DISFLUENCIES IN SPONTANEOUS ENGLISH DIALOGUES PRODUCED BY THAI LEARNERS OF ENGLISH

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ABSTRACT

The purposes of this study were to quantitatively examine: 1) types of the disfluencies in spontaneous English dialogues produced by native Thai learners of English, 2) the intentions of the Thai learners as speakers when producing each disfluency type during conversation, 3) native English-speaking hearers' interpretations of each disfluency type, 4) the difference between the speakers' intentions and the hearers' interpretations of the disfluencies, and 5) the difference in the disfluency types produced by the speakers with different levels of English proficiency. The instruments included spontaneous dialogues and a checklist for intentions/interpretations of disfluencies which were designed based on two theoretical views: cognitive and sociolinguistic. The participants included 30 Thai learners of English, the fourth-year students with similar experience of English exposure.

The findings revealed that, first, the speakers produced three main disfluency types with their sub-types: pauses (lexicalized filled pauses, non- lexicalized filled pauses, and unfilled pauses), repetitions (self-repetitions and other-repetitions) and repairs (self-initiated repairs and other-initiated repairs). Second, the speakers indicated three intentions in using the disfluencies: disfluencies as markers for cognitively managing speech production difficulties; disfluencies as discourse markers serving textual functions; and disfluencies as conversational devices for interpersonal functions.

Third, the hearers also identified their interpretations of the disfluencies under the same three functions as indicated by the speakers. Fourth, the speakers' intentions in using disfluencies and the hearers' interpretations of the disfluencies were found statistically different. However, their perceptions of L2 disfluencies' roles in conversation were found in the same direction. Cognitively managing speech production difficulties was the function rated with the highest tendency to occur. Textual functions were rated as the second highest, while interpersonal functions were placed at the lowest. Last, statistically, the speakers with different levels of language proficiency produced significant different proportions of disfluency types. However, the speakers of all proficiency levels revealed the same pattern of frequency for the disfluency types; that is, pauses were found at the highest number, repetitions were the second highest, and repairs were the lowest. In conclusion, types of disfluencies and their frequencies indicated the levels of the learners' speaking ability. The roles of disfluencies in speech communication as perceived by both the hearers and the speakers tended to be the same, while the proportions assigned to each role for each disfluency type by the speakers and the hearers were statistically different.

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CHAPTER I

INTRODUCTION

Rationale

"Disfluencies" is a technical term used to refer to normal breaks that disrupt the flow of speech without changing the core meaning of the utterances (Brutten, 1963; Jonhson, 1961; Kolk, 1991; Wingate, 1984b; Fox Tree, 1995). They are seen common in spontaneous speech (Swerts, et al., 1998). It was reported that, as a native norm of American English speakers' conversational speech, disfluencies occur at the rate of 6 times per 100 words and in every 15 words (Bortfeld, et al., 2001; Fox Tree, 2002; Shriberg, 1994). The forms of disfluencies that are widely recognized are *uh, um, ah, er*, slips of the tongue, and repetition or correction of words (Chomsky, 1965; Clark & Fox Tree, 2002; Oomen & Postma, 2001; Smith & Clark, 1993; Watanabe, Hirose, Den, & Minematsu, 2007). Disfluencies that have been proposed by previous studies (Johnson, 1961; Mahl, 1957; Maclay & Osgood, 1959; Shriberg, 1994; Clark & Wasow; 1995; Schnadt, 2009; Allwood, et al., 1990; Savova, 2002; Levelt, 1983) can be broadly classified as pauses (filled pauses, unfilled pauses (silent pauses), repairs, prolongations, and repetitions.

The phenomena of disfluencies are explained through two theoretical views: cognitive and sociolinguistic views.

Through cognitive view, disfluencies are errors in speech production process. The view is based on the assumptions that linguistic representations of an utterance are retrieved in order from semantics and syntax to phonology. That is, the speech production process is fed forward in only one direction from conceptual meaning to sound representations. The cognitivists believe that there are two main levels of speech production process. One is macroplanning level. It involves generating ideas and retrieving the appropriate information to serve the communication goal. The other one is the microplanning level. At this level, the conceptual message from the macroplanning level is converted into a preverbal message and then fed further into the formulating

process to be encoded with syntactic and semantic features. Then, before the message is uttered, it is encoded again with morphological, phonological, and phonetic features. The disfluencies that represent difficulties in speech production process can be recognized when speakers suspend their utterance to search for vocabularies, grammaticality, information, or pronunciation. For the cognitivists, these suspensions signal speakers' cognitive problems in producing speech and cannot be controlled by the speakers. The speech errors are avoided by means of a checking mechanism or self-monitoring process and the checking process can cause disfluencies in different forms such as pauses, repetitions, and repairs (de Bot, 1992; Sajavaara, 1987, Tang, 2015; Johnson, 1961; Fromkin, 1971; Gamett, 1975; Levelt, 1989; Levelt, et al., 1999; Fromkin & Ratner, 1998).

Through sociolinguistic view, based on the assumptions that language is a social and cultural phenomenon, a process of social interaction, and its main focus on how language functions in communication socially (Trudgrill, 1983; Wardhaugh, 1986; Schiffrin, 2001), disfluencies in utterances are seen as a unit of language which are associated with interactional roles among participants in a spoken discourse (Tubbs & Moss, 1981). The roles include disfluencies as discourse markers in conversations and disfluenices as speakers' communication strategies.

Disfluencies are considered serving as discourse markers indicating interpersonal obligations between hearers and speakers when they are used as the speakers' way to successful communication (Allwood, et al., 1990; Clark, 1996; Schmidt & Corley, 2006; Hartsuiker & Notebaert, 2010; Shriberg, 1996; Clark & Fox Tree, 2002; Scollon & Scolon, 2001). They are markers of interactive process in speech communication. The speakers produce them for an interactional purpose such as turn taking, holding and leaving speaking floor (Fuller, 2003; Wang, 2009; Zhao, 2013; Bu, 2013; Fehringer and Fry, 2003; Hilton, 2007, 2008; Liu, et al., 2010; Chen & Pu, 2002; Schiffirn, 1987) and they can be the cues for the hearers to predict about the upcoming speech (Fox Tree & Clark, 1997; Bailey & Ferreira, 2003; Arnold, et al., 2004; Fox Tree, 2001; Corley, et al., 2007; MacGregor, et al., 2010; Arnold, et al., 2007; Corley, 2010; Tottie, 2011; Lau & Ferreira, 2005).

Disfluencies are analyzed as communication strategies when they are used for creating appropriateness and efficiency in speech communication (Hymes, 1972;

Halliday, 1978; Canale & Swain, 1980; Whitman & Boase, 1983; Luoma, 2004; Vural, 2008). Disfluencies in such aspect function as the speakers' devices in gaining time for thinking and trying to successfully deliver the intended message within a limited time (de Bot, 1992; Sajavaara, 1987; Tang, 2015). Thus, the final goal of disfluencies as communication strategies is to facilitate a mutual communication for creating a mutual understanding among the participating speakers.

It can be concluded that disfluencies through cognitive view are considered symptoms of cognitive problems during speech production processes and cannot be controlled by the speakers. They indicate degree of automaticity of self-monitoring process, checking, and reconfirming corrections. Through sociolinguistic view, disfluencies are signals for expectation of delayed utterance and speaking turn; they demonstrate the needs of more time for planning, encoding, and articulating speech; they are cues for hearers to predict the upcoming speech with consideration of current context; and they are under the speakers' control.

Disfluencies are found in the speech produced in both first language (as above citation) and second language (Fehringer & Fry, 2007; Belz & Klapi, 2013; Hilton, 2007; Riazantseva, 2001; de Jong, et al., 2013; Liu, 2013; Hilton, 2008b, Vural, 2008; Kim, 2010; Bila & Dzambova, 2011; Kasper, 2006; Yoon, 2009).

In first language studies, disfluencies are reported as the indicators of the speakers' communication difficulty in which the occurrence of disfluencies cannot be controlled (Chomsky, 1965; Watanabe, et al., 2007; Levelt, 1983, 1989; Levelt, et al., 1999; Fromkin & Ratner, 1998; Harley, 2000). Conversely, they are viewed as the indicators of speakers' ways of communicative management (e.g. Allwood, et al., 1990; Clark, 1996; Schnadt & Corley, 2006; Hartsuiker & Notebaert, 2010; Shriberg, 1996; Clark & Fox Tree, 2002) in which their presence in an utterance is purposeful. For example, pauses and repetitions have been analyzed as signals of a speaker's speaking difficulties and hesitation which are under the speaker's control for making a choice or a change by deleting, reordering, inserting, or substituting words (Allwood, et al., 1990). Such use of the disfluencies as linguistic devices for accommodating planning difficulty during speech production process is supportive to successful

communication (Brennan & Williams, 1995; Fox Tree & Schrock, 2002; Schnadt, 2009). That is, the speakers can make use of disfluencies to facilitate their communication.

In conclusion, through cognitive view, disfluencies in L1 speech can reflect speakers' difficulties in cognitively processing speech production with less control from speakers while through sociolinguistic view, they serve as a conversational mechanism used for facilitating interaction in communication.

For second language speakers, disfluent speech, which is reflected through the higher frequency of disfluencies in comparison to the native norm, is recognized as the signature of novice second language speakers (Kasper, 2006). The findings of previous studies (Fehringer & Fry, 2007; Belz & Klapi, 2013; Hilton, 2007; Riazantseva, 2001; de Jong, et al., 2013; Liu, 2013; Hilton, 2008b, Vural, 2008; Kim, 2010; Bila & Dzambova, 2011; Kasper, 2006; Yoon, 2009) revealed that non-native English speakers illustrate inappropriate segmentation of the discourse and the overuse of pauses. The higher number of pauses in their oral productions is perceived and assessed as non-fluent revealing their deficiency of English language competence (Kasper, 2006; Bila & Dzambova, 2011) and as needs of more time for cognitive activities: planning, encoding, and articulating speech. The deviant segmentation tends to disturb the hearer and weakens hearer's comprehension (Bila & Dzambova, 2011).

Since it is difficult to investigate how speech production is processed cognitively, the researchers in this field observe the processes through speaker's utterances. Levelt's (1989) blueprint for speech production has been widely acknowledged by those researchers. The blueprint illustrates that speech production processes involve a speaker's cognitive processes of planning and performing utterances. The processes begin with conceptualizing a message before sending to the formulator for encoding linguistic representations in order to form grammatical structures and interrelation between syntactic and semantic features, then; feeding to the articulator for assigning phonological and phonetic features, and the message is finally articulated into an utterance. These stages work in a serial pattern. Speech errors are avoided by means of a checking mechanism (Fromkin & Ratner, 1998; Levelt, et al., 1999).

According to the cognitive view, disfluencies occur when a speaker is monitoring for speech errors and responds by making filled pauses (e.g. *uh, um*),

unfilled pauses (silence), prolongations (*"theeeee.."* for *"the"*), repairs (e.g correction, insertion, substitution, deletion, false starts), repetitions, and saying editing terms (e.g. *"I mean"*, *"sorry"*) (as discussed in Johnson, 1961; Mahl, 1957; Maclay & Osgood, 1959; Shriberg, 1994; Clark & Wasow; 1995; Schnadt, 2009; Allwood, et al., 1990; Savova, 2002; Levelt, 1983). In addition, there is evidence that the mechanisms of L1 and L2 monitoring and self-repair behavior share some similarities regarding to the pattern in processing language production (van Hest, 1996; Kormor, 2002; Shriberg, 1994). However, due to the less automatic processing of L2 speech, L2 speakers produce higher frequency of disfluencies than L1 speakers do. Furthermore, the nature of repairs found in the learners with low level of L2 proficiency are at syntactic level while those produced by advanced L2 speakers are at discourse level. Thus, the relationship between L2 speakers' language proficiency and the types of repairs can be evidence of L2 acquisition.

In addition, Kormos (2006) explains the phenomenon that speakers' monitoring for errors is an important checking process for speech production in both L1 and L2 speeches. Based on the assumption that self-corrections are overt manifestations of the monitoring processes, the relationship between self-monitoring and speech production has been used as a construct for testing both L1 and L2 productions (Kormos, 2000b; van Hest, 1996; Kormos, 2011). Monitoring involves checking of both internal and external speeches with application of the speaker's existing linguistic system (Levelt, et al., 1999; Kormos, 2011). When speakers detect an error in their utterance, they suspend their speech and execute a correction using linguistic rules and lexical items in their long-term memory (Levelt, 1989) However, for L2 speakers, their limited L2 knowledge may lead to less degree of automaticity comparable to L1 speakers; and it results in taking longer time for paying attention to monitoring and detecting errors (Shriberg, 1994). The memory capacity and automaticity of speech processing have an effect on L2 language production as evidenced by the frequent use of disfluencies such as fillers, repetitions, and reformulations or repairs (as discussed in Fehringer & Fry, 2007; Belz & Klapi, 2013; Hoshino, 2006). Kormos (2011) added that L2 speakers need more time not only for detecting errors; but, also for reconfirming that the correction is true.

Through different perspectives, there is evidence indicating that both high- and low-proficient L2 speakers can produce high number of disfluencies although they focus on different points for repairs (Swain, 1995; O'Connor, 1988; van Hest, 1996a, 1966b; Fehringer & Fry, 2007; Gilabert, 2007). Thus, the number of disfluencies in L2 speech may not indicate L2 acquisition. As a result, the current study also aims to investigate the interaction between L2 speakers' level of language proficiency and the types of the disfluencies used in order to be able to determine the degree of relationship between the two variables by comparing the occurrences of disfluencies in L2 speeches produced by L2 learners who have different levels of language proficiency. The knowledge will be useful for understanding L2 acquisition through their use of disfluencies in a dialogue.

In sum, according to cognitive theoretical perspective, L2 disfluencies are markers of L2 speakers' speech production difficulties which reflect the low automaticity in processing L2 speech. However, it is unclear that the occurrence frequency of L2 disfluencies is an indicator of L2 acquisition.

In contrast to the cognitive view, through the sociolinguistic view, communicative performance in L2 speakers can be influenced by not only insufficient language knowledge; but, also performance variables such as social and cultural factors which include, for example, places, time, hearers, purposes, or speaking topics; that is, sociolinguistic competence or appropriateness is involved (Canale & Swain, 1980; Hymes, 1972; Halliday, 1978; Luoma, 2004; Whitman & Boase, 1983; Vural, 2008). L2 Speakers tend to use communication strategies to manage their communication to be more efficient (Canale & Swain, 1980; Bachman, 1990; Fulcher, 2003). Those strategies can be broadly divided into three main categories adapted from Dörnyei (1995) which are avoidance or reduction strategies, achievement or compensatory strategies, and stalling or time-gaining strategies. The first category is about message reduction in which the speakers attempt to avoid the problems of insufficient linguistic resources. It involves formal avoidance (using the form that the speakers feel more comfortable instead), and functional avoidance (changing topics, abandoning conversation, overusing delexicalized words e.g. 'thing'). The second

involves the strategies used to compensate speakers' insufficient linguistic resources by means of , for example, overgeneralization (or morphological creativity), approximation (replacing with a more general word), paraphrasing (describing), word coinage (inventing new words), restructuring (using different word, different grammar), co-operative strategies (appealing for help), code switching (using more than one language back and forth), and non-linguistic strategies (using gestures or mime). The third deals with the use of fillers and/or hesitation devices – using filling words or gambits to fill pauses and to gain time to think. It can be seen that the last category involves the disfluencies that function as time-gaining devices such as filled pauses. Thus, there is a question as to whether each type of disfluencies can be intentionally used as a communication strategy by L2 speakers in order to get their message across and whether the hearers acknowledge the intention.

Moreover, through sociolinguistic perspective, some disfluencies (e.g. fillers such as *uh, um*) behave like discourse markers in which the speakers, especially, L2 speakers use to aid their communication (Clark, 2006; Clark & Fox Tree, 2002; Clark & Wasow, 1998). The characteristics and functions of disfluencies both in L1 and L2 speeches are found similar to those of discourse markers in four aspects: orality, syntactic detachability, being in lexicalized and non-lexicalized forms (e.g. *well, I mean*, and *uh, um* respectively), and connectivity (as discussed in e.g. Levelt, 1989; Clark, 1996; Shriberg, 1996; Clark & Fox Tree, 2002; van Hest, 1996; Kormor, 2002; Dornyei & Kormos, 1998; Schiffrin, 1987). They both do textual functions and interpersonal functions. However, some functions of discourse markers may not be performed by disfluencies. Those functions involve initiality, pragmatic meanings, and multi-categoriality aspects (Shriberg, 1994; Levelt, 1983, 1989). Thus, disfluencies and discourse markers share some characteristics and some functions. It is obvious that L2 disfluencies that involve turn holding function or the right to hold speaking floor (e.g. Chotirat & Sinwongsuwat, 2011; Tsychiya & Handford ,2014) are analyzed as discourse markers while those which deal with stalling or time-gaining function (e.g. fillers) are analyzed as communication strategies to keep communication channel open at time of difficulty (Dörnyei, 1995; Tang, 2015). The L2 disfluencies involving turn holding function are analyzed as a conscious means to sustain communication in

the face of difficulties (Canale, 1983; Canale & Swain, 1980; Ellis, 1985; Savignon, 1983 as discussed in Dörnyei, 1995).

Through this sociolinguistic view, repetitions, deletions, repairs, fillers, and prolongations can be the cues for the hearers to predict about the upcoming speech by interpreting the pragmatic meanings of the messages from the disfluencies in relation to the contexts where they are present (e.g. Fox Tree & Clark, 1997; Bailey & Ferreira, 2003; Arnold, et al., 2004; Fox Tree, 2001; Corley, et al., 2007; MacGregor, et al., 2010; Arnold, et al., 2007; Corley, 2010; Tottie, 2011; Lau & Ferreira, 2005). When a state of uncertainty occurs, people resolve it by making tentative inferences and asking upon them until further notice (Gumperz, 1997, 2001). The study by Clark and Fox Tree (2002) clearly indicated that *uh* and *um* are not noises in speech. They contain meaning and purpose in signaling to communicate an expectation of a delay and to maintain the speaking turn. Disfluencies through this sociolinguistic view; therefore, serve as markers for interpersonal obligation in conversations or dialogues. Both speaker and hearer are engaged in collaboratively taking the responsibility for successful communication. The methodology typically applied to elicit disfluencies include storytelling, story recalling techniques, describing pictures, picture naming, dialogues, monologues, retrospection and recognition of errors. Each technique is applied depending on what type of disfluencies to be elicited.

It can be concluded that disfluencies are signals of cognitive problems occurring during speech production processes and cannot be controlled by speakers. (Johnson, 1961; Garrett, 1975; Dell, 1986; Chomsky, 1965; Watanabe, et al., 2007; Levelt, 1989; Levelt, et al., 1999; Fromkin, 1971; Harley, 2000). In comparison with L1 disfluencies, L2 disfluencies demonstrate the speakers' difficulties and less automatically speech processing (e.g. pauses), and some are indicators of L2 acquisition (e.g. errors repairs, corrective repairs) (de Bot, 1992; Sajavaara, 1987; Tang, 2015). As a result, L2 disfluencies are viewed as communication strategies functioning as the stalling or time-gaining devices and they behave like discourse markers in doing textual and interpersonal functions such as turn taking (e.g Fuller, 2003; Wang, 2009; Zhao, 2013; Bu, 2013; Fehringer and Fry, 2003; Hilton, 2007, 2008; Liu, et al., 2010; Chen & Pu, 2002). However, these findings are mostly obtained through researchers'

observation. The evidence through the hearers' and the speakers' perceptions as well as their interaction is rarely found.

The previous studies found a variety of factors influencing the occurrence of disfluencies in L2 speech. They can be categorized into the following: (1) speakers' speech production system: memory capacity and automaticity of speech processing (Fehringer & Fry, 2007; Belz & Klapi, 2013 Hilton; 2008b), (2) speaker's language knowledge and ability: level of English language proficiency, linguistic skills (e.g. lexical retrieval speed, articulation speed, and sentence building speed), language knowledge (e.g. vocabulary and grammar knowledge) and processing skills play an important role in the production of L2 speech (Hilton, 2007; de Jong, et al., 2013), and (3) the conditions as the speaker engaging in speaking context: familiarity with the addressee, the interlocutors' mother tongue, the nature of speaking topic, and the speaking duration time (Belz & Klapi, 2013; de Jong, et al., 2013; Vural, 2008). Gestures are used as the speakers' communicative resource and cognitive mediation (Kim, 2010).

By analyzing the previous findings, the forms of disfluencies in both L1 and L2 speeches are similar due to the root of their origin in how speakers monitor their speech during production processes. However, speakers' choice in deciding whether to or not to re-encode and how they re-encode the preverbal message after detecting errors depend on both internal and external factors such as linguistic competence, communicative competence, memory capacity, and speakers' personality (whether willing to take the risk or likely to avoid problems). Besides, external factors, for example, the nature of discussed topics, the first language of hearers, how conversation is carried (monologues, dialogues, or multilogues), and social and cultural backgrounds can also affect the forms of disfluencies in L2. The L2 disfluenices can be different from those in L1 in some aspects. Moreover, many of the previous studies are concerned with how speakers monitor and correct errors in speech and analyzed under cognitive framework (e.g. Levelt, 1983, 1989; Levelt, et al., 1999). Only a small number of studies used interactional sociolinguistic framework to analyze the roles of disfluencies in speech communication. L2 speakers' intentions when they produce each type of the disfluencies in L2 speech, the interpretations of those disfluencies by the hearers who are native speakers of the target language and the relationship between the

L2 speakers' intentions and the L1 hearers' interpretations have been left unexplored.

Additionally, studies of disfluencies in Thai EFL context are rarely found. Most of them address the questions on how to promote Thai EFL learners' fluency in speaking English in terms of teaching and learning (e.g. Forman, 2011; McDonough & Sunitham, 2009; Noom-ura, 2008; Boonkit, 2010; Yangklang, 2013; Ngowananchai, 2013; Klomjit, 2013; Patansorn, 2010; Sinwongsuwat, 2012; Ussana & Sinwongsuwat, 2012; Chotirat & Sinwongsuwat, 2011; and Rodpradit & Sinwongsuwat, 2012). Some focus on investigating for factors affecting EFL speaking (e.g. Fujiwara, 2011; Kitikanan, 2010), and on examining pragmatic aspect (e.g. Chiravate, 2011; Tananuraksakul, 2013). The studies by Chotirat and Sinwongsuwat (2011) and Sinwongsuwat (2012) have presented some pragmatic explanation on the disfluency phenomena in the speech by Thai EFL speakers. The findings demonstrated that repairs, repetitions, and fillers function as turn-holding devices and those speakers use repairs for the purposes of meaning clarification and fluency in speaking. The studies were analyzed in the dimension of speaking fluency in relation to communication strategies leaving the point of disfluencies as markers of speaking fluency unexplored although some disfluencies (repairs, repetitions, and fillers) were reported. The knowledge of disfluencies is a gap that needs to be fulfilled to complete the overall picture of speaking ability among Thai EFL speakers.

Thus, the shortcomings indicate that the existing knowledge of disfluencies is largely through first language studies. Despite maintaining the identifiable characteristics and communicative functions, L1 disfluencies are subsumed under different communicative approaches such as discourse markers and communication strategies. Moreover, the proposed L1 speech production models do not clearly explain about L1 disfluency phenomena. In addition, L2 disfluencies are mainly studied focusing on levels of fluency rather than on their interactional aspects in speech communication or their own characteristics and functions. As a result, investigation on the types, the characteristics, and the occurrence frequency of each type of L2 disfluencies, whether L2 speakers do have intentions in using the disfluencies (as turn-taking devices and/or time-gaining devices), what the native English-speaking hearers' interpretations of these disfluencies (as discourse markers doing textual and/or interpersonal functions, as

communication strategies which do the functions related to time gaining, or as signals of cognitive difficulties) are, or whether the speakers' intentions in using disfluencies are acknowledged by the hearers, and what the interaction between the L2 speakers' levels of English language proficiency and the types of disfluenices produced should be conducted.

Objectives

This research aimed to examine the following aspects of disfluencies in spontaneous English dialogues between Thai learners and native English speakers:

1. the types of disfluencies produced by native Thai speakers,
2. the Thai speakers' intentions during the occurrence of each type of disfluencies,
3. the native English-speaking hearers' interpretations of each type of disfluencies,
4. the difference between the Thai speakers' intentions and the native English-speaking hearers' interpretations
5. the difference in the types of disfluencies produced by the Thai speakers in different levels of English proficiency

Research Questions

In response to the objectives, the following questions were addressed.

1. What were the types of disfluencies and their frequencies produced by Thai learners of English in their spontaneous English dialogues with native English speakers?
2. What were the Thai speakers' intentions when they produced each type of the disfluencies?
3. What were the native English-speaking hearers' interpretations of each type of the disfluencies?
4. Was there any difference in the Thai speakers' intentions and the native English-speaking hearers' interpretations?
5. Was there any difference in the types of the disfluencies produced by the Thai speakers in different English proficiency levels?

Scope of the Study

The current study was conducted under the following scope:

1. Speaking discourse was in the form of spontaneous English dialogues between Thai learners of English and a native English-speaking hearer. But only the learners' speech was examined.

2. All gestural communicative resources such as bodily movement, hand movement, mime, eye gazing, and facial expression were not included. Thus, the speakers and the hearers were set to communicate on a non-face-to-face basis (i.e. with an in-between partition).

3. Speech errors and slips of the tongue, which occurred when two elements of an utterance were transposed, were excluded due to their impacts on the propositional content of utterances as evidenced in semantic substitution errors (Hotopf, 1980), morpheme-exchange errors (Smyth, Morris, Levy, & Ellis, 1987), and number-agreement errors (Bock & Eberhard, 1993; Haskell & MacDonald, 2003) while disfluencies did not hurt the content although they may have been considered as noises in speech communication (Shriberg, 1994). Moreover, there was evident that speech errors operated at the level of meta-judgments or discourse level (for further details see Brennan & William, 1995; Smith & Clark, 1993; Ferreira, et al., 2004).

4. Unfilled pauses or silences studied in the present research referred to the silence with noticeable long-duration as perceived by the hearers not the silences with long duration as accurately measured by the machine. This was to serve the objective of the study in investigating the hearers' interpretations of L2 disfluencies during conversations.

Significance of the Study

The significance of the current study was as follows.

1. The findings of the study offered a new body of knowledge for the researchers in the fields of second language acquisition, linguistics, sociolinguistics, applied linguistics, and others related fields.

2. It promoted EFL/ESL teachers' and learners' realization of the native English-speaking hearers' interpretations of the disfluencies in L2 speech of English

and the interaction between EFL/ESL learners' levels of English proficiency and the types of disfluencies that they produced. The EFL/ESL teachers may have applied the knowledge for creating an appropriate lesson plan to promote EFL/ESL learners' speaking ability.

3. Since disfluencies serve as indicators for evaluating speaking fluency in international standardized tests such as International English Language Teaching System or IELTS, the speakers' realization of such interpretations can make them pay more attention to the disfluencies, control their occurrence, and avoid the overuse of them.

Definitions of Key Terms

Disfluency referred to a break that occurs in utterances in spontaneous speech and disrupts the flow of speech without adding any propositional content to those utterances but rather maintaining the original propositional content as intended. Such breaks included pauses, repetitions, and repairs (cf. Johnson, 1961; Brutten, 1963; Fox Tree, 1995; Postma, et al., 1990).

Types of disfluencies referred to collections of disfluencies classified by observing how the speakers produced them. The disfluencies produced before articulating an utterance were named covert self-monitoring disfluencies which included three sub-types: filled pauses, unfilled pauses, and prolongations. Those disfluencies produced after articulating an utterance were named overt self-monitoring disfluencies which had two sub-types: repairs and repetitions (cf. Menyhárt, 2003; Levelt, et al., 1999; Levelt, 1983, 1989).

Fluency referred to the ability to speak easily and smoothly; especially the ability to speak a foreign language easily and effectively without being disrupted by excessive disfluencies as judged by native speakers' perception (cf. "Merriam-Webster", 2014; and Hasselgren, 1998).

Spontaneous English dialogues referred to English conversations in one-to-one settings, and without prior planning.

Hearer referred to a conversation participant who mainly had a receptive role while the more active role was played by the other conversation participant, a speaker (cf. Dynel, 2010). The term 'hearer' was widely used in research on disfluencies,

discourse markers, and pragmatics (e.g. Zhao, 2013; Schiffrin, 1987; Blakemore, 1992; Hymes, 1972; Goffman, 1981; Levelt, 1989) and the focus of this study was to emphasize on the speakers' active role in conversation rather than the counterpart. Thus, instead of using the term 'listener' or 'interlocutor' which suggested the more active role in conversation, the term 'hearer' was used to serve the purpose of the present study as well as to maintain the similar concept of hearer as referred by the widely-known scholars mentioned above.

Intentions referred to the purposes which speakers had in minds when producing any disfluencies and expected the hearers' a certain verbal response to the meet the purpose. For the current study, the speakers were represented by Thai learners of English.

Interpretations referred to the hearers' perception of the roles of disfluencies in the spontaneous dialogues. The interpretation might or might not correspond to the speakers' intentions. For the current study, the hearers referred to the native-English-speaking hearers.

CHAPTER II

LITERATURE REVIEW

This chapter aims to provide theoretical background of human communicative ability, speech production models, speech communication, disfluencies in first and second speech communications, interpretation of disfluencies, previous studies, and a theoretical framework for the study.

Theoretical Background: Human Communicative Ability

Theoretically, human communicative ability stems from the communicative competence, the knowledge which has been studied by several scholars who have given different explanations about its characteristics. One of the most influential explanations of human communicative competence is by Noam Chomsky (Savignon, 1983). Through his linguistic perspective, Chomsky claims that the communicative competence is innate and a type of genetic endowments (Chomsky, 1965). He contends that children are born with a linguistic device that contains an unconscious knowledge of language rules which is referred to as "universal grammar" (UG). This kind of knowledge is implicitly demonstrated without formal instruction. Commonly, a child learns how to speak its first language through receiving the well-formed sentences input from the people who speak the same first language as it does. The input which is formed by the language rules that are inapplicable to those rules in the child's UG will be filtered out. In other words, only the grammatical sentences corresponding to its UG are stored in its linguistic device for future communicative use (Chomsky, 1965). The major flaw of UG is that it is extremely ideal. The language rules exist in people's minds, are available to be used, but detachable from real world (Hymes, 1972; Halliday, 1970). However, the flaw has shed light on later studies of language which view language as a communicative behavior for social interaction (as discussed in Coulthard, 1977; Hymes, 1972; and Halliday, 1970). Coulthard (1977) suggests that degree of grammaticality and acceptability of meaning should be

considered as indicators of a speaker's communicative ability. Coulthard's suggestion is agreeable to Hymes (1972) who proposed to consider the feasibility of meaning generated by a language form as an aspect of communicative competence since a perfect grammatical form of language can be ambiguous in meaning (see example in Widdowson, 2007, p. 15).

Hymes views that language use is conventional and varies across different communities; it reflects the interaction between communicators and the nature of the event that the communication takes place. Social role of language in terms of the appropriateness and the actual language use in a social context is; therefore, a part of human communicative ability (Hymes, 1972). The social functions of language are also of Halliday's (1970) interest. While Hymes maintains the distinction between the knowledge of language rules or competence and the actual use of language or performance as contended by Chomsky, Halliday views the competence and the performance as one by reasoning that the differentiation of the competence (knowledge) and the performance (use) is irrelevant and misleading in interpretation (Savignon, 1983). To him, function means the use of language in a social setting; and the use varies by purpose of an utterance, not by grammatical form of the utterance.

It can be concluded broadly that human communicative ability is formed when a speaker possesses the knowledge on the rules of grammar and of language use in relation to a social context where the communication takes place. That is, communicative competence has dealt with interpersonal relation as it varies by context. It reflects a language user's knowledge of grammar, vocabulary, and appropriate application of the knowledge contextually (Munby, 1991).

For second language (L2) speakers, knowledge of the target language may not be sufficient for effective communication to take place. They require additional knowledge on how language is appropriately used in relation to a specific social situation (Munby, 1991; Canale & Swain, 1980) in order to communicate effectively. Communicative ability is not only determined by their knowledge of grammar and language use but also by the knowledge of contexts which is reflected through their actual use of language as appropriate to the conventional practices among the native speakers of the target language. In a broad sense, theoretically, human communicative

ability is formed in combination of various types of knowledge: language, contextual, socio-cultural, communicative strategic knowledge, and the most important is the actual application of the knowledge appropriately both in written and spoken languages. Thus, communicative ability is required for communication. However, only communicative ability is insufficient for creating a successful communication. The notions on "communication" is provided in the following section for better understanding the nature of communication and when a communication takes place.

Definitions of Communication

Following Dance (1970), there is no definition of "communication" that can serve all purposes. Each definition has its particular function in assisting scholars to investigate the truth as required. Like Dance (1970), Clevenger (1991) contends that defining "communication" for scholarly and scientific purposes has been a problematic issue as it is derived from the common verb "to communicate" which is used widely in daily life. Thus, it contains a variety of concepts with different scopes of meaning. However, based on Dance's exploration, among the 15 themes, there are three critical points that form the basic dimensions of communication: the level of observation, the presence or the absence of intent on the part of sender, and the normative judgment of the act (e.g. goodness or badness, successful or unsuccessful) (Dance, 1970). The definitions that reflect interest in different levels of communication systems such as the variations in communicative behaviors and the interpretation of observations are categorized into the level of observation. "Communication" through this view illustrates its concepts both in a broad sense and a narrow sense. Examples of the definition illustrating the *level of observation* in communication are:

> Ruesch (1957, p. 462): communication is "the process that links discontinuous parts of the living world to one another";
>
> "Merriam-Webster" (2014): communication is "the act or process of transmitting information (as about ideas, attitudes, emotions, or objective

behavior) (a) exchange of information between individuals through a common system of signs, symbols, or behavior (b) personal rapport"

The concept of *intentionality* infers less focus on observable behaviors. It provides purposeful message sending and receiving. "Communication" through this view reveals some weaknesses involving the verification of the sender's intent as communication. Examples of the definitions focusing on intentionality are:

> Miller (1966, p. 92): communications refer to "those behavioral situations in which a source transmits a message to a receiver with conscious intent to affect the latter's behaviors."
>
> Miller & Steinberg (1975): "we have chosen to restrict our discussion of communication to intentional symbolic transactions: those in which at least one of the parties transmits a message to another with the purpose of modifying the other's behavior (such as getting him to do or not to do something or to believe or not to believe something). By our definition, intent-to-communicate and intact-to-influence are synonymous. If there is no intent, there is no message."

"Communication" through the view reflecting *normative judgment* of the act typically includes a statement of success, effectiveness, or accuracy (Littlejohn & Foss, 2008) while some definitions demonstrate neutral judgment (as in e.g Berelson & Steiner, 1964). For those with judgment of successful interaction, Dance points that this view is extremely positive and restricts the generalization of communication concept. Examples for normative judgment are:

> Berelson & Steiner (1964, p. 254): "communication [is] the transmission of information"
>
> Hoben (1954, p. 77): "communication is the verbal interchange of a thought or idea"

The conclusion by Dance (1970) and Clevenger (1991) can be considered as a limitation in defining communication that there is no single definition applicable

universally. Ironically, the conclusion suggests common similarities in the concepts of communication (level of observation, intentionality, and normative judgment of the act) which have become the fundamental understanding of communication. That is, a communication phenomenon is observable, communication is conducted on a purpose, and its effectiveness is conditional. Among the three concepts, it is obvious that communication is the most clearly identified by observable behaviors. In evaluating the effectiveness of communication, Burgoon and Ruffner (1978) suggest considering the following components: source, receiver, message, intent, and interpretation of the intent. They observed that most definitions of communication are agreeable that communication will take place when a source has an intent to communicate and a receiver perceives it. This case is considered successful communication in which the source's intent is matched with the receiver's perception of the intent.

In other cases where the requirements of the conditions necessary for communication are not met, a communication does not occur. That is, when there is intent to communicate but it is not perceived, the source's intent is not noticed by the receiver. This may cause the source to try harder to bring the communication to its goal. When there is no intent to communicate and there is no perception of the intent, neither intent nor attempt to perceive is present. This can be explained that there is no shared experience that can link the receiver to the source. When there is no intent to communicate but the receiver perceives that there is an intent, although, in fact, the source has no intent underlying the communication. This may lead to the misunderstanding between the source and the receiver. The inference is that meaning cannot be transferrable from the source to the receiver. Although there is an attempt to identify the source's intent in relation to the receiver's perception of the intent, the source's true intent is difficult to be identified (Dance, 1970). However, one way that can be possible to know what the speaker's real intent is by considering the message meaning in relation to situational context which includes how the speaker performs the message according to the place, the moment, the situation and the relationship with the hearer (Salgado, 2011; Blum-Kulka, 1987).

However, Whitman & Boase (1983) notes that it is broadly agreed by most theorists that communication is a process that involves senders (sources) and receivers

transmitting and receiving message, and producing some effect. The explanation indicates that there is no sender's intent involved but receiver's reaction. In contrast with the intentional-oriented view, this nonintentional-oriented view holds that all behavior in an interpersonal situation has message value. The scholars in this group center at a receiver's response to a message, not a sender's intent. When there is a response from a receiver, communication has taken place. The response can be verbal or non-verbal or both.

In spite of different standpoints, the two groups share the notion that communication is a process in which six elements consisting of (1) source-receiver: sender and receiver, (2) channel i.e. seeing, hearing, touching, smelling, and tasting, (3) a common life space: experience shared between sender and receiver, (4) message, (5) effects or changes, and (6) context e.g. public speaking, small group, and interpersonal must be present and interact before communication can occur. The qualifications that a source and a receiver must have are communicative skills, attitudes, knowledge, social system, and culture (Berlo, 1960; Whitman & Boase, 1983).

In response to the philosophical assumption about language underlying the research questions that language use has functions to make meanings contextually, the present study will follow the intentional-oriented view of communication; that is, when speaker's intention and hearer's interpretation meet, communication takes place. Since a speaker often communicates to the hearer more than what he/she actually says (literal meaning and interpretation), his/her intention is contextually bound (cf. Searle, 1975). Thus, the hearer's interpretation relies on the context, language use, the experience shared between hearer and speaker, and their relationship (Salgado, 2011; Blum-Kulka, 1987). The meaning which is acceptable to both speaker and hearer indicates successful communication (as discussed in Maynard, 2009 and Coulthard, 1977).The speakers' intentions in using disfluencies and the hearers' interpretations of those disfluencies are one of the focuses in the present study. "Communication" hold in the current study is defined as "a process of message transmission between a sender and a receiver through a channel -- hearing. The process is made with intention to have some effects or changes on the counterpart's behaviors."

Since the current study concentrates on the disfluencies arising during speaking, speech production models and how disfluencies occur in speech production are to be presented next.

Speech Production Models

From theoretical perspectives of cognitivists (e.g. Johnson, 1961; Fromkin, 1971; Garrett, 1975; Levelt, 1989; and Levelt, et al., 1999), different models of speech production have been proposed to answer the question about how speech production is cognitively processed: how linguistic features are retrieved and encoded during speech processing. Among the models, the two widely-known models are Levelt's speech production (Levelt, 1989), and WEAVER++ computational model initiated by Levelt, Roelofs, and Meyer (Levelt, et al., 1999) ("WEAVER" stands for Word-form Encoding by Activation and VERification). All the models maintain the hypothesis that the linguistic representations of an utterance are retrieved in order from semantics and syntax to phonology.

However, their focuses are different. Levelt's speech production model (Levelt, 1989, see Figure 1) emphasizes on speaker's speech production process while WEAVER++ computational model (see Figure 2) proposed by Levelt, et al. (1999) focuses on lexical accessing; for example, the evidence from the tip-of-the-tongue state in which the speaker does know what to say but does not know how to transform the message into pronunciation. Levelt (1989) and Levelt, et al. (1999), as shown in Figure 1 and 2 respectively, are considered suitable for this study with different advantages. Levelt (1989 as cited in García-Amaya, 2012; Harley, 2001) noted that the speech production processing proceeds in two levels of planning: macroplanning and microplanning. Macroplanning process involves the generation of ideas in the speaker's mind with a communicative goal and the retrieval of appropriate information. Microplanning is a process that the speaker uses for converting conceptual message into a preverbal message. The preverbal message will be fed into the formulation process where the mental lexicon, which consists of two elements: lemma and form, play a major role. The lemma contains the conceptual, semantic, syntactic, and pragmatic

information. The form involves phonological form of the lemma. Although this model reveals the whole picture of speech production, it is developed based on monolingual speaking. Thus, it is assumed that the speaker already has knowledge of the lemma in the conceptualizer and has sufficient language knowledge without difficulties. In case of L2 speakers whose L2 knowledge is limited, it is possible that they will lack knowledge of the required lemma. Thus, this model is unable to explain what kinds of feedback will be or how the L2 speakers can lexicalize the lemma properly.

