., 2010; Anderson-Hsieh et al 1994) maintain that mastery of reduced forms is crucial not only to understand but also to produce connected speech effectively and appropriately. Failure to produce them will prevent the listener from focusing on the more meaningful words of the message. So, students at listening and speaking classes should not only be aware of the existence of these forms so as to better attune their ears to the English rhythm but also to be exposed to many and varied opportunities to produce them, with the purpose of improving both their comprehension and productive skills.

As seen in the literature review, the paucity of studies in the area of connected speech usage in L2 settings in general and in EFL settings in particular shows a need for more research on how connected speech instruction influences learners' speech production and comprehension (Wickins, 2016; Alameen, 2014; Sardegna, 2011). In sum, more appropriate training is needed to develop language teaching materials to help EFL learners understand and produce connected speech.

Research problem

However, the reason for trying to deal with this topic comes from the researcher's personal experience in teaching English as a second and foreign language. The researcher has noticed that Saudi English majors can attain near native speaker proficiency in written production while failing short of native speaker fluency in oral production, particularly in terms of connected speech features. The researcher found that most of the times Saudi students, just as many students in other countries, express that they can understand their conversational text in their listening books well, while they constantly complain about their disability in listening comprehension. They encounter great difficulty when they are suddenly faced with spoken English produced by native speakers. The naturally occurring speech of native speakers is mostly rapid and continuous with frequent reduction, sound alteration, elision or assimilation at word boundaries, which may cause comprehension difficulty when non-native speakers listen to it. This recurrent phenomenon is very noticeable especially during dictations. When a teacher, who extensively uses weak forms in his speech, dictates, students show poor abilities to understand the meanings of sentences and to break them down. Very frequently, students ask the teachers to repeat what they say, and it is almost always the weak forms that cause problems. The problem is usually solved as the teacher repeats what he said but with the use of full forms instead. As a matter of fact, students need to be taught the rules governing the use of weak forms and be exposed to natural speech embedded with connected speech features such as contractions, elision, assimilations.......

Although connected speech is a characteristic of spoken English and essential for communication, it is not paid enough attention in English language learning and teaching. Connected speech is not taught in any systematic manner in EFL programs in Saudi Arabia. Furthermore, little research has been done on connected speech. More specifically, no study, according to the knowledge of the researcher, has been conducted on the teachability and effectiveness of instruction in connected speech in Saudi Arabia. Hence, this study intended to address this gab by investigating the effect of an explicit instruction in connected speech features on increasing Saudi EFL learners' overall listening comprehension, "reduced forms" understanding, and also their ability of producing the "reduced forms", since it is believed that listening and speaking skills are closely inter-related. The study also attempted to explore the EFL students' perceptions and attitudes towards instruction of connected speech features.

Research Questions

Due to the scarcity of studies in the area of instruction on connected speech forms for comprehension and production of English as EFL language, the research questions were as follows:

1. Does the explicit instruction of connected speech features (e.g., contraction, elision, assimilation) enhance listening comprehension?

2) To what degree does instructing English "reduced forms" explicitly improve/increase Saudi EFL learners' ability to comprehend/ recognize individual words in connected speech at the end of the treatment?

3) To what degree does instructing English "reduced forms" explicitly improve/increase Saudi EFL learners' ability to produce reduced forms (them) in their own daily conversation at the end of the treatment?

4) What are the EFL students' perceptions towards an explicit instruction in connected speech features in enhancing English listening comprehension and speaking ability?

Hypotheses of the study

With regard to the research questions, the researcher proposed the following hypotheses:

1) Instructing "connected speech features" to the experimental group participants does not affect their overall listening comprehension.

2) Instructing English "reduced forms" to the experimental group participants would increase their ability to recognize them in the spoken language.

3) Teaching English "reduced forms" to the experimental group participants would enable their ability to produce them in their own daily verbalizations.

4) Saudi EFL students have positive perceptions and attitudes towards the use of explicit instruction in connected speech features.

Significance of the Study

The results of the present study will be of great importance to EFL learners, teachers, researchers and material designers.

-The findings can help English majors learn these connected speech features and try to make use of them while speaking so that they can enhance their overall intelligibility and sound more native-like while speaking English.

-The findings might benefit language teachers. Teachers might reduce the difficulty which the learners face in listening comprehension. Teachers can raise their students' attention to these features and they can provide their learners with some techniques to facilitate their speech comprehension and production.

-The findings suggest some clues and guidelines to help syllabus designers and textbooks writers to look at listening comprehension skill from a new standpoint. That is, listening skill should involve teaching connected speech features as an integral part.

-Finally, this study may encourage researchers to expand on connected speech research by investigating other connected speech aspects and advanced pedagogical tools.

Review of literature

Definition of "Connected Speech"

Connected speech is "a term used in linguistics to refer to spoken language when analyzed as a continuous sequence, as in normal utterances and conversations" (Brown and Kondo-Brown 2006). In other words, connected speech involves the phenomena in spoken language that collectively include phonological processes such as reduction, elision, intrusion, assimilation, contraction and so forth (Carrareia 2008). This type of speech has also been referred to as reduced forms, sandhi-variation, or weak-forms (Brown and Kondo- Brown, 2006 Ito, 2006). The term connected speech is interchangeably used with reduced forms in this study.

Researchers speak about benefits of producing "connected speech". For example, Ahmadian and Matour (2014) argued that producing "connected speech" can be beneficial in many ways because it enables the speaker to not only improve his or her intelligibility by developing overall speech rhythm, but also brings psychological relief and confidence as it causes speech to sound more natural. Not using "connected speech" might even cause a non-native speaker's speech to sound unnatural and choppy, and could bring about frustration to the listener (Wang, 2005).

Characteristics of connected speech

The major characteristics of connected speech that Anderson-Hsieh, Riney, and Koehler (1994) identify are (1) more frequent assimilation, in which the distinctiveness among adjacent sounds is lost;(2) a blurring of boundaries and a reorganization of phonetic material;(3) lenition, or a lesser degree of closure in the vocal tract, (4) vowel reduction, by which is meant vowel centralization and shorter vowel duration, as well as possible vowel loss leading to the syllabification of consonants, (5) a shorter duration of long sound segments, and (6) the deletion of consonants in consonant clusters.