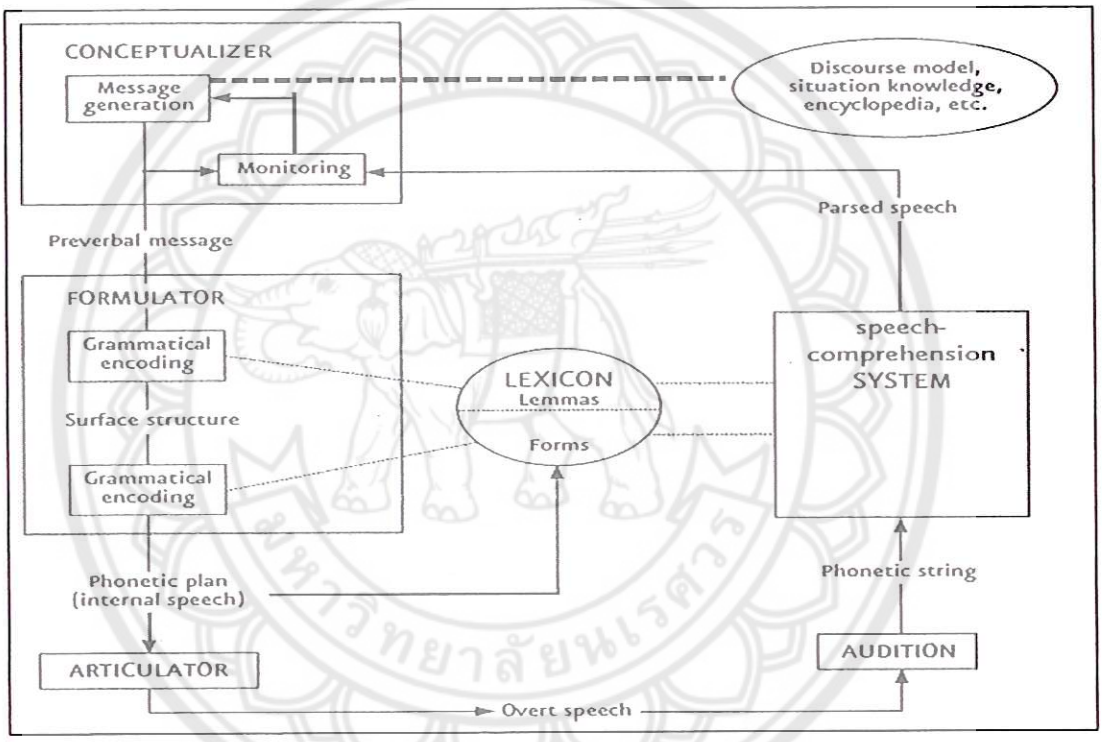

Figure 1 Levelt's blueprint for speech production

Source: Levelt, 1989, p. 9

Levelt, et al. (1999) proposed a computational model called WEAVER++ which was developed based on the assumption that there is a feed-forward activation-spreading network. All the processes proceed in only one direction from conceptual meaning to sound representation. There are three main levels within the network. The

highest level contains nodes representing lexical concepts. The second level is a place for the nodes of lemma which is an abstract word existing in the speaker's mental lexicon. The syntactic features (e.g. parts of speech) and semantic features (e.g. human, animal, and thing) but not phonological ones are processed at this point. The lowest level has nodes that represent word forms encoded by morphemes and phonetic segments. There are various processing stages in the process of speech production. Those stages work in a serial pattern. Speech errors are avoided by means of a checking mechanism (Fromkin & Ratner, 1998).

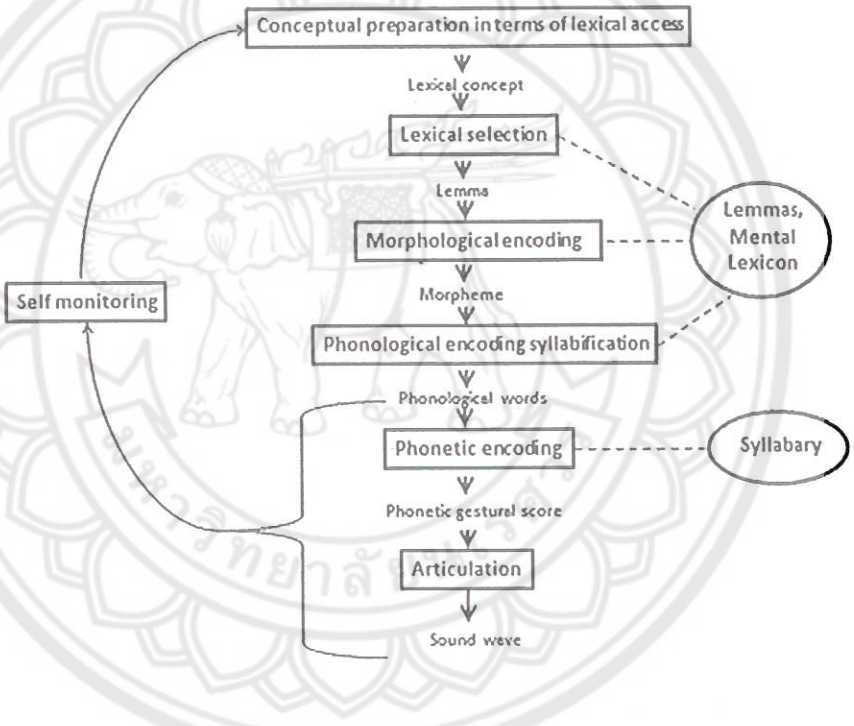

Figure 2 WEAVER++ : Speech production model by Levelt, et al. (1999)

At the stage of lexical selection (see Figure 2), a lemma which represents the required meaning and syntactic features is selected. It is explained that the lexical selection process is likely to accommodate the lemma that is more active than other lemmas which contain semantically related concepts. The selected lexis in the basic form will then activate for being translated into a linguistic form, and fed into the process of

lexicalization by morphological encoding and phonological encoding syllabifications. The form with morphological and phonological properties of the word will then be retrieved from the mental lexicon (Harley, 2001). In the next stage, the lemma form encoded with morphophonological features is available for being encoded with syntactic properties of the word that is required for the syntactic structure of an utterance. The last stage involves the phonetic and articulatory planning and turning the word into sound. The lemma can be monitored and changed after lemma selection process is completed; that is, before phonological information of the word is accessed. Speakers use a self-monitoring device to serve as a control function supervising the speech production process.

The advantage given by this model is that it is more flexible than Levelt's (1989) model for the reason that it includes the speakers' feedback when they detect some errors in their speech. They, then, verify their lexicalization by means of self-monitoring. However, it does not explain how disfluency phenomena can occur.

It can be pointed that while Levelt's blueprint for speech production provides understanding of how all the processes of speech production proceed, it is rather ideal that in normal speech there are some breaks occurring during speaking and those breaks are sometimes followed by speakers' correction of the word that is formerly said. Monolingual speakers may make less frequent pauses than bilingual speakers do due to the different degree of language proficiency. The WEAVER++ model reflects speech production in a more realistic perspective than does the blueprint. It includes speakers' self-monitoring to occasionally detect an ill-formedness in their speech and may decide to self-interrupt to make correction. However, the monitoring mechanism will do its work only after the speakers have encoded the lemma form which involves phonetic encoding. Thus, the model suggests that there is no self-monitoring during lexical selection, morphonological encoding, and phonological encoding syllabification. That means the speakers may have perfect grammatical knowledge or may ignore grammaticality aspect of the utterance. Such underlying assumptions tend to be less realistic especially in case of the speakers who have limited language knowledge, and/or grammaticality is likely to be their main concerns. The point indicates a question on whether self-monitoring can occur not only during form encoding process but can also occur during semantic and syntactic encoding process.

To answer the above question, based on the assumption that self-monitoring can be identified by disfluency phenomena or speech disruptions (e.g. pauses, repetitions, and prolongations) occurring during speaking (Kormos, 2000b; 2006), Menyhárt (2003; see Figure 3) studied changes in the operation of speech production processes from early childhood to old age through observation of disfluency phenomena in Hungarian L1 and proposed potential sources of disfluency phenomena as follows.

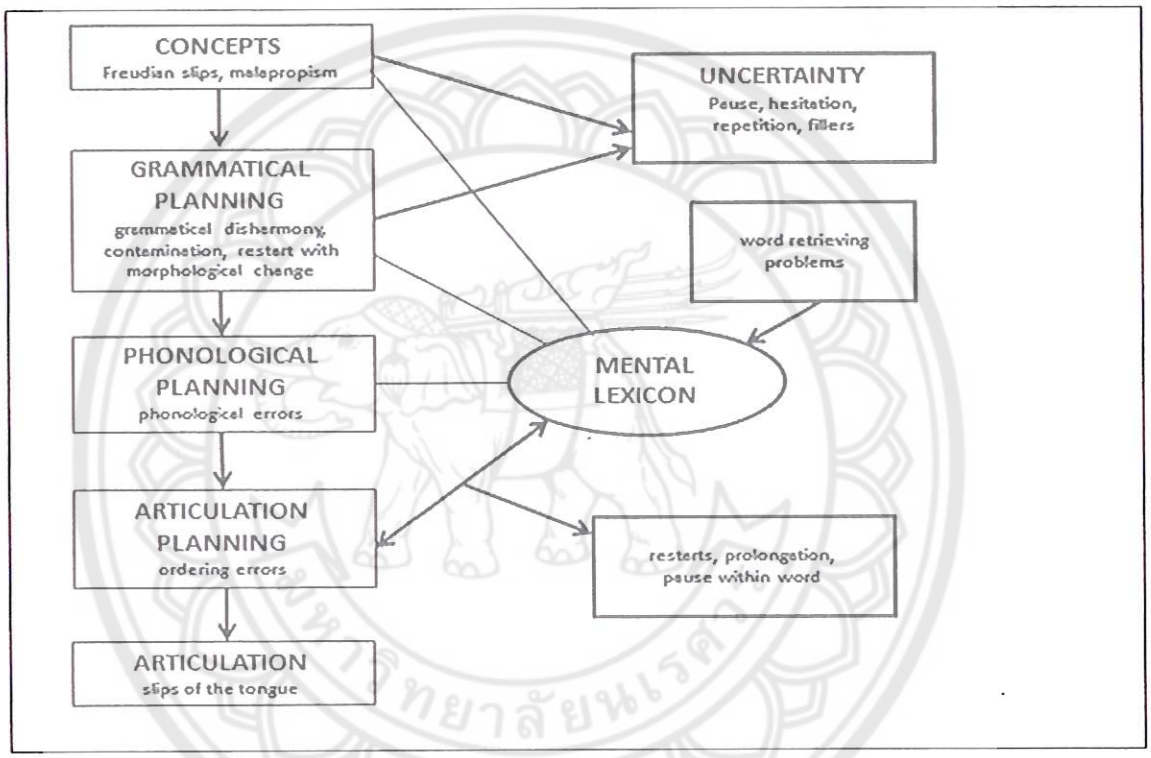

Figure 3 Process of speech production and sources of disfluency phenomena

Source: Menyhárt, 2003, p. 45

Figure 3 illustrates that while producing speech, a speaker can show two types of disfluency phenomenon: one occurs before phonological planning while the other one occurs after the process. That is, the first type signals the speaker's uncertainty about the concepts and the grammaticality of what to be said. The disfluencies in this type are pauses, hesitations, repetitions, and fillers. The second type signals speech ill-formedness

which includes restarts, prolongations, and pause within word (more details on disfluencies are provided later under the section of disfluencies).

Through cognitive theoretical perspective, for normal speech production, the languages are cognitively processed in the same way (see Figure 1). When a speaker is producing speech, his/her declarative knowledge containing the explicit knowledge of lexis, semantic information, syntactic, morphological, and phonological rules stored in his/her mind are being transformed into the procedural knowledge which involves implicit knowledge of how to use the word forms, and the linguistic rules. During the proceduralization process, lexical items are to be selected for representing the speaker's mental concept while linguistic rules are also being applied producing utterances. This can be interpreted that when there is a disfluency occurring in a certain level it can have impact on the subsequent levels as the speech production process goes in only one direction, step by step. The execution of the next process will not be possible if the current process is not completed. Each completion of process may obey or not obey the rules governing over each process. If the speaker self-monitors his/her internal speech and finds some mistakes, or feels uncertain about it, he/she will make a decision whether to edit or to ignore the mistakes, or to give a signal to the hearer for help bringing the communication to its goal. Disfluency phenomena are expected to arise within such circumstance. At this stage, disfluency may occur, when there is a disruption to the flow of speech. The disruption can be slips of the tongue, actual ungrammaticalities, the vast majority of silence, over interruptions of the utterances, repeated words and phrases, and corrections or modifications of parts of the utterance (Fox Tree, 1995; Bortfeld, et al., 2001).

The model by Menyhárt (2003) clearly explains where disfluency phenomena can occur but does not explicitly explain about self-monitoring process which has been hypothesized for its relationship with speech production. The hypothesis has been put to the test for both L1 and L2 productions (Kormos, 2000b; van Hest, 1996).

For the current study, by adapting the conceptualization of speech production processes from Levelt's, et al. (1999) and Levelt's (1989) in combination with Menyhárt's (2003) suggestion on the potential sources of disfluency phenomena, Figure 4 is the diagram demonstrating how disfluency phenomena are likely to be shown during speech

production processing by Thai EFL learners as being engaged in speaking tasks is proposed as an analytical framework to identify the types of disfluencies in this study. It is developed by drawing the strength of the three models: Levelt's blueprint for speech production (Levelt, 1989), WEAVER++ model (Levelt, et al., 1999), and Menyhárt's (2003) sources of disfluencies.

As influenced by the nature of the linguistic systems in the first and the second languages, it is possible that the nature of disfluencies in the native speakers of English and that in the non-native speakers of English are different. Disfluencies occurring at the formulating level and at the articulating level have different characteristics due to different types of self-monitoring processes which are covert self-monitoring and overt self-monitoring. These two checking processes are shown in the following Figure.

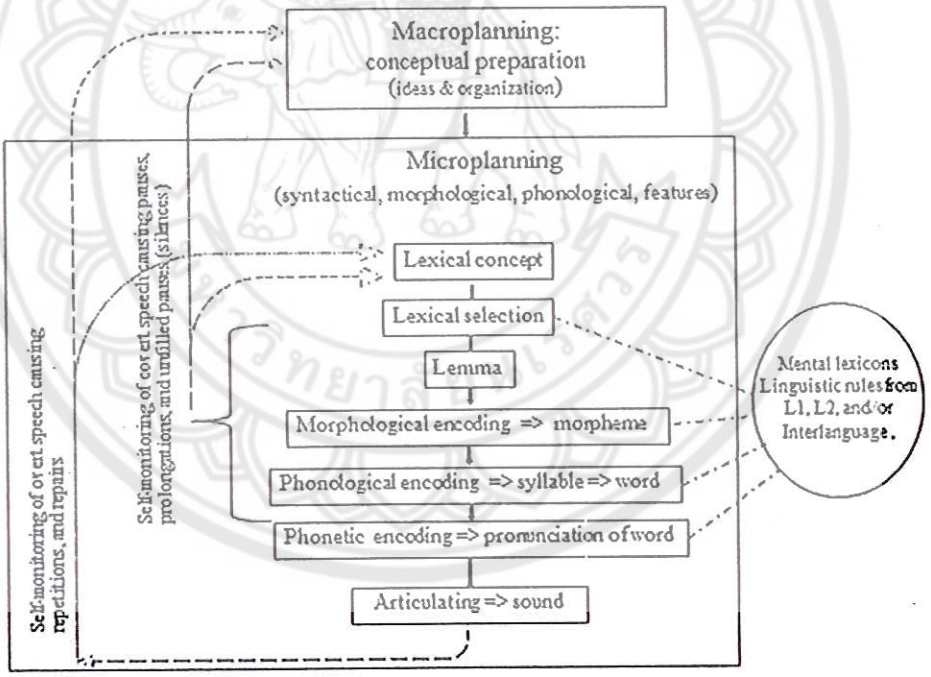

Figure 4 Potential sources of disfluencies

The two processes of checking are conducted in two loops for double checking. The first loop involves covert self-monitoring, an utterance has not yet been articulated; the disfluencies are possibly produced in the forms of pauses and prolongations. This is

a reflection of the internal checking process that the speaker is performing in his/her mind (Levelt, 1983, 1989; Kormos, 2006). That is, the preverbal plan for the intended message is monitored before articulation (Postma & Kolk, 1993). This process serves as the first checking. The second checking loop will be executed after articulation. It involves overt self-monitoring, an utterance has already been articulated; all linguistic rules as known to the speaker have been applied. When the speaker monitors the already articulated utterance and detects a mistake, he/she will do re-planning which can be at both micro and macro planning levels depending on nature of the detected mistake, and later begins encoding processes again. These are concerned with surface corrections (Shriberg, 1994). The mental lexicons in EFL learners as shown in the figure contain the lexicons from three sources: the speaker's first language (Thai), the speaker's foreign language (English), and the speaker's interlanguage (a language system created by L2 speakers). Lexical selection can be drawn from any sources of the lexicons and that may cause some disagreements among levels for example between lexical access and articulatory planning, between the articulatory planning and execution, or among several levels of planning (Menyhárt, 2003). Disfluency can possibly arise as a result of such disagreements. The disfluencies that presumably arise as a result of this overt self-monitoring process are repairs and repetitions.

There is some empirical evidence supportive to the assumptions of the potential sources in the speech production system as proposed in the diagram. The evidence shows two types of factors that influence the production of disfluencies in non-native English speakers. The first type is related to the speakers' speech production system: memory capacity and automaticity of speech processing (e.g. Fehringer & Fry, 2007; Belz & Klapi, 2013; Hoshino, 2006). Fehringer and Fry (2007) studied the hesitation phenomena in the language production of bilingual speakers focusing on the role of working memory by investigating the use of fillers, automatisms, repetitions, and reformulations in both L1 and L2 of 20 adult bilingual speakers using storytelling and story recalling techniques to elicit spontaneous speech from the participants. The results indicated that the production of such elements in both languages is linked to working memory capacity of the speakers as evidenced by the higher overall rate of hesitation phenomena in their L2 in comparison with their L1; there was an underlying

negative relationship between memory capacity and the production of hesitation phenomena, implying that speakers with lower memory ability rely more heavily on such time-buying devices; and the individual types of hesitation phenomena produced in their L1 were carried over into their L2 suggesting that a speaker's planning behavior is reflected in both languages. Another example is Belz and Klapi's (2013) study which gave agreeable results to the above findings. They found that the speakers adopted the disfluency patterns (pauses following fillers) in L1 when producing speech in L2, although the length of pauses and fillers in L2 is longer than in L1. The authors pointed that these phenomena suggest the L2 speakers' less automized speech production of L2 in comparison with their L1 speech production. Hoshino's (2006) psycholinguistic study of native language constraints on speaking words in a second language informed that the bilinguals are allowed to select the language of production at an earlier point in speech planning when there are scripts available for facilitating their lexical access processing.

The second type of factor is associated with the speakers' language knowledge and ability: levels of English language proficiency, linguistic knowledge and processing skills. As evidenced by de Jong, et al.'s (2013) work which showed that linguistic skills were strongly related to average syllable duration. The authors interpreted this phenomenon that L2 cognitive fluency or linguistic knowledge and processing skills (e.g. lexical retrieval speed, and sentence building speed) can be measured by L2 utterance fluency (e.g. articulation speed) while the length of silent pause is not a good indicator for L2 cognitive fluency. Lexical knowledge and lexical retrieval are considered the primary cause of the most serious disfluencies (Hilton, 2008). Additionally, Hilton's (2007) study provided evidence that the amount of the overuse of cognitive discourse markers – hesitations, decreases as the speakers' language proficiency has been developed.

The evidence from Shriberg (1994) shows the distribution of disfluencies under varying conversational situations. She examined disfluencies (*um*, repetitions, filled pauses, deletions, and variety of forms of self-repair) in the spontaneous speech of adult normal speakers of American English. The results show that disfluencies are likely to increase by the length of utterances (greater number of disfluencies in human-human

and goal-oriented dialogues than in human-machine dialogues), the disfluency position (highly occurred in a sentence-initial position than in sentence-medial position), the presence of another disfluency in the same sentence, disfluency type, and combinations of these features. These findings suggest that some types of disfluencies have a role in conversation providing signals for both speakers and hearers to share responsibility in making smooth communication for example taking turns and prediction of the messages as intended by speakers.

However, speech production models can only account for how linguistic information is cognitively processed and how disfluencies can occur while an utterance is being produced. As language is one of the most complex systems of human behavior, understanding only of cognitive dimension of speech production is insufficient. To reach the goal of communication in transferring ideas, thoughts, and emotions from individual to individual, it is necessary to understand how environments where communication takes place can affect the speaker's speech production processing especially the occurrence of disfluencies during speaking. An overview of speech communication is, therefore reviewed and presented as follows.

Speech Communication

Speech communication is different from non-speech communication which can be written communication or the communication among the people who are unable to speak or hear. Speech communication, on the contrary, requires all the parties to be able to produce and to hear the speech sounds. While the options for non-speech communication can be sign language, picture exchange communication, or electronic communication devices, speech communication involves verbal and nonverbal codes. There is evidence from research (e.g. Choi & Lantolf, 2008; Kim, 2010; van Compernolle & Lawrence, 2011) demonstrating the relationship between the use of verbal and nonverbal codes that the two types of codes are utilized in combination as people are communicating through speech rather than through writing. It is commonly seen that when people are speaking, they use some nonverbal codes as communication aids.

Nonverbal communication concerns the messages which are not coded with words (Whitman & Boase, 1983) but involves the use of bodily movement, facial expression, touching behavior, eye contact, and paralanguages (vocalics) (Ekman & Friesen, 1969; Darwin, 1965; Whitman & Boase, 1983; Munby, 1991; McConnell & Philipchalk, 1992; Carney, et al., 2010; Knapp & Hall, 2010; Reddy & Wasserman,1997; Meadors & Murray, 2014). Without the source's intent and/or the receiver's perception, they are merely behaviors. They signal additional information for the receivers such as anxiety, stress, uncertainty, friendliness, or unfriendliness, and have interactional functions in conversational turn-taking (Ashenfelter, 2007; Spencer, 2012; York, 2013; Carney, et al., 2010; Knapp & Hall, 2009; Reddy & Wasserman, 1997; Meadors & Murray, 2014).

Interpretation of nonverbal codes is considered irrelevant for this study as it focuses on verbal communication rather than nonverbal communication or the relationship between verbal and nonverbal communications. As a result, any nonverbal communication produced by the speakers will be excluded, and "speech communication" for this study will be defined as "verbal communication between Thai EFL learners and the hearers whose mother tongue is English".

During speech communicating process, all the six major elements of communication as proposed by Whitman and Boase (1983) are interacting. The source and receivers (S/Rs) of messages have a dual role that the individuals who are being engaged in a communicative activity play simultaneously as communication process is going on. Those individuals will be the sources or encoders when they send messages; they will, in turn, be the receivers or decoders when they receive the messages. The S/Rs' encoding and decoding messages require some stimuli. Each S/R is stimulated by the stimuli existing in environments around S/R e.g. a sound of music and by the stimuli within the organism e.g. anger and thoughts. These stimuli will be competitively selected for attention for decoding and interpreting by the S/Rs. However, it is possible that some stimuli may not be attended by the S/Rs.

According to Whitman and Boase, communication between S/Rs is linked by a communicative channel and a common life space. The channels are the medium through which the communication passes within the channels. However, there are

stimuli that interfere with the reception of a message and distort the message intended by the source. Such negative stimuli are viewed as noises which can be disfluency manner appearing in speech during communication. The common life space refers to the experiences that are shared between or among the S/Rs. The larger area it is, the more understanding among the S/Rs will be as common experiences lead toward accuracy of information exchange (Whitman & Boase, 1983). In other words, if the speaker considers that the common knowledge that he/she shares with the hearer is insufficient for understanding, it is likely that higher disfluency phenomena will occur as the speaker puts more effort to have the hearer understand the message as intended. However, speech communication is influenced by many factors other than the message content, especially, when the speech communication is made through a second language (L2).

L2 speech communication requires L2 speakers to have an ability to apply different kinds of knowledge to carry on the communication appropriately. Its characteristics and related factors is illustrated in the following section.

L2 Speech Communication: Characteristics and Related Factors

Second language or L2 in the present study will be used in a broad sense to refer to any non-native languages learned after the speaker's first language. The term "English as a foreign language" (EFL) will be applied to refer to English language studied bythe learners whose native languages are not English and they do not use English in their daily life.

As reasoned earlier that communicative ability of L2 speakers is formed with at least four components: knowledge of L2 grammar, knowledge of L2 use, knowledge of L2 contexts, and ability to apply the three types of knowledge for actual use appropriately. Effective speech communication is impossible without interaction of all the components and of the hearers through their responses (Whitman & Boase, 1983; Munby, 1991; Canale & Swain, 1980). It can be explained simply that among the components, message serves as the starting point of communication, and the response or effect given by the hearer indicates the occurrence of communication.

The nature of message or topic (e.g. abstractness, and relevance to the speakers) is considered a difficulty for their communication and can also result in their degree of fluency in speaking (Luoma, 2004). This implies that EFL speakers tend to be more disfluent when the message is dealing with higher degree of abstractness and low degree of relevance to the speakers' knowledge. This is because the way in which they represent reality using non-native language (English, in this case) is even more complex in comparison with communicating through their native language. Consequently, they may frequently pause or make a long pause in mid-utterance. In other words, the speakers will take a longer time searching for the vocabularies which tend to have low frequency of use (for the speakers); that is lexical access difficulties during speech production process arise (as discussed in e.g. Shooshtari, et al., 2013; Shahrestanifar & Rahimy, 2014; and Vural, 2008).

There is evidence revealing the impacts of contexts on EFL disfluencies studied by Vural (2008). Vural, studying Turkish speakers of English, established specific conditions: familiarity vs. non-familiarity, concrete topic type vs. abstract topic type and speaking with native speaker vs. speaking with non-native speaker. It was found that, EFL learners spoke more fluently when speaking with a familiar addressee, with a native speaker of English, with concrete topic type and with meaningful body gestures. This can be interpreted that the use of non-verbal languages can result in less number of disfluencies in their speech. Vural's study also indicates that the number of disfluencies in EFL learners' speech increased when the duration of the conversation increased. That is, the occurrence of their disfluencies was influenced by their anxiety when talking under time pressure. The effect from speaker's anxiety on the occurrence of disfluencies in L2 speech was also supported by Ur's (1996) and Zhang's (2009) studies.

Moreover, speakers' speech rate and gender were found associated with the occurrence of disfluencies. The speakers with higher speech rate produced less disfluencies than the slower ones (Maclay & Osgood, 1959). Female speakers produced the lower number of disfluencies than male speakers (Lickley, 1994).

It can be concluded from the studies reviewed above that L1 and L2 speech communications share the main components which are knowledge of grammar, of

language use, and of contexts. However, one of the differences is that L1 speakers maintain one language system and sufficient linguistic knowledge to convey the message as intended while L2 speakers possess more than one language systems: L1 system, L2 system, and interlanguage (IL) system – a created language system which is composed of numerous elements of L1, L2, and IL (that do not have their origin in either L1 or L2) (Gass & Selinker, 2008). Thus, their speech processing is rather complex in comparison with L1 speakers'. In other words, the different language systems held by L2 speakers can affect the automaticity of their speech production. This conclusion is evidenced from the study results provided by Hilton (2008, 2007) that L2 speakers with low level of language proficiency demonstrate problems on lexical retrieval while the amount of their overuse of cognitive hesitations decreases as the speakers' language proficiency has been developed. Additionally, Kasper (2006) and Bila & Dzambova (2011) found that the high number of pauses in L2 oral production reveals their weak L2 competence. Other than the language systems, L2 speakers' use of language is also influenced by their anxiety, the degree of L2 knowledge that they currently maintain, and their ability to appropriately use L2 knowledge in a context. Thus, L2 speech communication is likely to be characterized with high number of disfluencies or mid-utterance breaks such as pauses, repairs, and repetitions of words or phrases. However, there is some confusion about the concepts of "fluency" and "disfluency" which needs to be clarified for a more understanding of the characteristics of L2 speech and of the focus of this present study.

Fluency and Disfluency in L2 Speech Communication

Fluency and disfluency have distinct concepts. The term "disfluency" is not a negative version of "fluency" although there is a prefix "dis-" attached to the stem "fluency". "Fluency" is an abstract noun meaning "the ability to speak easily and smoothly; especially: the ability to speak a foreign language easily and effectively; the ability to do something in a way that seems very easy" ("Merriam-Webster", 2014) while "disfluency" is used as a countable noun (as in e.g. Levelt, 1989; Shriberg, 1994; Fox Tree & Clark, 1997) referring to a break that the speaker makes on-and-off during

speaking. Native speakers of English produce disfluencies in a variety of forms: filled pauses (e.g. uh, um), unfilled pauses (silences), prolongations (e.g lengthening a vowel sound), repairs, and repetitions (e.g. Shriberg, 1994; Fox Tree & Clark, 1997). The occurrence of disfluencies in an utterance is used as one of the main characteristics for evaluating speaking fluency (Fulcher, 2003). According to Hasselgren (1998, p. 155), fluency refers to:

"the ability to contribute to what a listener, proficient in the language, would normally perceive as coherent speech, which can be understood without undue strain, and is carried out a comfortable pace, not being disjointed or disrupted by excessive hesitation, excessive disfluencies are caused by contextual constraints".

The above definition suggests that fluency can be evaluated by human judgment and the indicators are the connectedness of utterances and the rate of disfluencies occurring in the utterances; the rate, in turn, is influenced by the nature of the environment where the communication takes place. That is, fluency in L2 speech communication involves mainly with time-bound speed and disfluency phenomena. Since speaking is a real-time phenomenon (Bygate, 1987), its speed in planning, formulating, and articulating an utterance is bound to the current time of communication (Levelt, 1989, Fulcher, 2003). The appropriate speed in processing speech production depends both on the internal factors (e.g. language proficiency, lexical range, ability to plan about what to say, ability to retrieve vocabulary, grammar, and to self-monitor for detecting errors in an utterance as well as the hearer's effect) and the external factors, for example, the nature of speaking topic, and the familiarity with the hearer (Levelt, et al., 1999; Vural, 2008).

Moreover, the interactional nature of speaking situation also requires speakers to make choices of language use to suit the social contexts and of interactional practices to conform to the conventions held by the native speakers, for example, getting turn, keeping turn, and giving turn (Fulcher, 2003; Levinson, 2003). The degree that the speakers can automatically control all the processes involved in speech production and speech communication within the appropriate speed reflects that the speakers become 'fluent' (Fulcher, 2003; Gass & Selinker, 2008). The disfluency phenomena that are considered indicators for the fluency (and the lack of fluency) in

L2 speech include, for example, pauses, repetitions, repairs, and prolongations (Fulcher, 2003, Luoma, 2004; Lennon, 1990; Brown, 2000; 2003). Normatively, disfluencies in normal speech of L1 English speakers occur at the rate of 6 times per 100 words (Bortfeld, et al., 2001; Fox Tree, 2002; Shriberg, 1994).

As opposed to fluency, the lack of fluency can be described as speech that is most often slow, uneven, disconnected, having incorrect segmentations, and filled with excessive disfluencies (Fulcher, 2003; Freed, 2000; Luoma, 2004). Empirical evidence from EFL contexts shows that the lack of fluency state is impacted by grammatical knowledge, language processing, conversational skills, pragmatic skills (involving speaking conventions), inadequate input (both language rules and language use) (Gan, 2013; Malik, 2012), and sociocultural constraints: familiarity with situations, sensitivity to maintaining self-face and level of politeness and complexity of the appropriate expressions required in a particular social situation (Lee, 2013).

It can be concluded that fluency and disfluency maintain different conceptions. Fluency refers to the state of fluidity in speaking. Disfluency is a break that occurs at any point in speech. The rate of its occurrences indicates the degree of fluency which can be judged by human perception. As disfluencies are the main focuses of this present study, more details on disfluencies which include description, types, roles, and interpretations are reviewed and presented next.

Disfluencies

Description of Disfluencies

"Disfluencies" is a term first used by Johnson (1961) to refer to the normal mistakes of speech. Johnson and his colleagues studied normative data concerning speaking rate and disfluencies of stutterers and nonstutterers using eight types of disfluencies which are associated with the perceptual and evaluative reactions of the hearers and of the speakers. Their analysis was associated with the frequency and forms of disfluencies produced by the speakers. They reported that the frequencies and the forms of the eight variables found in the nonstutterers in comparison with those produced by the stutterers were adequately comprehensive. They classified the

nonstutterers' speech as disfluency whereas the speech produced by the stutterers was called stuttering, and such stuttering aspect is not within the scope of this study.

The terminology to refer to disfluency phenomena in speech varies across disciplines. For example, in psycholinguistics, the phenomena are sometimes called 'hesitations' (e.g. Maclay & Osgood, 1959) or "pauses" (e.g. Goldman-Eisler, 1958); in psychology, the term "speech disturbances" (e.g. Mahl, 1957) or "nonfluency' (e.g. Miller & Hewgill, 1964) is used; in medical field, "dysfluency" (e.g. Culatta & Leeper, 1988) is an accepted term, in cognition field, "self-repairs" (e.g. Levelt, 1983) is widely found; and in linguistics, the term "own communication management" (e.g. Allwood, et al., 2005) is sometimes used to refer to disfluency.

However, as discussed by Wingate (1984), there are some mixed concepts in the use of terms: disfluency, dysfluency, nonfluency, and fluency. Silverman and William (1967) studied the loci of disfluencies in the speech of stutterers and presented that disfluencies include all types of disruptions in nonstuttering speech. To avoid being confused, Kolk (1991) used "normal disfluencies" in the same meaning as "not stuttering". "Disfluency" can mean the lack of fluency in speech or the speech that is not fluent. It connotes normal mistakes of speech (Horii & Ramig, 1987). Wingate (1984) viewed fluency as an abstraction created for academic purposes. It involves normal speech and the speech that is perceived as normal fluent speech typically contains a variety of "disfluencies" while the speech that is abnormal is normally referred to, within medical contexts, as "dysfluency".

Johnson (1961) defined disfluencies as the hesitations, the pauses, the repeated words and the restarted or repaired phrases in spontaneous speech. Brutten (1963) gave a broader definition that disfluencies refer to interruptions and breaks in the flow of the speech signal. Postma, et al. (1990) made a clear distinction among "speech errors", "disfluencies", and "self-repairs" through explanation of how they are born to be. They pointed that speech errors refer to the already articulated utterance that deviates from a speech plan while disfluencies are interruptions to the execution of a speech plan, and self-repairs are corrections of speech errors. Fox Tree's (1995) definition does not focus on what disfluencies are but on what they do and what they do not. Fox Tree defined disfluencies as the phenomena that interrupt the flow of

speech and do not add propositional content to an utterance. This communicative function of disfluencies signals the view that although disfluencies occur in an utterance, the core meaning of that utterance remains unchanged. The above definitions are all conceptualized from English L1 studies; and this is crucial for the present study to explore such phenomena of disfluencies in the speakers of English as a foreign language.

In order to avoid bias against the results about the nature of disfluencies prior to studying, the term "disfluencies" is selected to be used throughout the current study with the reasons that "disfluencies" is considered neutral in comparison to the other terms. It contains no evaluative attitudes towards the nature of the disfluencies while the other terms contain evaluative-bias connotations informing both positive attitudes (e.g. "own communication management"), and negative attitudes (e.g. "hesitations", "speech disturbances", and "nonfluency"). In addition, the prefix "dis-" which means "apart" suggests that "disfluencies" means making the fluency apart or breaking it (an utterance) up. Thus, the term "disfluencies" is the best appropriate suggesting no evaluative biases and informing its behavior about breaking up an utterance into parts.

Although researchers from various fields of study have described and termed disfluency phenomena in different ways, there are some common characteristics that can be concluded to illustrate the overall picture of disfluencies. Its description to be used for this study is as follows.

"Disfluencies" (henceforth, DFs) refer to the breaks that occur in utterances in spontaneous speech and disrupt the flow of speech without adding any propositional content to those utterances but rather maintaining the original propositional content as intended. Such breaks include pauses, repetitions, and repairs. Their presence in mid-utterance suggests that there may be some changes to be made by the speaker.

All the above reviewed literature indicates that because of having more than one system of languages, limited L2 knowledge, different speech self-monitoring process, and different communicative ability from L1 speakers, L2 speakers may produce DFs in their L2 speech differently from those L1 speakers do. The following section explains about the nature of L1 DFs, and of L2 DFs in order to understand their distinctions and similarities.

Disfluencies in L1 Speech: Types, Roles, and Interpretations

L1 DFs have been studied in different areas of study (e.g. medical, psychology, linguistics, and psycholinguistics). Each area provides different conceptualization of DFs based on the purposes of their studies. However, there are some characteristics of DFs that those researchers have in common which can be broadly classified as repairs, filled pauses, unfilled pauses (silent pauses), prolongations, repetitions, false starts, and editing terms (Johnson, 1961; Mahl, 1957; Maclay & Osgood, 1959; Shriberg, 1994; Clark & Wasow; 1995; Schnadt, 2009; Allwood, et al., 1990; Savova, 2002; Levelt, 1983). The characteristic of each one is described as follows.

Pauses

Pauses are one of the major disfluency forms that have drawn attention from the researchers on human speech. Their occurrences were found in relation to the syntactical complexity of speech (Rochester & Grill, 1973; Cook, et al., 1974; Gleason & Ratner, 1998). The more complex the language structure is, the higher number of pauses is found. Their occurrences also suggest the reflection of speakers' language encoding process and their breathing duration between utterances. However, the researchers have agreed that there are two distinctive features of pauses which are filled pauses and unfilled pauses.

Filled pauses refer to the breaks that are filled with fillers. There are different forms of filled pauses e.g. *uh, um, ah, mm, oh*, and other fillers in the form of vocalization. *Uh* and *um* are the most interesting forms among researchers due to their frequent occurrence in daily speech. Allwood, et al. (1990) have claimed that DFs have discourse function in speech and they are used as tools for the speakers to manage their own communication. Their findings reveal that filled pauses are markers for signaling that the speakers are holding time for processing and making their choice of content and structural expression; that is, they have the choice-related function. In addition, according to Aijmer (2013), filled pauses (i.e. *mm...erm...*) co-occurred with *well* when speakers started with filled pauses followed by an expression of hesitation like *I think* and then made another filled pause before saying *well* as a marker for informing that the speakers are changing the illocutionary force of an utterance. Aijmer also concluded that when pauses (both filled and unfilled pauses) co-occur

with *well*, the *well* will function as a turn-holding device while the speaker is searching for words or planning ahead. This speech preplanning is also reflected through the use of fillers *uh* and *um*. The two fillers signal delay of the upcoming words in the speech in order to hold the floor in speaking while the speakers are searching for the next word to say (Clark & Fox Tree, 2002; Fox Tree, 2001).

Pauses tend to occur at clause boundaries or the major structural breaks and before certain lexical decision points (Gleason & Ratner, 1998; Swerts ,1998; Shriberg,1994). Swerts (1998) found that utterance initial fillers reflect macro-planning of an upcoming major discourse segment. Shriberg's (1994) work illustrates a clearer understanding of these phenomena. She found *um* and *uh* occurring in distribution patterns. *Um* tended to occur more frequently in the initial position of an utterance while *uh* was likely to appear within an utterance. Shriberg analyzed that the fillers occurring at the beginning of an utterance are associated with macro-planning of the upcoming speech whereas the fillers within an utterance are related to micro-planning processes. These phenomena support the findings in the work of Allwood, et al. (1990) that pausing is used as the speakers' strategy to hold time for taking the floor and taking the time to encode the following clause or word simultaneously. Shriberg (1994) noted that due to no relationship between filled pause production and sentence-related variables found in her study, other than speech production process, those DFs may be also related to discourse and sociolinguistic factors in association with conversation management.

While the filler *um* is likely to serve as a discourse marker and signaling macro-planning process as evidenced by their initial utterance positions, the filler *uh* has effect on language comprehension (Fox Tree, 2001; Bailey & Ferreira, 2003) by drawing the hearers' attention to have faster recognition for the upcoming words. That is, filler *uh* serves as communicative signal to the hearers for better understanding the messages as intended when it precedes the upcoming words. Although Clark and Fox Tree (2002) reported that the filler *uh* and the filler *um* are different in which *uh* signals a shorter delay, the filler *um* signals a longer delay (in native speakers of English). Inconsistent findings were found by Riazantseva (2001) that, in the non-native speakers of English, length of pause is not related to the filler type preceding

the pause. Filler *oh* has different interpretation from the first two fillers. It is assessed as a signal for suggesting that the information provided is not connected to the information that just preceded it but to that follow it (Fox Tree & Schrock, 1999). The studies by Veilleux, et al. (2007), Swerts (1998), and Arnold, et al. (2003) indicated the role of filled pauses as markers of discourse boundary cueing the hearers to the presence of the new and difficult-to-be-processed information. The evidence implies the discourse marking function of filled pauses. In terms of sociolinguistic dimension, Tottie (2011) revealed that filled pauses *(er/uh,erm/um)* are sociolinguistic markers.

The above findings suggest that there are various forms of filled pauses. Each form has its own characteristics. They are conceptualized as multifunctional markers. First, they mark syntactic boundaries. Filled pauses tend to occur most often at the initial position of utterance. As this phenomenon reflects difficulty in lexical access, it can be interpreted that filled pauses occurring at the beginning of utterance are associated with problems in micro-planning process. Second, for speakers, they allow speakers to have more time to detect errors and plan for the next information. Filled pauses allow the speakers to have time for managing their own communication with others and monitoring to detect errors in their speech. Third, for hearers, filled pauses provide semantic focus giving a clue for the hearers to faster predict what the speakers tend to say following the filled pause. Last, filled pauses indicate the speakers' signal to give the next turn to the hearers. When they co-occur with other discourse marker like *well*, they form pragmatic meaning suggesting the speakers' intention to produce an utterance. In conclusion, it is rather clear that both speakers and hearers make use of filled pauses for communicative purposes.

As earlier informed, these are findings mainly gained from native speakers of English, whether the filled pauses produced by non-native speakers of English particularly by Thai EFL learners behave similarly or differently is a question to be inquired in this present study.

Unfilled pauses are the most frequently occurring type of DFs (Laver, 1995; Goldman-Eisler, 1961). They are recognized as a suspension of speech that occurs at a silent stage within an utterance (Clark & Wasow, 1998). Heike, et al. (1983) referred to the unfilled pause as a vocal inactivity of a certain duration embedded within the

stream of speech. The two definitions clearly state that there is only one form of unfilled pauses – silence. Researchers have found that silence in speech involves breathing (e.g. weak respiration), intention of interpretation of the text (e.g. silent pauses in conversations), syntax, emotion, rhetorical and expressive emphasis (e.g. silent pauses in public speaking), and the mismatch between speech planning and articulation (Laver, 1995; Zellner, 1994). The inference is that silence in speech is associated with cognitive, psycholinguistic, physiological, and social factors. Goldman-Eisler (1958) analyzed the occurrence of silence in speech in relation to the predictability of lexical words both before and after the silence in order to identify the differences between hesitation pauses and breathing pauses.

The findings showed that the lexical item after a silent pause is more difficult to predict; and this type of pause reflects hesitation in speaking. Its presence is to gain time for processing speech production. The occurrence of those pauses decreased when the speaker's automaticity in language production increased (Goldman-Eisler, 1961). Her work was supported by the findings from the studies by Maclay and Osgood (1959), Tannenbaum, et al. (1965). Clark and Wasow (1998) contended in the same direction and emphasized that the pause is planned by speakers. Speakers often suspend speaking after producing a constituent (e.g. noun, pronoun, and article) during this time the speakers are planning for the next utterance. The unfilled pauses that occur at clausal boundaries tend to reflect formulation processes of the next constituent while those occurring within a clause are viewed as a result from delays in lexical retrieval (Levelt, 1989; Kircher, et al., 2004). In other words, unfilled pauses are used for stopping to gain time for processing and making a choice of content and types of structured expression (Allwood, et al., 1990).

This can be concluded that silence in speech is a piece of evidence of cognitive effort in response to linguistic activity. In identifying silence as speakers' natural prosody (breathing pauses), Ferreira (1993) and Bailey and Ferreira (2003), claimed that prosodic pauses are determined by the relationship to the constituent that comes before the silence. These prosodic pauses are typically found at the intonation phrase boundaries; that is, the rhythmic structure of speech may not be related to planning processes. In terms of the communicative role of unfilled pauses, it was

found that they have contribution to the clarification of syntactical ambiguity e.g. as in compound words (as discussed in Tissi, 2000) and to the discourse segmentation associated with the hearers' attention and perception (Tissi, 2000; Kendall, 2007). Both Tissi and Kendall demonstrated the roles of silence in generation and interpretation of meaning. Ignorance of silence in speech can lead to misinterpretation by hearers; moreover, the meaning of message that is embedded in unfilled pauses can also be misinterpreted based on cultural and social differences between the speaker and the hearer. As evidenced from Bilá and Džambová (2011), by comparing functions of pauses in semantically identical utterances in micro-textual units in colloquial style produced by L1 and L2 speakers, it was found that L2 speakers demonstrated inappropriate segmentation of the discourse (silence was not left at the crucial point for the hearers to be able to predict the upcoming word) and deviant distribution and frequency of unfilled pause in their speech. The authors interpreted that this is because L2 speakers apply cognitive activities differently from L1 speakers. However, its results can also be interpreted in relation to the L2 speakers' social and cultural backgrounds.

Martin (1967) analyzed the hearers' interpretation of unfilled pauses and proved that the hearers recognized an utterance using the boundaries of grammatical units as a clue. Keseling's (1992) study also confirmed the result that pauses perform emphatic function marking coherent passages to the receiver.

The duration of silence in unfilled pauses is another issue that has been largely investigated by researchers in order to identify the minimum duration of the silence that is assessed as disfluency- unfilled pauses, not nonfluency. Campione and Véronis (2002) studied silence in speech of five European languages and revealed that the distributions of unfilled pauses were from a combination of three categories of pauses: brief (< 200 ms), medium (200-1000 ms), and long (> 1000 ms) pauses. Sabol and Zimmermann's (1984 as discussed in Bila & Dzambova, 2011) study found that the normal duration of silent pauses is 300 ms. - ≤ 350 ms. which falls into the medium range as categorized by Campione and Véronis. The suggested duration has been widely accepted for research. Megyesi and Gustafson- ˇCapková (2001) observed that pause length has an effect on the hearers' perception. The longer the silent

intervals are, the better the chance that the perceived pause (by human) is close to an acoustic silent interval (as detected by machine). The minimum pause length for this study is 100 ms. The implication of these findings suggests that the pause length which is noticeable will be perceived by the hearers. However, the authors insisted that the intonational variations can have effects on prosodic phrasing. Campione and Véronis (2002) added that pause duration varies in statistically significant ways between languages. For the current study, one of its purposes is to investigate the hearers' interpretation of the DFs, thus, human perception of the noticeable long-duration of silence is required rather than accurate measurement by the machine detection.

Prolongations

Prolongations refer to speech sounds that are stretched out longer than it is in normal speech rate (Schnadt, 2009). The stretch typically happens with vowel sounds (e.g. *theeee*….) and short function words like *the, a*, or *to* (Eklund & Shriberg, 1998). Fox Tree and Clark (1997) studied the pronunciation of a function word *'the'* and found that the occurrence of its prolongation form *'thiy'* prior to a suspension of speech is much more frequent than the occurrence of its shortened form *'thuh'* at the same position. The authors concluded that *'thiy'* signals a major problem while *'thuh'* signals a minor problem in relation to lexical retrieval process. Clark and Wasow (1998) explained such phenomenon as a Commit-and-Restore strategy which signals that there are some grammatical problems, the speaker's desire to maintain continuity, and/or out of an attempt to hold a prior syntactic commitment. One of the problematic issues about prolongations is how to identify that they are hesitant or prosodic features. Eklund (2001, 2002) suggested that prolongations can be recognized by their unusual duration of speech sound within the context that it takes place, for example, the content word which follows the prolongation. It was also found that the function words (i.e. *a, in, of, to*, and *that*) in the prolongation forms will be used in their normal forms when occurring with other disfluency (Bell, et al., 2003). Prolongation phenomena can be influenced by speech rate, stress, position within an utterance, and speaker's physiological factors.

Repetitions

Repetitions refer to the repetition of words or phrases. Repetition can be viewed as a mark for amendment; but, since the current study is to investigate the hearers' interpretation of DFs, repetitions can serve as a means to emphasize the intended message by speakers. Due to this ambiguous function, repetition is not included as a member of repairs. Repetitions refer to the disruption in ongoing speech in the form of repeated word(s) or a part of them. Repetitions can also purposefully used to make a smooth speech after a long pause (Buck, 2001). This is in line with the study result from Heike (1981) that repetitions were preceded by a long pause but not accompanied by an unfilled pause except by filled pauses. Heike distinguished repetitions into two types: prospective repeats and retrospective repeats. The prospective repetitions act as a hesitant disfluency to gain time for lexical search while the retrospective repetitions are to resume fluency after the interruption (Buck, 2001, Schnadt, 2009).

The prosodic aspects of repetitions that were studied by O'Shaughnessy (1993) demonstrated that there is a difference in the length between the first instance (or prospective repetition according to Heike) and the repeated words (or Heike's retrospective repetitions). It was found that the repeated words were shortened up to 50% of the first instance of the repeated words. Plauche and Shriberg (1999) provided evidence of word durations and the distribution of pauses for differentiating three types of repetitions. Shriberg (1995) observed that different prosodic length signals speaker's intention to maintain intonation patterns and local pitch range relationships. This observation was confirmed by Savova and Bachenko (2003). Regarding to the prosodic similarity between the prospective and the retrospective repetitions, Cole, et al. (2005) contended that it provides a strong perceptual cue to the listener for the repetition of the lexical item.

Repetition phenomena occur with function words more often than content words due to their occurrence at the beginning of an utterance where is a position syntactically reserved for function words (Clark & Wasow, 1998). Shriberg (1995), Levelt (1983), and Postma and Kolk (1993) have proposed repetitions as a form of covert repairs with the reason that an error in the speech plan is identified prior to its

articulation. For interactional function, repetitions represent a preliminary commitment to speaking to avoid unnecessary silence. The repeated word is to restore continuity (Schnadt, 2009). In additions, Savova and Bachenko (2003) found repetitions co-occur with substitution (does not…did not), insertion (to clean…to try to clean), and deletion (no spotting dysuria or abnormal…correction no spotting or dysuria). Savova's findings reveal that repetition acts as a mark for amendment of utterance.

Repairs

The DFs of repair concept include correction, completion, and omission in Mahl (1957), false starts in Maclay and Osgood (1959), revisions and incomplete phrase in Johnson (1961), self-interruptions in Alwood, et al. (1990), substitutions, insertions, deletions, word fragments, and editing terms in Shriberg (1994), and repairs in Levelt (1983) and Schnadt (2009). Under this concept, the term 'repairs' will be used in this study by referring to all amendments that speakers make resulting in reformulation of the articulated utterance. Those amendments can be correcting, completing, or revising words, phrases, and sentences by means of substitutions, insertions, or deletions. The marks of the amendments can be false starts (e.g. "*[He - She] has gone.*"), incomplete phrase (e.g. *Since she has gone…*), or editing terms (e.g. *I mean*). The general purpose of repairing is to maintain syntactic and semantic coherence between the intended speech plan and the actual speech production (Schnadt, 2009). Levelt (1983) found five types of repairs categorized based on production problems as perceived by speakers. The first type is D-repairs involve speaker's abandoning what being said (or partially said) and then say something different. Second, A-repairs are to make the utterance more appropriate in terms of context, syntax, or semantic. Third, E-repairs are used for correcting lexical, syntactic, or phonetic errors. Forth, C-repairs refer to covert repair which is that speakers suspend speech and produce an editing term, hesitation or repetition but maintaining the original utterance. Fifth, R-repairs include the rest or other repairs not relevant to the other four.

Shriberg (1994) found different types of DFs: repetitions, insertions, substitutions, deletions, misarticulations, complex repairs, and filled pauses. The types of repairs as categorized by the three researchers are in similar regularities. It is interesting that Shriberg have raised the issue of relationship between types of DFs by

classifying the type of complex repairs which involve the combination or co-occurrence of DFs across types. The rule is also proven to be applicable to analyzing L2 disfluency structure. According to the study results from van Hest (1996) and Kormor (2002), the majority of L2 learners' self-repair behavior follows the well-formedness rule. It indicates that the mechanisms of L1 and L2 monitoring and self-repair behavior share some similarities regarding to the pattern in processing language production. However, due to the lack of automaticity in L2, speech-production monitoring in L2 differs from that in L1 in terms of the amount of attention available for error detection (Kormos, 2006).

Beside the syntactic structure of repairs, their pragmatic meaning through analysis of the timing of self-repairs in the speech of 30 Hungarian learners of English at three different levels of proficiency by Kormos (2000b) reflected that the speed of detecting pragmatically inappropriate words and lexical errors was very similar. The author interpreted that during monitoring the pragmatic features of the lexical entry are checked simultaneously with its phonological and semantic form as well as its argument structure. The findings suggest indirect evidence for the assumption that lexical entries do not contain only semantic specifications but also information concerning their pragmatic value (Dornyei & Kormos, 1998; La Heij, 2005). It revealed that the uncertainty of speakers about the correctness of utterance in the case of rephrasing repairs slow down the detection process to a considerable extent (Kormos, 2000b). With this evidence, Kormos (2000b) proposed to add rephrasing repair as one more type of repair into those previously suggested by other researchers in order to account for disfluency phenomena in L2 learners. Types and characteristics of L1 DFs are as follows.

Table 1 Types and Characteristics of L1 Disfluencies

Types of DFs	Characteristics
Filled pauses	Vocalics e.g. ah, uh, um, eh, mm.. And other fillers such as editing terms e.g. *well, I mean, you know*
Unfilled pauses	Suspension with silence occurring at any point in an utterance
Prolongations	Lengthened vowel sounds e.g. *theeee..., thuuuuh, tooooo...*
Repetitions	repeated words, phrases, or sentences e.g. *to clean...to clean*
Repairs	Amendments that speakers make resulting in reformulation of the articulating utterance i.e. correcting, completing, revising words/phrases/ sentences by means of substitutions, insertions, or deletions

The roles of disfluencies in L1 speech, and hearer's interpretation of those disfluencies when they are present in utterances can be summarized as follows.

Table 2 Disfluencies in L1 Speech: Roles and Hearers' Interpretations

Types of DFs	Roles	Hearers' Interpretations
Filled pauses	To mark syntactic boundaries Speakers' time holding devices for managing speech Speakers' signals to give turn to hearers Hearers' semantic focus giving clues for prediction of next utterance	Markers of discourse boundary Cueing for new & difficult-to-be processed information
Unfilled pauses	To gain time for processing, making a choice of content &types of structured expression To clarify syntactic ambiguity (e.g. compound words such as new houses and shops; discourse segmentation such as Have you met my brother Fred? vs Have you met my brother, Fred?	Meaningful unit in an utterance making coherent passages to the receiver
Prolongations	to hold prior syntactic commitment to maintain continuity To signal there are some grammatical problems	No evidence from previous studies

Table 2 (cont.)

Types of DFs	Roles	Hearers' Interpretations
Repetitions	To mark for amendment of speech To emphasize speakers' intended message To purposefully make a smooth speech after a long pause To gain time for lexical search To resume fluency after interruption To represent a preliminary commitment to speaking (avoid unnecessary silence)	A strong perceptual cue to the repeated lexical item
Repairs	To maintain syntactic and semantic coherence between the intended speech plan and the actual speech production To signal speakers' lack of automaticity in speech monitoring processes	No evidence from previous studies

These types of DFs can be categorized into two main types according to how they produced in speech production process as shown in the diagram of potential sources of DFs (see Figure 4) which are covert self-monitoring DFs (indicating DFs occurring at formulating level) and overt self-monitoring DFs (indicating DFs occurring at articulating level). The first main type includes filled pauses, unfilled pauses, and prolongations. The second consists of repairs and repetitions. Each type has its own characteristics.

Considering the roles and the hearers' interpretations of DFs in L1 speech, the previous studies suggest that L1 DFs behave like (a) discourse markers in doing both textual (e.g. repairs -- to maintain syntactic coherence between the intended speech plan and the actual speech production) and interactional functions (e.g. filled pauses -- to mark speaker's signals to give turn to a hearer), (b) communication strategies such as unfilled pauses -- to clarify syntactic ambiguity such as in discourse segmentation, and (c) as indicators of speaker's cognitive difficulties such as prolongations -- to signal some grammatical problems. From hearer's perspective, DFs are viewed as discourse markers indicating new information which is difficult to be processed,

making coherent passages to the receiver, and cuing to the repeated lexical item. In conclusion, L1 DFs behave similar to discourse markers and communication strategies, and as markers of speaker's low level of speaking proficiency. They can be in lexicalized or non-lexicalized forms. Although there is some information on the roles of prolongations and repairs, it is mostly from researchers' observation, the evidence from hearers' own interpretations on these two DFs is not found.

Disfluencies in L2 Speech

Types

Previous studies on L2 speech reveal similar types of DFs as found in L1 speech in general. There are three main types of L2 DFs: pauses, repetitions, and repairs. Only prolongations which are classified as a type of L1 DFs are included into non-lexicalized filled pauses. That is, L2 researchers may consider prolongations as fillers playing a similar role as filled pauses. There are also sub-types demonstrating sub-characteristics of each type. The details are presented as follows.

Pauses

Pauses are identified as unfilled pauses (or silent pauses) and filled pauses. Dornyei and Kormos (1998) and Tang (2015) analyzed filled pauses as non-lexicalized items focusing on their forms of vocalics e.g. *um, uh,* and their phonological variants. Prolongations, which are classified as one type of L1 DFs, are also analyzed as non-lexicalized pauses by Tang (2015). Fillers which are non-vocalics-- in word form or any equivalent forms e.g. *well, I mean, like, and you know* are categorized as lexicalized pauses (Tang, 2015; Hlavac, 2011).

Repetitions

Repetitions are divided into self-repetitions and other-repetitions (Dornyei & Kormos, 1998; Tang, 2015). Self-repetitions refer to speakers' repetition of their own utterances by repeating a word or stress of words immediately after they are said while other-repetitions involve repeating something the interlocutors said.

Repairs

Repairs in L2 speech, as reviewed, are emphasized more on who initiates the repairs rather than on how L2 speakers repair their speech (e.g. reformulations, false starts, corrections, or other amendments of articulated utterances). They are analyzed as self-initiated repairs and other-initiated repairs (as discussed in Liyanage & Gardner, 2013; Chotirat & Sinwongsuwat, 2011; van Hest, 1996; Kormor (2002). Only some researchers focus on how those speakers do the repairs such as corrective repairs (O' Connor, 1988), error repairs (Poulisse, 1993), and rephrasing repairs (Kormos, 1998). The types and characteristics of L2 DFs can be summarized as shown in Table 3.

Table 3 Types and Characteristics of L2 Disfluencies

Types of DFs	Characteristics
Pauses	Suspension in mid-utterance with or without fillers
Non-lexicalized filled pauses	Vocalics e.g. ah, uh, um, eh, mm...and their phonological variants and sound lengthening (prolongations) e.g. *theeee...*, *thuuuuh*, *tooooo...*
Lexicalized filled Pauses	Non-vocalic fillers e.g. *well, I mean, you know*, and *like*
Unfilled pauses (Silence pauses)	Suspension with silence
Repetitions	Repeated words, phrases, or sentences e.g. *to clean...to clean*
Self-repetitions	Repeating one's own word or stress of words immediately after they are said
Other-repetitions	Repeating something the interlocutors said
Repairs	Amendments that speakers make resulting in reformulation of the articulating utterance i.e. correcting, completing, revising words/ phrases/ sentences (rephrasing) by means of substitutions/ insertions/ deletions
Self-initiated repairs	Repairing initiated by speakers themselves
Other-initiated repairs	Repairing as initiated by the interlocutors

It is controversial that the types of DFs produced by L2 speakers are signals of their difficulties in processing speech production, or indicators of their L2 acquisition, or their ways to manage their speech communication. According to the

literature reviewed, it can be concluded that there are different views on L2 DFs. The following section provides more details on the issue.

L2 Disfluencies through Cognitive View

Through cognitive view, it is similar to L1 DFs that L2 DFs are seen as errors in speech production processes. They signal L2 speaker's cognitive problems in producing speech and cannot be controlled by speakers (de Bot, 1992; Sajavaara, 1987; Tang, 2015). However, L2 speakers demonstrate less automatic speech processing than L1 speakers do. In their L2 speech, the speakers produce high number of DFs such as filled pauses (fillers), repetitions, and repairs (Fehringer & Fry, 2007), the longer pause length in comparison with that in the speakers' L1 speech (Belz & Klapi, 2013), and when a script is available for them, they can make faster lexical access processing (Hoshino, 2006). That is, they can speak more fluently. In addition, according to de Jong, et al. (2013), linguistic skills--lexical retrieval speed and sentence building speed have strong relationship with the average syllable duration. Such phenomena reflect L2 cognitive fluency which involves linguistic knowledge and processing skills. These results are in line with those yielded from Guara-Tavares' (2013) study which reports that working memory capacity correlates with accuracy in spontaneous speech, and it is also related to L2 planned speech in terms of fluency and complexity of language. In other words, in spontaneous-speech condition, L2 speech is likely to be characterized with DFs and ungrammaticality while in planned speech condition, they tend to demonstrate more fluency and complexity. Kahng (2014) also adds that pauses within clauses reflect L2 speakers' difficulties in speech production processing especially in cognitively demanding contexts. However, they facilitate hearer's speech perception and speakers' recall.

The above findings indicate that memory capacity and automaticity of speech processing can have effects on L2 language production as evidenced by the frequent occurrence of DFs in a cognitively demanding conditions. When L2 speakers are provided with stimuli such as scripts or time for speech preparation, they demonstrate higher automaticity in producing L2 speech.

The previous studies of cognitive view also studied the interaction between types of L2 DFs and speaker's level of language proficiency. It was found that L2 speakers with low level of language proficiency demonstrate high number of pauses and when their proficiency developed, they make more self-corrections in their L2 speech (Lennon, 1990). Comparing the occurrence of DFs in the speech made by L2 speakers at lower proficiency level and at high proficiency level, the former produces higher amount of repairs than the latter (Yang, 2002). Rather than focusing only on frequency, O'Connor (1988) also concentrated on the qualitative characteristics of DFs and found that the speeches of L2 speakers with high and low proficiency levels show different nature of repairs. The less proficient learners produce high number of corrective repairs while the higher ones make more discourse corrections. The advanced learners make corrections less frequently than the beginning and the intermediate learners (van Hest, 1996; Liu, 2009). The number of self-repairs among the beginning and the intermediate group is reported no significant difference (van Hest, 1996). The repair patterns and features in the low-proficiency-level L2 speakers' speech indicate that they focus more on the form language rather than the content (Chen & Pu, 2002). Based on 1085 cases of self-repairs from 48 learners of English from East-Asian background, it was found that their self-repair behavior is to a large extent rule-governed and systematic (Kazemi, 2007)

Regarding to the occurrence of repairs in advanced L2 learners' speech, DeKeyser (1997) explains that when the development of L2 learners' language skills progresses, their conscious controlled knowledge, which involves language errors, becomes automatic unconscious rules. If the rules are correct and stored in their memory, their speech is possibly free of errors. Poulisse (1993) adds that because of the automaticity development, advanced learners make less error. As a result, they make fewer error repairs than those with lower language proficiency. These phenomena indicate that the speech produced by the lower-level-language-proficiency learners contains more DFs especially pauses, errors repairs, and corrective repairs due to the erroneous activation of lemmas which involve lexical processing. As evidenced by Hilton, (2007, 2008), lexical knowledge and lexical retrieval are considered the primary cause of the most serious DFs and the overuse of hesitation markers decrease

as the speakers' language proficiency has been developed. Liu, et al. (2010) also suggest that word production in L2 is less automatic and cognitively demands for lexical retrieval articulatory processing than in L1. Thus, more working memory with attention directed at every stage of processing is needed for L2 speech production (Paradis, 1994).

In conclusion, through cognitive view, the overuse of pauses in L2 speech is analyzed as speech production difficulties. The repair pattern mostly found in the L2 learners' self-repair behavior follows the well-formedness rule. The same pattern is also found in L1 speech (van Hest, 1996; Kormor, 2002; Shriberg, 1994). This evidence indicates that the mechanisms of L1 and L2 monitoring and self-repair behavior share some similarities regarding to the pattern in processing language production. Self-corrections or self-repairs are the disfluency types that frequently occur in advanced L2 speech. Moreover, the nature of repairs mostly found in advanced L2 speakers is at discourse level while the repairs that are frequently present in the speech produced by the learners with low level of L2 proficiency are at syntactic level. Thus, the relationship between L2 speakers' language proficiency and the types of repairs can be evidence of L2 acquisition. However, the similar evidence in relation to other types of disfluencies is not reported by the previous studies.

To the issue of L2 acquisition as raised above, Swain (1995) also argues that the disfluency type of self-repairs, instead of reflecting L2 speakers' problems in producing L2 speech as claimed by the cognitivists, they mirror the speakers' development in acquisition of L2. Supporting to Swain's argument, the previous studies (O'Connor, 1988; van Hest, 1996a, 1966b; Fehringer and Fry, 2007; Gilabert, 2007) provide evidence indicating that not only the low proficient L2 speakers produce a high number of DFs, but the advanced L2 learners may also produce a high rate of DFs especially repairs for appropriate use of language. Thus, in comparison with the types of DFs, their frequency is less indicative of the speakers' L2 acquisition.

Other than pauses and self-repairs, L2 DFs which are analyzed as indicators for development of L2 acquisition can be in the form of lexicalized fillers such as *you know, I mean, well, like, yeah, right, ok, then,* and *now* or in the form of non-lexicalized fillers such as *um, oh*, and *uh huh* (Fraser, 1990; Clark & Fox Tree, 2002;

Liu, 2013; Fehringer & Fry, 2007; Bu, 2013). These DFs are used to mark for repairing an utterance and, in general, have a similar pattern of use, but not identical way to discourse markers (Fraser, 1990; Clark & Fox Tree, 2002). Some research study such fillers as a set of discourse markers indicating L2 acquisition. The details are explained below.

Bu (2013) examined *like, yeah, oh, you know, well, I mean, right, ok,* and *actually.* The results indicate that gender, style, individual identity, and context have effect on the learners' L2 acquisition as indicated by the use of these markers. The female learners produce these lexicalized fillers more frequently than the male learners. The author indicates that these lexicalized fillers, as discourse markers occur more frequently in a natural setting (interviews) than in a classroom setting. Thus, it is likely that the fillers can be better acquired through natural learning than through formal learning.

Zhao (2013) reveals that acquisition of *you know, well,* and *I mean* in Chinese EFL learners can be fossilized due to their lack of acquiring the pragmatic functions of the markers. The study indicates that they are not aware of the importance of markers in constructing textual coherence. This conclusion is supported by Fuller's (2003) and Wang's (2009) study results that non-native speakers of English use 'you know' at a higher rate. Fuller also found that their use across contexts is not different. Thus, they may not be aware of the relationship between the use of makers and contextual situation. Additionally, their acquisition of L2 needs to be promoted since the roles of DFs such as lexicalized fillers in terms of interactional function in conversation are unclear to them.

Fehringer and Fry's (2007) work reveals that the types of DFs (e.g. fillers, repetitions, reformulations which are referred to as hesitation phenomena in their study) and their frequency of occurrence in advanced bilinguals who acquire L2 from formal settings are carried over to their L2 speech. Similar results regarding to the L1 effect on the use of English discourse markers by L2 speakers of English are found in Liu's (2013) study. The evidence is that the participants use *yeah/yes* as a backchannel after the interlocutor's reaction of acknowledgement e.g. *uh huh, ok.* Such behavior in using L2 discourse markers is similar to that in the speakers' L1.

L2 DFs do not only behave like discourse markers, their practices are also similar to communication strategies, and the previous study results on whether they do reflect speakers' L2 acquisition since there are some inconsistent findings about the interaction between the use of those DFs and L2 speakers' levels of language proficiency as presented next.

Tang (2015) found a tight correlation between the speakers' communicative strategic competence and their linguistic proficiency. The L2 speakers in Tang's research project are found to be less proficient at utilizing L2 fillers than the L1 equivalents with respect to variation. The frequency in using stalling devices (a term that Tang, 2015 and Dornyei & Kormos, 1998 use to refer to hesitation markers – the markers that they view as communicative facilitators) increases along with the decrease of the L2 speakers' automaticity of language processing. Those L2 speakers' use of L2 fillers: lexicalized and non-lexicalized fillers and repetitions can indicate their L2 acquisition. Conversely, Uztosun and Erten (2014) found that L2 speakers' language proficiency level is not a factor influencing learners' choice in using a type of DFs (i.e. filled pauses, self-repairs, and repetitions which were called communication strategies in their study). That is, there is no relationship between the L2 speakers' language proficiency and the types of DFs that they produced. Thus, the issue on interaction between L2 speakers' proficiency and types of DFs requires further investigation.

The empirical findings of the above studies through cognitive view show that (1) L2 DFs reflect difficulties in processing speech production (e.g. pauses), and (2) some are indicators of L2 acquisition (e.g. errors repairs, corrective repairs). They behave similar to discourse markers and/or communication strategies. However, it is not clear-cut about which type of DFs fall into discourse markers or communication strategies. They may indicate the development in L2 acquisition. The indicative characteristics include transfer of L1 DFs, patterns of use and types, and fossilization in the use of discourse markers. The findings suggest that DFs tend to have pragmatic functions and acquisition of their use through natural settings can be more effective than through formal settings. The types of DFs produced by L2 speakers who have low language proficiency show that language at syntactic level is their major concern while the high proficient L2 speakers pay more attention to the discourse level.

However, both high and low proficient L2 speakers may produce a high rate of DFs in their speech. This shows that types of L2 DFs can be a better indicator of L2 acquisition than their frequency of occurrence. From the previous studies, not all types of L2 DFs are investigated in terms of their behaviors and their interaction with L2 speakers' language proficiency. Thus, it is interesting to find out whether every type of DFs found in L2 speech of English (as reviewed earlier) behave similarly or differently from discourse markers and/or communication strategies and whether there is an interaction between each type of DFs and L2 speaker's level of language proficiency.

Other than cognitive view in which DFs in L2 speech are analyzed as discourse markers (DMs) indicating development of L2 acquisition, research on DFs through sociolinguistic view also analyze DFs in L2 speech as discourse markers and communication strategies. The difference is that their main focus is on the roles of DFs in conversational interaction rather than on L2 acquisition. The empirical findings regarding to this point is presented next.

L2 Disfluencies through Sociolinguistic View

The DFs in L2 speech that are analyzed focusing on their roles in conversational interaction can be classified into disfluenices as discourse markers (DMs) in conversations, and DFs as communication strategies.

Disfluencies as Discourse Markers in Conversations

Through the sociolinguistic perspective, discourse is viewed not only as a unit of language but also a process of social interaction (Schiffrin, 2001). Coherence and relevance are included into the studies of discourse as the markers of interactive process in communication. For spoken discourse, Scollon and Scollon (2001) note that successful conversation discourse requires the speakers and the hearers maintain cohesion or relevance. The cohesion is not only necessary for convenient communication, it is also a social and interpersonal obligation among the participants to be co-responsible for smooth spoken discourse when there is a break or disruption; for example, going back to the break and repair it in order to make the conversation move forward; this is because spoken discourse is real-time processing with ongoing process of interpretation (Gumperz, 2001). Such interpersonal obligation will be even difficult

when it involves the interaction between people from different cultures since it tends to create more misunderstanding rather than understanding (Tubbs & Moss, 1981) due to small area of common experience among them. For example, differences in language systems reveal differences in predictable patterns culturally and these differences are reflected in the spoken discourse.

Tubbs and Moss's notion of the break in cohesion suggests that breaks or DFs in utterances are associated with interactional roles among participants in a spoken discourse. When a state of uncertainty occurs, people resolve it by making tentative inferences and asking upon them until further notice (Gumperz, 1997, 2001). This statement is supported by the evidence showing that some DFs: repetitions deletions, repairs, fillers, and prolongations can be the cues for the hearers to predict about the upcoming speech by interpreting the pragmatic meanings of the messages in relation to the contexts where they are present (e.g. Fox Tree & Clark, 1997; Bailey & Ferreira, 2003; Arnold, et al., 2004; Fox Tree, 2001; Corley, et al., 2007; MacGregor, et al., 2010; Arnold, et al., 2007; Corley, 2010; Tottie, 2011; Lau & Ferreira, 2005). They; therefore, serve as markers for interpersonal obligation in conversations.

For researchers in sociolinguistic view, DFs in conversations are considered markers in spoken discourse that the speakers use as their ways of communication management and intentionally produce them for drawing attention from the hearers to notice and for implicitly asking for help to solve the difficulty in carrying on the coherence and relevance in dialogues (e.g. Allwood, et al., 1990; Clark, 1996; Schnadt & Corley, 2006; Hartsuiker & Notebaert, 2010; Shriberg, 1996; Clark & Fox Tree, 2002). DFs from this view; therefore, are seen as the markers that behave similar to DMs for marking interpersonal obligations between hearers and speakers. Thus, the characteristics and the functions of DMs in comparison with those of DFs are reviewed in order to clearly identify the status of DFs in L2 speech.

Characteristics of Discourse Markers vs Disfluenices

Characteristics of DMs have been examined extensively and the widely cited studies are conducted by van Dijk (1979), Levinson (1983), Schiffrin (1987), Blakemore (1987, 1992, 2002), and Schourup (1999). The term 'discourse marker' is

named differently depending on how the relationship between those expressions and contexts is conceptualized; for example, pragmatic connectives, pragmatic operators, discourse particles, and etc. (Fraser, 1999; Schourup, 1999).

van Dijk (1979) clearly distinguishes between semantic and pragmatic connectives. However, van Dijk emphasizes that semantic connectives have certain pragmatic implications. That is the same expression can work as a semantic connective expressing the facts and it can also work as a pragmatic connective expressing relations between speech acts.

Levinson (1983) claims that DMs are words and phrases that indicate the relationship between an utterance and the prior discourse. Levinson treats DMs as signals of the organization and structure of discourse. In addition, they also inform how the utterance that contains them responds to or continues from the prior discourse. Schiffrin (1987) defines DMs as elements proposing the contextual coordinates within which an utterance is produced and interpreted. They are sequentially dependent elements that bracket units of talk, i.e. nonobligatory utterance – initial items that function in relation to ongoing talk and text. The markers are syntactically detachable; operate at both local and global levels and on different types of discourse. In spite of holding primary function, the use of DMs is multifunctional (Schiffrin, 2001). Analysis of discourse makers; therefore, concerns with their source, their relationship with context. They facilitate a more understanding of speech and create a smooth and spontaneous speech interaction between speakers and hearers.

Blakemore (1987, 1992, and 2002) proposes that DMs can introduce a contextual implication such as *so*, *therefore*. They can strengthen an assumption expressed, or introduce further evidence for it, for example, *after all*, *besides, moreover*, and *furthermore.* They can deny, or contradict an assumption such as *however*, and *but*. The use of DMs can be a cue for the hearer to understand the meaning of an utterance as intended.

Schourup (1999) proposes that the typical discourse marker refers to a syntactically optional expression that does not affect the truth-conditions associated with an utterance it introduces. It is used to relate this utterance to the immediately

preceding utterance. It is loosely attached to the structures. Removal of the marker does not alter the grammaticality of its host sentence and nor change semantic relationship between the elements it associates. It is independent of syntactic categorization and can belong to more than one category; it can work as adverb (*now, by the way*), conjunction (*but, and*), interjection (*oh, gosh*), or clause (*y' know, I mean*).

The above five descriptions suggest that DMs are primarily found in speech communication. Their main duty is to connect the language units that are longer than a sentence. Although their presence or absence does not affect the core meaning of the language unit, they do have pragmatic meaning binding to the context they are used. However, the focus of each expert is different. van Dijk and Levinson emphasize on the main function of DMs in connecting pragmatic meaning. Blakemore concentrates on the lexicalized DMs which mainly involve their semantic meanings. Schiffrin and Schourup provide flexibility for analysis of discourse-marker characteristics that they may be in the forms of lexicalized and non-lexicalized markers such as *you know, I mean*, and interjections (e.g. *oh*), respectively.

In conclusion, discourse markers are characterized by their aspects of orality, intiality, syntactical detachability without hurting the core meaning of the utterance which contains them, multi-categoriality, connectivity, pragmatic meanings, and they can be in the lexical or non-lexical forms. Thus, the DFs that are treated like DMs share some characteristics of DMs. According to the empirical findings on DFs (as discussed earlier both in L1 and L2 DFs e.g. Levelt, 1989; Clark, 1996; Shriberg, 1996; Clark & Fox Tree, 2002; van Hest, 1996; Kormor, 2002; Dornyei & Kormos, 1998; Schiffrin, 1987), it is clear that DFs and DMs have four characteristics in common: orality, syntactic detachability, being in lexicalized and non-lexicalized forms, and connectivity. They are commonly found in both L1 and L2 speeches, their removal does not change the sentence grammaticality or semantic relationship between the elements they associate, their forms can be, for example, *um, uh, I mean, you know,* and *well* .

However, there are some differences in terms of initiality, having pragmatic meanings, and multi-categoriality aspects. DMs are normally found at the initial position of an utterance while DFs can be found not only in initial position but also in the medial position of an utterance (Shriberg, 1994; Levelt, 1983, 1989). It was

revealed by several studies (e.g Fuller, 2003; Wang, 2009; Zhao, 2013; Bu, 2013; Fehringer and Fry, 2003; Hilton, 2007, 2008; Liu, et al., 2010; Chen & Pu, 2002) that there is the overuse of the DM-like DFs in L2 speech communication such as *you know, I mean,* and *well* for continuing the speaker role and they tend to have a pragmatic function in conversations. Although these DM-like DFs are lexicalized, their semantic meaning is less important than their function as editing terms for repairs (Shriberg, 1994). As a result, the aspect of multi-categoriality does not belong to DFs. Based on the reviewed literatures as discussed, the characteristics of DFs and those belong to DMs are summarized and shown in the following table for better understanding of their similarities and differences.

Table 4 Comparison of Characteristics of DMs and DFs

Characteristics of DMs	DMs	DFs
Orality	✓	✓
Syntactic detachability	✓	✓
Being in lexicalized/non-lexicalized forms	✓	✓
Connectivity	✓	✓
Initiality	✓	Optional aspect
Having pragmatic meanings	✓	Potential aspect
Multi-categoriality	✓	N/A

These similarities and differences suggest that DFs may also do some functions like DMs do. When they do those functions, it is interesting to investigate the hearers' interpretation of them in comparison with what the speakers intend to mean by using those DFs. Since the interaction between speakers' intentions and hearers' interpretations of DFs is one of the main focuses of the current study, the connectivity aspect of DMs is reviewed in order to understand how they are analyzed and whether there are any differences and similarities between DMs and DFs with regard to the connectivity aspect. The connectivity involves the functions of DMs in conversations, analysis of their functions as revealed by the previous studies and its theoretical ground are presented in the following section.

Functions of Discourse Markers vs of Disfluencies

The connectivity aspect of discourse markers (DMs) in speech communication as discussed earlier can be explained in terms of language function through three main perspectives.

First, DMs as cohesion, Halliday and Hasan (1976) identify different types of cohesive devices that help create semantic relations in texts. The devices consist of reference, repetition, substitution, ellipsis, and conjunction. The devices create cohesion through anaphoric or cataphoric reference. In other words, the reference can link backwards to the previous information in text or link forwards to the to-be presented information in the text. The cohesion can also establish through DMs and conjunctions. While DMs are used for indicating a relationship between segments of the discourse which is the job of conjunction, they provide the audience with information for the interpretation of the utterance. The meaning results from the semantics of a word or from the propositions in a text (Schiffrin, 2001). The cohesion analysis is based primarily on written texts. Although the function of DMs as cohesion in written texts is not the focus of the present study, their concept of cohesive devices will be of benefit to the interpretation of the status of the DFs to arise.

Second, DMs as pragmatic markers, Fraser (1990; 1996; 1999) focuses on the meaning of sentences and the function of DMs in relating the messages sent by the prior and the following sentences. To Fraser, a sentence contains two types of meaning: content and pragmatic meanings. Pragmatic markers are used as signals of pragmatic meaning which concerns the speaker's communicative intention. The pragmatic markers consist of (1) basic pragmatic markers to signal illocutionary force (e.g. please), (2) commentary pragmatic markers to signal comments on the basic message (e.g. generally), and (3) parallel pragmatic markers to signal another message in addition to the basic and/or commentary message (e.g. *John*, you are very noisy). DMs are under commentary pragmatic marker type. They signal how the speaker intends the basic message that follows to relate to the prior discourse (e.g. *so*). Through Fraser's view, DMs do not function simultaneously in sentential and textual dimensions. That is, a discourse marker does only one function at any time it is present.