Types of Connected Speech Patterns investigated in the Present Study

Pioneering researchers in various studies have found that contraction, (Fan, 2003), assimilation (Fan, 2003; Wang, 2005), and V-V linking (Kuo, 2012) are the basic types of connected speech causing problems for EFL learners. Adding to these types, the present study includes additional types of connected speech, elision and reduction for investigation. The definition of connected speech types is provided as follows (Brown and Kondo-Brown, 2006):

Elision, also named deletion or omission, refers to the phenomenon that a sound in the citation forms is eliminated in certain environment. Consonant clusters in English tend to undergo elision. When the consonant cluster occurs in the final position of a word and the next word starts with a consonant, the consonant cluster will be modified. For example, the word "fast" when it is isolated you pronounce it fully with /t/, but sometimes in a context you elide the sound /t/ for instance the phrase " fast people", here the last sound /t/ in fast is elided for the sake of fluency. Another example, /d/ in "blind man" will be deleted.

Contraction is the only connected speech pattern that can be reflected in written forms. Contraction often occurs in function words, such as "am," "is," "will," "have," and "has." For example, "I am" can be contracted as "I'm."

Assimilation is "a process whereby one phenomenon is changed into another because of the influence of nearby phenomena". For example, In the context "get them" the initial phoneme of the second word "them" is /ð/ it is changed into /t/ so the sentence "get them" / get ðəm/ is changed into / get təm /. Another example is that / k / replaces /t/ before /k/ or /g/. that cat /t/→/k/. That girl /t/→/k/

Reduction is "a process that occurs in connected speech, in which phonemes of the language are changed, minimized, or eliminated in order to facilitate pronunciation". For example, Vowels in unstressed syllables are reduced to schwa /ə /. could ⇒/kəd

Intrusion

The addition of sounds in connected speech which are not heard when words or syllables are said in isolation. There are three sounds in English that behave as intruders : / r/ , / j/ and / w/ as in the following examples:

' go on' becomes ' go**w**on'

' I agree ' becomes ' ai**y**agree'

'law and order' becomes ' law**r**anorder' (Brown and Kondo-Brown (2006)

The Importance of Teaching Connected Speech Features

This section addresses the four major reasons why connected speech features should be instructed in EFL classrooms. The first reason is that some EFL learners may not be familiar with the rhythm of English. The rhythm structure of English (stress-timed language) and syllable-timed languages are completely different from each other. Therefore, the difference of rhythm may interfere with the listening greatly, if listeners are expecting each individual sound to be delivered with a similar clarity, as in syllable-timed languages. Since connected speech features result from the rhythm structure of English (Ting and Kuo, 2012), it is essential to teach connected speech features in order to familiarize learners with English rhythm structure.

The second reason is that to identify word boundaries may be difficult for learners because of connected speech features. Norris (1995) claims that learners have difficulty in comprehending what is being said because of connected speech features.

The third reason is that learners usually hear the texts without connected speech features in the class because teachers and recorded materials provided in the class speak too clearly and carefully (Rogerson, 2006). Therefore, teaching connected speech features is required to prepare for listening and conversation in real world, particularly considering the following.

Perhaps the most obvious reason for teaching connected speech features is that English majors will encounter spoken language with connected speech features. It is said that connected speech features appear in every level of speech including very formal speech (Brown and Kondo-Brown, 2006). If teachers anticipate that learners will face connected speech features sooner or later, they should teach these features.

Approaches to teaching reduced forms

Celce-Murcia, et al. (2010) asserts that there are two general approaches to teaching pronunciation: an intuitive-imitative approach and an analytic-linguistic approach. The intuitive-imitative approach depends on the learner's ability to listen to and imitate the rhythms and sounds of the target language without the intervention of any explicit information; it also presupposes the availability of good models to listen to, a possibility that has been enhanced by the availability first of phonograph records, then of tape recorders and language labs in the mid-twentieth century, and more recently of audio-and videocassettes and compact discs.

The analytic-linguistic approach, on the other hand, utilizes information and tools such as phonetic alphabets, articulatory descriptions, charts of the vocal apparatus, and other supplementary materials (i.e. Video and audio excerpts from the internet to boost listening, imitation, and production. It explicitly informs the learner of and focuses attention on the sounds and rhythms of the target language. The current study adopted the second approach in teaching connected speech.

Studies related to Effectiveness of connected speech instruction on listening comprehension

The influence of connected speech on listening comprehension has been investigated in several studies (Brown and Hilferty, 2006; Ashtiani and Zafarghandi, 2015; Ito, 2006). These studies also show how reduced forms in connected speech can interfere with listening comprehension.

In a pioneer study in connected speech processes, Kuo (2012) investigates the positive effects of teaching the "connected speech forms" on listening comprehension and found that teaching English "reduced forms" significantly improved Japanese freshman's ability to recognize "reduced forms" on a post-course test of listening ability. Similarly, Ito (2006) also investigates the role of connected speech in listening comprehension for ESL learners and he concludes that the presence or absence of connected speech did indeed affect listeners' perception.

Matsuzawa (2006) did a similar experiment using a pretest-posttest design with 20 Japanese business people to see if they would benefit from connected speech instruction. The student's listening comprehension ability was measured by a dictation test, and subsequent to the treatment, the posttest scores indicated that the students had made statistically significant improvement.

Other recent studies pursue the instruction of connected speech features and word recognition. With respect to their findings, studies showed that explicit instruction in connected speech processes was effective in improving learners' perception of connected speech processes and therefore should be taught in the classroom (Ahmadian and Matour, 2014; Shimazaki, 2016; Carreira, 2008 and Khaghaninezhad and Jafarzadeh, 2014; Wang, 2005; Lee and Kuo, 2010).

Studies related to Effectiveness of CSP instruction on L2 production

Although there have been numerous studies on the effectiveness of teaching connected speech processes on listening perception and comprehension, few studies have investigated the production of connected speech to see whether it could make speech more intelligible and natural, or whether it could be taught and improved through instruction. This can be largely attributed to the pedagogical priorities of teaching listening to ESL learners since they are more likely to listen than to speak in ESL contexts, and partly to a general belief that CSPs are only a complementary topic in pronunciation teaching and sometimes markers of 'sloppy speech'. Although Anderson-Hsieh, Riney, and Koehler's (1994) research did examine the production of connected speech forms, the study was more about examining how native speakers and non-native speakers differ in the amount of connected speech produced, rather than investigating the effectiveness of instruction on overall pronunciation ability. The results revealed that the higher level students produced more connected speech modifications that were closer to those of English native speakers than the lower level students, which showed that the ability to produce connected speech forms was related to proficiency level.

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The researcher also find few studies (Ashtiani and Zafarghandi, 2015; Underwood and Wallace, 2012; Sardegna, 2011; Kuo, 2012; Melenca, 2001) investigating the effectiveness of connected speech instruction on L2 learners' speech production. Interestingly, after receiving instruction, the experimental group in all studies significantly improved their speech production and developed phonological awareness. More studies investigating the use of connected speech and its influence on intelligibility and overall pronunciation are needed in order to understand the benefits of learning how to produce connected speech.

Indeed, connected speech is the area on which little research has been done and is not taught in any systematic manner in EFL programs in Saudi Arabia, including high school English education. This dearth of empirical information and inconsistent research findings formed the main motivation to conduct the present study.

Study Variables

The study contained the following two variables.

1. An independent variable

The independent variable refers the treatment implemented in this study (the explicit instruction of English "reduced forms" implemented with the experimental group versus the regular instruction received by the control group).

2. A dependent variable

Dependent variables were the subjects' scores on the three tests and the scores of their responses to the items of the attitudinal questionnaire.

Participants

Forty eight homogeneous Saudi students participated in the present study. They were English majors at the English Language and Translation Department at University of Qassim in the academic year 2017-2016 in KSA. They were selected from a pool of fifty six students registered in level four. Students' age ranged from 20 to 22 years. They were enrolled in the "Listening and Speaking" class and met twice per week.

Their homogeneity was measured through Oxford English Language Placement Test, developed and validated by members of the English language department. They were tested in the sections of listening, structure, and reading comprehension. Having taken the Oxford English Language Placement Test, the participants with the intermediate level of proficiency were randomly assigned to two experimental and control groups, each comprising 24 participants. And eight of the students were discarded due to their extreme scores in the test. The experimental group received various types of connected speech instruction, whereas the control group followed the department language programs which centered on the speaking and listening skills which were taught implicitly. The class met twice per week, 75 minutes each session for 12 weeks.

Materials

The course chosen for this research was "Interaction 2 Listening and Speaking Student Book". It was taught for the two research groups who have already finished the previous listening courses including listening and Speaking 1 and listening and Speaking 2. This course is designed to be taught in 12 weeks of the first semester, which means students need to attend hundred fifty-minute per week. As designed in the syllabus, the focus of listening and speaking course is on improving their oral skills. In addition to "Intercation2: Listening and Speaking Book", the researcher uses supplementary materials embedded with features of connected speech in teaching the experimental group. The main source of supplementary materials embedded with features of connected speech used in this study was adapted from different sources (Shimazaki, 2016; Kuo et al, 2016; Underwood and Wallace, 2012; Brown and Hilferty, 2006). These sources provide the learners with some exposure to "connected speech features". The targeted features are (a) Contraction, (b) Reduction, (c) Elision, (d) Intrusion and (e) Assimilation.

Research instruments

In order to answer the research questions, the following tests were used to collect the needed data:

Oxford English Language Placement Test (OELPT)

Oxford English Language Placement Test used as homogenizing tool. This is an online free placement test including 50 items, and is copy right – free, (available at http: // www. Lang. ox.ac. uk / course / tst-English – placement. html.)

In the beginning of this research, two classes which were in level four in English department (56 participants) were selected. Then, the Oxford English Language Placement Test (OELPT) was administered to determine the homogeneity of the participants. Data analysis showed that the 48 of participants (85.7%) were in the same level and 8 (14.3%) students were in another level. So in order to homogenize the participants, eight of participants were discarded. Then, the forty eight randomly assigned to the experimental and the control group.

General English listening comprehension test:

A reliable and valid listening comprehension test was given to the participants as the pre-test and post-test, and the performances of the both groups were compared. The listening test consisted of four conversations selected from audio recordings of actual communications included in the interaction book by Richards and Bohlke (2012) – a total of 50 listening items including various types of questions; true or false items, completion items and multiple choice items.

Reduced forms dictation test

The goal of using this fill in the blank test was to see whether the participants were able to recognize the "reduced words" in the spoken language they hear, and also to see if the instruction of the "reduced forms" will improve their ability to comprehend these forms. In order to achieve this goal, a dictation test consisting of 25 sentences embedded with "reduced forms" was used, and it served as the "reduced forms" pretest and post-test in the current study. The sentences presented in this test contain representatives of five types of reduced forms: contraction, elision, assimilation, reductions, intrusion. These sentences were compiled by the researcher and produced by a native speaker who works as an assistant professor in the English Department, Qassim University (see Appenix C).

In the "reduced forms" recognizing test, participants were asked to listen to each sentence which had some parts related to reduced forms missing as blanks; each sentence was repeated up to three times. The subjects were to fill in the blanks to complete the forms of features of connected speech which were pronounced in reduced form (e.g. gonna, going to). Scoring was based on the correct dictation of certain target features instead of the whole sentence. Omissions were counted as errors.

Test Validity:

The "reduced forms" recognizing test was given to a panel of specialists in the field of applied linguistics to be professionally reviewed. Moreover, the jury members were asked to evaluate the test as a whole in terms of: (a) the items must be representative of natural spoken language with embedded connected speech features to the functions measured, (b) suitability of the sentences to students' linguistic level and (c) suitability of the test to measure the intended skills. Based on the reviewers' feedback and comments, the researcher had to evaluate and fix whatever needed to be fixed, and eliminate some items. By doing so, the validity of the test can be insured.

Test Reliability

In terms of inter-rater reliability, the researcher asked two judges to listen to the recorded speech samples of both speaking tasks to determine whether or not the researcher accurately transcribed each sentence with the appropriate connection. This gives the judges a chance to point out any errors or omissions. No omissions were found by the judges. The transcripts can thus be considered highly reliable with regard occurrence of connected speech processes.