Third, in contrast, Schiffrin (1987) contends that DMs work as markers for social interaction in speech communication rather than separately function as pointed by Fraser. This third view suggests that DMs (English expression i.e. *oh, well, and, but, or, so, because, now, then, I mean*, and *y'know*) display relationship between adjacent utterances (local) and across wider spans and/or structures of discourse (global) (Schiffrin, 2001). They operate at both local and global levels. Their use is multifunctional and it helps establish coherence (Schiffrin, 1987; 2001). Through this sociolinguistic perspective, Schiffrin views discourse as social process of interaction. They can occur with different aspects of communicative situation displaying their relationship with contexts. Thus, their functions are tied with contexts. According to Shriberg (1994), editing terms such as *I mean*, *y'know* , *oh,* and *well* are considered DFs of repairs. Thus, it can be said that some types of DFs are subset of DMs.

It can be concluded that the three perspectives are based on the speakers' view point which suggests that DMs have functions as intended by the speakers and can be divided into three main functions based on Halliday's (1970) concept of language functions which are (1) ideational function, (2) interpersonal function, and (3) textual function.

Ideational function involves the expression of 'construct' or speakers' ideas/concepts about something (Halliday & Hasan, 1976). Interpersonal function is about expressing attitudes of speakers to establish and maintain social relations and communicative roles in conversations. Textual function is for creating a link of textual meanings in relation to the context where the discourse marker occurs.

Normally, DMs perform all the three functions (as cohesive devices, as pragmatic markers, and as social interaction process) while disfluenices which are DM-like may not follow the norm due to their characteristics which are also in the non-lexicalized forms such as fillers (e.g. *um, uh, er*), silences, repetitions, and repairs (see Table 4). Thus, their ideational function which requires referential meaning provided in lexical items plays a rather minor role in the case of DFs. That is, there are two macro functions that DFs perform: social process of interaction between speakers and hearers (as discussed in Schiffrin, 1987) and textual connectivity (as discussed in

Halliday &Hasan, 1976; and in Fraser, 1990, 1996, 1999). In other words, only interpersonal and textual functions are involved with DFs.

Supporting to the above note, Brinton (1996), Aijmer (2002), and Liu (2013) reviewed the literatures on the functions of DMs and proposed frameworks for analyzing DMs. It can be concluded that their frameworks are similar in terms of the main functions involved. Based on general studies on DMs (e.g. Schiffrin, 1987; Levinson, 1983; Quirk, et al., 1985), Brinton (1996, p. 37-38) proposes a set of fundamental functions of DMs.

Aijmer (2002) identifies DMs (discourse particles as referred to in her work) play roles at two macro levels which are textual and interpersonal. The studied DMs consist of *now, oh/ah, just, sort of, actually*, and tags such as *and that sort of thing*. At textual level, DMs perform their function for either local coherence or global coherence. The DMs that work for textual purpose are grouped into two types: framers and qualifiers. The framers do frame functions and the functions are not needed when interaction between the speakers and the hearers goes smoothly. In general, it is "...to draw the hearer's attention to a transition or a break in the conversational routine" (p. 41). DMs as qualifiers are used to imply that ''some qualification is needed because the dialogue does not go well'' (Aijmer, 2002, p. 45). They occur at the beginning of disagreement, in question-answer exchanges, and for indicating comparison or contrast. According to Aijmer (2002), DMs at interpersonal level can be in the form of expression for uncertainty, appeals for confirmation, backchannel signals responding to the preceding utterance, floor-holding devices, and markers made in relation to politeness.

Liu (2013,) investigates the effects of L1 on the use of English DMs by L1 Chinese speakers of English. For analysis of DM functions, Liu suggests a framework, as the other two scholars do, dividing into textual functions and interpersonal functions but slightly different in details. The three frameworks are illustrated in Table 5 and 6. Table 5 shows the textual functions of DMs as proposed by the three researchers. It can be seen that all agree that DMs have functions in signaling turn-taking, self-corrections, new information, and transitions or discourse boundary. While Brinton and Liu suggest that DMs serve as fillers that speakers use to hold the floor,

Aijmer analyzes that DMs serve as markers introducing or closing a digression e.g. *well now*, and *actually* and places DMs as floor-holding devices on interpersonal functions rather than on textual functions of language. It can be said that functions of DFs are not clear-cut between textual and interpersonal functions. They may conditionally function for textual link, for interpersonal relation in conversations, or both.

Table 5 Comparison of Textual Functions from Different Researchers

Textual Functions of DMs		
Brinton (1996) L1 English	**Aijmer (2002)** L1 English	**Liu (2013)** L2 English (L1 Chinese)
	Frame functions	
1.Initiating discourse including claiming the attention of the hearer, and close discourse 2. Aiding the speaker in acquiring or relinquishing the floor 3. Serving as filler or delay tactic used to sustain discourse or hold the floor 4. Marking a boundary to indicate a new topic, a partial shift in topic (correction, elaboration, specification, expansion) or the resumption of the earlier topic (after an interruption) 5. Denoting either new or old information 6. Marking sequential dependence to constrain the relevance of one clause to the preceding clause by making explicit the conversational implicatures relating the two clauses, or to indicate by means of conventional implicatures how an utterance matches cooperative principles of conversation 7. Repairing one's own or others' discourse	1.Introducing a new turn (initiators) 2.Making transitions (e.g., topic shifts, introducing a new aspect of the topic, opening and closing conversation) 3. Introducing an explanation, Justification, and background 4. Introducing or closing a digression *(push-markers* to signal movement to a parenthetical comment e.g. *Well now;* and *return pops* for popping from the embedded activity to back to the tacitly on-going higher level activity e.g.*actually)* 5. Self-correction 6. Introducing direct speech *Qualifying functions* 1.Indicating agreement/disagreement 2.Response to a question (a request) 3.Indicating comparison or contrast 4. Listing	1. Marking transitions (e.g., topic shifts, introducing a new aspect of the topic, opening and closing conversation 2. Introducing a new turn (initiators) 3. Self-correction 4. Introducing direct speech 5. Serving as a filler or holding the floor

Table 6 shows the comparison of the frameworks for analyzing interpersonal functions of DMs. Brinton divides the functions into two sub-types: subjective functioning and interpersonal functioning. The former is speaker-oriented focusing on speakers' purpose in using DMs rather than hearers' response. Differently, the latter is speaker-hearer oriented with the purpose to create communicative interaction between speakers and hearers. The other two frameworks treat all aspects under the same single one -- interpersonal functions.

Table 6 Comparison of Interpersonal Functions from Different Researchers

Brinton (1996) L1 English	Aijmer (2002) L1 English	Liu (2013) L2 English (L1 Chinese)
Subjectively expressing a response or a reaction to the preceding discourse or attitude toward the following discourse, including also back-channel signals of understanding and continued attention spoken while another speaker is having his/her turn and perhaps hedges expressing speaker tentativeness Interpersonally effecting cooperation, sharing, or intimacy between speaker and hearer, including shared assumptions, checking or expressing understanding, requesting confirmation, expressing deference, or saving face (politeness)	Expression for uncertainty Appeals for confirmation Backchannel signals responding to the preceding utterance Floor-holding devices Markers made in relation to politeness	Expressing a response or a reaction to the preceding discourse or attitude toward the the following discourse including back-channel signals Hedges expressing speaker tentativeness Effecting cooperation, sharing, intimacy between speaker and hearer, including confirming shared assumptions, checking expressing understanding, requesting confirmation, expressing deference, or saving face (politeness)

It can be concluded from the Table that the functions analyzed as interpersonal functions by all the researchers are: (1) DMs as back-channel signals responding to the preceding utterance and marking sequential dependence between clauses in conversations and (2) DMs at the beginning of indirect speech are treated as markers introducing politeness in communication. With regard to the qualifying function (see Table 5), the aspects, pointed by Aijmer, is social-relation-oriented because it involves argument, question-answer relations, comparison, and contrast which require participation from the other party. However, it is categorized under textual functions. The present study argues

that qualifying function should be included into interpersonal functions rather than textual functions since it is noticeable that the qualifying functions are similar to Brinton's subjective functioning (e.g. hedges expressing speaker's tentativeness). Although the functions are speaker-oriented, they demand reaction from hearers in some degree. Thus, to serve the purposes of the current study, the qualifying functions are included under interpersonal functions in the framework for the current study.

Another aspect that is analyzed as an interpersonal function in the Table 6 is turn-taking. "Turn" refers to the right to have control of conversation (Yule, 1998). Turn-taking involves an interaction between people in the conversational process occurring in order to maintain two important elements of conversation which are one person speaking at a time and the space in which one person stops talking and another begins (Sacks, 1992). In a dialogue, a speaker and a hearer constantly shift roles using both verbal and nonverbal codes (Whitman & Boase, 1983). While communication in monologue discourse flows in only one direction, in the discourse of dialogue, participants take turn being a speaker and a hearer (Levinson, 2003). That is, when a participant takes a turn being a speaker that means he/she can take speaking floor and he/she may hold the floor until he/she finishes his/her turn. According to Edelsky (1981), there are two aspects related to turn-taking: floor holding and use of overlapping speech. It can be further explained that when the second participant does not wait until the first participant leaves his/her speaking floor and deliver a speaking turn, the second participant may use an overlapping speech to claim for his/her turn. Theoretically, turn-taking is based on social interaction (Schiffirn, 1987). It, therefore, serves as a device for the interpersonal function rather than for the textual functions as claimed by Brinton (1996) and Liu (2013) who classify floor holding function as a textual function of DMs.

The previous findings from empirical studies on the roles of DFs (as concluded in Table 2) can be classified under the framework of DM functions in Table 7.

Table 7 Conclusion of DM Functions

Textual Functions	Interpersonal Functions
DMs as signals for 1. Self-corrections (repairs) 2. New/additional information 3. Transitions e.g. topic shifts 4. New aspect of topic, opening/closing conversations 5. Discourse boundary 6. Sequential dependence between the preceding and/or the following utterance 7. Listing	DMs as signals for 1. Turn-taking devices: to hold/to leave speaking floor 2. Expressing speaker's attitude, response, backchannel signals of understanding 3. Effecting cooperation, sharing, or intimacy between speaker and hearer including confirming shared assumptions, checking or expressing understanding, requesting confirmation, expressing deference, or saving face (politeness) 4. Expressing speaker's uncertainty 5. Appealing for confirmation

Based on information in Table 5, 6, and the concept of language functions about textual functions and interpersonal functions as presented earlier, Table 8 show the functions of the L1 DFs that behave like DMs.

Table 8 Functions of L1 DFs Based on DM Functions

Types of DFs	Textual Functions	Interpersonal Functions	
		Speaker-oriented	Hearer-oriented
Pauses Filled pauses	Marking syntactic boundary (Sequential dependence between	Holding time Expressing speaker's utterances) Giving a turn	Markers of discourse boundary cueing for new & difficult-to-produce information
Unfilled pauses	Clarifying syntactic ambiguity (New/additional information)	Holding time Expressing speaker's uncertainty	Meaningful unit in an utterance involving coherent passages to the receivers
Prolongations	Holding syntactic commitment to maintain continuity(Sequential dependence between utterances)	Expressing speaker's uncertainty	No investigation found
Repetitions	Marking for amendment of speech	Emphasizing on speaker's message Holding time *Making smooth speech pause *Resuming fluency after interruption *Representing a preliminary commitment to speaking (to avoid unnecessary Expressing speaker's uncertainty	-Strong perceptual cue to the repeated lexical item
Repairs	Maintaining semantic and syntactic coherence between intended speech plan and actual speech production (Sequential dependence between utterances)	Expressing speaker's uncertainty	No investigation found

In Table 8, it can be seen that DFs function similarly to DMs in terms of textual functions which include marking for new/additional information, sequential dependence between utterances, and self-corrections. The functions on transition (e.g. topic shift), new aspect of topic, opening and closing conversations, discourse boundary, and listing are not found in the previous study results. For the interpersonal functions, DFs are marking for turn-taking -- floor holding and confirmation of shared assumption while the functions regarding to speaker's attitudes, response, backchannel signals of understanding, uncertainty, intimacy between speaker and hearer, checking understanding, requesting confirmation, expressing deference, or saving face (politeness) are not reported in the previous study findings.

Through the hearer-oriented functions, it was found that the presence of DFs can be a cue for hearers to predict the next utterance, and this is the function that is not mentioned in the three analytical frameworks of DM (see Table 5, 6). From hearers' perspective, unfilled pauses and repetitions involve textual functions. Taking notice of the three aspects (as marked with asterisks in Table 8) under interpersonal functions, they are not noted as functions of DMs in those frameworks but DFs do the functions. However, those functions are similar to communication strategies that speakers use to make their speech fluent. They are about making smooth speech after long pause, resuming fluency after interruption, and representing a preliminary commitment to speaking such as to avoid unnecessary silence. Moreover, each type of DFs may not do the same function and mostly they do textual functions. They may do only textual function, only interpersonal function or both of them. When they do both functions, they can be classified as DMs. It is interesting to find out what category they belong to if they do only one of the two: DFs, DMS, or communication strategies. However, it is likely that, according to the previous findings, DFs and DMs share only some functions. Thus, the rest needs investigation.

With regard to DFs in L2 speech, their functions according to the empirical findings are to be presented based on textual functions and interactional functions, the two major functions of DMs relevant to DFs which have been discussed earlier. The

functions of L2 DFs (as shown in Table 3) which are pauses, repetitions, and repairs are described as follows.

Pauses in L2 speech have three forms (see Table 4): non-lexicalized filled pauses, lexicalized filled pauses, and unfilled pauses (silence pauses). The non-lexicalized filled pauses in L2 speech also include prolongations other than vocalics like *ah, uh, um*, and their phonological variants (Tang, 2015). The lexicalized filled pauses are those non-vocalic fillers such as *well, I mean, you know*, and *like*. The unfilled pauses refer to the suspension in mid-utterance with silence.

In L2 speech communication, filled pauses play a role similar to DMs since their functions cover both two aspects. They have textual functions in helping keeping conversation going when speakers fail to complete their speaking turn (Chotirat & Sinwongsuwat, 2011; Ussana & Sinwongsuwat, 2012; Tang, 2015). They create a sense of continuity, keep the communication channel open and maintain discourse at time of difficulty (Tang, 2015).

Regarding to the interpersonal functions, filled pauses are used as turn holding devices, and they can be a clue for hearers to expect that the speaker is going to refer to something which tends to be expressed through a relatively long or complex constituent (Watanabe, et al., 2008). Filled pauses can facilitate hearers' speech perception and speakers' recall (Kahng, 2014) since speakers may use filled pauses for holding time while gathering thoughts (Tang, 2015; Guillot, 1995). However, L2 learners in Tavakoli's (2010) study display their inappropriate use of pauses which reflects their weak pragmatic practice. The appropriate use of pauses among L2 speakers can be the results of good interactional practice (Liyanage & Gardner, 2013). In other words, L2 speakers tend to appropriately make use of pauses for communicative purposes when they have more exposure to the use of pauses in conversations. As evidenced by by Zhao's (2013) and Quan and Zheng's (2012) studies, lacking of filled pauses (*well* and *I mean*) acquisition, L2 speakers show the underuse of the markers. According to House (1999), pragmatic fluency is a characteristic of interactions in speech communication. Among her performance criteria for pragmatic fluency, types of filled and unfilled pauses that L2 speakers of English use are included as indicators of pragmatic fluency. Another

example of the pragmatic role of DFs is in Hlavac's (2011) study which reveals that bilinguals' use of lexicalized filled pauses (as well as non-lexicalized pauses, silences, and repairs) together with code-switching helps facilitating the incorporation of other language, and the usage is not arbitrary. It is used on purpose conditionally. Thus, fillers are purposefully produced. Conversely, as evidenced by Thai EFL learners, fillers in pauses occur unintentionally rather than being used (Malasit & Sarobol, 2013).

This can be said that filled pauses play a role in pragmatic meaning which is one of the characteristics of DMs. They share both textual functions and interactional functions with DMs. In addition, when they co-occur with code-switching which is a communication strategy or with other types of DFs such as repairs and repetitions, they become a part of communication strategies that L2 speakers use to overcome their difficulties to speech communication. However, due to the inconsistent result on whether filled pauses in L2 speech are purposefully produced, speakers' intention to make use of DFs is an issue to be examined in the current study.

Unfilled pauses or silences: the previous study results do not clearly reveal the textual and the interpersonal functions of unfilled pauses. Indirectly, the results show L2 speakers' failure to do meaningful segmentation by using unfilled pauses inappropriately (Bada, 2006; Bada & Genc, 2008; Bila & Dzambova, 2011). It was found that L2 learners produce the length of unfilled pause preceding and following 'that' and 'to' particle in to-infinitive phrase in an opposite manner to L1 speakers (Bada, 2006; Bada & Genc, 2008). It implies that unfilled pauses may function for textual purpose in L2 speech. As a result, the inappropriateness of doing meaningful segmentation can create comprehensibility problem to the hearers while the appropriate use of unfilled pauses can facilitate hearers' comprehensibility, speakers' recall (Kahng, 2014), and reveals the speakers' good interactional practice indicating a high level of competence (Liyanage & Gardner, 2013). They are not signals of communication failure; in contrast, they reflect L2 speakers' realization of problems in expressing the intended meaning (Sukirlan, 2014). To overcome the problem, L2 speakers use unfilled pauses as their way to overcome speech difficulties. The findings also suggest that unfilled pauses do interpersonal functions since they are the cues for the hearers to interpret the intended meaning. Such behavior of unfilled pauses can be analyzed as a

communication strategy which can be acquired through formal learning (Sukirlan, 2014). Another interactional function of unfilled pauses is that they help preventing others from interruption (Dornyei & Kormos, 1998). In other words, they are signals for floor holding and that is one of DMs' interactional functions. In sum, unfilled pauses or silences in L2 speech have interactional functions while textual functions are not clearly identified.

Repetitions: in L2 speech, it was found in the previous studies that repetitions of problematic units can occur with both syntactic and lexical items. L2 speakers utilize repetitions as vocalized fillers (filled pauses) and as self-repairs (Bada, 2010; GenÇ, 2007). However, Chotirat & Sinwongsut (2011) and Simpson, et al. (2003) found that repetitions occur prior to repairing. That is, they are marked as precursor for repairs. It can be said that they co-occur with repairs. Thus, repetitions, especially, self-repetitions which occur before repairs do function in buying time as evidenced in the study by Guillot (1995). As a result, it is likely that the hearers can predict what the speaker is going to do next when the repetitions occur. They are classified as compensatory strategies that the high proficient L2 speakers use to facilitate their speech communication when a difficulty occurs (Melasit & Sarobol, 2013). From the above information, it can be concluded that repetitions do interactional functions rather than textual functions. In other words, they tend to behave as communication strategies rather than DMs when they are repetitions of problematic units. It is interesting to investigate when repetitions behave like DMs such as repetitions without repairs, and repetitions under textual functions.

Repairs: repairs in L2 speech are classified into self-initiated repairs and other-initiated repairs. Through cognitive view, self-repairs are analyzed as speakers' cognitive difficulties in producing speech and are evidence of L2 acquisition. Through sociolinguistic view, they share some characteristics with DMs. From the previous findings, they do textual functions of turn-taking. L2 speakers attempt to finish their turn by using self-initiated self-repairs. While searching for relevant words, they may produce repetitions functioning like fillers as turn-holding devices (Chotirat & Sinwongsuwat, 2011). Tsychiya and Handford (2014) reveal that although self-repairs do turn-taking function like DMs do, they are analyzed as communication strategies

Tsychiya and Handford also report that other-repair or other reformulation by the counter party is used for making an understanding of the message sent by speakers while self-repair (by speakers) is for clarification of the previous statement. Although they do both textual functions and interactional functions like DMs do, their co-occurrence with other DFs makes them viewed as communication strategies. It needs investigation to find out from the native hearers' and the non-native speakers' perceptions about what repairs are: DMs, communication strategies, or DFs. Thus, the focused repairs in the current study are self-repairs rather than other-repairs.The conclusion on the functions of L2 DFs in comparison with those of L1 is as follows.

Table 9 Functions of L1 DFs in Comparison with L2 DFs Based on DM Functions

Types of DFs	Textual Functions		Interpersonal Functions			
			Speaker-oriented		Hearer-oriented	
	L1	L2	L1	L2	L1	L2
Filled pauses	-Marking syntactic boundary	-Expressing continuity -Introducing pragmatic meaning while they are used with a communication strategy	-Holding time -Giving turn -Expressing speaker's uncertainty	-Holding time -Holding turn -Introducing problems in communication	-Markers of discourse boundary cueing for new & difficult-to-produce information	-Clues for prediction of next utterance
Unfilled pauses	-Clarifying syntactic ambiguity	-Textual functions are unclear	-Holding time -Floorholding -Expressing speaker's uncertainty	-Holding time -Floorholding -Preventing others from interruption	-Meaningful unit in an utterance involving coherent passages to the receivers	-Cues for hearers to interpret the intended meaning
Prolongations	-Holding syntactic commitment to maintain continuity	-Prolongations serve as an aspect of filled pauses and have the same functions as filled pauses	-Holding time -Floorholding -Expressing speaker's uncertainty	-Prolongations serve as an aspect of filled pauses but no studies found examining this issue	-No investigation found	-Prolongations serve as an aspect of filled pauses and have the same functions as filled pauses
Repetitions	-Marking for amendment of speech	-No textual function found	-Emphasizing on speaker's intended message -Holding time * Making smooth speech after long pause * Resuming fluency after interruption * Representing a preliminary commitment to speaking (to avoid unnecessary silence)	-Holding time -Floorholding -Precursor of repairs	-Strong perceptual cue to the repeated lexical item	-Clues for the hearers to predict the following repair of utterance
Repairs	-Maintaining semantic and syntactic coherence between intended speech plan and actual speech production	-Clarifying previous statement -Self-corrections	-Expressing speaker's uncertainty	-Turn-taking devices (speakers try to finish their turn)	-No investigation found	-No investigation found

Table 9 shows that all L1 DFs have both textual and interpersonal functions like DMs while not all L2 DFs can be classified as DMs. It can be seen that the textual functions of unfilled pauses and repetitions in L2 speech are unidentified. Thus, it is likely that these two DFs may or may not behave like DMs. For the interpersonal functions, the previous findings reveal that there is no investigation on the function of DFs (e.g. repairs) as intended by speakers and as perceived by the hearers who are native speakers of the target language – mostly is English language. The speaker-oriented interpersonal functions as shown in the Table are mostly from the observational data conducted by the researchers. Those results will be stronger if there are supportive findings obtained through the perspectives of L2 speakers and of native-English-speaking hearers as well as the interaction between the two perspectives.

It can be concluded about similarities and the differences between DFs and DMs in two aspects: characteristics and functions. DFs and DMs do not have identical characteristics. While they share the characteristics of orality, syntactic detachability, being in lexicalized/non-lexicalized forms, and connectivity, DFs may not be like DMs in terms of their occurrence at the initial position of an utterance, their unclear pragmatic meanings, and their non-multi-categoriality characteristic. Their functions consist of textual and interpersonal functions. While the previous findings reveal that L1 DFs have both functions like DMs do, the findings about L2 DFs are inconsistent. Repetitions in L2 speech are found not having textual functions. That is, DF of repetitions in L2 speech may not function as DMs in conversations but they are likely to function as a communication strategy since they do only interpersonal function suggesting communicative interaction between conversational participants. It is noticeable that the details of the functions of DMs as performed by L1 DFs and L2 DFs are different. As illustrated in Table 10, textual functions of L1 DFs mainly involve syntactic and semantic coherence while those of L2 DFs mainly involve strategies in dealing with the hearers in order to successfully get the messages across (e.g. self-corrections, clarification of previous statement, and expression of continuity). With regard to the speaker-oriented interpersonal functions, the main functions that both L1 and L2 DFs do are turn-taking which involves floor holding and time holding. While the speaker-oriented interpersonal functions of L2 DFs are for turn-taking purpose, L1 DFs in L1

speech are to serve the fluency purpose, to emphasize on the intended message, and to signal speakers' uncertainty. Based on the hearer-oriented interpersonal functions, L2 DFs are cues for hearers to predict the up-coming utterance, which involve lexical problems, while L1 DFs are markers for discourse boundary and for meaningful units in an utterance. In other words, for hearers, L2 DFs reflect lexical problems while L1 DFs have functions involving discoursal problems.

The previous findings also suggest that, in L2 speech, repairs and repetitions are often found co-occurring with other DFs and communication strategies such as filled pauses and code-witching (e.g. Hlavac, 2011). When such phenomenon occurs, the DFs can be perceived as communication strategies that L2 speakers use to deliver their messages. Thus, DFs do not only share some characteristics with DMs, they may also function like DMs do. Moreover, L2 DFs can be viewed as communication strategies since there are some DFs that have overlapping behaviors with communication strategies. From the previous studies, it is noticeable that when DFs do interpersonal functions rather than textual functions, the DFs can be analyzed as communication strategies. The next section is to provide the information on communication strategies that are typically used by L2 speakers.

L2 Communication Strategies (CSs)

When L2 speakers encounter with speaking difficulties, CSs may be used. In spite of having communicative ability, L2 speakers still have difficulties in getting their messages across languages; especially, in the context of spontaneous speech – an unprepared speech which people typically use for conversational interaction in day-to-day life. Basically, spoken language is processed rapidly at the approximate rate of 150 words a minute (Eysenck & Keane, 2010; Smith, 2000). Consequently, spontaneous speech which requires the communicators to promptly process their production and perception of speech during communicating (Luzzati, 2004 as discussed in Dufour, et al., 2009) is characterized mainly by the ungrammaticality and DFs (Dufour, et al., 2009; Liu, et al., 2005; Lease, et al., 2008; Mareuil, et al., 2005). Under such time demand, the speakers; especially, L2 speakers may seek for ways to lengthen the time so that they will be able to manage their speech production for effective communication.

CSs refer to the interaction process used in a joint negotiation of meaning where both interlocutors are attempting to agree as to a communicative goal (Tarone, 1983, 1980; Kongsom, 2009). In other words, CSs are used as a means to enhance the effectiveness of communication rather than to solve problems in speech communication (Canale, 1983). Thus, CSs are consciously produced by speakers (Tarone, 1977). According to Tarone (1977), paraphrase, transfer, appealing for assistance, mime, and avoidance are the interlanguage-related CSs that are consciously made by ESL learners through picture description task. That is, L2 speakers may purposefully make use of a CS to serve their communication goal. However, the issues of consciousness in using CSs and of the question on whether speakers' purpose in using CSs for solving communication problems, or for enhancing the effectiveness of communication are controversial.

As opposed to the social interaction view, psychologically, CSs can be seen as a mental process in which a language user employs in order to achieve his/her intended meaning on becoming aware of problems arising during the planning of an utterance due to (his/her own) linguistic shortcomings (Poulisse, 1990; Bialystok, 1990; Faerch & Kasper, 1983). This can be explained that CSs through psychological view serve personal purpose and they are used as a means to overcome the difficulties to their speech production processes. That is to say, through cognitive view, types of DFs can be similar to CSs. Furthermore, it can be said that CSs can serve both personal and interpersonal purposes. The CSs which serve the personal purposes involve a speaker's mental process and difficulties arising during speech planning while those serve the interpersonal purposes involve a mutual communication between a speaker and a hearer. The two main purposes of CSs are similar to the interpersonal functions of DMs and DFs which involve speaker-oriented and hearer-oriented aspects (see Table 10).

The concepts of personal and interpersonal purposes can be clearly seen in Dörnyei and Scott's (1997) taxonomy of CSs which explains three categories of CSs: direct strategies, interactional strategies, and indirect strategies showing how CSs help the speakers to solve the problems during oral communication tasks and accomplish mutual understanding.

Direct Strategies

Direct strategies are related to the resource deficit (e.g. message reduction, circumlocution, approximation, code switching, and mime), speakers' own performance problems (e.g self-rephrasing and self-repair), and others' performance problems (e.g. other-repair). They are used by a speaker who encounters difficulties during processing speech communication. The strategies under this category include all the achievement and reduction strategies that have been classified by Faerch and Kasper (1983).

Interactional Strategies

Interactional strategies are also related to resource deficit (e.g. appeals for help), speakers' own performance problems (e.g. comprehension check and own-accuracy check), and others' performance problems (e.g. asking for repetition, guessing, and responses). These strategies involve the mutual cooperation among the interlocutors to overcome the problems during communication process.

Indirect Strategies

Indirect strategies are related to the processing time-pressure (e.g. use of fillers, repetitions), speakers' own performance problems (e.g. verbal strategy markers), and others' performance problems (e.g feigning understanding). Speakers use these strategies to bring them to the mutual understanding with their interlocutors.

It can be seen from the taxonomy that each category involves both personal and interpersonal aspects of CSs which are speakers' own performance problems (mental-process related strategies) and others' performance problems (interactional-process related strategies), respectively. DFs (i.e. fillers, repetitions, and repairs as indicated by Dörnyei and Scott, 1997) are identified as indirect and direct communication strategies which involve mental process rather than interactional strategies which require a response from the counterpart. This is different from their functions as DMs which indicate that they do interpersonal functions as turn-holding devices (see Table 10).

Since the previous findings on the use of L2 DFs suggest that when DFs co-occur with other DFs or CSs, they can be perceived as a systematic technique and potentially conscious plans, employed by a speaker to express his/her meaning when

faced with some difficulty in reaching a particular communicative goal (Corder, 1977; Faerch & Kasper, 1983a). They are the techniques of coping with difficulties in communicating in an imperfectly known second language (Stern, 1983); in this regard, the next section is to provide a broad description of each of L2 speakers' CSs compiled from several scholars (Gudykunst, 2004; Fulcher, 2003; Johnson, 2000; Kormos, 2000b; Dörnyei & Kormos, 1998; Dörnyei & Scott, 1997; Dornyei, 1995; Johnstone, 1989; Van Lier, 1988; Zentella, 1985; Faerch & Kasper, 1983; Corder, 1983; Tarone, 1977; Schegloff, et al., 1977).

In order to have a better understanding of the CSs in L2 speech, the following classification adapted from Dornyei (1995) is provided (cf. Dornyei, 1995; Dörnyei & Scott, 1997; and Fulcher, 2003). They fall into three broad categories: avoidance or reduction strategies, achievement or compensatory strategies, and stalling or time-gaining strategies.

Avoidance or Reduction Strategies

The strategies in this category concern with a message reduction. They involve the speakers' attempts to avoid communicating the messages that they do not have linguistic means to convey. Corder (1983) viewed these strategies as risk-avoiding. That is, L2 speakers who avoid taking risk tend to use the strategies that save them from the potential errors that they could make. These strategies are usually classified into formal and functional avoidances: avoid using the form which they are uncomfortable to use it; and topic avoidance, abandoning conversation and semantic avoidance. The overuse of a particular form is likely to be interpretable that the other form is avoided (e.g. passive form versus active form). The speakers may give up sending the messages and no attempt to use alternative strategies. The utterances are left propositionally incomplete. The second case arises when the speakers continue with the topic but try to avoid unknown lexis and typically results in the overuse of delexicalized words, such as 'thing', making the message rather vague in meaning (Fulcher, 2003; Faerch & Kasper, 1983).

Achievement or Compensatory Strategies

Achievement strategies refer to the ways that the speakers use to overcome the problems on lacking knowledge of language. Corder (1983) viewed these strategies as risk-taking. L2 speakers use these strategies to compensate their insufficient linguistic resources (Færch & Kasper, 1983). The members of this category include circumlocution, approximation, code-switching, mime, repair, overgeneralization or morphological creativity, paraphrase, word coinage, restructuring, cooperative strategies, literal translation, and foreignizing. Their descriptions are provided below.

Circumlocution

Circumlocution "is a wordly extended process in which the learner describes the characteristics or elements of an object or action instead of using the appropriate target language structure" (Tarone, 1977); for example, when an L2 speaker tries to refer to a 'waterpipe', the speaker says *"She is, uh, smoking something. I don't know what its name. That's uh, Persian, and we use in Turkey, a lot of"* (Tarone, 1977, p. 198).

Approximation

Approximation refers to the use of a more general target language vocabulary or structure to replace the unknown word/structure and the speaker knows it is not correct (Tarone, 1977; Fulcher, 2003) for example, using *ship for sail boat* (Dornyei, 1995, p. 58).

Code Switching

Code switching involves the use of two languages by switching codes back and forth between two languages; if a learner is speaking to someone with whom he or she has a language in common, a word or phrase taken from the common language may be used to overcome a communication difficulty (Fulcher, 2003; Zentella, 1985); code switching also serve other functions for example to align speakers with others in specific situations (e.g. defining oneself as a member of an ethnic group), and to announce specific identities, create certain meanings, and facilitate particular interpersonal relationships (Johnson, 2000; Gudykunst, 2004).

Mime

Mime is about using a nonverbal strategy such as pointing to objects in order to elicit language or help with communication (Fulcher, 2003; Tarone, 1977).

Repair

Repairs can be the treatment of trouble occurring in interactive language use (Schegloff, et al., 1977). It can also be a mechanism to correct for imperfect language adjustment. Repair is used to compensate for the speaker's lack of ability to adjust appropriately (Van Lier, 1988). Self-repair refer to the treatment of the imperfect language made by the speakers, themselves while other-repair is the same treatment but it is made by the other interlocutor. Self-rephrasing is used when the speaker is uncertain about the correctness of utterance mainly concerning pragmatic meanings (Kormos, 2000b; Dornyei & Kormos, 1998).

Overgeneralization/Morphological Creativity

Overgeneralization or morphological creativity concerns an application of a language rule to the items that are excluded from the language norm (Fulcher, 2003); for example, using past tense morpheme (*-ed*) to mark all past tense verbs.

Paraphrase

Paraphrase deals with the use of a lexical item that has a close synonym for the required word or trying to explain the meaning or describe the concept for the words that are not known (Fulcher, 2003).

Word coinage

Word coinage is an invention of a new word for the unknown word (e.g. using *round meat* for *meatball*).

Restructuring

Restructuring refers to the speakers' attempts to communicate the same message using different words which is usually followed by different grammatical pattern; for example, using *"Someone told me to leave"* for *"I was told to leave."*

Cooperative Strategies

Cooperative strategies are about getting help from the hearers through asking if they understood, appealing directly or indirectly for help in saying something, or providing an unknown word; for example, *What is this?* or using rising intonation, pause, eye contact, and puzzled expression (Dornyei, 1995).

Literal Translation

Literal translation refers to literally translating a lexical item, an idiom, a compound word or structure from L1 to L2 (Dornyei, 1995).

Foreignizing

Foreginizing is about using an L1 word by adjusting it to L2 phonologically and/or morphologically; for example, using an L2 pronunciation or adding an L2 suffix to an L1 word.

Stalling or time-gaining strategies

Stalling or time-gaining strategies are equivalent to the indirect strategies as proposed by Dornyei and Scott (1997). They involve the use of fillers and/or hesitation devices – using filling words or gambits to fill pauses and to gain time to think, for example, *well*, and *now let me see*.

It can be seen that the time pressure when making spontaneous speech forces L2 speakers to struggle and bring the communicative interaction to achieve the goal by using the CSs. L2 speakers' decision in making a choice of the strategies is impromptu in nature and it is made based on the factors influencing their performance during speaking and their existing communicative competence. According to Canale and Swain (1980), L2 speakers are required to possess this strategic competence to enable them to manage their communication as effectively as possible by, for example, evaluating what is said and planning utterances (Bachman, 1990). The factors that may affect L2 speakers in making a choice of CSs are their levels of language proficiency, the extent to which they expose to English speaking context in real life, and how they perceive their English oral proficiency (Chen, 1990; Tuan, 2001; Malasit & Sarobol, 2013; Tang, 2015). The weak L2 speakers are likely to use reduction strategies while the advance ones tend to use achievement strategies.

Table 10 shows the functions that L2 DFs do in comparison with DM interpersonal functions and Cs functions, as well as the hearers' perceptions when they are present in an utterance. Obviously, L2 DFs involve time-gaining function no matter how they are analyzed as DMs or CSs. Differently, the hearers' focus is mainly on what is coming next after a DF occurs rather than what a DF does or what is the speaker's intention in using a DF. Thus, it should be investigated whether the hearers

who are native speaker of English -- the target language of the current study interpret these DFs as markers of interactional obligations between L2 speakers and native-English-speaking hearers, or as difficulties in cognitive process of speech production, or merely noises in speech communication. In other words, the role of L2 DFs in interactional communication across languages through conversational participants' perspectives is the focus of the present study.

Table 10 Comparison of DM Interpersonal Functions and CS Functions of L2 DFs

Types of DFs	DM Interpersonal Functions of L2 DFs	CS Functions of L2 DFs	Hearers' perceptions of L2 DFs
Filled pauses	Time/Turn holding	Stalling/time-gaining	Clues for prediction of next utterance
Unfilled pauses	-	-	-
Prolongations	-	-	-
Repetitions	Time/Turn holding & precursor of repairs	Processing time-pressure	Clues for the following repairs
Repairs	Turn holding	Managing speakers' own performance problems	-

Based on the cognitive view and the sociolinguistic view on disfluencies, the analytical framework shown in Table 11 derived from the merger of the two views was applied in this study to analyze types, characteristics, and functions of L2 disfluencies as intended by the speakers and as interpreted by the hearers whether they are discourse markers, signals of speakers' difficulties in speech processing, speakers' CSs or the noises that interfere the hearers' reception of a message. The assumption underlying the use of CSs for the current study is that they function as a social interaction in speaking mode which requires at least two parties to participate in the activity. Spoken discourse of dialogues will be adopted as the communication form for this study. Thus, characteristics of dialogue are provided in the next section.

Table 11 Analytical Framework for L2 DFs: Types, Characteristics, and Functions

Types of DFs	Characteristics of DFs	Cognitive View	Sociolinguistic View		
			Textual Functions	Interpersonal Functions	
				Speakers' Intentions	Hearers' Interpretations
Pauses	Suspension in mid-utterance with or without fillers	Speech production difficulties			
Non-lexicalized filled pauses	Vocalics e.g. ah, uh, um, eh, mm...and their phonological variants & sound lengthening (prolongations) e.g. theee.... thuuuuh,..., tooooo...		-Marking syntactic boundary -Expressing continuity -Introducing pragmatic meaning while they are used with a CS	-Holding time -Giving turn -Expressing speaker's uncertainty -Holding turn -Introducing problems in communication	-Markers of discourse boundary cueing for new & difficult-to-produce information -Clues for prediction of utterance
Lexicalized filled Pauses	Non-vocalic fillers e.g. well, I mean, you know, and like				
Unfilled pauses (Silence pauses)	Suspension with silence		-Clarifying syntactic ambiguity -Holding syntactic commitment to maintain continuity	-Holding time -Floor holding -Preventing others from interruption -Expressing speaker's uncertainty	-Meaningful unit in an utterance involving coherent passages to the receivers -Cues for hearers to interpret the intended meaning
Repetitions	Repeated words, phrases, or sentences e.g. to	Speech production difficulties	-Marking for amendment of speech	-Emphasizing on speaker's intended message	-Strong perceptual cue to the repeated lexical item
Self-repetitions	Repeating one's own word or stress of words they are said			-Holding time -Making smooth speech after long pause	-Clues for the hearers to predict the following repair of utterance
Other-repetitions	Repeating something the interlocutors said			-Resuming fluency after interruption -Representing a preliminary commitment to speaking (to avoid unnecessary silence) -Floor holding	
Repairs	Amendments that speakers make resulting in articulating utterance i.e. correcting, phrases/ sentences (rephrasing) by means of insertions/ deletions	Indicators of SLA	-Maintaining semantic and syntactic coherence between intended speech plan and actual speech production -Clarifying previous statement -Self-corrections	-Precursor of repairs -Expressing speaker's uncertainty -Turn-taking devices (speakers try to finish their turn) -Managing speakers' own performance problems	No investigation found
Self-initiated repairs	Repairing initiated by speakers themselves				
Other-initiated repairs	Repairing as initiated by the interlocutors				

Spoken Discourse: Dialogue as Social Interaction

The reasons for adopting dialogue as the communication form for this study are that it represents the fundamental social interaction of speaking. In other words, one-to-one conversation or dialogue is a basic interpersonal communication which is characterized by anaphora, discourse structure, and coherence as seen in the turn-taking rules (Finlayson & Corley, 2012; Megyesi & Gustafson- ˇCapková, 2001; Nicholson, 2007). It is an act of communication that requires expressive and social knowledge which involves the ability to display personal and social identities to convey attitudes, perform action, and negotiate meaning with others. The communicators require cognitive ability to represent concepts and ideas through language; and also require textual ability to organize language form and convey meaning within unit of language longer than a single sentence (Schiffrin, 2003).