The reliability of the test was also calculated for the EFL learners using Cronbach alpha. The value of Cronbach alpha for the test was .78.

"Reduced forms" Production test:

In order to answer the third research question, a production test was used both as the pre-test and posttest. The aim of the production test is to provide us with information about the students' ability to produce the English "reduced forms" in their daily, informal dialogues. The test of production consisted of two types of spoken samples: a) a sample of the learner reading aloud (ten sentences embedded with connected speech processes) and b) a sample of the learners' speech. These two task types complement each other as Celce-Murcia et al. (2010) observe: "reading aloud does not provide the most natural evidence of a speaker's pronunciation, it is also essential to obtain a more spontaneous sample of spoken English." They also state that the speech sample allows to confirm or to reassess the impressions gained from the analysis of the reading tasks.

In the speech test, the participants were asked to speak for 3 minutes, and meanwhile their speeches were recorded for later analysis. Learners were free to speak about every topic they were interested in. The scoring of the speaking test was based on the number of "reduced forms" produced by the participants. The scoring rubric for this test assessed the students' use of the following five connected speech features, (a) Contraction, (b) Reduction, (c) Elision, (d) Intrusion and (e) Assimilation.

The scoring process was done by two experienced teachers in rating pronunciation mostly from evaluating students in the classes they taught. In addition to this, a script was developed including the connected speech forms that were taught in class to assess the students' performances on producing the connected speech features they have learned. The specific indicators in the dialogue for each item are summarized in Table 13 in appendix. This table was also presented to the raters in their rating guidelines so that it could assist them in paying attention to certain phrases they would be basing their judgments on.

Questionnaire on the instruction of connected speech features

To understand the participants' impressions about the instruction of connected speech features, a questionnaire on the instruction of connected speech features was created by the author and conducted after the treatment. This questionnaire included 30 items. A two-point Likert scale was used and an open-ended item dealing with the problems and difficulties in applying connected speech rules in real situations

Some questions in the survey were extracted and slightly modified from Rosa (2002) and Lin (2011). The other questions were created by the researcher based on his experiences in teaching reduced forms. The items in the survey were all about the participants' perceptions pertaining to connected speech forms instruction.

Questionnaire Validity

The draft questionnaire was submitted to some specialists in the field of TESOL to check validity and convenience with the research purposes. Members of the jury in the field of TEFL were directed to judge the questionnaire statements according to the following criteria:

1- The relation of the statements to the research objectives

2- The clarity of the meaning of the statement to the respondents.

3- The appropriateness of the wording to the intended respondents.

4- Add any phrase or statement that seems to be fit.

5- Delete any inappropriate phrase or statement.

The reviewers suggested that some of the scale's items should be re-written or eliminated in order to be suitable for the study. Accordingly, the researchers agreed with the reviewers' suggestions to modify, and eliminate some items. As a result, the scale ended up with a twenty item attitudes instrument.

Questionnaire Reliability:

To find out reliability degree of the questionnaire, the reliability coefficient (Cronbach alpha) was calculated as an indicator of homogeneity to the level of instrument as a whole.

The attitudinal questionnaire was tested on thirty students who were not members of the current study. A technique of a test-retest was used to ensure the reliability of the research instruments. The period between the pre and the post application was two weeks. A statistical Alpha Cronbach calculation showed a higher level of reliability of 0.840, which is acceptable by the researchers, (Table 1).

Table 1: Instrument's Reliability

Research Tool	No. Items	No. Students	Reliability
Questionnaire	30	24	0.840

Procedures

First, Oxford English Language Placement Test was administered to two classes (56 participants) to determine the homogeneity of the participants. So in order to homogenize the participants, eight of participants were discarded, and the participants (48) with the intermediate level of proficiency were selected. Then, they randomly assigned to the experimental and the control group.

Second, participants of both groups were given three pre-tests for checking their overall listening comprehension ability, their "reduced forms" recognition ability, and their "reduced forms" production ability. The pretests were used to see whether all the participants in both groups were homogenous in their knowledge of the items under investigation.

Third, after pretests, learners in experimental group were given instruction on "reduced forms", but learners in the control group just followed their regular instruction.

Following the pretests, the participants of the two groups were met twice a week. Every teaching session lasted for 75 minutes. The study duration continued for 12 weeks. The control group will follow the regular way in listening and speaking class activities and drills offered by their course book, whereas the experimental group participants will receive explicit instruction on the significance of connected speech features and the role they play in listening comprehension. The teaching content included such connected speech features as contraction, assimilation, reduction, etc. In each lesson, the teacher first explains an idea related to the phonological rules of one of the connected speech features explicitly. Then, learners listened to five example sentences with the connected speech feature. After that, more detailed explanations of the connected speech feature were given. In addition, learners were asked to do dictation exercises related to detailed explanation. Learners listened to some real authentic conversations with the connected speech feature and were required to fill in the blanks with a citation form. Correct answers were checked after the exercises. Finally, students did a few "reduced forms" exercises of words, conversation, and passages in hope of enhancing their production and use of the "reduced forms" in their verbalization.

The researcher was responsible for the treatment of the experimental group. An example of the lesson plan is presented in Appendix A.

Finally, all the participants were given three post-tests for checking their possible improvement in general listening comprehension ability, their "reduced forms" recognition the ability and their "reduced forms" production ability. Then, the results were compared between two groups and also with the participants' pretest results. At the end of the instruction, an attitudinal questionnaire is only given to the experimental group students to investigate their attitudes towards instruction in reduced forms.

Statistical Analysis

To answer the first three research questions, the three tests were administered as pre-tests and post-tests. Two independent t-tests were run for the difference between the mean scores of the experimental group and the control group on each pre-test as well as the post-test. A paired t-test was run to find the difference between the means of the scores on the following tests: the pre- and post-tests for the control group as well as for the experimental group to see if there was any difference between the performance of the subjects on the pre- and post-tests. Moreover, in an attempt to learn what the students in the experimental group thought about the reduced forms instruction, they were asked to do a questionnaire after the treatment. Data obtained from the questionnaire were calculated by using frequencies and percentages and interpreted as levels to indicate how students perceived the use of task based instruction.

Results and discussion

Comparing the Two Groups on the Pre-Tests

The study's pre-tests attempted to compare the participants of the study in three different but interrelated respects of English oral skills before the commencement of the study's treatment. Hence, accordingly, three pre-tests were designed and applied for the participants of the study.

An independent t-test was run to compare the experimental and control groups' mean scores on the three pretests in order to show that both groups were at the same level of proficiency ability prior to the administration of the treatment. Employing three independent-samples *t*-tests, it was revealed that there was no statistically significant difference between these two group's performances on the "overall listening comprehension pre-test" (p = .305> .05) (Table 2), the "reduced-forms recognizing pre-test" (p = .077> .05) (Table 3) and the "reduced forms" production pre-test (p = .020> .05) (Table 4).

Table 2 An Independent T-test results for the Comparison of Pre-test Scores between Control Group and Experimental Group in the listening skills Test prior to Experimentation

Group	N.	Mean	SD	T	DF	Sig.
Control	24	22.29	2.645	1.038	46	.305
Experimental	24	21.50	2.638			

Table 3 An Independent T-test results for the Comparison of Pre-test Scores between Control Group and Experimental Group in the "reduced forms recognition" Test prior to Experimentation

Group	N.	Mean	SD	T	DF	Sig.
Control	24	19.75	3.110	.197	46	.077
Experimental	24	19.54	4.139			

Table 4 An Independent T-test results for the Comparison of Pre-test Scores between Control Group and Experimental Group in the "reduced forms" production Test prior to Experimentation

Group	N.	Mean	SD	T	DF	Sig.
Control	24	8.63	1.135	-.094	46	.020
Experimental	24	8.67	1.857			

Based on these results, it can be concluded that there is not any significant difference between the mean scores of the experimental and control groups on the pre-tests. That is to say the two groups were homogenous in terms of their listening and speaking abilities before the administration of the treatment to the experimental group. To sum up, the three applied independent-samples t-tests revealed that participants of both groups were approximately similar in their listening ability in general and in "reduced forms" recognizing and producing, in particular.

It was reasonable to assume that these two groups were at about the same proficiency level of English before treatment was conducted.

Within-group Comparisons: paired-samples t-test

a) Performance of Participants of Both Groups on "Overall Listening Comprehension" Pre and Post-Test

In order to scrutinize the difference between the experimental group's performances on the pre and the post "overall listening comprehension" test, a paired-samples t-test was run. Likewise, another paired-samples t-test was run to examine the difference between the pre and post-test means of the control group. Based on the results displayed in table 5, descriptive analysis showed that, the means of the experimental group on the post-test were higher than that of theirs on the pre-test (Experimental: pre-test = 21.50, post-test = 40.25 / Control: pre-test = 22.29, post-test = 26.88). Table 5 shows the reports of the used paired-samples t-tests which reveal that there were significant differences between the experimental and the control participants' performances on general listening comprehension pre and post-tests. As the results suggest, participants of both groups made statistically significant improvements in their overall listening comprehension ability after 10 weeks of general listening comprehension training.

Table 5 Paired Samples t-test of the Comparison of the Mean of the listening Pre-test and Post-test within the Group

Group	Pre-test Mean SD)	Post-test Mean (SD)	df	t-Test	Sig.
Control (n=24)	22.29 (2.645)	26.88 (2.864)	23	-10.887	.000
Experimental (n=24)	21.50 (2.638)	40.25 (4.306)	23	-17.829	.831

B) Performance of Participants of Both Groups on "Reduced Forms" Recognition Pre and Post-Test

Descriptive statistics showed that the post-test mean of the experimental group on "reduced forms" recognizing was higher than its pre-test mean (pre-test = 19.54, post-test = 37.88) A paired-samples t-test was conducted to investigate if this difference was significant. As Table 6 indicates the experimental group made a significant improvement in the "reduced forms" recognizing post-test (p = .000 < .05). Although the post-test mean of the control participants on "reduced forms" recognizing test was also higher than that of theirs on pre-test (pre-test = 19.75., post-test = 23.21) but as Table 6 indicates the control participants did not make a high improvement in the "reduced forms" recognizing post-test (p = .000> .05) as much as their peers in the experimental group in recognizing "reduced forms".

Table 6 Paired Samples t-test of the Comparison of the Mean of the "reduced forms recognition" Pre and Post-test within the Group

Group	Pre-test Mean (SD)	Post-test Mean (SD)	df	T -Test	Sig.
Control (n=24)	19.75 (3.110)	23.21 (2.782)	23	-4.945	.000
Experimental (n=24)	19.54 (4.139)	37.88 (2.626)	23	-20.186	.000

Therefore, a positive answer could be given to the second research question. That is, "connected speech" practice was shown to be effective in increasing Saudi EFL learners' ability to understand "reduced forms".

Performance of Participants of Both Groups on "Reduced Form Production" Pre and Post-Test

According to the descriptive statistics, the post-test mean of the experimental group on producing "reduced forms" was higher than that of theirs on pre-test (pre-test = 8.67, post-test = 15.33). A paired-samples *t*-test was conducted to investigate if this difference was significant. Table 8 indicates that the experimental group made a significant improvement in the "reduced forms" production post-test (p= .680 < .05) which suggests the "reduced forms" instruction was effective in improving participants' "reduced forms" production. On the contrary, as Table 7 indicates, the control group made a scant improvement in the "reduced forms" producing post-test (p = .000 > .05).

Table 7 Paired Samples t-test of the Comparison of the Mean of the "reduced forms" production Pre and Post-test within the Group

Group	Pre-test Mean (SD)	Post-test Mean (SD)	df	T -Test	Sig.
Control (n=24)	8.63 (1.135)	10.13 (1.116)	23	-8.307	.000
Experimental (n=24)	8.67(1.857)	15.33 (1.494)	23	-14.338	.680

Therefore, a positive answer can be given to the third research question. That is, "reduced forms" practice could increase Saudi EFL learners' ability to produce "connected speech" in their daily speech.

Post tests

a) Comparing the Two Groups on the Administered Post-Tests

According to the results obtained, the post-test mean of the experimental group on "general listening comprehension" test was higher than the post-test mean of the control group (see table 8). An independent-samples t-test was used to examine if this difference was significant. Table 8 reveals that there was a significant difference between these two group's performances in the "general listening comprehension" post-test ($p = 0.00 \cdot < .05$) i.e., the experimental group significantly outperformed the control on this test. Consequently, it can be concluded that "connected speech" practice was effective in increasing Saudi EFL learners' general listening comprehension ability. Therefore a positive answer could be given to the first research question. According to the obtained results, there was a support for the first hypothesis stating that instructing "connected speech features" to the experimental group participants does not affect their overall listening comprehension.