In a dialogue, a speaker and a hearer constantly shift roles using both verbal and nonverbal codes (Whitman & Boase, 1983). While communication in monologue discourse flows in only one direction, in the discourse of dialogue, participants take turn being a speaker and a hearer. "Turn" refers to the right to have control of conversation. The turn can be taken when the other interlocutor attempts to get it or when the other offers it. The point where any possible change of turn occurs is called a Transition Relevance Place (TRP) (Yule, 1998). There are two rules for turn taking (Levinson, 2003).

Rule 1 applies initially at the first TRP of any turn on conditions that (a) if the current speaker selects the next speaker in current turn, then the current speaker must stop speaking and the next speaker must take the turn to speak; (b) if the current one does not select the next one, then any (other) party may self-select, first speaker gaining rights to the next turn, (c) if the current one has not selected the next, then the current one may (but need not) continue.

Rule 2 applies at all subsequent TRPs, when Rule 1 (c) has been applied by C, then at the next TRP Rules1 (a-c) apply, and recursively at the next TRP, until speaker change is affected. DMs such as *you know, well* are indicators of TRP. For L2 speakers, to identify TRP in conversation, they require various kinds of L2 knowledge:

pragmatics, sociolinguistics cognitive science, as well as other linguistic and non-linguistic disciplines (Schiffrin, 2003). DFs, for example unfilled pauses or silences are discourse devices used in conversations by the native speakers (Finlayson & Corley, 2012; Nicholson, 2007).

There is a question that L2 speakers know how to make use of such DFs conforming to the L2 conventional practices of DMs in conversations and whether they can be categorized as DMs for turn taking as perceived by the native-English-speaking hearers.

Previous Studies on Disfluencies in Thai EFL Contexts

In Thailand, English is the only one foreign language provided as a compulsory course in schools. Thai learners are required to take English courses from primary school till finish high school level which is about 12 years. English is taught mostly by non-native English speakers who have Thai language as their mother tongue the same as the learners do. Thai language is used as a medium of instruction. It is the only one official language in Thailand. The learners use it in their daily life. Thus, their out-of-classroom-context communication mainly involves Thai language. In other words, their exposure to English outside classrooms is limited leading to limited practice of English speaking and listening skills especially with native English speakers. Wiriyachitra (2002) identified that the interference from mother tongue (pronunciation, syntax, idiomatic usage), the lack of opportunity to use English in daily life, the unchallenging English lessons, being passive learners, the lack of confidence to speak English, and the lack of responsibility for their own learning are the difficulties to English speaking fluency among Thai EFL learners. As a consequence, it is difficult for them to master English language especially speaking and listening skills. In addition, according to World Bank report (2012), English skill is one of the serious weaknesses among Thai graduates. This is supported by the scores of TOEFL and TOEIC, international standardized tests, which reveal that Thai learners' English proficiency is significantly low in comparison with other countries in Southeast Asia (Trent, 2009; Bolton, 2008; Bunnag, 2005a, 2005b).

The issues have been widely addressed by the researchers in the field of Thai EFL teaching and learning. The questions posed by those studies can be divided into two main types. One involves teaching and learning English speaking among Thai EFL learners, for example, Iamsen, 2007; Noom-ura, 2008; McDonough and Sunitham, 2009; Patanasorn, 2010; Boonkit, 2010; Forman, 2011; Chotirat and Sinwongsuwat, 2011; Fujiwara, 2011; Chiravate, 2011; Rodpradit and Sinwongsuwat, 2012; Ussana and Sinwongsuwat, 2012; Sinwongsuwat, 2012; Klomjit, 2013; Phaiboonnugulkij and Prapphal, 2013; Yangklang, 2013; Ngowananchai, 2013; and Tananuraksakul, 2013. The other type involves the communication strategies that the learners use to overcome their speaking difficulties, for example, Luangsaenthong, 2002; Wannaruk, 2003; Somsai and Intaraprasert, 2011; Prapobratanakul and Kangkun, 2011; Malasit and Sarobol, 2013; Metcalfe and Noom-Ura, 2013.Each study referred above is summarized as follows.

Iamsen (2007) explored the factors that lead to the achievement in spoken English focusing on three aspects: cognitive, affective, and environmental. The study was conducted with Thai EFL undergraduate students with average grades in five listening and speaking-related courses. Classroom observations of the learners' learning styles and learning behaviors, individual interviews with each student, and diary writings were used as the methods for data collection. The findings revealed that the background knowledge of English, the willingness to use the language, and exposure to language-using situations were the main factors for achievement in English listening and speaking skills. The other supportive factors were students' learning-cultural background, their learning styles, their goals for learning English, and their opportunities to use the language. The results indicate that both internal and external factors influence the achievement in English listening-speaking skills. In other words, the factors related to cognition, motivation, and cultural context play a significant role in learning listening and speaking English effectively.

Noom-ura (2008) studied teaching listening-speaking skills to Thai students with low English proficiency. Its aim was to explore the results of an intervention designed to improve listening-speaking skills of 28 first year undergraduate students who had low English proficiency. The measurements involved pre-test, post-test, pre-

questionnaire, post-questionnaire, classroom observation, self-reflection, and course evaluation. The findings revealed that the participants gained higher confidence in using English. They showed good rapport among themselves and with teachers. They reflected on their changes cognitively, affectively, and behaviorally. The study results indicate that confidence is the key factor that influences the Thai EFL learners' listening-speaking skills.

McDonough and Sunitham (2009) investigated whether Thai EFL learners reflect on and remember language forms. They focused on the learners' interaction through collaborative dialogue during self-access computer activities. The language-related episodes (LREs) that occurred when the learners carried out the activities were examined using the developed tests that targeted the linguistic information discussed in those LREs. There were 48 learners participating in the study. The results showed that the learners' LREs involved lexical items more often than grammatical forms. They successfully resolved the majority of their LREs while they were collaborating. The test performance revealed that they remembered less than half of the lexical items and one-third of the grammatical forms that they had discussed. This study; although, focuses on the learners' interaction through collaborative dialogue and has found their difficulties in retrieving lexical items, it does not provide information on what the learners are reacting during the lexical-searching period such as pausing or repeating words in order to hold the speaking floor for completing their speaking turns.

Patanasorn (2010) investigated the effects of procedural, content, and task repetition on accuracy and fluency in an EFL context. 92 Thai EFL learners consisting of non-English majors were separated into a procedural repetition (n=37), content repetition (n=28), and task repetition group (n=27). The instruments consisted of a pretest, three treatment tasks, an immediate post-test, and a delayed post-test. The test tasks were film retell tasks. The three tasks included task repetition, content repetition, and procedural repetition. Transcriptions of the learners' performance on the film retell tasks were analyzed. The results revealed that the procedural repetition promoted the learners' accuracy of the past simple tense while the content repetition improved their global fluency. The task repetition did not influence any major changes on the learners' accuracy or fluency. Patanasorn's study reflects that macro-planning in

speech production processes as evidenced by the learners' global fluency when performing the content repetition task has positive influence on the learners' speaking fluency globally.

Boonkit (2010) conducted a qualitative study: action research to investigate the factors enhancing the development of speaking skills and the strengths and weaknesses of speaking performance of 18 Thai EFL undergraduate students using a task-based approach and structured interview. The findings indicated that confidence, creativity of topics, and speaking competence were the key aspects of improvement when speaking while the students' lack of confidence and anxiety about making errors in pronunciation and grammatical structure were categorized as their weaknesses. The findings of students' weaknesses are in line with those found in Noom-ura (2008).

Forman (2011) examined humorous language play initiated by a bilingual EFL teacher and taken up by 31 post-beginner Thai EFL undergraduate students. A framework of verbal art was adopted to locate the use of humor in relation to both language play and to creativity more broadly. In-class observation and textual analysis were adopted. The findings showed that the verbal humor observed in the class was identified as having two foci: linguistic, relating to word-play, and discursive, relating to social positioning. The play was beneficial to the students in learning listening and speaking with understanding of affective, sociocultural and linguistic dimensions. The study does not provide knowledge on the students' level of fluency during performing or the communication strategies used by the students in bringing the communication to its goal.

Chotirat and Sinwongsuwat (2011) studied the effects of scripted and non-scripted role play activities on oral performance: a case study of repair organization in conversation of Thai college students. They investigated the students' repair in talk obtained from role-plays using scripted and non-scripted role plays. The results showed that in the non-scripted role plays, the students employed self-initiated self-repairs to try finishing their turns by collaboratively searching for relevant words. They often repeated the problematic unit as well as using fillers as turn-holding devices while searching for a word. Non-scripted role plays were found allowing the students better opportunities to practice relevant features of language use in actual interactions than those in scripted

role-plays. The study results suggest that a type of DFs, repairs, play a role in speech communication. It is treated as one of the Thai EFL learners' communication strategies. However, the interpretation was not made by native hearers of English. Their perception and interpretation should be investigated for a more rigorous result. Fujiwara's (2011) study aimed to explore the dimensional structure of the language learning beliefs of 542 Thai learners of EFL, to determine if the conceptually developed categories were empirically identifiable, and to examine the cultural variations of language learning beliefs. Through factor analysis, a five-factor structure was identified: learning and communication strategies; important aspects of language learning; expectations and difficulty of learning English; nature and aptitude of language learning; and difficulty and ability of language learning. A Thai language version of Horwitz' 35-item Beliefs About Language Learning Inventory (BALLI), translated from Yang's (1999) 35 BALLI items in the English Learning Questionnaire, was used for this study. The study results suggest that, to Thai EFL learners, learning and communication strategies are necessary for improving language proficiency.

Chiravate (2011) studied the perception of politeness in English requests by Thai EFL learners by investigating to what extent they differ from native speakers of English in the use of politeness strategies and if there was evidence of L1 influence on the learners' use of politeness strategies. The participants included 30 native speakers of English and 60 Thai EFL learners: 30 high-proficiency and 30 low-proficiency learners. The instruments were judgment task consisting of 12 situations varying in social and psychological factors. The results showed that the learners' use of politeness strategies was different from that of native speakers. In comparison with the native speakers, the learners tended to use less politeness strategies while the learners with high proficiency and those with low proficiency differed from the native speakers to a greater extent. In certain situations, the difference in the use of politeness strategies between the native speakers and the learners can be attributed to L1 influence. The analysis shed light on the difficulty experienced by L2 learners in acquiring aspects of L2 pragmatics.

Rodpradit and Sinwongsuwat (2012) investigated the impact of using scripted and non-scripted role-play activities on EFL learners' speaking performance. The

participants were 12 engineering staff of a hotel. 15 lessons of the English for hotel engineering staff course were given twice a week, each lesson lasted two hours. Pre-test and post-test through actual interaction with a native speaker of English were administered to assess the participants' oral English performance. It was shown that the participants' post-test scores on vocabulary and fluency were significantly higher than the pre-test scores. The non-scripted role-play activities better contributed to the holistic improvement of learners' performance evaluated by two native speakers in face-to-face on-the-job interaction using the traditional rubric. T-test was used to analyze and interpret the results from the pre-test and post-test of each participant. The results support Chotirat and Sinwongsuwat's (2011) findings about the effects of non-script role-play activities on improving speaking skills in terms of the better opportunities to practice in an actual communication interactively. However, the study has left the issue of how the participants manage their communication when facing difficulties in producing speech during conversing.

Ussana and Sinwongsuwat (2012) investigated the differences between two types of oral English proficiency tests: interview interaction and two-party peer interaction, in assessing learners' English speaking performance. The objectives were to determine whether the two tests produce different results when used in assessing students' oral performance with a traditional rubric; whether they differ in terms of the interactional features produced by the students; and how the differences in interactional features possibly contribute to the different score results and the conversation-assessing ability of each test task. The participants were 10 M.3 English program students of a secondary school in Thailand. The two test tasks involved a 5-minute interview interactions and a 5-minute two-party peer interaction. Conversation Analysis of the transcriptions obtained from the tasks was conducted. The results produced by both test types were similar. However, it was also found that the learners' limited conversational competencies, unequal social encounter, and limited opportunities to produce interactional feature sufficiently led to difficulties during interview interaction. The study also reported that a smile, a pause, acknowledgement tokens (e.g. *'yes'*), fillers (e.g. '*uhm*') or agreement tokens (e.g. '*I think that too'*) were used to keep the conversation going when the students failed to produce a complete turn.

The authors suggested that phenomena such as fillers, stuttering, pauses of various lengths, overlap and laughter, which they might have disregarded as speech perturbations, are in fact meaningfully and purposefully produced, for example, fillers such as *'uh'* and *'uhm'* may serve as turn-holding devices. Broken utterances and stuttering can be used as devices to get attention from addressed recipients or to preface speakers' dispreferred responses, e.g. a decline to a request. This study infers that taking notice of the structural organization of the conversations being engaged as well as the meanings of disfluency phenomena during conversing, the learners may make a more meaningful communication socially as well as be able to predict what is going on in the conversation and how it unfolds.

Sinwongsuwat (2012) reassessed the mainstream tasks used for evaluating Thai EFL learners' speaking skills: face-to-face interview and role-play. Sinwongsuwat suggested that non-scripted role-play activities allow Thai EFL learners to produce approximately natural conversation in a form of oral communication in everyday life. Phaiboonnugulkij and Prapphal (2013) compared the differences in strategies used in an online language for specific purposes speaking test in tourism with two proficiency groups of students, and to investigate the strategies that should be used for low-proficiency students to improve their speaking ability for specific purposes. The Web-based Speaking Test in English for Tourism and a coding scheme were used as research instruments. Descriptive statistics, the Man-Whitney U test, percentages, and qualitative content analysis from verbal reports were used in the data analysis. The qualitative results indicated that high-proficiency students used more complex details in all of the sub-strategies than the low-proficiency students who relied mostly on their L1 linguistic knowledge. That is, low language proficiency level students are likely to use code switching as their communication strategies. They may also produce DFs such as silent pausing, filled pauses, or repetitions during communication.

Yangklang (2013) investigated the improvement of English stress and intonation pronunciation of the 40 first-year students at a university after using an e-learning program, and explore students' satisfaction to the e-learning program for improving stress and intonation pronunciation. The participants were randomly selected. Pre-test was administered to classify the participants' abilities. Post-test was

conducted 4 weeks after using the program. Arithmetic mean, standard deviation, and percentage were employed to complete the students' pronunciation achievement. The results showed that the students improved their pronunciation after they used the e-learning program and reported satisfactory with the program that it encouraged and motivated their pronunciation improvement. This study helps building the students' confidence in producing speech for communication meaningfully.

Ngowananchai (2013) investigated students' improvement in speaking competence shown when they are in different contexts: classroom and outside classroom; and to examine the significant differences in terms of performance of speaking ability in different contexts. There were 72 students participating in the study. The experiment used Natural Occurring Conversation as a teaching model to improve the speaking competence of students. The implementation period was 12 weeks. The results revealed that Natural Occurring Conversation promoted the students' confidence and felt free when speaking English in outside-classroom context: interviewing tourists. However, their performance in speaking ability in both in and outside classroom contexts was not significantly different since they relied mostly on the prepared scripts. The results suggest that although the scripts help increasing the students' confidence in speaking English, the scripts themselves decrease the students' opportunities to practice speaking English naturally.

Tananuraksakul (2013) examined Thai EFL undergraduate students' confidence and attitude levels before and after interventions in a listening and speaking in English class with the notions of Hofstede's power distance and Skinner's positive reinforcement. The study involved quantitative research approach. The results showed positive impacts on the students' levels of confidence in oral English communication and attitudes towards teaching and learning of English to some degrees.

The above studies mostly focus on how to promote speaking fluency among Thai EFL learners (e.g. Forman, 2011; McDonough & Sunitham, 2009; Noom-ura, 2008; Boonkit, 2010; Yangklang, 2013; Ngowananchai, 2013; Patanasorn, 2010; Chotirat & Sinwongsuwat, 2011; and Rodpradit & Sinwongsuwat, 2012); then, on speaking assessment (e.g. Sinwongsuwat, 2012; Ussana & Sinwongsuwat, 2012; and Phaiboonnugulkij & Prapphal, 2013), the factors influencing EFL speaking (e.g.

Fujiwara, 2011; Tananuraksakul, 2013), and pragmatic aspects (e.g. Chiravate, 2011; Tananuraksakul, 2013).

The second type of main question that has been asked involves the communication strategies that the learners use to overcome their speaking difficulties focusing mostly on the frequency of the strategies used by Thai EFL learners (e.g. Malasit &Sarobol, 2013; Metcalfe & Noom-Ura, 2013; Chuanchaisit and Prapphal, 2009) as well as categorization of those strategies (e.g. Luangsaenthong, 2002; Somsai & Intaraprasert, 2011). Summary of each cited study is presented next.

Luangsaenthong (2002) investigated the use of communication strategies for oral communication of 60 first-year undergraduate students and compared the use of those strategies with different English learning achievement. The study involved quantitative research. The instruments were the communication strategies for oral communication test and the communication strategies analysis form. The participants were asked to describe the provided pictures in English. Their performance was tape-recorded and transcribed. The results showed that the participants used approximation strategy the most, followed by repetition strategy, and switch strategy the least. The participants with different English learning achievement used different communication strategies for oral communication significantly.

Chuanchaisit and Prapphal (2009) adopted a mixed-method research approach to examining the types of communication strategies that low-language-proficiency students selected and the pedagogical implications of helping those students to improve their oral communication ability through the selection of effective communication strategies. 300 Thai EFL undergraduate students participated in the study. The instruments included the strategy use in speaking task inventory to assess the frequency of the students' use of communication strategies, a self-report questionnaire, and an oral communication test consisting of four tasks: a warm-up task, an interview task, a description task, and a problem-solving task. The students' oral performance was taped recorded and transcribed. Independent t-test and descriptive statistics were employed. The results revealed that the high-ability students preferred risk-taking strategies such as social-affective, fluency-oriented, help-seeking, and circumlocution strategies whereas the low-ability students tended to employ more risk-avoidance

strategies like time-gaining strategies. The authors analyzed that because of high proficiency in English and cognitive flexibility, the high-ability students used most of the risk-taking strategies. On the contrary, the lower English proficiency of low-ability students may lead them to utilize risk-avoidance strategies and relied more on their world-knowledge than on linguistic knowledge. Thus, the high-ability students were more successful in communication than the lower competent ones. However, the authors acknowledged that the evidence of how the two groups performed in terms of their use of intelligible information units in the oral communication test was not reported due to the study scope which did not include linguistic analysis of the information units used by the students.

Prapobratanakul and Kangkun (2011) focused on investigating the communication strategies used by young Thai students, fourth-year undergraduate students, during their speech communication through object description task. The results showed that the most frequently used communication strategies were paralinguistic strategies (i.e. gestures or facial expressions), followed by intra-linguistic strategies (i.e. circumlocution and approximation).

Somsai and Intaraprasert (2011) were interested in exploring how university students majoring in English for International Communication cope with their face-to-face oral communication problems. 48 students participated in the study. The instruments consisted of a semi-structured interview. The transcribed data were analyzed and found that there were two main categories of communication strategies employed by the students: 1) strategies for conveying a message to the interlocutor, and 2) strategies for understanding the message. The main category 1 was further sub-categorised into two groups: continuous interaction, and discontinuous interaction. The purposes in using the continuous interaction were to sustain the interaction and to achieve a communication goal. The speakers may utilize a circumlocution strategy using familiar words or phrases, using time fillers and appeals for help. The discontinuous strategies were adopted when the speakers faced difficulties to conveying message. Thus, they found an alternative method such as switching topics, appeals for help from hearer or dictionary in order to understand the message, and asking for repetition. The continuous

and the discontinuous strategies termed by this study are equivalent to Færch and Kasper's (1983) achievement and the reduction strategies, respectively.

Malasit and Sarobol (2013) investigated types of communication strategies employed by M.3 (grade 9) English Program students at a secondary school, the effects of task type and English speaking proficiency: high, middle, and low on their use of communication strategies. The data were collected using one-way and two-way speaking tasks, audio recording, and transcriptions of verbal data. Data analysis was based on integrated framework comprising avoidance strategies (Tarone, 1980) and compensatory strategies (Faerch & Kasper, 1983; Dornyei and Scott, 1997). The findings showed that the most frequently used strategies were fillers or hesitation devices. The use of self-repetition and code switching strategies varied from participant to participant. The high proficiency students relied on compensatory strategies while the lower ones utilized the avoidance strategies. The authors noted that the students' 'slipped' fillers in their actual speech rather than 'used' them. The least frequently used strategies were foreignizing: morphologically and phonically adjusting L1 to L2. English proficiency did not have impact on the choice of strategies. Two-way communication helped promoting interaction and opportunity to negotiate meanings. It can be seen that the study categorizes filled pauses and repetitions as communication strategies and marks that the students produce filled pauses unintentionally. However, the mark has been left unproven.

Metcalfe and Noom-Ura (2013) compared the communication strategies that were used by two groups of Thai EFL undergraduate learners: those with high and low English language proficiency. The total participant number was 104. All were first-year students. The quantitative data were collected using an adapted version of oral communication strategy inventory, a 62 item self-reporting questionnaire used across a number of different countries to assess communication strategy. The findings showed that message reduction and alteration and negotiation for meaning whilst listening were, respectively, the most frequently reported speaking and listening strategies. The high proficiency learners were reported significantly higher use of social-affective, fluency-oriented, negotiation for meaning during speaking, and circumlocution. The low proficiency learners were reported significantly higher use of message abandonment and

less active listener strategies. The results of this study are in line with other above cited studies that the high proficiency L2 learners use achievement strategies while the lower ones adopt avoidance or reduction strategies.

The methods of inquiry mostly conducted by all the above studies are quantitative approaches. The data were collected through pre-test and post-test, questionnaires, classroom observation, learners' self-reflections, and interviews. Speaking tasks such as retelling stories, describing pictures, role plays with and without scripts were used as stimuli for eliciting oral communication data. There are a small number of studies using qualitative approach, for example, Boonkit's (2010) action research design with task-based approach to data collection.

According to the above previous studies, there are three points indicating that disfluency phenomena in Thai EFL learners' speech are worth studying. First, the occurrence of DFs is the consequence of cognitive processes which involve the automaticity of speech production system, and it is one of the key features that mark the degree of speaking fluency. However, the occurrence of DFs has not been of the researchers' interest as found in the previous studies. Instead, they have paid attention to speaking fluency in relation to communication strategies. Thus, the point of DFs as markers of speaking fluency has been left unexplored even though some DFs (repairs, repetitions, and fillers) were reported. This suggests that the findings reveal mainly one aspect of communicative ability that is the leaners' performance of speech communication. According to the theories involved human communicative ability (as discussed at the beginning of this chapter), speech communication ability cannot be explained dimensionally through only one feature of communicative ability – speaking performance for this case. The feature indicating the learners' communicative competence is required to complete the explanation. Second, the categories of DFs reflect how the learners cognitively produce their speech. In other words, disfluency categories inform the sources of difficulties to producing speech, for example, the problems involve language rules or language use. This is another issue that has not been investigated by the previous studies on Thai EFL learners' speech communication. Third, some types of DFs such as filled pauses repetitions, and repairs were analyzed as members of the communication strategies used by the learners in those studies. Despite the fact that the findings are

generalizable since they were obtained through large data analyses, they inform only the learners' ways to overcome speaking difficulties, they do not provide a deeper understanding of the learners' speaking difficulties in terms of their automaticity in processing speech production, their intention in using a type of DFs as their communication strategies or other communicative functions such as DMs for turn taking, and interpretations of the DFs as perceived by the native hearers.

In conclusion, the knowledge of disfluencies is a gap that needs to be fulfilled to complete the overall picture of speaking ability among Thai EFL speakers. The current research will; therefore, aim to study the disfluencies that occur in Thai EFL speech in order to investigate the learners' speech production processes, their perspectives on the communicative functions of disfluencies, as well as the native hearers' interpretation of those disfluencies.

Chapter Summary

The ultimate goal in using language is for communication. Human communicative ability demands various types of knowledge from different disciplines. Speech communication is considered fundamental ability of people. However, all related knowledge needed for forming the ability is not basic, instead, rather complicated. A variety of knowledge and skills such as language knowledge, contextual knowledge, sociocultural knowledge, communication strategies knowledge, appropriate applicability knowledge, speaking skill, conversational skill, and interactional skill are required. Disfluency phenomena do not only reflect how people cognitively process speech production, but they also do something related to how people perceive or interpret the messages and the inference attached to the messages via the DFs produced by the communicators. The forms, functions, and interpretations of those DFs among the people who have the same native language have been found inconsistent. The knowledge on the forms of the DFs produced by L2 speakers, as well as their communicative functions and interpretations through the native hearers' perspective has been rarely found. This study therefore aims to seek the truth. The theoretical framework for this study was as in Figure 5 showing that

a speaker sends messages to a native hearer through spontaneous dialogues. Both the speaker and the hearer possess communicative ability. During interaction through dialogues, the speaker may have an intention to produce DFs functionally. The hearer's interpretation of those DFs may or may not correspond to their functions as intended by the speaker.

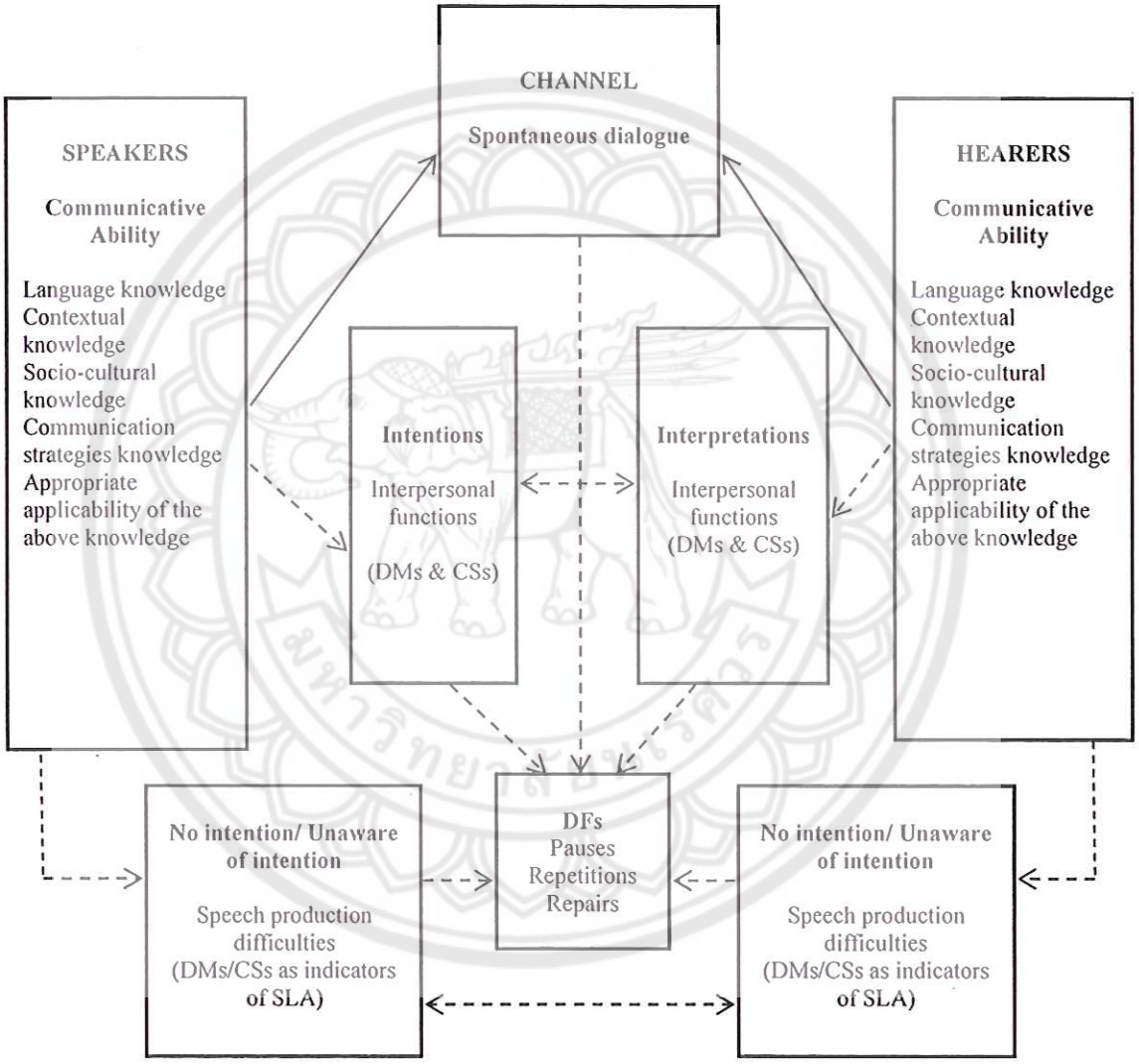

Figure 5 Theoretical framework for the current study

Note: The sign ⟶ represents the direction of messages.
The sign - - -> shows that the phenomenon pointed by the arrow may occur.
The sign <- -> shows that the two phenomena pointed may occur with a relationship.

In conclusion, disfluencies found in both L1 and L2 speeches reflect cognitive processes of speech production which can result in speech delay and signal difficulties in producing speech. They are the features indicating the degree of fluency in speaking. However, it is unclear in three points (1) the interaction between the types of L2 disfluencies and L2 speakers' language proficiency, (2) the interaction between L2 speakers' intentions in using disfluencies and the native-English-speaking hearers' interpretation of those disfluencies, and (3) their roles as communication strategies and as discourse markers facilitating interaction in a conversation as intended by speakers and/or as interpreted by hearers especially in EFL/ESL speech. In order to understand disfluencies from both cognitive and interactional sociolinguistic views rather than through only one of them as previously studied, this study will apply the framework merged from the two views. The speech production model of Levelt, (1989) in combination with Levelt, et al. (1999) and Manyhart (2003) (see detail in Chapter II) will be used as the cognitive framework to examine types of disfluencies in English speech produced by native Thai learners of English and the speakers' cognitive difficulties during speaking. The analytical framework of discourse marker functions adapted from Brinton (1996), Aijmer (2002), and Liu (2013) will be applied to investigate the discourse-like functions which involve textual and interpersonal functions. The characteristics of L2 disfluencies will be analyzed based on those found in L2 speech (see Table 4, 5). The framework to identify the L2 disfluencies in doing the functions as communication strategies is adapted from Dornyei (1995) (cf. Dornyei, 1995; Dörnyei & Scott, 1997; and Fulcher, 2003).

CHAPTER III

RESEARCH METHODOLOGY

This chapter deals with the research methodology describing the materials, and the methods employed in the current study. It begins with research method followed by descriptions of the participants, instruments, data collection, and data analysis.

Research Method

This study employed a quantitative research method to address the five research questions as stated in Chapter I. The quantitative method was used when a researcher attempted to determine a relationship between or within variables (Mackey & Gass, 2005). Conceptually, quantitative research method is divided into two types: experimental and associational or correlational. The experimental research method is to determine whether there is a casual relationship between the independent variables and the dependent variable. In other words, it is used for testing the impact of a treatment—manipulation of an independent variable on an outcome; all other factors that might influence the outcome are controlled (Creswell, 2003; Mackey & Gass, 2005). The correlational research method focuses on the co-occurrence of the independent and the dependent variables, not their cause-effect relationship. Its goal is to determine whether a relationship exists between variables and make predictions about a single dependent variable or outcome. This type of quantitative method is often used in survey-based research to provide a quantitative or numeric describing of trends, attitudes, or opinions of populations by studying a sample of that population. From sample results, the researcher generalizes or makes claims about the population. The basic concern of correlational research is to identify the degree to which the two types of variables change together, on average (Creswell, 2003; Mackey & Gass, 2005; Hatch & Farhady, 1982).

Considering the purposes in using each type of quantitative methods, the correlational research design was the most appropriate for serving the objectives of the current study which concentrates on comparison of the Thai speakers' intentions when producing each type of DFs and the native-English-speaking hearers' interpretations of

those DFs; and the difference in the Thai speakers' English proficiency levels and types of the DFs produced. The advantage of this methodology is that it provides a systematic scientific way for a statistical analysis of the results with comprehensive answers to the research questions. The obtained results were acknowledged as true and unbiased (Creswell, 2003; Mackey & Gass, 2005; Hatch & Farhady, 1982; Rudestam & Newton, 2001).

Participants

To serve the study purposes in examining DFs in spontaneous English dialogues between Thai learners and native speakers of English, Thai speakers of English and native-English-speaking hearers were purposively selected as the speakers and the hearers, respectively. Although there were different terms that were used to refer to the receiver of message in conversation such as listener, interlocutor, audience, and hearer, the term 'hearer' was used in the present study. The reasons were that first, to maintain its similar concept as widely used in the studies on DFs, DMs, CSs, and speech communication (e.g. Zhao, 2013; Schiffrin, 1987; Blakemore, 1992; Hymes, 1972; Goffman, 1981; Levelt, 1989; Swain, 1995; Canale & Swain, 1980 Whitman & Boase, 1983; Munby, 1991); and second, the focus of the current study was on the speakers' active role in conversation rather than the counterpart; the term 'hearer' suggested that he/she was a conversation participant who mainly had a reception role (cf. Dynel, 2010). Each group of the participants was described as follows.

Speakers

The speakers consisted of 30 students. They were purposively selected using the following criteria: (a) they were Thai learners of English as a foreign language; (b) they spoke Thai as their mother tongue (c) none of them had experiences abroad to native English-speaking countries; (d) they had the same average length of exposure to English – 15 years through classroom learning; (e) they were the fourth-year students with the same experience in taking 15 English courses in English linguistics (i.e. Introduction to English Linguistics, Practical English Phonetics and Phonology, and English Morphology and Syntax) and English for communications (i.e. English for Communication 1 and 2, Listening and Speaking for Situational English, Listening and

Speaking for Social Communication, Occasional Public Speaking, Communicative English Writing, Formulaic English Writing, Creative English Writing, Fundamental Strategic English Reading, English Reading for Interpretation, Analytical and Critical English Reading, and Introduction to English Translation); (f) they had different levels of English language proficiency; (g) they were studying in the same university, Loei Rajabhat University which provided English courses for non-native English students who were native Thai speakers in majority. Most lecturers of English courses in the university spoke Thai as their first language. The main medium language for instruction was Thai. With all these settings, Loei Rajabhat University, were considered under the context of English as a foreign language (EFL); and (h) all agreed to participate in the study.

The number of speakers was based on the number of the qualified learners within a class. Empirically, it was found by the previous studies (Riazantseva, 2001; de Jong, et al., 2013; Liu, 2013) that the non-native speakers' level of English language proficiency, linguistic knowledge, and linguistic skills influenced their production of disfluencies. With these experiences, the students were assumed to have sufficient language knowledge and ability to communicate in English meaningfully and likely to produce information-rich data for the study.

The speakers were classified into 3 groups according to their levels of language proficiency as indicated by their grade point average (GPA). The GPAs were calculated specifically from all the 15 taken English courses. To determine the members of each group, Z-score was applied for converting (in other words, standardizing) the GPAs which were in a normal distribution to become a standard normal distribution. The results showed that there were 5 members for the high-proficiency speaker group (HPS), 11 members for the mid-proficiency group (MPS), and 14 for the low-proficiency speaker group (LPS). The division was to serve the objective of the study in investigating whether there was any difference in the types of the disfluencies produced by the Thai speakers with different English proficiency levels. In this study, the term "speakers" referred to Thai learners of English who participated in the research.

Hearers

There were 3 hearers. They were purposively selected using the following criteria: (a) being native speakers of English; (b) being the lecturers at Loei Rajabhat University; and (c) being readily accessible to the researcher.

The number of hearers was grounded on the principle of interrater reliability that two or more raters judged the same set of data in the same way which represented the same phenomenon (Mackey & Gass, 2005). The purpose was to obtain the stable and consistent results and it served as a within-case checking by three hearers. With lecturer status, the hearers were believed to provide justified judgments and able to articulate the problems and the opinions which were informative for the current study (Creswell, 2005; Fraenkel, Wallen, & Hyun, 2012; Mackey & Gass, 2005).

Instruments

To obtain the required data, a speaking task for creating a spontaneous dialogue, descriptors for categorizing types of the DFs, and a checklist of speakers' intentions and hearers' interpretations of DFs were used for collecting the data.

Speaking Tasks

Developing Speaking Task

The speaking task involved the activities that stimulate speakers to use a language to achieve a particular goal in a particular speaking situation (Bachman & Palmer, 1996; Luoma, 2004). For the present study, a speaking task of spontaneous dialogue between a speaker and a hearer was under the designed task specifications following Fulcher's (2003) framework of speaking task which comprised six components: (1) task orientation, (2) interactional relationship, (3) goal orientation, (4) interlocutor status and familiarity, (5) topic(s), and (6) situation. The descriptions of task objective and the task specifications were shown in Table 12.

The purposes of speaking task were (1) to create spontaneous speech of English, (2) to stimulate communicative interaction through a dialogue, and (3) to obtain the types of DFs produced by the speakers. The speaking task required the speakers to talk about their general information such as, name, hometown, family,

education, future work, and experience in traveling abroad. The purposes were grounded on the following reasons.

Firstly, spontaneous speech of English was adopted as the communication form in this study with the reason that it was produced without preparation and it was characterized mainly with DFs and ungrammaticalities (Liu et al, 2005; Lease, et al., 2006; Mareüil, et al., 2005). Thus, DFs were likely to arise in a spontaneous speech. Additionally, spontaneous speech was the conversation commonly found in everyday life.

Secondly, a dialogue represents a foundational form of social interaction. Speaking is a meaningful interaction and is both personal and a part of a shared social activity between speakers (Luoma, 2004). Such social interaction enabled the speakers to make a spontaneous speech of English naturally. It allowed the hearers to interpret the communicative roles of DFs contextually. Due to the prompt-response nature of the dialogue, the speakers may have intentions in using DFs for communicative purposes. Lastly, regarding to the topic of talk, the caveats that the researcher should be aware of were that speaking tasks were artificial for the speakers to act out and the actions may not normally occur in real life situation. The results of situation may not be truthful; and the topics may not be relevant to the speakers' knowledge (Schreiber & Asner-self, 2011; Creswell, 2005; Fraenkel, Wallen, & Hyun, 2012; Mackey & Gass, 2005). The current study, therefore, chose the topics on the speakers' general information which involved their self-introduction, hometown, family, education, future work, an experience in travelling abroad. The chosen topics were considered relevant to the speakers' knowledge and experience which then increased the degree of topic familiarity to the speakers and enabled them to retrieve the required vocabularies more easily. Thus, they were encouraged to carry on the speaking task naturally and freely with a wider range of vocabulary. The hearers helped stimulating the speakers to talk as much as possible. Such basic social interaction allowed the researcher to observe the communicative roles of DFs as communicative interaction between a speaker and a hearer naturally.

The speaking task for the current study was a communicative task pertaining to problem-solving, decision-making or opinion-expressing. The task specifications used in the current study were shown in Table 12.

Table 12 Task Specifications

Specification Elements	Details
Task objective	To elicit from the speakers' spontaneous speech of English the forms and communicative functions of disfluencies that were used by each speaker in order to achieve a communication goal.
Task orientation (speaker-oriented outcome)	Each speaker had to talk with the same hearer who was a native speaker of English for about 5 minutes as maximum. The outcome was dependent upon the speaker. The task was conducted in English.
Items to be assessed	Repetitions, repairs, and pauses (filled pauses, unfilled pauses, and prolongations)
Interactional relationship	Two-way, between a speaker and a hearer. The hearer and the speaker talked about the speaker's general information. The hearer attempted to encourage the speaker to speak as much as possible.
Goal orientation:	None, because the dialogue was a small talk without any specific topic.
Interlocutor status and familiarity	The hearer and the speakers were not familiar with one another. The hearer's status was considered high and the familiarity was low.
Topics:	Any topics of the speaker's general information, e.g. self-introduction, hometown, family, education, future work, and experience in travelling abroad.
Task materials	None, because it was spontaneous in nature and the topics were from the the speaker's experience
Situations:	Conversation. Both speakers and hearer co-construct meaning by exchanging information, opinions, and views. During talking, there was a partition blocking the hearer's view from any gestural movement might be made by the speakers to assist them in expressing thought or to emphasize what was said.

According to Brown & Yule (1983), the task was transactional in nature. It was message-oriented and involved information exchanged between two or among more conversation participants. The methodology that was typically applied to elicit DFs in the previous studies included storytelling, story recalling techniques, picture describing, picture naming, and role plays (with and without scripts) (e.g. Forman, 2011; McDonough & Sunitham, 2009; Noom-ura, 2008; Boonkit, 2010; Yangklang, 2013; Ngowananchai, 2013; Klomjit, 2013; Patansorn, 2010; Sinwongsuwat, 2012; Ussana & Sinwongsuwat, 2012; Chotirat & Sinwongsuwat, 2011; and Rodpradit & Sinwongsuwat, 2012). Those techniques revealed some flaws in terms of speakers' memory capacity (e.g. storytelling, story recalling, picture naming, and role plays with scripts) which represented mainly the data from speakers' cognitive process; and in terms of limited

vocabularies involved (e.g. picture describing and role plays with/without scripts) which might have not allowed L2 speakers to utilize a wide range of vocabulary. Thus, spontaneous dialogue using the speakers' topics of their general information was adopted for data elicitation. The task was tested for efficient elicitation of the data prior to implementation and in order to systematically record the data generated from the speaking task, descriptors for categorizing types of the DFs and a checklist for identifying the speakers' intentions and hearers' interpretations of the DFs were applied.

Descriptors as Criteria for Categorizing Types of DFs

To establish the truthfulness of the data, the descriptors for categorizing types of the DFs were created. The categorized data from the researcher were cross-checked with the data provided by the trained categorizer. The descriptors (Table 13) were developed based on the types and the characteristics of L2 DFs as reviewed and shown in Table 3 in Chapter II.

Table 13 Descriptors as Criteria for Categorizing Types of DFs

Types of DFs	Characteristics
Pauses	Suspension in mid-utterance with or without fillers
Non-lexicalized filled pauses	Vocalics e.g. ah, uh, um, eh, mm...and their phonological variants and sound lengthening (prolongations) e.g. *theeee...*, *thuuuuh, tooooo...*
Lexicalized filled Pauses	Non-vocalic fillers e.g. *well, I mean, you know*, and *like*
Unfilled pauses (Silence)	Suspension with silence
Repetitions	Repeated words, phrases, or sentences e.g. *to clean...to clean*
Self-repetitions	Repeating one's own word or stress of words immediately after they are said
Other-repetitions	Repeating something the interlocutors said
Repairs	Amendments that speakers make resulting in reformulation of the articulating utterance i.e. correcting, completing, revising words/ phrases/ sentences(rephrasing) by means of substitutions/ insertions/ deletions
Self-initiated repairs	Repairing initiated by speakers themselves
Other-initiated repairs	Repairing as initiated by the interlocutors

The descriptors contained the description of each type of DFs. After obtaining the verbal data from speaking task, the data were categorized by the researcher and another categorizer who was trained to use the descriptors for categorizing the DF-types prior to categorizing the data using the created descriptors as a framework to identify the type of each DF. The categorizers filled in the blank column with the forms of the DFs obtained from the speaking task. In order to statistically ensure that the content validity in the descriptors, an evaluation of the validity was conducted by three content experts using the Index of Item-Objective Congruence or IOC (Rovinelli & Hambleton, 1977). Each item in the instrument was evaluated by giving the item a rating of 1 for clearly measuring, -1 for clearly not measuring, or 0 when it was unclear whether the listed item could measure the content. The items with the IOC of greater than 0.5 were adopted. The results in showed the IOC of higher than 0.5 mostly. Thus, the Descriptors for Categorizing Types of DFs were acceptable and then adopted for this study.

Checklist for Intentions/Interpretations of DFs

Another instrument for obtaining the data was a checklist for the speakers' intentions and the hearers' interpretations of DFs (intention-interpretation checklist). It was designed to address the research questions and developed based on the types and the characteristics of L2 DFs shown in Table 3, the functions of discourse markers shown in Table 7, and the DÖrnyei and Scott's (1997) taxonomy of communication strategies (CSs) which were already explained in Chapter II. However, the taxonomy is re-presented in brief. The taxonomy dealt with both psychological and social interactional processes. It was based on how communication strategies contributed to resolving conflicts and achieving mutual understanding. The taxonomy was divided into 3 main categories: direct strategies, indirect strategies, and interactional strategies. The sub-strategies under each main category were shown in Table 14. The list of discourse marker functions (Table 7) and the communication strategies (Table 14) were included into the items in the designed checklist (shown in Table 15). The purposes of the checklist were to obtain the data on (a) the types of DFs produced by Thai learners of English, (b) the learners' intentions when producing DFs and (c) the hearers'

interpretations of the DFs produced. However, the interpretation of DFs by only one hearer could be distorted or biased. To manage the problem, the interpretations of DFs were made by three hearers. The same checklist (Table 15) was used by the researcher and an expert, the speakers, and the hearers.

Table 14 Dornyei & Scott's (1997) Taxonomy of Communication Strategies

CS Categories	Descriptions	Strategies
Direct strategies	Strategies used when a speaker lacks resources, and consists of any moves used in order to assist speech production	Message abandonment Message reduction Message replacement Circumlocution Approximation Word coinage Restructuring Literal translation Code switching Mime Mumbling Omission Retrieval Use of all-purpose words Use of similar sounding words Foreignizing Self-rephrasing Self-repair Other-repair
Indirect strategies	Strategies used to create the conditions for mutual understanding when a speaker	Fillers Repetitions Self-repetitions Other-repetitions Verbal strategy markers (speaker's performance-related issues) Feigning understanding (hearers' issues)
Interactional strategies	Cooperative exchange between two or more interlocutors to overcome problems	Appeals for help Comprehension check Own-accuracy check Asking for repetitions Asking for clarification Asking for confirmation Guessing Expressing non-understanding Interpretive summary Response Repeat (after other repair) Repair Expand Confirm Reject

To establish the reliability of the checklist, the checklist was inspected by two experts before having it tried out with a pilot study prior to conducting the main study.

IOC procedure was used. The results showed that all items were acceptable (IOC = 1) by the three experts. Details of the checklist were provided in Table 15 as follows.

Table 15 Checklist for Intentions/Interpretations of Disfluencies

Time (sec.no.#) วินาทีที่	Types of disfluencies ประเภทของการพูดติดขัด	Intentions/ Interpretations of each disfluency เจตนารมณ์/การตีความของการพูดติดขัดแต่ละประเภท
	Pauses การหยุด ☐ Non-lexicalized filled paues การหยุดแบบเติมช่องว่างด้วยการเปล่งเสียง เช่น อา..*(uh)*,.. อื่ม... *(um)* รวมถึง การยืดเสียง เช่น ดี..*(thee..)* ดา.*(thuh..)* ☐ Lexicalized filled pauses การหยุดแบบเติมช่องว่างด้วยคำหรือวลีสั้นๆ เช่น *I mean, You know* ☐ Unfilled pauses (silences) การหยุดแบบปล่อยเงียบ Repetitions การพูดซ้ำ ☐ Self-repetitions การพูดซ้ำคำพูดตนเอง ☐ Other-repetitions การพูดซ้ำคำพูดผู้อื่น Repairs การแก้ไขถ้อยคำ ☐ Self-initiated repairs การแก้ไขถ้อยคำริเริ่มโดยผู้พูด ☐ Other-initiated repairs การแก้ไขถ้อยคำริเริ่มโดยผู้อื่น	☐ 1. Thinking about a vocabulary (กำลังคิดคำศัพท์) ☐ 2. Thinking about grammaticality (กำลังคิดเกี่ยวกับไวยากรณ์) ☐ 3. Thinking about adding, reducing, changing, or repairing information กำลังคิดเกี่ยวกับเพิ่มเติม ลด เปลี่ยนแปลง หรือ แก้ไข ข้อมูล ☐ 4. Know the word but don't know how to pronounce it รู้คำศัพท์แต่ออกเสียงไม่รู้ว่าจะออกเสียงอย่างไร ☐ 5. Thinking about coherence and relevance กำลังคิดเกี่ยวกับความสอดคล้องของเนื้อหาและความข้องเกี่ยวของเนื้อหากับผู้พูด&ผู้ฟัง ☐ 6. Thinking about appropriateness (e.g. politeness) กำลังคิดเกี่ยวกับความเหมาะสมของภาษา (เช่น ความสุภาพ) ☐ 7. Thinking about shifting to other new topic กำลังคิดเกี่ยวกับการเปลี่ยนเรื่องไปหัวข้อใหม่อื่นๆ เปลี่ยนเรื่องไปหัวข้อใหม่อื่นๆ ☐ 8. Thinking about opening/closing conversation กำลังคิดเกี่ยวกับการเริ่มต้น/ยุติ การสนทนา ☐ 9. Having found a mistake in speaker's speech พบว่ามีข้อผิดพลาดบางอย่างในถ้อยคำของผู้พูด ☐ 10. Avoiding unnecessary silence (เลี่ยงเพื่อไม่ให้เงียบโดยไม่จำเป็น) ☐ 11. Making smooth speech after long pause (ทำให้การพูดลื่นไหลหลังจากการพูดติดขัดก่อนหน้านั้น) ☐ 12. Resuming fluency after interruption (สร้างความต่อเนื่องของการพูดหลังจากถูกขัดจังหวะ) ☐ 13. Emphasizing on the intended message (เน้นความหมายของข้อมูลตามที่ตั้งใจ) ☐ 14. Checking understanding (ตรวจสอบความเข้าใจ) ☐ 15. Expressing understanding (แสดงว่าเข้าใจ) ☐ 16. Confirming shared assumptions (ยืนยันแนวคิดที่มีร่วมกันของคู่สนทนา) ☐ 17. Holding time to continue speaker role(ประวิงเวลาเพื่อครอง ☐ 18. Giving clues for prediction of next utterance (ส่งสัญญาณเพื่อสามารถคาดเดาถ้อยคำต่อไปได้) ☐ 19. Signaling to hearer for help (ส่งสัญญาณขอความช่วยเหลือจากผู้ฟัง) ☐ 20. Waiting for hearer to speak (กำลังรอให้ผู้ฟังพูด) ☐ 21. Blank head (ไม่ได้คิดอะไร) ☐ 22. Do not have enough knowledge about the topic. (ไม่มีความรู้เกี่ยวกับเรื่องที่สนทนามากพอ) ☐ 23. Uncertain about the content or the topic (ไม่แน่ใจเกี่ยวกับเนื้อหา/หัวข้อที่พูด) ☐ 24. Others (อื่นๆ).....

In conclusion, all the 3 instruments: (1) the speaking task was proven efficiently eliciting the data of L2 DFs as required; (2) the descriptors as criteria for categorizing the types of DFs; and (3) the checklist for intentions/interpretations of DFs were acceptable for their reliability and validity. The following section reports about how the pilot study was conducted and its results.

Pilot Study

The pilot study was conducted in order to check if the procedures were feasible as planned and if the developed checklist and the descriptors were effective and practical to all the parties concerned. The conduction followed the actual steps of data collection procedures. While the participants for the main study consisted of 3 hearers and 30 speakers, those in the pilot study included 1 hearer and 5 speakers. Connelly (2008) and Treece & Treece (1982) suggested 10% of the project sample size as the minimum sample size for a pilot study. Thus, to establish reliability during the pilot study, the sample size of 5 speakers for this project which was equivalent to 15% of the total number of the speakers participated in the main study was determined. The speakers had the same qualifications as required by the study but these speakers were not included into the main study. They had different levels of English language proficiency, ranking from the highest to the lowest GPA of only English courses taken: 4.00, 3.80, 2.75, 2.55, and 1.97. The hearer was a lecturer who was a native English speaker. One English lecturer (native Thai) was trained for categorizing the DFs. The same trained expert was one of the two DF categorizers (including the researcher) for the main study. The instruments were speaking tasks, a checklist for intentions and interpretations of DFs, and descriptors for categorizing types of DFs.

Pilot Study Results

The Effectiveness of the Instruments

Speaking Task

It was found that speaking task could elicit spontaneous speech from the speakers and it could well serve the social interaction aspect of language. Both the

speakers and the hearers could carry on conversations naturally and the speakers produced information-rich data.

Descriptors for Categorizing Types of DFs

It was found that the descriptors were informative and clearly described the characteristics of DFs. The agreement between the two categorizers (as shown in table 14) could be statistically reported that for the student 1, 2, 3, 4, and 5, the agreement was 89.66%, 90.91% , 70.00%, 100%, and 84.00% respectively. The overall agreement was 88.00%. The percentage of the agreement was considered high; that is, the descriptors for categorizing types of DFs were efficient.

However, there were some disagreements concerning: the differences between the ungrammaticality aspect of the speech (i.e. *they are come from..*) *and* the characteristics of DFs, the difference between phrase repetition and sentence repetition (i.e. *I want....*), repetition of acknowledgement words (i.e. *yes yes!*), and slips of the tongue (i.e. *I reallily...*). The solutions were that:

1. All ungrammaticality aspects were not considered a DF since they did not break the utterance; except, a certain ungrammatical feature was repeated or repaired. This is because the repetitions and the repaired affected the speakers' flow of their utterances.

2. If the repetitions were not made for the whole sentence but partially, it was not considered a sentence repetition but a phrase repetition; for example, *" I want.. "*

3. The repetition of acknowledgment words such as "yes yes!" was not considered a disfluency item but repetition for emphasis of acknowledgement.

4. Slips of the tongues were not considered DFs. The reasons were stated earlier in the scope of the study that such aspects were not included.

5. The researcher developed a more practical form for checking and categorizing the types of DFs

Checklist for Intentions/Interpretations of Disfluencies

There was no problem for both the speakers and the hearers in using the checklist. Thus, it was applicable effectively.

The Feasibility of the Planned Data Collection Process

The time for sound recording – 5 minutes was appropriate for the speakers to produce the target data. The number of sound recordings which was 5 recordings a day was possible for the two categorizers to do their categorization of DFs within one day before the sound listening task which was to be held the next day.

However, it was rather difficult to arrange the appointment for all the parties concerns to meet at the same time. As a result, only the speakers and the hearer who was the interlocutor were arranged for doing the sound listening on the next day (after the speaking task day). The other two hearers were arranged to do sound listening separately at their convenient times.

It was found that some speakers seemed to wait for answering the yes-no questions. Thus, they did not produce information-rich data. To solve the problem, the hearer was asked to use the Wh-questions more and used the yes-no questions only where necessary such as to serve as a guide for the next question which was Wh-question.

In addition, the speakers' topics of interest were only about the basic information related to their everyday life. The researcher, therefore, asked the hearer to carry on the conversation as naturally as possible using the basic questions that were related to the speakers' personal information and their desires. The questions were: (1) How many people in your family? (2) What does your father/mother do? (3) What do you want to be after finishing your study in the university? (4) If you have money, which country would you like to visit?

Thus, all the data collection process and procedures were feasible and adopted for collecting the data step by step as follows.

Data Collection

Step 1: Speaking Task Activity

1. The speakers were grouped according to their levels of language proficiency indicated by the z-scores of their GPAs. Three groups of speakers were classified: high-proficiency speakers (5 members), mid-proficiency speakers (11 members), and low-proficiency speakers (14 members). The speakers were scheduled to perform their speaking task with a hearer on different days, 5 speakers at maximum a day.

2. The speakers were informed about the objectives of the research, what they were required to do and not to do. They were assured that all their mistakes did not affect the evaluation of their performances in any English courses; their performances were to be kept confidential and used only for the research. Thus, they felt free to carry on a conversation with the hearer.

3. A hearer was invited to sit at the arranged chair behind the partition waiting for a speaker to come in. The hearer was asked to control the recorder. Before the speaker entered the room, the speaker had been provided with a brief instruction. The researcher reminded her/him again about what s/he was not allowed to do. When the speaker took a seat, the hearer asked him/her about his/her general information using the following questions:

Could you please tell me a little bit about yourself?
Where are you from?
Could you tell me more about your hometown?
How many people in your family?
What does your father/mother do?
What do you want to be after finishing your study in the university?
If you have money, which country would you like to visit?

The dialogue started when the recorder was turned on. Guiding questions were provided to the hearer in order to stimulate the speaker to talk. The hearer was asked to carry on the conversation naturally and to encourage the speaker to speak as much as possible. A partition that was placed between the speaker and the hearer was to avoid gestural interference which may affect the hearers' interpretations of disfluencies. The length of the conversation was about 3-5 minutes. When the conversation ended, the hearer turned the recorder off.

Step 2: Categorizing DF-Types

After step one, the speeches were examined for categorizing the DF-types within the same day after speaking task had completed so that they were able to be used as reference for the meeting on the following day with the Thai speakers who produced the speeches and three native-English-speaking hearers. The researcher and another trained expert categorized the DFs occurring in the verbal data from speaking

tasks using the checklist for intentions and interpretation of DFs following the timeline of the dialogue. The categorization of data involved making decisions about which type or sub-type a DF belonged to. The types and the characteristics of DFs shown in table 13 were used as the framework for categorizing the DFs arose in the present study.

Step 3: Meeting with Hearers: Recollection of Intentions/Interpretations

The next day after speaking task, each speaker and the three hearers met for checking the intentions and the interpretations of the DFs in the speech from the spontaneous English dialogues. Prior to checking the DFs, they were explained about the instructions and how to use the checklist. Then, they checked in the list independently as the sound record was being played to stimulate their recall of each DF. The sound record was stopped or replayed each time a DF arose and the participants were asked to check the item which was true to them until the sound record finished. Then, another meeting was made with another speaker but the same hearers. The same process of checking was followed again with each speaker until finished.

The same procedures of step 1, 2, and 3 were followed with another two groups of speakers.

Data Analysis

The researcher and the trained expert did the analysis. The target data collected in the current study consisted of (1) L2 DFs, and (2) the speakers' intentions and the hearers' interpretations of the DFs.

For research question (1), analysis of the DF types had already been done in step 2. The pauses, the repetitions, and the repairs identified by both categorizers were counted as DFs. Then the occurrence frequency of each DF type was calculated so as to observe the tendency of DFs produced by the 30 Thai speakers. The statistical analysis for calculating the occurrence frequency of DFs was mode value. Mode value was the most frequent score in a data set. It was used for categorical data where the most common category was needed to know (Mackey & Gass, 2005).

For research question (2) concerning with the Thai speakers' intentions when they produced each type of the DFs, based on the data obtained through step 3 (checklist),

the speakers' intentions as checked were counted for the frequency of each intention type. The mode value was applied. The analytical framework to identify the intentions was shown in Table 11. The representative intention for each disfluency was determined by the intention identified with the highest frequency. In case that two or more different intentions were identified with the same frequency, the data were uncounted and classified as "simultaneous intentions" group.

For research question (3), the hearers' interpretations generated from step 3 (checklist) were counted for the frequency of their occurrence. The mode value was also applied. The same analytical framework as used for identifying the intentions was adopted. The representative interpretation for each disfluency was indicated by the highest frequency of interpretation as identified by at least two hearers.

For research question (4), the difference between the speakers' intentions and the hearers' interpretations was statistically analyzed using Chi-square Test for homogeneity of proportions with the claim that the proportions of the frequency of intentions identified by the speakers and the frequency of interpretations indicated by the hearers as per the three functions of DFs (DFs as markers for speech production difficulties, DFs as markers serving textual functions, DFs as conversational devices serving social interaction during conversation) were the same.

For research question (5), the difference in the types of the disfluencies produced by the Thai speakers in different English proficiency levels (high, mid, low) was determined by using Chi-square Test for homogeneity of proportions with the claim that the proportions of the frequencies for all the disfluency types produced by each group of speakers were the same.

The research findings were presented in the next chapter.

CHAPTER IV

FINDINGS

The aim of this chapter is to report the data collected (see Appendix) and their analysis. The findings are presented related to each research question and the objectives of the study which were to examine types of the disfluencies (DFs) produced by the native Thai speakers, the speakers' intentions during the occurrence of each type of DFs, the native English-speaking hearers' interpretations of each type of DFs, the difference between the speakers' intentions and the hearers' interpretations, and the difference in the types of the DFs produced by the Thai speakers with different English proficiency levels. The details are as follows.

Finding 1: Types of Disfluencies and Their Frequencies

Research question 1: What were the types of DFs and their frequencies produced by Thai learners of English in their spontaneous English dialogues with native English speakers?

The answer to this question was obtained by using the L2 DFs categorization criteria which was used as the framework to identify the DF types found in the verbal data from the speaking task. The criteria were developed based on the types and the characteristics of the L2 DFs revealed by the previous research findings. The description of each type of DFs was shown in Table 11. The obtained data were categorized based on the criteria. The details are shown in Table 16. According to Table 16, each DF was counted, grouped into sub-types, and then categorized into the main DF types. The mode value showed that the 30 Thai learners of English (hereafter referred to as "speaker(s)") produced 3 main types of DFs with 7 sub-types. The 3 main types consisted of pauses, repetitions, and repairs. Each of them had its sub-types. Pauses were produced at the highest frequency (79.90%), repetitions were the second highest (14.07%), and repairs were found with the lowest frequency (6.03%).

Table 16 Types and Frequency of DFs in English Speech by Thai Learners

DF-Types	Sub-Types of DFs	Frequency Counted	% of Grand Total
Pauses	Non-lexicalized Filled Pauses	711	51.04
	Lexicalized filled pauses	22	1.58
	Unfilled pauses	380	27.28
	Total	***1113***	***79.90***
Repetitions	Self-repetition	156	11.20
	Other-repetitions	40	2.87
	Total	*196*	***14.07***
Repairs	Self-initiated repairs	83	5.96
	Other-initiated repairs	1	0.07
	Total	*84*	***6.03***
	Grand Total	*1393*	***100.00***

When ranking within the sub-types, the mode value showed that the highest frequency fell into the non-lexicalized filled pauses (51.04%), the second was unfilled pauses (27.28%), the third was self-repetitions (11.20%), the fourth was self-initiated repairs (5.96%), the fifth was other-repetitions (2.87%), the sixth was lexicalized filled pauses (1.58%), and the lowest was other-initiated repairs (0.07%). All the details of the frequencies ranging from the highest to the lowest were as shown in the following table.

Table 17 Sub-Types and Frequencies of DFs in English Speech by Thai Learners

Sub-Types of DFs	Frequency Counted	% of Grand Total
Non-lexicalized filled pauses	711	51.04
Unfilled pauses	380	27.28
Self-repetitions	156	11.20
Self-initiated repairs	83	5.96
Other-repetitions	40	2.87
Lexicalized filled pauses	22	1.58
Other-initiated repairs	1	0.07
Total	***1393***	***100.00***

Explanation on the phenomena of each DF-type is presented next.

Pauses

Type 1 was pauses, the type with the highest frequency of 79.90%. The sub-types under pauses were non-lexicalized filled pauses, unfilled pauses, and lexicalized filled pauses. Among the sub-types, the non-lexicalized filled pauses were produced with the highest frequency of 51.04%. This sub-type was marked by *ah, uh, um, eh, er*, some Thai markers such as อืมม..., อ่อ, อ้อ, อ๋อ, เอิ่ม, โอ๋, ฮึ, and อะ, and prolongations or sound lengthening. Unfilled pauses were found the second highest frequency of 27.28% and marked by silences. Lexicalized filled pauses (*like* and *and*) were produced at the lowest frequency of 1.58% which was much lower than the non-lexicalized filled pauses and the unfilled pauses.

Repetitions

Type 2 was repetitions which were produced with the second highest frequency of 14.07% in comparison with the total number of the DFs produced. Their sub-types including self-repetitions and other-repetitions were revealed. The frequency of the self-repetitions was found the highest (11.20%) while that of other-repetitions was found the lowest (2.87%) which was much lower than the first type of repetitions. The self-repetitions that were mostly found were word repetitions such as *"I, I, I from Khonkaen" "my, my family..." "..she is, is..."* and *"...very, very good"*. Phrase repetitions, for example, *"I think, I think so"* were found at the lower number than word repetitions while sentence repetitions such as *"I don't know, I don't know"* were rarely found. However, although the form of repetitions for emphasizing the message and that of repetitions as disfluencies were identical, the function of repetitions identified by the speakers was considered the final and was counted.

Repairs

Type 3 was repairs which were produced at the lowest frequency of 6.03 %. The sub-types were self-initiated repairs and other-initiated repairs. The former type was found at the highest frequency (5.96%) and the latter was at the lowest (0.07%). The data showed that self-initiated repairs by revising the message (e.g. *she...he is clever*) were the most frequently made by the speakers especially by the low-proficiency group.

The self-initiated repairs by deleting (e.g. *I ~~am~~ like travelling*) were found at the lower number than the revision while the self-initiated repairs by inserting (e.g. *I want (to be) a teacher*) were produced at the lowest number.

In sum, the answer to this question was that pauses, repetitions, and repairs were the three main types of DFs made by the speakers. Pauses tended to be produced at the highest frequency, repetitions were the second, and repairs were produced at the lowest frequency.

Finding 2: Types of Disfluencies and the Speakers' Intentions

Research question 2: What were the Thai speakers' intentions when they produced each type of the DFs?

The answer to the second question was obtained through the developed Checklist for intentions/interpretations of DFs. Each speaker was provided with the checklist and used it while listening to his/her own conversation with the hearer from the audio record. When each DF in the speaker's speech was found, the speaker identified his/her intentions by choosing from those stated in the checklist. The frequency of the items as marked by the speaker was counted and categorized. The data were analyzed using the mode value. In case that two or more items were identified, the items were grouped as one if they were under the same intention. If there were more than one intention for each DF, the representative intention was determined by the intention which had the highest frequency. If there were two or more different intentions were identified with the same frequency, the data were uncounted and classified as "simultaneous intention" group.

The findings indicated that the Thai learners had intentions to use the DFs based on three functions: (1) cognitively managing speech production difficulties, (2) textual functions, and (3) interpersonal functions. More explanation on the intentions and their frequencies identified by the speakers is presented in Table 18 which showed the speakers' intentions ranged from the highest to the lowest frequency were: speech production difficulties (37.76%), interpersonal functions (23.76%), and textual functions (23.55%).

Table 18 Frequencies of Thai Speakers' Intentions on Production of Each DF-Type

DF-Types		Speakers' Intentions				
		Speech Production Difficulties	Textual Functions	Interpersonal Functions	Simultaneous Intentions	Total
Pauses	Frequency Counted	430	250	275	158	1113
	% of Total	*30.87*	*17.95*	*19.74*	*11.34*	*79.90*
Repetitions	Frequency Counted	65	42	51	38	196
	% of Total	*4.67*	*3.02*	*3.66*	*2.73*	*14.07*
Repairs	Frequency Counted	31	36	5	12	84
	% of Total	*2.23*	*2.58*	*0.36*	*0.86*	*6.03*
Grand Total	Frequency Counted	*526*	*328*	*331*	*208*	***1393***
	% of Grand Total	*37.76*	*23.55*	*23.76*	*14.93*	***100.00***

The speakers' intentions as shown in the table can be reported as follows.

Speakers' Intentions

Intention 1: *To cognitively manage speech production difficulties*

The intention of cognitively managing speech production difficulties was related to English language knowledge which included vocabularies (retrieving or thinking about the meaning of vocabularies), grammaticality (e.g. *"he is...ah...he was"*), pronunciation (e.g. " *web..ah..wave*"), knowledge about the topic (*ah...ah...silences...I..I..I don't know*) and remembering information *(mmm...about eightyyyy....)*. Under this intention, the speakers also reported that they were thinking about nothing (blank head) when producing a DF marker. It was found that the highest frequency, 37.76%, of the total number of DFs (1393) were for the intention of cognitively managing speech production difficulties.

Intention 2: *To serve textual functions*

The intention in using DFs for textual functions was dealt with adding, reducing, changing, or repairing information, coherence and relevance, mistakes detected, and uncertainty about the content or the topic; for example, "*I want to be English teacher...ah...soldier...uh..soldier teacher*" ;and *"and...(silences)....because... uh...he can good job...ah...he can do good job"*. It was found that 23.55% of the total number of DFs produced for serving textual functions. Among the three intentions, textual functions were found at the lowest frequency.

Intention 3: *To serve interpersonal functions*

The intention for interpersonal functions included using DFs as markers before rephrasing the utterance for appropriateness (e.g. politeness), shifting to other new topic, opening/closing conversation, avoiding an unnecessary silence, making smooth speech after a long pause, resuming fluency after interruption, emphasizing on the intended message, checking understanding, expressing understanding, confirming shared assumptions, holding time to continue speaker role, giving clues for prediction of next utterance, signaling to hearer for help, and waiting for hearer to speak. 23.76% was reported as the frequency for the speakers' intention in using DFs for interpersonal functions. Some examples were as follows.

Hearer: *"Do you live nearby?"*

Speaker: *"...(silence)...ah.....(silence)....."*

(The speaker identified the DFs as signaling to hearer for help, avoiding an unnecessary silence, and holding time)

Hearer: *"Do you live around the university?"*

Speaker: *"...ah...Here, Here?" "I live at...ah...ah....Kotnarin dormitory... near...near seven...seven-eleven"*

(The speaker identified the DFs as checking understanding and holding time to continue speaker role.)

However, for some DFs (as shown in the above example), the speakers identified more than one intention. Thus, those DFs were categorized into a group of 'simultaneous intentions'. More explanation is as follows.

Simultaneous Intentions

The DFs under the group of simultaneous intentions were identified by the speakers as having more than one intention. That is, there were more than two intentions identified with equal number of frequency. Although it was possible that each speaker might have more than one intention in using each DF, the present study used mode value to determine the intention identified with the highest frequency for a DF as the representative of each speaker's intention in producing a DF. Thus, the DF with two or more intentions that held the equal number of frequency was uncounted and classified

under simultaneous-intention group. Under the group, 14.93% of all DFs were reported serving more than one intention at a time being produced.

It can be concluded that the highest frequency (37.76%) in using DFs was for the intention of cognitively managing speech production difficulties while the lowest (23.55%) was for serving textual functions. The intention with the second highest frequency (23.76%) identified by the speakers was for interpersonal functions, and 14.93% was for simultaneous intentions. According to the table, details of the findings on DF-types and the speakers' intentions in using them are presented as follows.

Pauses and Speakers' Intentions

The number of 1,113 pauses was produced in total. Among pauses, the highest frequency of 30.87% was identified as serving the intentions to cognitively manage the speakers' production difficulties. They were used at the second highest frequency of 19.74% for interpersonal functions, and the lowest was for textual functions which indicated the frequency of 17.95%. 11.34% was identified as having simultaneous intentions, being uncounted data discarded.

It can be said that the speakers tended to use pauses indicating their cognitively managing speech production difficulties rather than serving for interpersonal functions and textual functions. Some pauses were identified with more than one intention. The frequency for the pauses with simultaneous intentions was found.

Repetitions and Speakers' Intentions

The number of 196 repetitions was produced in total. 4.67% of all the DF items produced (1393) which was the highest frequency of all was to serve the intention on cognitively managing speech production difficulties. 3.66%, the second highest frequency was for interpersonal functions, and 3.02%, the lowest frequency, was for textual functions. 2.73% was identified as serving simultaneous intentions.

Thus, the speakers tended to produce repetitions when they were trying to cognitively manage their speech production difficulties rather than for interpersonal functions and textual functions. Repetitions were used for textual functions at the lowest rate of all. Some repetitions were also identified with simultaneous intentions.

Repairs and Speakers' Intentions

The number of 84 repairs was produced in total by the speakers. Textual functions were identified with the highest frequency (2.58%) as the speakers' intentions when producing repairs. Those for cognitively managing speech production difficulties were reported with the second highest frequency of 2.23%. The use of repairs for interpersonal functions was found at the lowest of 0.36%. 0.86% was indicated with simultaneous intentions.

It can be reported that the speakers tended to produce repairs to serve textual functions rather than for cognitively managing speech production difficulties. It was unlikely for the speakers to use repairs for interpersonal functions. Repairs with simultaneous intentions were found with much higher frequency than repairs for interpersonal functions.

According to the data, all the DF types served all the three functions but in different degree. The phenomena indicated that the speakers had higher tendency to use pauses and repetitions for cognitively managing their speech production difficulties which were related to the problems on English language knowledge. Such phenomena indicated high tendency for pauses and repetitions serving as markers for speech production difficulties.

Repairs were different from pauses and repetitions. The data showed the high tendency for repairs to be used for textual functions rather than for cognitively managing speech production difficulties. There was low tendency for them to be used for interpersonal functions during conversation. Thus, repairs were likely to be markers for textual functions.

In conclusion, from the perspective of the Thai learners of English, their pauses and repetitions highly tended to be markers for speech production difficulties and indicators of the level of second language acquisition. Conversely, the data revealed low tendency for pauses and repetitions to be used as the speakers' textual discourse markers. There was a low tendency for repairs to be used as the speakers' communication strategies and discourse markers for social interaction serving interpersonal functions during the conversations.

Other than the speakers' intentions when they produced each type of DFs, hearers' interpretations of each DF were examined. The findings on the hearers' interpretations of each DF-type are reported in the following section.

Finding 3: Hearers' Interpretations of the Disfluencies Produced

Research question 3: What were the native English-speaking hearers' interpretations of each type of the DFs?

To answer this question, the same checklist for intentions/interpretations of DFs as provided to the speakers was also applied to obtain the data. The purpose of using the same checklist was to compare the speakers' intention and the hearers' interpretation of the same DF. The three native English-speaking hearers listened to the same audio record as did the speakers. They identified their interpretations in the checklist independently. Only the same interpretations of the same DFs that were identified by at least two of the hearers were counted for frequency since they provided truly representative samples statistically (Creswell, 2003; Mackey & Gass, 2005). The interpretations as marked were analyzed using the mode value.

In order to assess the degree to which different hearers (as observers) give consistent estimates of the same phenomenon, the percent of agreement among the hearers' interpretations of each DF item was measured. Based on the total number of DF items (1393) produced by the speakers, the three hearers indicated 100% agreement of interpretations for 451 DF items or 32.38% of the total, and 66.67% agreement by two out of three hearers for 803 DF items or 57.65% of the total while only 139 items or 9.98% of the total were identified as 0% agreement among the hearers. Thus, it statistically reported high percentage for the consistency in the agreement of hearers' interpretations of DF items.

The result revealed three functions of DFs according to the hearers' interpretations: (1) cognitively managing speech production difficulties, (2) textual functions, and (3) interpersonal functions. However, there were some DFs analyzed as uncounted data since there was no agreement among the hearers' interpretations. This group of data was assigned in the category named 'uncounted data'.

To compare the occurrence frequencies of the hearers' interpretations for each type of the DFs, the data are reported in percentage. The mode value was calculated to determine the frequency numbers. The frequencies of the native English-speaking hearers' interpretations of DFs are reported in Table 19.

Table 19 Frequencies of the Hearers' Interpretations of DFs

DF-Types		Hearers' Interpretations				
		Speech Production Difficulties	Textual Functions	Interpersonal Functions	Uncounted Data	Total
Pauses	Frequency Counted	487	190	315	121	**1113**
	% of Total	*34.96*	*13.64*	*22.61*	*8.69*	***79.90***
Repetitions	Frequency Counted	56	59	64	17	**196**
	% of Total	*4.02*	*4.24*	*4.59*	*1.22*	***14.07***
Repairs	Frequency Counted	28	51	4	1	**84**
	% of Total	*2.01*	*3.66*	*0.29*	*0.07*	***6.03***
Grand Total	Frequency Counted	571	300	383	139	**1393**
	% of Grand Total	*40.99*	*21.54*	*27.49*	*9.98*	***100.00***

The data showed that, among the three types of DFs, hearers' interpretations of the DFs as markers for cognitively managing speech production difficulties was at the highest frequency of 40.99%, as conversational devices for interpersonal functions at the second highest frequency of 27.49%, and as discourse markers serving textual functions at the lowest frequency of 21.54%. 9.98% of the data was uncounted as there was no true representative statistically determined by the mode value. Thus, this set of data was discarded.

The frequency of each interpretation as per DF-type is reported as follows.

Pauses and Hearers' Interpretations

It was found that 34.96% of the total number was interpreted as markers of the speakers' speech production difficulties; 22.61% which was the second highest frequency was interpreted as for interpersonal functions; 13.64%, the lowest, was rated as the speakers' markers for textual functions. 8.69% of the total was identified as uncounted data discarded.

Thus, pauses in conversations tended to be interpreted as indicators of the speakers' speech production difficulties at the highest tendency, as conversational devices: speakers' communication strategies and discourse markers for social interaction at the second highest, and as discourse markers for textual connection at the lowest tendency.

Repetitions and Hearers' Interpretations

The number of 196 repetitions was found in total. 4.59% of the total, the highest frequency was interpreted as serving interpersonal functions; 4.24%, the second highest frequency, was for textual functions; and 4.02%, the lowest, was interpreted as the speakers' markers of their speech production difficulties. 1.22% of the total was repetitions as uncounted data.

It can be summarized that repetitions had the highest tendency to be interpreted as indicators of speakers' conversational devices serving interpersonal functions. They were likely to be perceived as the speakers' discourse markers for textual connection at the second highest tendency while they were interpreted as the speakers' markers for speech production difficulties at the lowest tendency of all.

Repairs and Hearers' Interpretations

The number of 84 items was found as the total number of the repairs produced. The highest frequency of 3.66% of the total number was interpreted as doing textual functions. The second highest frequency, 2.01% of all, was identified serving as the speakers' indicators for speech production difficulties. The lowest frequency of 0.29% was reported as repairs for serving interpersonal functions. 0.07% of the total was uncounted data.

This means that the hearers perceived repairs as discourse markers for textual connection at the highest tendency, as indicators of speakers' speech production difficulties at the second highest tendency, and as conversational devices serving interpersonal functions at the lowest tendency.

According to the results, the three functions of DFs as interpreted by the hearers were found in all DF types. However, each DF-type was identified with different highest tendencies of interpretation. Pauses were likely to be perceived as markers signaling the

speakers' speech production difficulties. The hearers' indicated the lowest tendency for pauses to be interpreted as the speakers' discourse markers for textual connection. Repetitions tended to be perceived as the speakers' conversational devices for social interaction during conversation rather than marking as the speakers' speech production difficulties and textual connections. For repairs, the hearers reported the highest tendency as for the speakers' discourse markers for textual connection. Repairs as doing interpersonal function serving social interaction in conversation were rated with the much lower percentage than that of textual functions.

The findings on the DF-types, the speakers' intentions and the hearers' interpretations of each DF-type as reported in the previous sections were used as the data for further analysis to obtain the knowledge on whether there was any difference between the speakers' intentions and the hearers' interpretations. The findings were reported as follows.

Finding 4: Difference between Speakers' Intentions and Hearers' Interpretations

Research question 4: Was there any difference in the Thai speakers' intentions and the native English-speaking hearers' interpretations?

The answer for this question was analyzed from the data for the questions 2 and 3 which were about the speakers' intentions and the hearers' interpretations of the DFs produced. Chi-square test of homogeneity was applied to determine the difference in proportions between the speakers' intentions in using each type of DFs and the hearers' interpretations of the DFs. The results were found as shown as follows.

Overall Result

According to Table 20, it was found that speech production difficulties were the function with the highest frequency (39.38%) as identified by both the speakers and the hearers; interpersonal functions were the second highest (25.63%); and textual functions were at the lowest frequency (22.54%). 12.46% was under the uncounted data. The overall result from the testing for the difference between the speakers' intentions and the hearers' interpretations using Chi-square test of homogeneity indicated the p-value (.000) which was less than the significance level (.05). That is, the proportion of

the speakers' intentions in using all types of the DFs was not identical to the proportion of the hearers' interpretations of those DFs.

Table 20 Comparison of Speakers' Intentions and Hearers' Interpretations *

		Intentions and Interpretations				
		Speech Production Difficulties	Textual Functions	Interpersonal Functions	Uncounted Data Discarded	Total
Speakers	Frequency Counted	526	328	331	208	**1393**
	% of Total	*18.88*	*11.77*	*11.88*	*7.47*	***50.00***
Hearers	Frequency Counted	571	300	383	139	**1393**
	% of Total	*20.50*	*10.77*	*13.75*	*4.99*	***50.00***
Total	**Frequency Counted**	1097	628	714	347	**2786**
	% of Total	*39.38*	*22.54*	*25.63*	*12.46*	***100.00***

* $P < .05$ (.000): comparing the proportion of the total frequencies for the speakers' intentions in using all DF-types (pauses, repetitions, and repairs) and the proportion of the total frequencies for the hearers' interpretations of all the DF-types as signaling speakers' speech production difficulties, as doing textual functions, and as serving interpersonal functions

However, it was found that the ranking pattern of the frequency in using DF-types as intended by the speakers and the frequency of the hearers' interpretations of the DFs were the same: speech production difficulties as the highest, interpersonal functions as the second, and textual functions as the lowest. The frequencies of speakers' intentions in using all DF-types as per the three functions were 18.88%, 11.88%, and 11.77%, respectively, and those of hearers' interpretations of all the DF-types as per the three functions were 20.50%, 13.75%, and 10.77%. 4.99% and 7.47% of the total frequency counted from the speakers' intentions and the hearers' interpretations, respectively, were uncounted data discarded.

Thus, the overall test result revealed that the proportions of the intentions and the interpretations were not the same, but the ranking patterns of frequency according to the speakers' intentions and the hearers' interpretations were the same.

When testing the difference based on each DF-type, the results were as follows.