Table 8 An Independent T-test results for the Comparison of Post-test Scores between Control Group and Experimental Group in the listening Skills Test

Group	N.	Mean	Std. Deviation	T	DF	Sig.
Control	23	26.88	2.864	-12.670	46	.000
Experimental	23	40.25	4.306			

Through employing another independent t-test it was revealed that there was a significant difference between the participants of two group's performances in the "connected speech" recognition post-test (p = .591< .05); the experimental group significantly outperformed the control group on the "connected speech" recognizing post-test, accordingly, a positive answer can be given to the second research question. This is shown in table 9. According to the obtained results, there was a support for the second hypothesis stating that instructing English "reduced forms" to the experimental group participants would increase their ability to recognize them in the spoken language.

Table 9 An Independent T-test results for the Comparison of Post-test Scores between Control Group and Experimental Group in the "reduced forms recognition" test

Group	N.	Mean	SD	t	DF	Sig.
Control	24	23.21	2.782	-18.783	46	.591
Experimental	24	37.88	2.626			

A third independent-samples t-test depicted that there was statistically significant difference between these two group's performances in the "connected speech" production post-test (p = .063 < .05). Since experimental group significantly outperformed the control group in the "connected speech" producing post-test, it could be concluded that "connected speech" practice was effective in increasing the learners' ability in producing the English "reduced forms" in their daily conversations (see table 10). Hence, a positive answer could be given to the third research question. According to the obtained results, there was a support for the second hypothesis stating that teaching English "reduced forms" to the experimental group participants would enable their ability to produce them in their own daily verbalizations.

Table 10 An Independent T-test results for the Comparison of Post-test Scores between Control Group and Experimental Group in the "reduced forms" production Test

Group	N.	Mean	SD	T	DF	Sig.
Control	24	10.13	1.116	-13.685	46	.063
Experimental	24	15.33	1.494			

In the posttests, however, the experimental group showed a better performance than the control group in the three posttests. Moreover, the comparisons between pretest and posttest of the experimental group suggests that the performance of the experimental group was better after the treatment, while scant progress was seen in the posttest scores of the control group after the treatment. Therefore, it may be said that instruction of connected speech features improved participants' speech comprehension and production. The increase of the amount of exposure to connected speech features and explicit instruction of the rules of connected speech features may have contributed to the enhancement of the speech comprehension and production. The researcher also felt that the more learners are exposed to L2 language, the chance that they can improve their listening skills would increase. In the present study, the participants were exposed to the sounds of connected speech features through example sentences and exercises. Therefore, through exposure to connected speech features, the participants in this study may have become familiar with the sound of connected speech features. This may have led to the successful decoding.

Of course, Effective methods of listening instruction are required in addition to exposure. In the present study, the rules of each connected speech features were taught explicitly. Such explicit instruction has some advantages. Firstly, it avoids variation between learners. If the rules of connected speech features are taught implicitly, some students may be able to discover the rules of connected speech features but others may fail

to do so. Secondly, it avoids inefficient learning. The explicit instruction may lead to learners noticing these features earlier. Since connected speech features are one of the fields that can be taught intensively, it should be taught intensively and explicitly. Therefore, the researcher thinks that this combination, namely, both the increase the amount of exposure and the explicit instruction helped enable participants to decode the sound with connected speech features automatically and to decrease their burden on working memory, and this contributed to the improvement of recognizing each word in connected speech better.

Questionnaire on the instruction of connected speech features

In order to answer the fourth question of the research, (i.e., What are the Saudi students' perceptions and attitudes towards the use of instruction in connected speech features), a survey of 30 questions was given to 24 students who had learned reduced forms throughout the first semester of 2016/17.

The questionnaire asked participants to rate the 30 questions as "agree, or disagree". The students are also asked to answer an open-ended question at the end of the questionnaire. The questionnaire was only given to the experimental group participates at the end of the treatment. The results were analyzed in terms of frequency and percentage to find out the students' attitudes towards teaching connected speech features.

The questionnaire results in table 11 show that connected speech forms instruction was important and helpful for listening comprehension.

Students' awareness of connected speech features before the treatment

In order to understand to what extent the Saudi participants knew about the reduced forms targeted in this study, we asked the participants in a survey if they knew about the forms before participating in the study. Only eight students of the experimental group stated their awareness of aspects of connected speech, whereas sixteen participants (66.7%) reported that they were not familiar with aspects of connected speech before the treatment (item 8). The above result shows that several students do not know that reduced forms play an important role in the pronunciation of English. In relation to item 29, 66.7% of the students agreed with option, "Before learning connected speech rules, they cannot understand what is said when spoken naturally". Moreover, more than three quarters of participants (83%) cannot recognize individual words in connected speech before treatment (item 13). In addition to this, 95.8% of the students reported that their English listening courses have not covered connected speech features (item 26). This suggests that a high percentage of the students are unaware of the rules of connected speech features before treatment. This indicates that students lack the exposure to connected speech features, and it also shows to what extent they are in need for connected speech instruction. This result accords with Laoubi (2010) who found that the majority of students in his study are unaware of the rules, or they do not know how to apply them.

Table 16 (item 19) presents that the majority of the participants (87.5%) reported in their answers to the questionnaire that learning connected speech features is too difficult before participating in the study. What makes the issue get more worse, 75% of the learners said that they had never learnt rules of connected speech (item 10) and didn't get any instruction in connected speech before (item 12). This suggests that some English teachers in Saudi Arabia were unaware of the importance of comprehending connected speech and did not provide instruction on the connected speech forms. This result indicates that even if some English teachers taught the reduced forms, the instruction might have just provided explicit knowledge of the forms with little or no development of receptive skills. It is also possible that reduced forms instruction coming from non-native speakers is less effective due to inaccurate pronunciation.