Pauses

For pauses, the result (see Table 21) revealed that the highest frequency of 19.32% of the total was speakers' intentions in using pauses as markers indicating cognitively managing their speech production difficulties, the second was pauses as conversational devices serving social interaction during conversation at the frequency of 12.35%, the lowest was 11.23% for textual connections, and 7.10% was identified as simultaneous intentions which became uncounted data for the present study. The frequencies of the hearers' interpretations of pauses ranked from the highest to the lowest were: 21.88% was interpreted as markers of the speakers' speech production difficulties; 14.15% was perceived as conversational devices serving social interaction during conversation, 8.54% was for textual connections, and 5.44% was uncounted data discarded.

Table 21 Comparison of Speakers' Intentions and Hearers' Interpretations of Pauses*

		Intentions and Interpretations				
		Speech Production Difficulties	Textual Functions	Interpersonal Functions	Uncounted Data Discarded	**Total**
Pauses						
Speakers	Frequency Counted	430	250	275	158	**1113**
	% of Total	*19.32*	*11.23*	*12.35*	*7.10*	***50.00***
Hearers	Frequency Counted	487	190	315	121	**1113**
	% of Total	*21.88*	*8.54*	*14.15*	*5.44*	***50.00***
Total	**Frequency Counted**	**917**	**440**	590	279	**2226**
	% of Total	*41.19*	*19.77*	*26.50*	*12.53*	***100.00***

*P < .05 (.000): comparing the proportions of the frequencies for the speakers' intentions in using *pauses* and the proportions of the frequencies for the hearers' interpretations of *pauses* as signaling speakers' speech production difficulties, as doing textual functions, and as serving interpersonal functions

The analysis through Chi-square test of homogeneity indicated the p-value of .000 which was less than the significance level (.05). Thus, it can be concluded that the proportion of the speakers' intentions in using pauses was not identical to the proportion of the hearers' interpretations of pauses.

Although the frequencies from the intentions and the interpretations were reported different, the ranking patterns of the frequencies as found in the speakers' intentions and in the hearers' interpretations were the same. That is, speech production difficulties were ranked with the highest frequency, interpersonal functions were the second, and textual functions were the lowest.

Therefore, for pauses, the proportions of the three functions of pauses (speech production difficulties, textual functions, and interpersonal functions) as intended by the speakers and as interpreted by the hearers were found different, but the ranking patterns of the frequency based on the speakers' intentions and the hearers' interpretations were the same.

Repetitions

For repetitions (see Table 22), the difference between the speakers' intentions in using repetitions and the hearers' interpretations of the repetitions were analyzed with application of Chi-square test of homogeneity. The result revealed the p-value of .005 which was less than the significance level (.05); thus, the proportion of the speakers' intentions in using repetitions was not identical to the proportion of the hearers' interpretations of the repetitions.

Table 22 Comparison of Speakers' Intentions and Hearers' Interpretations of Repetitions*

		Intentions and Interpretations				
		Speech Production Difficulties	Textual Functions	Interpersonal Functions	Uncounted Data Discarded	**Total**
Repetition Speakers	Frequency Counted	65	42	51	38	**196**
	% of Total	*16.58*	*10.71*	*13.01*	*9.69*	***50.00***
Hearers	Frequency Counted	56	59	64	17	**196**
	% of Total	*14.29*	*15.05*	*16.33*	*4.34*	***50.00***
Total	**Frequency Counted**	**121**	**101**	**115**	**55**	**392**
	% of Total	***30.87***	***25.77***	***29.34***	***14.03***	***100.00***

*P < .05 (.005): comparing the proportions of the frequencies for the speakers' intentions in using *repetitions* and the proportions of the frequencies for the hearers' interpretations of *repetitions* as signaling speakers' speech production difficulties, as doing textual functions, and as serving interpersonal functions

In comparison of the frequency ranking pattern, it was found that the frequencies of the hearers' interpretations and the speakers' intentions were different. Through speakers' intentions, by ranking from the highest to the lowest, 16.58% of the total was used as markers of the speakers' cognitively managing their speech production difficulties, 13.01% was to serve interpersonal functions for social interaction during conversation, 10.71% was for textual connections, and. 9.69% was simultaneous intentions. Through hearers' interpretations, the highest was 16.33% for repetitions as the speakers' conversational devices for social interaction during conversations, 15.05% was interpreted as doing textual functions, 14.29% of the repetitions were perceived as the speakers' markers of speech production difficulties, and 4.34% was uncounted data. It can be said that, for repetitions, the ranking patterns of the frequencies as per speakers' intentions and the hearers' interpretations were different.

In conclusion, ranking patterns of the frequency in using repetitions as intended by the speakers and the frequency of hearers' interpretations of repetitions were different and the proportions of the intentions and the interpretations as per the three functions were not the same statistically.

Repairs

For repairs, the frequencies of the speakers' intentions and the hearers' interpretations were compared as in Table 23, as follows.

Table 23 Comparison of Speakers' Intentions and Hearers' Interpretations of Repairs*

		Intentions and Interpretations				
		Speech Production Difficulties	Textual Functions	Interpersonal Functions	Uncounted Data Discarded	**Total**
Repairs						
Speakers	Frequency Counted	31	36	5	12	**84**
	% of Total	*18.45*	*21.43*	*2.98*	*7.14*	***50.00***
Hearers	Frequency Counted	28	51	4	1	**84**
	% of Total	*16.67*	*30.36*	*2.38*	*0.60*	***50.00***
Total	**Frequency Counted**	**59**	**87**	**9**	**13**	**168**
	% of Total	***35.12***	***51.79***	***5.36***	***7.74***	***100.00***

*P < .05 (.007) comparing the proportions of the frequencies for the speakers' intentions in using *repairs* and the proportions of the frequencies for the hearers' interpretations of

repairs as signaling speakers' speech production difficulties, as doing textual functions, and as serving interpersonal functions

According to the result from Chi-square test of homogeneity, the p-value of .007 which was less than the significance level (.05) was given. That is, the proportion of the speakers' intentions in using repairs to serve the three functions and the proportion of the hearers' interpretations of the repairs were not identical.

However, Table 23 showed the same ranking patterns of the frequencies as per speakers' intentions in using repairs and the hearers' interpretations of repairs. The pattern indicated repairs for serving textual functions at the highest frequency (21.43% by speakers, 30.36% by hearers), repairs for marking their cognitively managing speech production difficulties at the second highest (18.45% by speakers, 16.67% by hearers), and repairs as conversational devices for social interaction during conversation at the lowest frequency (2.98% by speakers, 2.38% by hearers). 7.14% of repairs was found as the speakers' simultaneous intentions while 0.60% of the hearers' interpretations of repairs was discarded as there was no agreement of interpretations among the three hearers.
Thus, for repairs, the proportions of the intentions and the interpretations were different, but the ranking patterns of frequency as per the speakers' intentions and the hearers' interpretations were the same.

In conclusion, there were two major results obtained for answering the research question 4: the proportions of frequencies; and the ranking patterns of frequency.

First, for the overall result, the proportion of the speakers' intentions in using all types of disfluencies and the proportion of the hearers' interpretations of all the disfluency types according to the three functions were not identical statistically. The same results were also found when analyzing each type of the DFs individually.

Second, as overall result, the ranking pattern of frequency according to the speakers' intentions in using the disfluencies and the ranking pattern of frequency according to the hearers' interpretations of the disfluencies based on the three functions (cognitively managing speech production difficulties, textual functions, and interpersonal functions) were found the same. In the same way, the results as analyzed based on an individual type showed that the frequency ranking patterns compared

between the speakers' intentions in using pauses and the hearers' interpretations of pauses, and those compared between the intentions in using repairs and the interpretations of repairs were also found the same. Only the frequency ranking patterns compared between the speakers' intentions in using repetitions and the hearers' interpretations of the repetitions were found different.

Thus, the speakers' intentions and the native English-speaking hearers' interpretations of the disfluencies were different statistically. However, the ranking pattern of the frequency in using the disfluencies by the speakers compared with the pattern of frequency for hearers' interpretations of the disfluencies tended to be in the same direction.

Finding 5: Types of Disfluencies and Speakers' English Proficiency Levels

Research question 5: Was there any difference in the types of the DFs produced by the Thai speakers in different English proficiency levels?

The same data for analysis to obtain the answer to question 1 were divided into three groups according to the speakers' levels of English language proficiency indicated by their GPAs with application of Z-score for a standard normal distribution of the data. The result showed three groups of speakers with different English language proficiency levels but with different numbers of members in each group. The group with positive z-scores from 1.00 and higher was assigned as the high-proficiency group (5 members); the group with positive z-scores from 0.00 and higher, but lower than 1.00 was the mid-proficiency group (11 members); and the group with negative z-scores lower than 0.00 was the low-proficiency group (14 members). The groups were hereafter referred to as high, mid, and low, respectively. The results are presented in terms of overall result and individual type of disfluencies.

Overall Result

According to Table 24, the data showed that the low-proficiency group produced the highest number of DFs in total (46.16%), the mid-proficiency group was found with the second highest number (45.01%), and the high-proficiency group demonstrated the lowest number of DFs (8.83%). The Chi-square test of homogeneity indicated the p-value of .000. Since the p-value was less than the significance level (.05),

it can be explained that the proportions of the frequencies for all the disfluency types produced by each group of speakers were not identical. Details of the difference are presented next.

Table 24 Comparison of All DF-Types and Speakers' Levels of Proficiency*

	DF-Types	Sub-Types of DFs	Proficiency Levels			
			High	Mid	Low	Total
Pauses	Non-lexicalized filled pauses	Frequency counted	73	350	288	711
		% of Total	*5.24*	*25.13*	*20.67*	*51.04*
	Lexicalized filled pauses	Frequency counted	0	12	10	22
		% of Total	*0.00*	*0.86*	*0.72*	*1.58*
	Unfilled pauses	Frequency counted	25	132	223	380
		% of Total	*1.79*	*9.48*	*16.01*	*27.28*
	Total	**Frequency counted**	**98**	**494**	**521**	**1113**
		% of Total	*7.04*	*35.46*	*37.40*	***79.90***
Repetitions	Self-repetitions	Frequency counted	9	77	70	156
		% of Total	*0.65*	*5.53*	*5.03*	*11.20*
	Other-repetitions	Frequency counted	4	15	21	40
		% of Total	*0.29*	*1.08*	*1.51*	*2.87*
	Total	**Frequency counted**	**13**	**92**	**91**	**196**
		% of Total	*0.93*	*6.60*	*6.53*	***14.07***
Repairs	Self-initiated repairs	Frequency counted	12	41	30	83
		% of Total	*0.86*	*2.94*	*2.15*	*5.96*
	Other-initiated repairs	Frequency counted	0	0	1	1
		% of Total	*0.00*	*0.00*	*0.07*	*0.07*
	Total	**Frequency counted**	**12**	**41**	**31**	**84**
		% of Total	*0.86*	*2.94*	*2.23*	***6.03***
	Grand Total	**Frequency counted**	**123**	**627**	**643**	**1393**
		% of Total	*8.83*	*45.01*	*46.16*	***100.00***

*P < .05 (.000): comparing the proportions of the total frequencies for all the DF-types as produced by the speakers at different levels of English language proficiency

Pauses and Speakers' Levels of Proficiency

As per Table 25, the data showed that the low-proficiency group demonstrated the highest number of pauses in total (46.81%), the mid-proficiency group produced pauses at the second highest number (44.38%), and the high-proficiency group produced the DFs at the lowest (8.81%). The p-value of .000 which was less than the significance level (.05) indicated that the proportions of the frequencies for pauses as produced by each speaker group were not identical statistically.

In comparison the frequencies of sub-types produced by each group, it was found that, for non-lexicalized filled pauses, the highest number was made by the mid-proficiency group (31.45%), the second highest was by the low-proficiency group (25.88%), and the lowest was by the high-proficiency group (6.56%). Lexicalized filled pauses were also produced at the highest number (1.08%) by the mid-proficiency group, and the second highest (0.90%) was by the low-proficiency group, while the high-proficiency group did not produced any lexicalized filled pauses in their utterances (0%). Unfilled pauses were produced at the highest number (20.04%) by the low-proficiency group, the second highest (11.86%) was by the mid-proficiency group, and the lowest (2.25%) was by the high-proficiency group.

Table 25 Comparison of Pauses and Speakers' Levels of Proficiency*

	DF-Types	Sub-Types of DFs	Proficiency Levels			
			High	Mid	Low	Total
Pauses	Non-lexicalized	Frequency counted	73	350	288	711
	filled pauses	% of Total	*6.56*	*31.45*	*25.88*	*63.88*
	Lexicalized	Frequency counted	0	12	10	22
	filled pauses	% of Total	*0.00*	*1.08*	*0.90*	*1.98*
	Unfilled pauses	Frequency counted	25	132	223	380
		% of Total	*2.25*	*11.86*	*20.04*	*34.14*
	Total	Frequency counted	98	494	521	1113
		% of Total	*8.81*	*44.38*	*46.81*	*100.00*

*P < .05 (.000) comparing the proportions of the frequencies for *pauses* as produced by the speakers at different levels of English language proficiency

When compared the ranking of frequency of the sub-types, the same patterns were found in all groups: non-lexicalized filled pauses were the highest, unfilled pauses were the second-highest, and lexicalized filled pauses were the lowest. According to the ranking, the frequencies as of the high-proficiency group were 6.56%, 2.25%, and 0%, those as of the mid-proficiency group were 31.45%, 11.86%, and 1.08%, those of the low-proficiency group were 25.88%, 20.04%, and 0.90%, respectively.

In conclusion, the mid-proficiency group demonstrated the highest number of two sub-types of pauses: non-lexicalized filled pauses and lexicalized filled pauses. The high-proficiency group produced the second highest number of the two sub-types as in the mid-proficiency group. The low-proficiency group produced the lowest number for the two sub-types, but demonstrated the highest number of unfilled pauses, while the high-proficiency group gave the lowest number of unfilled pauses. However, the same ranking patterns of the frequencies for the sub-types were found produced by all groups.

Repetitions and Speakers' Levels of Proficiency

The data from Table 26 revealed that the mid-proficiency group produced the highest number of repetitions in total (46.94%) while the low-proficiency group produced the second highest number (46.43%), and the high-proficiency group produced the lowest (6.63%).

Table 26 Comparison of Repetitions and Speakers' Levels of Proficiency*

	DF-Types	Sub-Types of DFs	Proficiency Levels			
			High	Mid	Low	Total
Repetitions	Self-repetitions	Frequency counted	9	77	70	156
		% of Total	*4.59*	*39.29*	*35.71*	*79.59*
	Other-repetitions	Frequency counted	4	15	21	40
		% of Total	*2.04*	*7.65*	*10.71*	*20.41*
	Total	**Frequency counted**	**13**	**92**	**91**	**196**
		% of Total	*6.63*	*46.94*	*46.43*	*100.00*

*P =.331: comparing the proportions of the frequencies for *repetitions* as produced by the speakers at different levels of English language proficiency

When compared the frequencies of sub-types, it was found that the highest number of self-repetitions (39.29%) was made by the mid-proficiency group, the second highest (35.71%) was by the low-proficiency group, and the lowest (4.59%) was by the high-proficiency group. For other-repetitions, differently, the highest number of other-repetitions (10.71%) was demonstrated by the low-proficiency group while the second highest number (7.65%) was made by the mid-proficiency. The lowest (2.04%)

was produced by the high-proficiency group. For all groups, self-repetitions were found with higher number than other-repetitions: 4.59% and 2.04% for the high group, 39.29% and 7.65% for the mid group, and 35.71% and 10.71% for the low group.

Based on the result from Chi-square test of homogeneity, the p-value of .331 was given. As the value was greater than the significance level (.05), the result can be explained that the proportions of the frequencies for repetitions as produced by each group of the speakers were not different.

It can be concluded that there was evidence showing that the repetition number produced by the speakers at all levels of proficiency followed the same distribution pattern: self-repetitions as the highest, and other-repetitions as the lowest. While the mid- and the low-proficiency groups tended to produce high number of repetitions, the high-proficiency group demonstrated the lowest number of all sub-types.

Repairs and Speakers' Levels of Proficiency

For all groups, repairs were produced at the lowest number of all the three main types. The mid-proficiency group produced the highest number of repairs (2.94%) in total, the low-proficiency group demonstrated the second highest number (2.23%), and the high-proficiency group was found with the lowest number (0.86%). However, since the number of repairs produced by all the speaker groups was very small, the Chi-square test of homogeneity was not applicable to the case. Thus, the analysis was made by considering the result from Table 24 which represented the overall result of the analysis for the difference in the types of the DFs produced by the Thai speakers in different English proficiency levels.

According to Table 24, it was found that self-initiated repairs were produced at the highest number (2.94%) in the mid-proficiency group, the second highest (2.15%) was in the low-proficiency group, and the lowest (0.86%) was in the high-proficiency group. For other-initiated repairs, only the low-proficiency group was found produced such type of repairs and only one item (0.07%) was found.

For all groups, self-initiated repairs were made at the highest number while other-initiated repairs were the lowest. Thus, the same ranking patterns of frequency were also found in repair production of all the groups.

Thus, the answer to the research question 5 was that the speakers of different levels of language proficiency produced different proportions of disfluency types. Repairs were produced at the lowest frequency by all groups. The mid-proficiency group produced the highest number of them while the high-proficiency group demonstrated the lowest number. All speakers groups produced self-initiated repairs in a much higher number than other-initiated repairs.

Chapter Summary

The study results can be summarized that:

Types and frequencies of the disfluencies produced

Pauses, repetitions, and repairs were three main disfluency types found produced by the Thai learners of English; each of the main type had its sub-types: lexicalized filled pauses, non-lexicalized filled pauses, and unfilled pauses were under pauses; self-repetitions and other-repetitions were under repetitions; and self-initiated repairs were under repairs. Pauses were found produced at the highest frequency, repetitions were the second highest, and repairs were the lowest. For the sub-types, non-lexicalized filled pauses were produced at the highest frequency while other-initiated repairs were found rarely produced.

Types of disfluencies and the speakers' intentions

There were three intentions informed by the speakers: disfluencies served as the speakers' indicators for their managing speech production difficulties; disfluencies for textual functions, and disfluencies for interpersonal functions. The results indicated that Thai learners of English highly tended to use pauses and repetitions as markers for speech production difficulties rather than doing textual functions and interpersonal functions. In contrast, repairs tended to be used as textual discourse markers but low tendency to be used as speakers' communication strategies and discourse markers for social interaction serving interpersonal functions.

Native English-speaking hearers' interpretations of the disfluencies

The same three functions as found as the speakers' intentions to use DFs were also found in the hearers' interpretations. To hearers, L2 DFs tended to be perceived as speakers' markers for cognitively managing speech production difficulties at the highest frequency, as conversational devices for interpersonal functions at the second highest frequency, and as discourse markers serving textual functions at the lowest frequency. As of each type, pauses had the highest tendency to be interpreted as markers signaling the speakers' speech production difficulties and had the lowest tendency to be interpreted as discourse markers for textual connection. Repetitions had the highest tendency to be perceived as the speakers' conversational devices for social interaction during conversation rather than marking as the speakers' speech production difficulties and textual connections. There was the highest tendency for the hearers to interpret repairs as discourse markers for textual connection while the lowest tendency was the interpretation of repairs as being conversational devices for social interaction during conversation.

Comparison of speakers' intentions and hearers' interpretations of DFs

There was statistically strong evidence suggesting a significant difference between the speakers' intentions and the hearers' interpretations of all disfluency types. Despite the statistical difference, both the speakers' intentions in using disfluencies and the hearers' interpretations of the disfluencies tended to follow the same pattern of frequency ranking based on the three functions: cognitively managing speech production difficulties, textual functions, and interpersonal functions. Thus, although the speakers' intentions and the hearers' interpretations were not identical, they tended to perceive the functions of disfluencies in conversations in the same way.

Comparison of the disfluency types produced by the speakers at different levels of English language proficiency

The low-proficiency group produced the highest number of disfluencies, while the high-proficiency group demonstrated the lowest number. Statistically, the speakers in different levels of language proficiency produced different proportions of disfluency types. However, the speakers of all proficiency levels revealed the same pattern of

frequency for the disfluency types; that is, pauses were found at the highest number, repetitions were the second highest, and repairs were the lowest.

Under pauses, non-lexicalized filled pauses and lexicalized filled pauses were made by the mid-proficiency group at the highest number, while the low-proficiency group produced them at the lowest number. The low-proficiency group demonstrated the highest number of unfilled pauses, while the high-proficiency group produced the lowest number of unfilled pauses. All groups were likely to follow the same tendency that non-lexicalized filled pauses were produced at the highest number, unfilled pauses were the second, and lexicalized filled pauses were the lowest. The number of those sub-types of pauses produced by all groups was different statistically.

Under repetitions, both sub-types consisting of self-repetitions and other-repetitions were produced at the highest number by the mid-proficiency group, but demonstrated at the lowest number by the high-proficiency group. The production of repetitions in all levels of language proficiency groups were found the same statistically. In all groups, self-repetitions were produced at the highest number while other-repetitions were shown at the lowest number.

Under repairs, self-initiated repairs were found at the highest number in the mid-proficiency group, but the lowest in the high-proficiency group. None of other-initiated repairs were found in the mid- and the high-proficiency groups but one in the low-proficiency group.

CHAPTER V

DISCUSSIONS AND CONCLUSION

The current study was conducted to explore the DF phenomena in L2 speech, Thai learners of English as a foreign language in this case. The findings on the phenomena were summarized and discussed as follows.

Summary

In the spontaneous English dialogues between the Thai learners of English and the native English-speaking hearers, it was found that the learners produced three main types of DFs consisting of pauses, repetitions, and repairs. Comparing the occurrence frequencies of the three types, the study revealed that out of the total number of 1393 DFs. The learners tended to produce pauses at the highest number, repetitions at the second, and repairs at the lowest. For the sub-types, non-lexicalized filled pauses were produced at the highest frequency while other-initiated repairs were produced with the lowest frequency. The learners indicated three intentions in using the DFs in their speeches. The hearers also reported three interpretations of the DFs appearing in the learners' speeches. The three functions as intended by the speakers and as interpreted by the hearers included: DFs as markers for cognitively managing speech production difficulties; DFs as discourse markers serving textual functions; and DFs as conversational devices for interpersonal functions. All the three functions were found in all DF-types.

To the L2 speakers, disfluencies tended to be used as markers indicating their speech production difficulties rather than as discourse markers for textual functions and social interaction serving interpersonal functions. In the same way, to the hearers, L2 disfluencies also tended to be perceived as speakers' markers for cognitively managing speech production difficulties rather than as conversational devices for interpersonal functions and as discourse markers serving textual functions.

Pauses were likely to be identified as markers indicating speech production difficulties by both the speakers and the hearers. The speakers tended to use repetitions

for the same purpose as pauses, while the hearers tended to perceived repetitions as conversational devices serving interpersonal functions. Repairs for both the speakers and the hearers were likely to serve textual functions. Pauses and repairs had low tendency to be identified as conversational devices serving interpersonal functions by both the speakers and the hearers.

The speakers' intentions in using disfluencies and the hearers' interpretations of the disfluencies were found different statistically. However, their perceptions of L2 disfluencies' roles in conversation were found in the same direction. Cognitively managing speech production difficulties was the function rated with the highest tendency to occur. Textual functions were rated as the second highest, while interpersonal functions were placed at the lowest.

The findings indicated a statistical difference in the proportions of disfluency types as produced by the speakers in different levels of language proficiency. However, all the speaker groups showed the same trend on the occurrence of disfluencies: pauses occurred at the highest number, repetitions at the second highest, and repairs at the lowest. For pauses, speakers in all levels were likely to produce non-lexicalized filled pauses at the highest number, unfilled pauses at the second highest, and lexicalized filled pauses at the lowest. However, while the mid group produced the highest number of non-lexicalized filled pauses, the low group demonstrated non-lexicalized filled pauses at the lowest number. The high group tended to produce unfilled pauses at the lowest number; conversely, the low group produced unfilled pauses at the highest number. Lexicalized filled pauses were not found in the high group but in the mid and the low groups. For repetitions, all groups produced self-repetitions at the highest number and other-repetitions at the lowest number. Both self-repetitions and other-repetitions were found produced at the highest number by the mid group, but at the lowest number by the high group. For repairs, self-initiated repairs were produced at the highest number, the second highest, and the lowest by the mid group, the high group, and the low group, respectively. However, only the low group found produced other-initiated repairs.

There were some interesting points in the findings to be discussed for more understanding of the answers to the research questions and how the findings can connect

to the already known about the research questions investigated. The discussion is as follows.

Discussion on the Main Findings

Discussions on the main findings from the study are presented with respect to each individual research question.

Types of DFs and Their Occurrence

The speakers produced three main DF-types which were: pauses, repetitions, and repairs. Sub-types were also found under each main type. The main DF-types found in the present study were the same as those reported in the previous studies. However, some implications of the occurrence of each type were discussed as follows.

Pauses

In comparison with repetitions and repairs, pauses were most likely to be produced by the Thai learners. This result responded to the study by Fehringer and Fry (2007) that L2 speakers produced high number of disfluencies such as filled pauses, repetitions, and repairs.

The phenomenon can be explained that L2 disfluencies reflected the speakers' limited capacity in memory and low automaticity of speech processing (Fehringer & Fry, 2007; de Bot, 1992; Sajavara, 1987; Tang, 2015). The difficulties were dealt with lexical retrieval, grammaticality, pronunciation, and appropriateness. In addition, according to Levelt (1989) and Levelt et al (1999), pauses occurred when the speakers were trying to form their message with linguistic features rather than when they were trying to speak it out. That is, the speakers tended to process words by encoding the message on their minds with syntactical, morphological, phonological, and phonetic features. They paused by using fillers (e.g. *ah, um*, and *er.*.) and/or sometimes without fillers but silence. The pausing was considered a reflection of the internal checking process that the speakers were performing in their minds (Levelt, 1983, 1989; Kormos, 2006) before saying the utterance which was thought having the fewest or no mistakes. That is, the plan for the intended message was monitored before saying it (Postma & Kolk, 1993).

The checking process, as explained above, involved self-monitoring of covert speech (cf. Menyhárt, 2003; Levelt, et al., 1999; Levelt, 1989) or the utterance that had not yet been said; the DFs were then produced in the form of pauses. Since speech production process is feed-forward on a step-by-step basis (Levelt, 1989; Levelt, et al., 1999), the execution of the next process will not be possible if the current process is not completed. Thus, when the message was not completed with linguistic features, the next step of speaking-- saying it out, could not be made.

As a result, the arising pauses were the disfluencies that occurred before the speakers produced the utterance.

Sub-types of Pauses

Pauses were marked with *non-lexicalized filled pauses* such as *ah, uh, um, eh, er*, and *mm...*, *lexicalized filled pauses* such as *like* and *and*, or unfilled pauses (*silences*).The current study found two lexicalized filled pauses: *like* and *and* in the L2 speeches; and the speakers tended to produce them at a much lower number than the other two sub-types.

The reason for such phenomena can be that *"like"* and *"and"*, by nature, are content words (as shown in English dictionaries that they are the words with meanings). The L2 speakers may have perceived them as meaningful words rather than conversational devices; thus, they may have thought that using these words might affect the meaning and the grammaticality of the utterance.

Such conclusion was made according to the evidence that the speakers used a large number of non-lexicalized filled pauses and unfilled pauses which were non-words but silence and vocalics. It was much easier for the L2 speakers to produce the vocalics: *uh, ah, um* etc. or kept silent than saying a word which highly demanded decision on making a choice of grammatical features, appropriate vocabularies and pronunciations. The speakers put more efforts in producing lexicalized filled pauses than just pausing with vocalics or silences. They, then, were likely to produce vocalics and silences rather than lexicalized filled pauses. As a result, lexicalized filled pauses were found in a much lower number than lexicalized filled pauses and unfilled pauses.

Thus, lexicalized filled pauses *"like"* and *"and"* in the Thai learners of English were disfluencies signaling L2 speech production difficulties rather than being discourse markers such as "*like*" which was suggested by a previous study (Bu, 2013) that it indicated learners' L2 acquisition when it was used in conversation. The finding of "like" and "and" as markers of L2 speech production difficulties is a new knowledge contributed by the present study.

Prolongations were also produced in word form (e.g. *I.., mother...)* The speakers had already decided to say something but somehow they hesitated to continue their speech then they prolonged their utterance while thinking about how to manage the difficulties. Such phenomenon was called process for self-monitoring of overt speech (cf. Menyhárt, 2003; Levelt, et al., 1999; Levelt, 1989). Prolongations were therefore considered members of the disfluencies for self-monitoring of overt speech.

In conclusion, pauses tended to reflect L2 speakers' speech production difficulties occurring at the formulating level—when the message was encoded with grammatical features; and the characteristics of their sub-types: word or non-word, can affect the number of disfluencies in L2 speech. Since lexicalized filled pauses and prolongations were marked in word form (e.g. *like*, *and,* and *I....*) which meant that they had already been formulated with language features and been articulated as words, they should be included into the group of the disfluencies for self-monitoring of overt speech rather than the disfluencies for self-monitoring of covert speech--the disfluencies which occurred before being pronounced. Thus, prolongations and filled pauses in word form which were grouped as lexicalized filled pauses by the previous studies (Tang, 2015; Hlavac, 2011), are proposed to be in the group of the disfluencies for self-monitoring of overt speech under the name "word-form pauses": the pauses that are marked in word form.

Repetitions

The two sub-types of repetitions: self-repetitions and other-repetitions which were found in the previous studies (e.g. Dornyei & Kormos, 1998; Tang, 2015) were also found in the current study.

Sub-types of Repetitions

Among all groups of the speakers, self-repetitions were found at a much higher number than other-repetitions. This can be explained that the speakers at any levels of language proficiency tended to produce self-repetitions rather than other-repetitions. That is, the speakers were likely to self-monitor or self-assess their speaking performance as they were speaking. That means, when self-repetitions occurred, the speakers might have found a mistake in their utterance or had some problems on producing an utterance. Thus, they suspended their speech and trying to fix the speech processing problem while repeating their own utterance. The evidence to support this explanation was that repetitions tended to co-occur with other disfluency types: pauses and repairs (cf. Savova & Bachenko, 2003).

In the present study, the co-occurrence with pauses was found both before and after pauses. That is, the speakers detected some difficulties after or before producing an utterance and tried to manage them. During managing the difficulties, they repeated their utterance. When repetitions co-occurred with repairs, the repetitions tended to be markers indicating that the utterance was going to be repaired. The speakers may repair by inserting additional information, deleting, or revising some information.

For self-repetitions, from the present findings, it can be concluded that they were indicators for the L2 speakers' speech self-monitoring. The results of the monitoring could lead to the phenomena of repetitions both preceding and following other disfluencies: pauses or repairs. Self-repetitions could be considered a signal of the speakers' L2 knowledge in detecting a mistake in their own utterance and also an indicator of their level of L2 proficiency when the repetitions co-occur with other disfluencies. The mistakes could involve with idea conceptualization, message formulation, and articulation of the message. The nature of repairs that co-occur with repetitions can be an indicator telling the speakers' level of L2 proficiency. It is interesting for the future research to study in-depth on the nature of repairs to be made by L2 speakers and the influence of L2 speakers' language proficiency on the nature of repairs.

With regard to other-repetitions, they could be considered an indicator showing that the L2 speakers did not detect the mistakes by themselves but by their interlocutor. The data showed that the mid- and low-proficiency speakers demonstrated higher

frequency of other-repetitions than the high-proficiency group. Thus, it is likely that the L2 speakers with lower language proficiency rather than those with high language proficiency would produce a higher number of other-repetitions. Thus, self-repetitions occurring by themselves or with other types of DFs can be an indicator of the speakers' level of L2 proficiency and the nature of repairs can tell much more clearly about the speakers' L2 proficiency. The speakers' difficulties may involve idea conceptualization, message formulation, or articulation of the message.

That is, through cognitive view, repetitions served as hesitation devices and reflected low automatically speech processing which were out of the speakers' control. They co-occurred with pauses or repairs. Their position of occurrence could be before and after other DF-types. The occurrence position as found informed that the self-monitoring was a one-direction process. The self-monitoring can be made as internal checking process of the message before saying and as external checking process of the utterance after being said. Each type of the checking processes can result in different types of DFs in L2 speech.

Repairs

Repairs referred to all the amendments that the L2 speakers made and resulted in reformulation of the utterance. While there were two types of repairs found in previous studies, the current study revealed two sub-types of repairs - self-initiated repairs and other-initiated repairs. The other-initiated repairs were found only one item in the L2 speeches. The reason could be that the speakers did not notice the hearer's initiated repairs, or the speakers did not pay attention to the hearer's suggestion of the repairs since it was done indirectly. The points that to what extent L2 speakers notice the hearer's initiated repairs and how they respond to the repairs that are initiated by the interlocutor are recommended for future studies.

Sub-types of Repairs

Self-initiated repairs were the disfluencies that occurred when the speakers found errors in their speech through self-monitoring process and decided to repair the utterance. In doing a repair, the L2 speakers were required to possess the communicative ability which involved language knowledge, contextual knowledge, socio-cultural

knowledge, communication strategies knowledge, and appropriate applicability of all the knowledge, and the speakers showed their efforts in making use of the ability to facilitate their communication to achieve its goal. The occurrence of self-initiated repairs in the L2 speakers' speech could be considered as a positive sign of their L2 learning that they had acquired some communicative ability while other-initiated repairs could not since the repairs were initiated by others not the speakers themselves.

The occurrence frequency of self-initiated repairs was found the lowest among the three disfluency types. It can be explained that due to the highly cognitive demanding for making an utterance repaired, the L2 speakers tended to produce the disfluencies at a lower rate. Thus, they tended to produce pauses and repetitions rather than producing this type of disfluencies.

In conclusion, for the current study, repetitions and pauses played a role as L2 speakers' hesitation devices and reflected their low automatically speech processing. Self-initiated repairs in the L2 speeches could reflect the speakers' communicative ability while other-initiated repairs may reflect such ability if the speakers do not only accept to follow the interlocutor's initiated repairs but they are also able to make use of the repairs appropriately. The occurrence position of disfluencies (before or after articulation of an utterance) can tell how the disfluencies are produced. The co-occurrence phenomena among different types of difluencies (repetitions with pauses or repairs) are signals of the speakers' L2 knowledge and L2 proficiency. The characteristics of disfluency sub-types (word or non-word form) can affect the number of disfluencies in L2 speech.

Rather than following the previous studies' categorization, as indicated by the findings from the current study, L2 disfluency types are proposed for two main types: first, *non-word-form disfluencies* which occurred during self-monitoring of covert speech, and second, *word-form disfluencies* which occurred during self-monitoring of over speech. Word-form disfluencies include repetitions, repairs, prolongations such as *I..., thuuuuhh....., theeee....., aaand.....*, and etc lexicalized filled pauses e.g. editing terms like *like, and, you know, I mean*, and etc. Non-word-form disfluencies include non-lexicalized filled pauses (vocalics like *ah, uh, um*, and etc.) and unfilled pauses (silences). The categorization is based on when the

disfluencies occur (self-monitoring before or after saying an utterance) since it can reflect the speakers' speech production system which involves memory capacity, automaticity of speech processing (Fehringer & Fry, 2007; Belz & Klapi, 2013 Hilton; 2008), as well as their speaking ability as conversing in English (cf. Levelt, 1983; Levelt, 1989; Levelt, et al., 1999; and Menyhart, 2003).

Additionally, the L2 disfluency types can also indicate the speakers' linguistic skills (e.g. lexical retrieval speed, articulation speed, and sentence building speed), language knowledge (e.g. vocabulary and grammar knowledge) and processing skills. The findings agree with those discussed in the previous studies such as in Hilton (2007) and de Jong, et al. (2013).

The knowledge of word-form and the non-word-form disfluencies and its implication were provided in more details in the implication section.

Speakers' Intentions in Using Disfluencies

The findings showed three intentions in using each type of the DFs: (1) to cognitively manage speech production difficulties; (2) to serve textual functions; and (3) to serve interpersonal functions. Discussion in the interesting point of each intention is presented as follows.

Intention 1: Speakers' Cognitive Management of Speech Production Difficulties

The findings showed that only *pauses and repetitions* were highly used for this purpose. It can be explained that the two disfluency types reflected that the main problem which the L2 speakers mainly concerned was in the domain of language knowledge rather than contextual or sociocultural knowledge. The evidence was that most speakers indicated their problems about language that they were not sure about how to correctly pronounce the word intended to say. Some had listening problems. They pointed that their pausing after the hearer had asked a question meant that they were trying to understand the question and sometimes they repeated the question in order to confirm the question being asked.

Pauses and repetitions were considered hesitation devices signaling their English language deficiency with low automaticity in processing speech production. In other words, to the L2 speakers, when they were using pauses or repetitions, it meant

that they were in the state of non-fluency and they were trying to keep going by using pauses and repetitions. Thus, the two types of DFs indicated their low automaticity and their degree of English language acquisition. This finding corresponded to those from previous studies such as in de Bot (1992), Sajavara (1987), and Tang (2015) which pointed that L2 DFs like pauses demonstrated the speakers' difficulties, less automatically speech processing than L1 speakers. This finding also agreed with those DFs in L1 speech as indicated in several studies, for example, Johnson (1961), Garrett (1975), Dell (1986), Chomsky (1965), Watanabe, et al. (2007), Levelt (1989), Levelt, et al. (1999), Fromkin, (1971), and Harley (2000) that DFs were signals of cognitive problems occurring during speech production processes and were unable to be controlled by speakers.

Intention 2: Disfluencies for Textual Functions

Textual functions involved with maintaining syntactic and semantic coherence in speech. The findings showed that, among the three disfluency types (pauses, repetitions, and repairs), *repairs* were the type that tended to be used by the speakers to serve textual functions at the highest rate. The difference can be resulted from the characteristics of repairs that highly demanded for sufficient L2 knowledge for correcting, completing, or revising words, phrases, and sentences in order to create semantic coherence and relevance while pauses and repetitions signaled the speakers' limited range of vocabulary and their effortfulness in accessing vocabularies. Thus, it can be concluded that repairs were likely to be used as discourse markers for textual functions in maintaining syntactic and semantic coherence in speech rather than being markers for cognitively managing speech production difficulties like pauses and repetitions. This finding agreed the conclusions from the previous studies (as discussed in e.g. Levelt, 1989; Clark, 1996; Shriberg, 1996; Clark & Fox Tree, 2002; van Hest, 1996; Kormor, 2002; Dornyei & Kormos, 1998; Schiffrin, 1987) that the characteristics and functions of disfluencies both in L1 and L2 speeches are similar to those of discourse markers in four aspects: (1) they are normally used in spoken language; (2) they can be detached from the utterance without hurting the utterance meaning; (3) they can be in the word form and the non-word form such as *well, I*

mean, and uh, um respectively, and (4) they can be used for connecting message in a text; and they can function in constructing textual coherence.

Intention 3: Disfluencies for Interpersonal Functions

Although pauses were found being used for the function of cognitively managing speech production difficulties at the highest, the L2 speakers also indicated that they tended to use *pauses* to serve interpersonal functions as well. However, the occurrence number of the latter was far below that of the former. It means that the L2 speakers were likely to use pauses to cognitively manage their speech production difficulties rather than to serve the interpersonal functions. According to several studies (e.g Fuller, 2003; Wang, 2009; Zhao, 2013; Bu, 2013; Fehringer and Fry, 2003; Hilton, 2007, 2008; Liu, et al., 2010; Chen & Pu, 2002), L2 disfluencies can function as L2 speakers' communication strategies for stalling or gaining time; and they can also be used as markers for turn-taking (Watanabe, et al., 2008), turn-holding, and time holding (as discussed in Kahng, 2014; Tang, 2015; and Guillot, 1995). It is possible that most of the L2 speakers may not know how to use pauses for interpersonal functions due to their less familiarity with the pragmatic usage of English language. Such phenomena was similar to those found by Zhao (2013), Fuller (2003), and Wang (2009) that it was likely that non-native speakers of English were not aware of relationship between the use of markers and contextual situation. Thus, the number of pauses being used for interpersonal functions was much lower than the number of pauses used as markers for cognitively managing speech production difficulties. Only a few speakers said they paused for conceptualizing some ideas to speak and for holding the speaking floor since they had not yet finished their intended message.

Although the speakers reported that they used pauses for several social-interaction purposes, most of them reported that, different from unfilled pauses (silences), they tended to highly use filled pauses (e.g. *um, ah, uh, prolongations*, and *lexicalized filled pauses*) to avoid unnecessary silence. That means the speakers used filled pauses as markers showing that they had obliged in carrying on the conversation with the hearer. Thus, they took responsibility for maintaining meaning connection within the message (Scollon & Scollon, 2001) and bringing the communication to its

goal. According to Tubbs & Moss (1981), such interpersonal obligation is considered difficult when it involves the interaction between people from different cultures since it tends to create more misunderstanding rather than understanding due to small area of common experience among them. The L2 speakers' underuse of pauses for interpersonal functions can be a reflection of their weak L2 pragmatic practice. This finding is consistent with that found in the studies by Liyanage & Gardner (2013), Zhao (2013), Quan and Zheng (2012), and House (1999).