Students' perceptive of connected speech features after the treatment

When the participants were asked whether they are aware of the importance of connected speech in teaching ESL listening after the treatment, results shown in table 11 demonstrate that 95.9% of the participants choose "Agree" (item 9). In relation to item (18), all the participants agreed that the instruction increases their familiarity with

aspects of connected speech (i.e. assimilation, elision, assimilation, intrusion, contraction and so on). This suggests that the instruction has a positive effect in increasing students' awareness of phonological rules. Another positive finding was that 87.5% of the students can actively participate in listening comprehension after they learned about connected speech rules (item 30).

With regard to item (11), 79 % of the students report that they can apply the rules of connected speech in their English language easily after treatment. In item 14, 91.7% of the participants can identify individual words in connected speech smoothly better than before. Moreover, all the participants perceive that this training increases their familiarity with aspects of connected speech (i.e. assimilation, elision, assimilation, intrusion, contraction and so on).

As far as English-listening and speaking curriculum is concerned, students expect to see reduced forms instruction in English education (see table 11). In item 28, the overwhelming majority of students (95.8%) believed that connected speech forms instruction should be covered in English-listening and speaking courses and that textbooks should include reduced forms exercises. This finding is in line with that reached by Lin (2011) and Brown and Hilferty (2006) which reported that the students in their studies could apply the connected speech rules in real life.

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Table 11 Students' perspectives towards teaching connected speech features

No.	Items	Agree		Disagree	
		N0.	%	N0.	%
1	I like to learn the rules that govern connected speech forms.	20	83	4	17
2	Learning connected speech rules are helpful in understanding spoken English.	19	79	5	21
3	I feel learning connected speech rules is interesting for me.	22	91.7	2	8.3
4	I thought that learning connected speech is useful for me.	21	87.5	3	12.5
5	I enjoyed learning connected speech.	20	83	4	17
6	I think learning reduced forms is great for learning natural speech.	19	79	5	21
7	Learning connected speech gave me confidence.	18	75	6	25
8	I am unaware of the rules of connected speech features before treatment.	16	66.7	8	33.3
9	I am aware of the importance of connected speech in improving listening comprehension after the treatment.	23	95.8	1	4.2
10	I had never learnt rules of connected speech before.	18	75	6	25
11	I feel I can apply the rules of connected speech in my English language easily after treatment.	19	79	5	21
12	I didn't get any instruction in connected speech before.	18	75	6	25
13	I cannot recognize individual words in connected speech before treatment.	20	83	4	17
14	After treatment, I can identify individual words in connected speech smoothly better than before.	22	91.7	2	8.3
15	I was satisfied with learning connected speech.	20	83	4	17

No.	Items	Agree		Disagree	
		N0.	%	N0.	%
16	Learning connected speech features helps me feel better about English.	22	91.7	2	8.3
17	Learning connected speech features makes me speak English more naturally and smoothly.	18	75	6	25
18	This training increases my familiarity with aspects of connected speech (i.e. assimilation, elision, assimilation, intrusion, contraction and so on).	24	100	0	0
19	I feel that learning connected speech features is too difficult.	21	87.5	3	12.5
20	I feel that learning connected speech improves my listening skill.	20	83	4	17
21	I feel that learning connected speech improves my speaking skill.	20	83	4	17
22	I think that teaching reduced forms is an important element to teach in listening and speaking classes.	21	87.5	3	12.5
23	This training Introduces me to how language is used in the real world.	23	95.8	1	4.2
24	I think that teaching reduced forms is an important element to teach in ESL listening classes.	22	91.7	2	8.3
25	I can produce sentences embedded with connected speech features after treatment.	20	83	4	17
26	My English listening courses have not covered connected speech features.	23	95.8	1	4.2
27	Learning connected speech helps me understand natural real English.	18	75	6	25
28	English-listening and speaking textbooks Should include reduced forms exercises.	24	100		
29	Before learning connected speech rules, I cannot understand what is said when spoken naturally.	16	66.7	8	33.3
30	I actively participate in listening comprehension after I learned about connected speech rules.	21	87.5	3	12.5

Students' attitudes towards the benefits of learning connected speech to listening and speaking skills

When students were asked to reveal their attitudes towards the benefits of learning connected speech features to listening and speaking skills, every statement scored relatively high. That's, more than 80% of the students agreed that learning connected speech improves their listening and speaking skills. This experimental group also considered connected speech forms to be Very important in teaching ESL listening comprehension, with 87.5% choosing this option (item 22).

According to the data from the questionnaire (item 21), a high percentage of participants (87.5%) agreed learning connected speech features improved their speaking since they perceived at the end of the study they had better oral skills; the data revealed that students' speaking skills had a tendency to get better since the students perceived themselves as being more prepared when establishing a conversation. Thus, it is important to highlight that students perceived that their needs were fulfilled and their self-image increased positively since they felt they could have a good use of their speaking skills. This means that in the students' opinion, learning connected speech features improves their listening and speaking skills.

The information from the questionnaire (item 25) also shows that at the end of the study, 83% of the students reported that they can produce sentences embedded with connected speech features after treatment. In item (17), 75% of learners reported that learning connected speech features makes them speak English more naturally and smoothly.

This indicates that the participants are aware of the importance of connected speech features in listening after the treatment. The participants considered reduced forms to be an important and helpful aspect for learners' listening comprehension and speaking ability. This finding goes in accordance of the results of Laoubi (2010) who concludes that the students in his study who are aware of the importance of weak forms in listening will perform better than those who are not.

The participants' feelings towards learning connected speech features

In item 3, the overwhelming majority of students (91.7%) reported that they were interested in learning the phonological rules that govern connected speech forms. This is probably because once students internalize these rules, they are able to grasp how reduced forms are formed. In item 4, the majority of the participants (87.5%) felt that learning connected speech features was useful for them. Also, according to the questionnaire data, a high percentage of students (83%) expressed their enjoyment for learning connected speech. In relation to item (7), three quarters of the participants (75%) agreed that learning connected speech helps them build their confidence as they realized that they could understand real conversational English. In item 15, more than three quarters of the students (83.3%) expressed their satisfaction with learning connected speech. This indicates that most students were satisfied with and enjoyed the connected speech instruction, consistent with previous studies (Carreira, 2008; Matsuzawa, 2006). Such enjoyment and satisfaction might enhance motivation for learning English, leading to improvements in listening fluency.

Students' opinions regarding the effectiveness of connected speech instruction in learning English

In relation to their opinions about the effectiveness of connected speech instruction in learning English, 83% of the participants like to learn the rules of connected speech forms (item1). In relation to item (2), 79% of the experiment group participants perceived that learning connected speech helps them better understand spoken English, and it is great for learning natural speech. In item 16, the majority of the students (91.7%) agree that learning connected speech features helps them feel better about English. In item 23, the participants also report that this training introduces them to how language is used in the real world (95.8%).

Students' opinions regarding the problems and difficulties in applying connected speech rules in real situations

The open-ended section of the questionnaire asked respondents to write their impressions of the lessons regarding the problems and difficulties in applying connected speech rules in real situations. The result for the first problem (21 students or 87.5%) revealed that there are too many rules which are too difficult to remember. The problem that was least troublesome was "having a lot of connected speech rules but can't apply them in real life", (4 students or 16.7%).

Table 12 Problems and difficulties in applying connected speech rules in real situations

problems and difficulties	No. of respondents	%	Rank
Too many rules which are too difficult to remember.	21	87.5	1
Cannot spontaneously apply the knowledge learned	17	70.8	2
Cannot speak naturally because of adhering to the connected speech rules too rigidly	11	45.8	3
Connected speech rules applied but still have some communication problems	9	37.5	4
Have a lot of connected speech rules but can't apply them in real life	4	16.7	5

Respondents commented further in an open question about the problems and difficulties by saying that studying connected speech rules is very difficult, so basic knowledge should be provided before practice. They also suggested that further examples and exercises to support teaching each connected speech aspect should be provided because it can help students understand more clearly and prevent students from forgetting what they have learnt. Some students also felt there were too many details in each topic and they needed some time in practicing exercises. Finally, they found video tapes showing how to produce reduced forms by English native speaker should be made available.

Based on the results of the questionnaire, it has been detected that the subjects in the present study were asked to express their opinions regarding connected speech. They agreed that the course was of high help to them since they could be exposed to these features and learn them as prefabricated expressions to help learners cope with streamed speech when delivered rapidly in a typical conversation. According to the questionnaire results, there was a support for the fourth hypothesis stating that Saudi EFL students have positive perceptions and attitudes towards the use of explicit instruction in connected speech features. Additionally, the results of the questionnaire showed that the experimental group participants enjoy learning and using these connected speech features, which confirms the findings of Rogerson (2006), who found that students were highly motivated to learn them. Similarly, the questionnaire findings partially confirm those of previous study (carreria, 2008; Brown and Hilferty, 2006; Matsuzawa, 2006), where the results shows improvement in listening comprehension and speaking ability after teaching reduced forms.

Discussion

The main purpose of this research was to discover whether teaching features of connected speech could boost Saudi EFL learners' speech comprehension and production. Based on the results of data analyses presented above, one could observe notable progress in the experimental group's performance after receiving instruction on connected speech features, while there was scant progress in the control group's performance (Tables 9, 10 and 11). Thus, the three null hypotheses are confirmed and the research questions can be answered; that is, teaching connected speech has positive effects on EFL learners' speech comprehension and production.

The responses from the questionnaire regarding students' perceptions towards connected speech instruction were wholly positive and are compatible with the findings of the three posttests. The experimental group students felt interesting and confident in learning and practicing the connected speech features; and they achieved progress in their comprehension and production. The findings of the study also reveal that the elements of connected speech features can be instructed to EFL learners of English, and this goes in accordance with the conclusions of earlier studies (Wickins, 2016; Ting and Kuo, 2012; Brown and Hilferty, 2006; Ahmadian and Matour, 2014; Underwood and Wallace 2012) which reached to the conclusion that the elements of connected speech features can be taught to non-native speakers of English and instruction on connected speech improved comprehension and production of connected speech by EFL students.

The findings of the present study are also in line with the results of other studies (Shimazaki, 2016; Kuo et al, 2016; Khaghaninezhad and Ghasem Jafarzadeh, 2014; Cormier, and Matsuzawa, 2013; Underwood and Wallace, 2012; Kodera, 2012; Sardegna, 2011; Carreira, 2008; Ito, 2006; Wang, 2005; Fan, 2003; and Norris, 1995) that investigated the teachability and effectiveness of an explicit instruction in connected speech on EFL learners' speech comprehension and production. These current and previous studies confirmed that "connected speech forms" instruction was effective in raising boosting EFL learners' "reduced forms" understanding as well as their ability to produce them.

In summary, the findings from Research Questions have extended our knowledge of the effect of connected speech instruction on learners' speech comprehension and production in several ways. First, the significant gains made by the Saudi students in the present study suggest that these findings might be generalizable to the broader population of Saudi English major students. Second, the results might therefore be replicable in other learning contexts. Third, these findings begin to extend teachers' knowledge of non-native speakers' comprehension of reduced forms in the context of a conversation. The analysis of student comprehension during the conversations indicates that students were clearly able to understand each other's use of reduced forms in the context of natural real conversations.

Conclusion

This present study has focused on the Saudi EFL students' perception and production of "reduced forms". The study has investigated the effect of an explicit instruction in "reduced forms" on boosting EFL learners' overall listening comprehension, "reduced forms" understanding, and also their ability of producing the "reduced forms", since it is believed that listening and speaking skills are closely inter-related. In order to achieve the study aims, a total of 48 Saudi EFL learners were recruited and grouped as the experimental and control group of the study. Three pre-tests were administered to examine the effect of instruction in "reduced forms" on the students' perception and production of "reduced forms". Additionally, an attitudinal questionnaire is only administered to the experimental group after the treatment.

The study results indicated that experimental participants had outperformed on "reduced forms" recognition and production tests than their peers in the control group as the result of the explicit instruction they received during the course of study. The questionnaire results also show that the experimental group participants have positive attitudes towards instruction in connected speech features. All in all, upon examining the empirical data collected from the experimental situations – comprehension and production–, we can say there is noticeable improvement in comprehending and producing the "reduced forms". These conclusions highlight the students' need for a greater amount of exposure and speaking practice to give them the perceptual and productive input necessary to develop and establish the target pronunciation patterns examined.

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