Simultaneous Intentions

Simultaneous intentions referred to the two or more intentions for one disfluency item that were identified by the speakers. This can be explained that it was possible for the speakers to use disfluencies for serving several purposes at the same time. The speakers found showing the large number of simultaneous intentions were in the mid and the low proficiency groups. The high proficiency speakers demonstrated the much lower rate of simultaneous intentions than the other two groups. The reason for such phenomena could be that the more advanced L2 speakers were likely to be more confident in using language as their tool for communication. Thus, the purpose was clearly identified.

It can be concluded from the present study that the L2 speakers showed that the intention most likely to be demonstrated when using L2 disfluencies was to serve their own needs in trying to overcome the difficulties in speaking English. Pauses and repetitions were used as the types serving this function. However, the speakers also pointed that some sub-types of pauses such as filled pauses and prolongations were likely to serve as their communication strategies during conversation. For repairs, it was obvious that repairs in L2 speech were identified as the disfluencies which behaved like discourse markers for maintaining agreements within the utterances in terms of both grammaticality and meanings. Thus, all types of pauses and repetitions were used as the L2 speakers' ways in solving their speech difficulties; filled pauses including prolongations and lexicalized filled pauses were used as L2 communication strategies; and repairs were used as L2 discourse markers for textual coherence and relevance.

Disfluencies and Hearers' Interpretations

The findings for this research question showed the same three functions of disfluencies as intended by the L2 speakers: first, disfluencies as markers for cognitively managing speech production difficulties; second, disfluencies as markers serving textual functions; and the last, disfluencies as communication strategies or conversational devices for interpersonal functions. The hearers interpreted that the occurrence of all the disfluency types was to serve all the three functions. This means that the hearers tended to perceive that all the types of L2 disfluencies possessed some meaning during conversations.

Interpretation 1: Disfluencies as Cognitive Management of Speech Production Difficulties

The hearers' interpretations indicated high tendency for pauses to be used to cognitively manage their speech production difficulties. For this function, the hearers commented that pauses mostly occurred as the speakers were thinking about the vocabulary, trying to remember the information or to recall the fact required, and making a decision. For example, when the speakers repeated a particular word in their utterance such as "*yeah yeah some...some...*", the hearers indicated that the pauses were like stalling to find correct word. One of the hearers called the L2 speakers' filled pauses as hesitation devices since many of the speakers demonstrated their hesitations when they paused during utterance. All the three hearers noticed that pauses were largely used by the L2 speakers to serve this purpose. Such interpretations showed that to native English-speaking hearers, pauses reflected the L2 speakers' problems on accessing the vocabulary needed; and they were signals of the speakers' hesitations especially those involved with language problems. They were commonly used by the L2 speakers when the speakers were self-monitoring and trying to detect errors in their speech. For example, when one of the speakers was asked about the reason why she wanted to become a teacher, she said "*My mother is my* ...(paused and then slowly said the word "inspiration" as)*...in-sa-pi-ra-tion*". The hearers viewed such phenomenon that maybe the speaker visualized the word 'inspiration' since she almost said it as if she was reading it. Another example that two of the hearers raised was that when the information

intended to speak involved with Thai names such as temple name, school name, and dormitory name, as well as when the speakers failed to access the required vocabulary, they mostly paused their utterance before switching the language from English to Thai. One of the hearers pointed that the speakers demonstrated such reaction because they were trying to translate the words. As a result, code-switching was used as their means to overcome the language difficulties. Thus, to the native English-speaking hearers, pauses were likely to be perceived as markers of insufficient L2 knowledge and non-fluency. The present findings agreed with the previous studies (e.g. Fehringer & Fry, 2007; Belz & Klapi, 2013 Hilton; 2008b; Hilton, 2007; and de Jong, et al., 2013) that L2 pauses revealed the speakers' problems on memory capacity and automaticity of speech processing which mainly involved linguistic skills such as vocabulary accessing speed and also sentence building speed.

Interpretation 2: Disfluencies as for Textual Functions

The hearers opined that pauses and repetitions were sometimes used to demonstrate that *"they (the speakers) are not sure or uncertain"* rather than *"they don't know"* about the language and/or the information related to the topic being discussed; and *"sometimes they paused or repeated their own utterance because they may not know how to respond to the question – what more they could add as they had already answered the question previously."* The hearers added that the speakers paused the most when they were questioned to expand on their answers (answer to "why" questions), when the subject changed, or when they were trying to think about the relevant topic. The hearers suggested the evidence supporting the textual functions of pauses and repetitions that *"He (the speaker) agreed with my suggestion but he repeated himself as he redirected the topic to give his answer. He's a confident speaker, comfortable chatting."* *"She repeated '4' for clarity, to correct the pronunciation of the first utterance of '4'."* From these comments, the hearers perceived L2 pauses and repetitions as the markers used when the speakers were focusing on creating unity of the meaning in the message, having found a mistake in their speech, or uncertain about the content or the topic.

Thus, pauses and repetitions in the L2 speeches were likely to be interpreted as having textual functions in terms of maintaining semantic and syntactic coherence between the intended speech plan and the actual speech production, clarifying the previous statement, marking for amendment of speech, clarifying syntactic ambiguity, and holding syntactic commitment to maintain continuity.

In conclusion, although pauses were interpreted as doing textual functions at the highest frequency in comparison with the other two types of disfluencies: repetitions and repairs, which were found with the second highest and the lowest, frequency, respectively, for textual functions, all the disfluency types were likely to co-occur and the hearers tended not to interpret the role of disfluencies in L2 utterance without taking the other disfluencies co-occurring with them into consideration. Thus, disfluencies in context were meaningful to the hearers. Since disfluencies themselves did not contain lexical meaning, when the hearers said they serve textual functions, it means that the disfluencies behaved like discourse markers in creating textual coherence in terms of both meanings and grammaticality.

Interpretation 3: Disfluencies as for Interpersonal Functions

Through the hearers' perspectives, the L2 speakers tended to highly use pauses as conversational devices for interpersonal functions. The hearers pointed that the L2 speakers largely used pauses, especially, filled pauses to break silence between the question and their answers. Such phenomenon was interpreted by the hearers that the speakers paused for processing question (thinking about the answer, or calculating answer to numerical questions). That is, pauses in this aspect behaved like discourse markers for acknowledging a speaking turn and cueing for the new and/or the difficult-to-produce information. For example, when the hearer asked a question: *"How far is it?"* the speaker said "*Um...about...(silence)...10...kilometers*".

That is, *"um"* behaved like a discourse marker for acknowledging a speaking turn and *"silence"* occurred when the speaker was estimating the distance, which was difficult-to-produce, before saying the number. They were clues for the hearers to predict what the speakers were going to say next. Sometimes the hearers were able to predict the following repair of the utterance. Thus, to the native English-speaking hearers,

pauses, especially filled pauses which included fillers in word form and prolongations were perceived as devices for turn taking; turn holding, time-gaining during the conversations.

It can be said that pauses in L2 speech were discourse markers for interpersonal functions in different conditions.

When they occurred at the beginning of an utterance especially before the speaker answering the hearer's question, they were for turn taking purpose (cf. Fuller, 2003; Wang, 2009; Zhao, 2013; Bu, 2013; Fehringer and Fry, 2003; Hilton, 2007, 2008; Liu, et al., 2010; Chen & Pu, 2002). For example, *"um"* in the following sentence: "*um....about...(silence)...10 kilometers*".

When they occurred in mid- utterance, they were for turn holding, time gaining, or time holding while gathering thoughts and/or remembering the information required (cf. Chotirat & Sinwongsuwat, 2011; Ussana & Sinwongsuwat, 2012; Tang, 2015; Watanabe, et al., 2008; Guillot, 1995; Kahng, 2014); for example *"silence"* (unfilled pauses) and *"and"* (prolongations-a sub-type of pauses) in the following sentence: "*umm...because...(silence)...they are kind teachers....and....lovely.*"

Thus, filled pauses helped facilitate the hearers' perception of the L2 speakers' acknowledgement of what the hearers have said, which means that the speakers have heard, understood, tried to understand, or tried to respond to the hearers' message. The acknowledgement, therefore, is like a signal showing that a communication between the speakers and the hearers has taken place.

It was interesting that the hearers in the current study additionally pointed with remarks that, in generally, pauses in the L2 speeches tended to be natural and some were habitual aspect. That means, it was acceptable to the hearers that pauses occurred naturally. They did not feel that pauses were intrusive in their conversation at all. In other words, pauses did not hurt the overall meanings of the utterance and they were perceived as natural pauses like in the English L2 speech (as commented by the hearers). It was noted that pauses were found occurring in the speech produced with continuity. The speakers kept their speech going regardless of ungrammaticality or incorrect pronunciation. This is a good news for L2 speakers that when speaking English with native speakers (especially for the high-stake tests like IELTS), it is important to

keep the conversation going, although sometimes it is difficult to pronounce a particular word or sound, because the hearers can predict what the speakers intend to say and it can help the hearers to understand throughout the conversation. Rather than avoiding the difficult-to-pronounce word/sound, the L2 speakers are recommended to try to say the word/sound so that the hearers are not confused. However, if possible, correct pronunciation is the best. In terms of grammaticality, it was unexpected that none of the hearers mentioned about this aspect of the L2 speeches. The hearers mostly focused more on the meanings of message and the speakers' ability for communication.

With regard to pauses as the speakers' habitual aspect, as perceived by the hearers, it can be explained that although the overuse of pauses in L2 speeches does not lessen the hearers' comprehensibility of the message, they reflect that the speakers do not speak in a normal rate which means non-fluency, as perceived by the hearers. Thus, inappropriate use of pauses can be markers of weak pragmatic practice (cf. Tavakoli, 2010).

The findings showed that repairs were not likely to be interpreted as doing interpersonal functions, only a small number of them were found. The possible reason can be that self-initiated repairs in the present study found focusing on pronunciation and grammaticality rather than on appropriateness. Thus, the hearers were likely to perceive the repairs as having low degree in doing interpersonal functions during conversation.

Thus, to native English-speaking hearers, disfluencies in L2 speech, especially pauses, do one function, at least, during conversation. There is high potential that the hearers would interpret pauses and repetitions as signals of L2 speakers' non-fluency. However, the two types of DFs are also likely to be perceived as discourse markers for building textual coherence contextually. Besides, pauses are perceived as markers for social interaction during conversation. However, it seems like the hearers do not perceive that the L2 speakers have intentions to use them. The evidence is that they have found L2 DFs produced naturally and habitually. Thus, to them, L2 DFs are likely to occur unexpectedly but once they occur, the hearers perceive them as having some social functions in conversations.

Comparison of Speakers' Intentions and Hearers' Interpretations of Disfluencies

The statistical results revealed that there was strong evidence (small p-values of: .000 as overall test result, .000, .005, .007 as test results based on each disfluency type) confirming that L2 speakers' intentions in using disfluencies and the hearers' interpretations of the disfluencies were not identical. However, it was interesting that both the speakers and the hearers indicated the same direction in perceiving the roles of L2 disfluencies in conversations that the disfluencies tended to function as signals of L2 speakers' speech production difficulties at the highest frequency, as textual connections at the second highest and as conversational devices or interpersonal functions at the lowest. This means that although the L2 speakers and the hearers had the same understanding of the roles of L2 disfluencies in speech, their degree of attention paid to each role were different. The evidence from the overall test result (see Table 20). Speech production difficulties were perceived as the function mainly found for L2 disfluencies. However, the number of uncounted data consisting of speakers' simultaneous intentions and hearers' disagreement number of interpretaions revealed that there was a rather high number of simultaneous intentions (7.47%) made by the speakers in using disfluencies. In contrast, there was a much lower number of disagreement among the hearers' interpretations of disfluencies (4.99%). The phenomenon reflected that it was rather difficult for L2 speakers to tell about their exact intention in using a disfluency in each case, then more intentions were identified with hesitation. As a result, the speakers demonstrated a very close number of the occurrence between the disfluencies for textual functions and interpersonal functions (11.77% and 11.88%, respectively). Differently, the low number of hearers' disagreement in interpreting the roles of disfluencies indicated the hearers' stronger decision on assigning a role for each disfluency than did the L2 speakers. The evidence was the sharp difference between the disfluencies interpreted as doing textual functions and those as interpersonal functions (10.77% and 13.75%, respectively). Based on analysis of each individual type of disfluencies, the same phenomena were also found in the speakers' intentions in using pauses and repetitions in comparison with the hearers' interpretations of the disfluencies.

However, repairs were viewed in the same way by the two parties. Both of them considered repairs as having a role of textual connections in a much higher degree

than as having a role of interpersonal functions (21.43% : 2.98% for speakers, 30.36% : 2.38% for hearers, respectively). Thus, repairs for both the hearers and the speakers were unlikely to be conversational devices for interpersonal functions.

These phenomena were considered as a reflection of the native English-speaking hearers' strong experience about the roles of disfluencies in speech communication, while the same kind of experience that the L2 speakers had was rather weak. Thus, for native speakers, L2 disfluencies have some functions in speech communication, basically, they are markers of low degree of fluency; however, pauses and repetitions are likely to be perceived as conversational devices or communication strategies that L2 speakers use to overcome their speech difficulties, while repairs were discourse markers for textual connections. For L2 learners, L2 disfluencies are mostly caused by their low automaticity in speaking, which can be caused by their weak knowledge of L2 language and communication skills.

It is important for L2 learners to understand the roles of disfluencies as interpreted by the native speakers; especially, when taking a high stake test such as IELTS to realize that the more they produce utterance without hesitations or thinking too much, the more chance for them to be interpreted by the hearers as having higher ability in L2 communication since the hearers are likely to interpret the disfluencies in a positive way, for example, as the speakers' habitual or natural aspect.

Speakers' Levels of English Proficiency and the Types of Disfluencies Produced

Statistically, the findings revealed that the speakers at all levels demonstrated the same pattern in producing disfluency types: pauses were found produced at the highest number by the speakers from all levels, repetitions were the second, and repairs were the lowest. However, each of the types was found produced in different numbers by speakers at different levels of English proficiency. Although there are some studies inform about the high number of disfluencies demonstrated by weak L2 speakers, none of them found providing the knowledge on L2 disfluency types and their ranking pattern as produced by L2 speakers at different levels of language proficiency as in the present study. This new knowledge indicates that, when assessing L2 learners' speaking ability, one of the criteria should be considered is the number of each disfluency type rather than

considering only the number or the types of disfluencies since the characteristics of disfluencies in combination with their occurrence frequencies can better indicate the learners'level of speaking ability.

Discussion on the speakers' levels of language proficiency based on each type of disfluencies is presented next.

Pauses and Speakers' Levels of English Proficiency

In comparison with other speaker groups, the low proficiency group demonstrated the highest number of pauses while the high proficiency group produced pauses at the lowest number. This phenomenon indicated clearly that pauses are markers of low language proficiency. The weak L2 speakers reflected their difficulties in processing their speech production while the advanced ones reflected their higher automaticity in processing their speech production. Thus, it can be claimed that pauses are signals of non-fluency in L2 speakers. Such claim is strongly supported by the statistical evidence of Chi-square test of homogeneity with the p-value of .000 which below the significance level (.05) showing the significant difference in the number of pauses produced by different groups of L2 speakers.

Repetitions and Speakers' Levels of English Proficiency

The findings revealed that repetitions were found at the highest number in the mid proficiency group while the high proficiency group made repetitions at the lowest number. However, the results showed that the frequency of repetitions made by each group was very close, especially that of the mid and the low proficiency groups (0.93% for the high, 6.60% for the mid, and 6.53% for the low). The phenomenon reflected that the speakers at the mid and the low levels were more likely to produce repetitions at the same number but sharply contrast with the number made by the high group. Thus, it is unlikely that repetitions can be markers of low L2 proficiency and automaticity in producing speech.

Repairs and Speakers' Levels of English Proficiency

Repairs were found in a very close number in the mid- and the low-proficiency groups (2.94% and 2.23%, respectively). In contrast, the high-proficiency group

produced the much lower number (0.86%) than the first two groups. However, there were some differences in the nature of repairs made by the first two groups and the latter. The reasons for explaining the phenomenon is that repairs required various kinds of knowledge to form communication ability. Although, the speakers with sufficient knowledge of L2 and communication ability are likely to do the repairs at the higher frequency than the lower, the data showed that the lower proficiency speakers repaired their speech by deletion at the higher number than the advanced speakers did.

This can be explained that as repairing did not involve only the well-formedness rule but also the pragmatic rule, the speakers were required to do the two processes simultaneously (as discussed in van Hest, 1996 and Kormor, 2002). Thus the speakers with low language proficiency level may not have sufficient knowledge to make a repair by revising or inserting language features in the utterance. Thus, the nature of repairs can reflect the speakers' L2 acquisition (cf. O' Connor, 1988; van Hest, 1996; Liu, 2009; Chen & Pu, 2002.

Implications

The findings indicated that disfluencies in L2 speech were significant in two dimensions. *First, through cognitive view*, disfluency types in L2 speech reflected the speakers' speech processing difficulties or low automaticity in speaking, and the extent to which their L2 was acquired. Disfluency types were also a clue for a better understanding of the L2 speakers' problems in relation to the levels in speech production processes: whether the problems involved with conceptualizing ideas during the macroplanning process or involved with the microplanning process which can be formulating the message to be uttered or articulating the formulated message as an utterance.

According to the current findings, the present study suggested to classify L2 disfluencies based on their sources into two main types: *word-form disfluencies* which were caused by the speakers' self-monitoring of overt speech and *non-word-form disfluencies* which were caused by the speakers' self-monitoring of covert speech (see Figure 6).

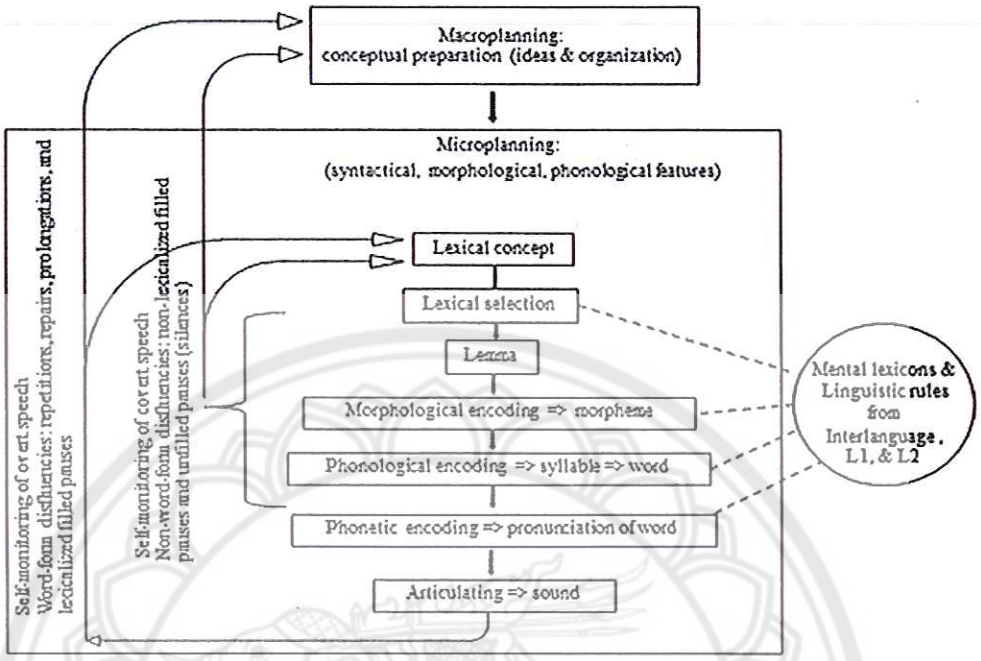

Figure 6 Sources and types of disfluencies produced by Thai learners of English

Word-form disfluencies consisted of repetitions (self-repetitions and other-repetitions), repairs (self-initiated repairs and other-initiated repairs), and lexicalized filled pauses (*and, like*, and prolongations, for example, *I....., inspi...ra....tion*). The occurrence of these disfluencies was caused by the checking process executed after articulation which involved the speakers' self-monitoring of their overt speech, an articulated utterance that was encoded by all linguistic rules as known to the speaker (knowledge from L1, L2, and interlanguage systems). When the speaker monitored the already articulated utterance and detected a mistake, he/she re-planned the speech either at micro or at macro planning level depending on the nature of the detected mistake such as the mistake on idea conceptualization, or linguistic representations, and then, he/she began encoding processes in speech production again. In other words, the speaker retrieved their mental lexicons and linguistic rules from three sources: the speaker's first language, the speaker's foreign language, and the speaker's interlanguage (a language system created by L2 speakers). Lexis and linguistic rules which were drawn from any sources of the three language systems caused some disagreements between lexical

access and articulatory planning, or between the articulatory planning and execution (cf. Menyhárt, 2003). Word-form disfluencies arose as a result of such disagreements which were from self-monitoring process of overt speech.

Non-word-form disfluencies consisted of non-lexicalized filled pause (e.g. *uh, ah, um*, etc) and unfilled pauses (*silences*). This group of disfluencies involved the checking process executed prior to articulating an utterance, or at formulating level. In other words, the speaker was self-monitoring his/her covert speech and decided not to produce any utterances. It was a reflection of the internal checking process that the speakers performed in their minds (cf. Levelt, 1983, 1989; Kormos, 2006). That is, the preverbal plan for the intended message was monitored before articulation (cf. Postma & Kolk, 1993). Since the speech production process proceeded on a step-by-step basis, if the speaker failed to complete the current step, the next step could not be possible. As a result, no utterance was produced but silences, *uh, ah, um, er, mmm*...., *อ่อ, อ่อ*, or *other non-lexicalized filled pauses*. According to the current findings that the weak L2 speakers (Thai learners of English in this case) produced the highest number of non-lexicalized filled pauses and unfilled pauses, it can be explained that the source of disfluencies in their L2 speech was mainly from the problems occurring during microplanning process at formulating level. The results agreed with the previous studies (cf. Fehringer & Fry, 2007; Belz & Klapi, 2013; Hoshino, 2006) that unfilled pauses and non-lexicalized filled pauses in L2 speech were related to the speakers' low memory capacity and automaticity of speech processing.

It can be concluded that non-word-form disfluencies were markers of low automaticity in processing speech production which was caused by insufficient L2 knowledge, the knowledge was too limited to be used for encoding the utterance at the formulating level. The evidence was from the findings that the low proficiency speakers produced much higher number of non-word-form disfluencies than did by the high proficiency speakers. Another piece of evidence confirming this conclusion was the speakers' identification of non-word-form disfluencies (such as *silences* and *uh, ah, um*) as their markers of speech production difficulties. In contrast, word-form disfluencies in L2 speech such as self-repetitions, other-repetitions, self-initiated repairs, other-

initiated repairs, lexicalized filled pauses, and prolongations were produced at a much lower number than the non-word-form disfluencies. Such phenomenon indicated that to reach the articulating level, the speakers required many kinds of L2 knowledge consisting of phonology (pronunciation), morphology (word formation), syntax (grammar), semantics (meanings), and pragmatics (meaning in context). As a result, it was rather difficult for the weak L2 speakers to produce word-form disfluencies. Moreover, some types of disfluencies in this group which involved higher cognitively demanding such as self-initiated repairs by revising or inserting language features in the utterance tended to be performed by the high-proficiency speakers while the lower ones were likely to produce self-initiated repairs by deletion rather than revision or insertion.

Thus, although number of disfluencies can indicate L2 speakers' state of fluency, the characteristics of disfluencies are crucial for tracing back to the source of the speakers' difficulties in producing L2 speech and also crucial for assessing their L2 acquisition. As a result, the L2 speakers' symptoms of speech production difficulties can be diagnosed for a proper treatment.

Second, *through sociolinguistic view*, the previous studies indicated that disfluencies serve as L2 speakers' communication strategies and discourse markers for social-interaction between speakers and hearers. For the current study, it was found that the L2 speakers' intentions and the hearers' interpretations of each disfluency types agreed with the previous findings in some degree (see Figure 7).

From Figure 7, both the speakers and the hearers had the same perspectives on the roles of pauses in conversation that they had the highest tendency to function as speakers' signal of speech production difficulties, the second highest for interpersonal function, and the lowest for textual function. That is they both perceived that pauses were markers of low automaticity in speaking. Such implication was supportive to the conclusion from the analysis through cognitive view that the non-word-form disfluencies (non-lexicalized filled pauses and unfilled pauses) were overused by weak L2 speakers and the phenomenon reflected how the problem arose.

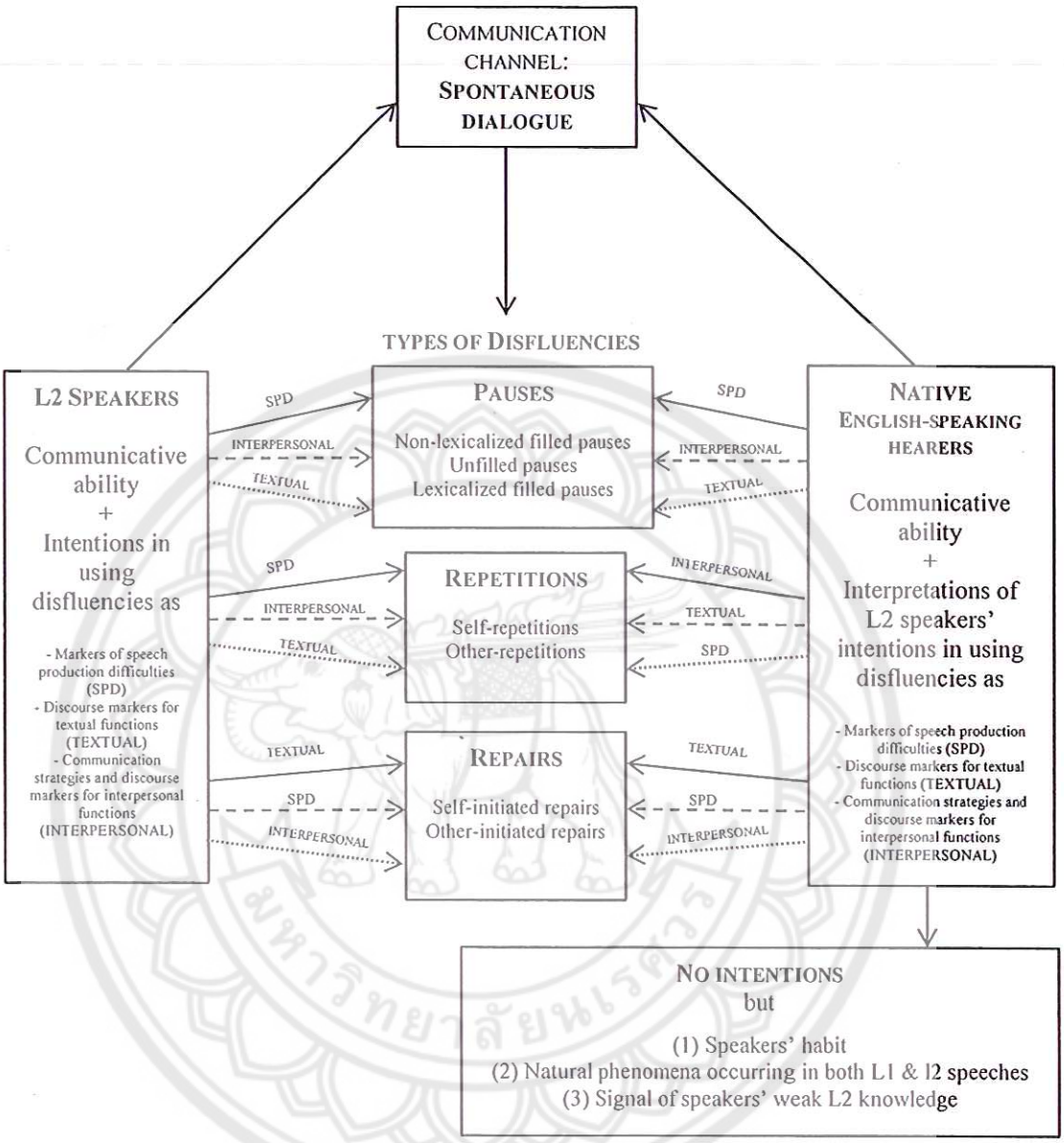

Figure 7 Communicative roles of L2 disfluencies as perceived by L2 speakers and native English-speaking hearers

Note: The sign ⟶ shows that the phenomenon pointed by the arrow has the highest tendency to occur.

The sign - - - -> shows that the phenomenon pointed by the arrow has the second highest tendency to occur.

The sing .....> shows that the phenomenon pointed by the arrow has the lowest tendency to occur.

For repetitions, through the speakers' perspective, the major role of repetitions was a signal of speech production difficulties while textual functions were the minor role. For hearers, the major roles of repetitions in conversation was speakers' communication strategies and discourse markers for social interaction serving interpersonal functions, while being a signal of speech production difficulties were the minor role for them. That is the hearers tended to interpret repetitions as a conversational device rather than speakers' problems.

Repairs were perceived differently from pauses and repetitions. Both the speakers and the hearers pointed the same perception on the role of repairs in conversation. That is, the most-likely-to-occur role of repairs was discourse markers serving textual functions in linking the messages in speech to create meaning relation within utterances (i.e. repairing by insertion, revision, and deletion) while the least-likely-to-occur role of repairs was communication strategies and discourse markers for social interaction serving interpersonal functions during conversation. Thus, it can be clearly said that repairs tend to be discourse markers for textual functions rather than discourse markers for interpersonal function in conversation.

In conclusion, although the L2 speakers tended to use disfluencies for signaling their difficulties, the hearers perceived that the disfluencies were not used on purposes. Their occurrence was not by intention of the speakers but they arose naturally. It was the speakers' habit to produce disfluencies, but once they were produced, they were likely to be interpreted as having some communicative meaning or being a conversational device to facilitate conversation. However, both the L2 speakers and the hearers considered that each type of disfluencies play different major roles in conversation. For hearers, an overuse of the markers signaled the speakers' weak L2 knowledge and lack of fluidity in speaking. The findings of the current study offered significant information filling the gap on L2 disfluencies produced by Thai learners of English that, first, L2 disfluency types indicated about what kind of speech production problems being dealt by the speaker. The symptoms can be diagnosed for a further proper treatment; second, it revealed the roles of L2 disfluencies in speech communication as perceived by both native English-speaking hearers and L2 speakers, especially in Thai EFL context. Since disfluencies serve as indicators for evaluating

speaking fluency in international standardized tests such as International English Language Teaching System or IELTS, the speakers' realization of such interpretations can make them pay more attention to the disfluencies to control the frequency of their occurrence in speech, and make use of the disfluencies for socially interact with the interlocutor on a purpose (e.g. signaling as communication strategies for social interaction during speaking). The findings cannot only help promoting EFL/ESL teachers' and learners' realization of the native English-speaking hearers' interpretations of the DFs in L2 speech of English but also the interaction between EFL/ESL learners' levels of English proficiency and the types of DFs that they produce. The EFL/ESL teachers may apply the knowledge for creating an appropriate lesson plan to promote EFL/ESL learners' speaking ability and to void overusing DFs.

The major implications for further study suggested by the current study involve interaction between the learners' L2 proficiency level and DF-types; relationship between the occurrence positions of L2 DFs and the learners' L2 proficiency level; and the co-occurrence patterns of each DF-types.

REFERENCES

REFERENCES

Aijmer, K. (2002). *English discourse particles: Evidence from a corpus (Topics in English.Linguistics).* Amsterdam: John Benjamins.

Aijmer, K. (2013). *Understanding Pragmatic Markers.* Edinburgh: Edinburgh University Press.

Allwood, J., Ahlsén, E., Lund, J., & Sundqvist, J. (2005) Multimodality in Own Communication Management. In *Proceedings from the Second Nordic Conference on Multimodal Communication*, Göteborg, 2005.

Allwood, J., Nivre, J., & Ahlsén, E. (1990). Speech management - On the non-written life of speech. *Nordic Journal of Linguistics*, *13*, 3-48.

Arnold, J., Fagnano, & M., Tanenhaus, M. (2003). Disfluencies signal *theee, um*, new information. *Journal of Psycholinguistic Research*, *32*(11), 25-36.

Arnold, J.E., Hudson Kam, C.L., & Tanenhaus, M.K. (2007). If you say thee uh you are describing something hard: The on-line attribution of disfluency during reference comprehension. *Journal of Experimental Psychology: Learning, Memory and Cognition*, *33*, 914-930.

Arnold, J. E., Tanenhaus, M. K., Altmann, R. J., & Fagnano, M. (2004). The old and thee, uh, new: Disfluency and reference resolution. *Psychological Science, 15*, 578-582.

Ashenfelter, K.T. (2007). *Simultaneous analysis of verbal and nonverbal data during conversation: Symmetry and turn-taking*. Doctoral dissertation, Ph.D.,University of Notre Dame Indiana. United States of America.

Bachman, L.F. (1990). *Fundamental considerations in language testing*. Oxford: Oxford University Press

Bachman, L. F. & Palmer, A. S. (1996*). Language testing in practice.* Oxford:Oxford University Press.

Bailey, K.G.D. & Ferreira, F. (2003). Disfluencies affect the parsing of garden-path Sentences. *Journal of Memory and Language, 49*, 183-200.

Bailey, K. M., & Savage, L. (eds.). (1994). *New ways in teaching speaking.* Alexandria, VA: Teachers of English to Speakers of Other Languages, Inc.

Bell, A., Jurafsky, D., Foster-Lussler, E., Girand, C., Gregory, M., & Gildea, D. (2003). Effects of disfluencies, predictability, and utterance position on word form variation in English conversation. *Journal of the Acoustic Society of America, 113* , 1001-1024.

Belz, M. & M. Klapi (2013) Pauses following fillers in L1 and L2 German map task dialogues. In R. Eklund, (ed.), In *Proceedings of DiSS 2013: The 6th Workshop on Disfluency in Spontaneous Speech* (pp.9–12).

Berelson, B. & Steiner, G. (1964). *Human behavior*. New York: Harcourt Brace Jovanovich.

Berlo, D.K. (1960). *The process of communication*. New York, NY: Holt, Rinehart & Winston.

Bialystok, E. & Sharwood Smith, M. (1985). Interlanguage is not a state of mind: An evaluation of the construct for second-language acquisition. *Applied Linguistics, 6*, 101-117.

Bila, M. & Dzambova, A. (2011). A Preliminary study on the function of silent pauses in L1 and L2 speakers of English and German. *Brno Studies in English, 37*(1), 21-39.

Blakemore, D. (1992). *Understanding utterances*. Cambridge: Blackwell Publishers.

Blum-Kulka, S. (1987). Indirectness and politeness in requests: Same or different? *Journal of Pragmatics , 11*, 131-146.

Bock, K. & Eberhard, K.M. (1993). Meaning, sound, and syntax in English number agreement. *Language and Cognitive Processes, 8*, 57-99.

Boonkit, K. (2010). Enhancing the development of speaking skills for non-native speakers of English. Innovation and Creativity in Education, *Procedia-Social and Behavioral Sciences, 2*(2), 1305-1309.

Bolton, K. (2008). English in Asia, Asian Englishes, and the Issue of Proficiency. *English Today, 24*(2), 3-12.

Bortfeld, H., Leon, S., Bloom, J.E., Schober, M.F., & Brennan, S.E. (2001). Disfluency rates in conversation, age effects relationship, topic, role, and gender. *Language and Speech, 44*(2), 123-147.

Brennan, S.E. & Williams, M. (1995). The feeling of another's knowing: Prosody and filled pauses as cues to listeners about the metacognitive states of speakers. *Journal of Memory and Language*, *34* (3), 383–398.

Brinton, L. (1996). *Pragmatic Markers in English:Grammaticalization and Discourse Functions*. Berlin: de Gruyter.

Brown, A. (2000). *An investigation of the rating process in the IELTS oral interview.* Retrieved November, 20, 2014, from www.ielts.org/researchers/ research/ volume_3.aspx.

Brown, A. (2003). *An examination of the rating process in the revised IELTS speaking Test.* Retrieved November, 20, 2014, from www.ielts.org/ researchers/research/volume_6.aspx.

Brown, G.,& Yule, G. (1983). *Discourse analysis*. Cambridge: Cambridge University Press.

Bruning, R., Schraw, G., Norby, M., & Ronning, R. (2004). *Cognitive Psychology and Instruction.* Upper Saddle River, NJ: Pearson Merrill Prentice Hall.

Brutten, E. (1963). Palmar sweat investigation of disfluency and expectancy adaptation. *Journal of Speech and Hearing Research*, *6*, 40-48.

Bu, J. (2013). A study of the acquisition of discourse markers by Chinese learners of English. *International Journal of English Studies, 13*(1), 29-50.

Buck, G. (2001). *Assessing listening.* Cambridge: Cambridge University Press.

Bunnag, S. (2005). English skills lowly ranked: Tests put Thais near bottom in S.E. Asia. (10 August 2005) *Bangkok Post* : 5.

Bunnag, S. (2005b). Test results spur curriculum change: English language teaching be to overhauled. (11August 2005) *Bangkok Post*: 1.

Burgoon. M. & Ruffner, M. (1978). *Human communication.* New York: Holt, Rinehart & Winston.

Bygate, M.(1987). *Speaking.* Oxford: Oxford University Press.

Campione, E. & Véronis, J. (2002). A large-scale multilingual study of silent pause duration. In *Proceedings of the Speech Prosody 2002 Conference* (pp.199-202). Aix-en-Provence: Laboratoire Parole et Language.

Canale, M. & Swain, M. (1980). Theoretical bases of communicative approaches to second language teaching and testing. *Applied Linguistics*, *1*(1), 1–47.

Canale, M. (1983). From communicative competence to communicative language pedagogy. In Richards, J. C., & Schmidt, R. W. (eds.). *Language and Communication.* (pp. 2-27). London: Longman.

Carney, D. R., Cuddy, A. J. C., & Yap, A. J. (2010). Power posing: Brief nonverbal displays affect neuroendocrine levels and risk tolerance. *Psychological. Science, 21*, 1363–1368

Chafe, W. (1994). *Discourse, consciousness, and time: The Flow and displacement of consciousness in speaking and writing*. Chicago: University of Chicago Press.

Chen, L. & Pu, J. (2007). A corpus-based analysis of self-repairs by college non-English majors. *Foreign Language Education (Waiyu Jiaoxue), 28*(2), 57-61.

Cherry, K. (2014). *"Types of Nonverbal Communication"*. Retrieved January 2, 2015 from http://psychology.about.com/od/nonverbalcommunication/a/nonverbaltypes.htm.

Chiravate, B. (2011). Perception of politeness in English requests by Thai EFL learners. *3L; Language,Linguistics and Literature,The Southeast Asian Journal of English Language Studies, 7* (2), 59-71.

Chmiliar, L. (2010). Multiple-case designs. In A. Mills, G. Durepos, &E. Wiebe (eds.), *Encyclopedia of case study research* (pp. 583-585). Thousand Oaks, CA:SAGE Publications, Inc.

Choi, S-J & Lantolf, J. P. (2008). The representation and embodiment of meaning in L2communication: Motion events in speech and gesture in L2 Korean and L2 English speakers. *Studies in Second Language Acquisition, 30* (2), 191-224.

Chomsky, N. (1965). *Aspects of the theory of syntax.* Cambridge, Mass.: MIT Press.

Chotirat, S. & Sinwongsuwat, K. (2011). Effects of scripted and non-scripted role play Activities on oral performance: A case study of repair organization in conversation in conversation of Thai college students. In *Proceedings of the 3rd International Conference on Humanities and Social Sciences, Faculty of Liberal Arts, Prince of Songkhla University,* Thailand: Prince of Songkhla University.

Clark, H.H. (1996). *Using language*. Cambridge: Cambridge University Press. Retrieved July 10, 2014, from http://ebooks.cambridge.org/ebook.jsf?bid= CBO9780511620539.

Clark, H.H. & Fox Tree, J. (2002). Using *uh* and *um* in spontaneous speaking. *Cognition, 84* (1),73 - 111.

Clark, H. H. &Wasow, T. (1998). Repeating words in spontaneous speech. *Cognitive Psychology, 37*, 201-242.

Clevenger, T. Jr. (1991). Can one not communicate? A conflict of models. *Communication Studies, 42*(4), 340-353.

Cole, J., Hasegawa-Johnson, M., Shih, C., Kim, H., Lee, E., Lu, H., Mo, Y., & Tae-Jin Yoon, T. (2005). Prosodic parallelism as a cue to repetition disfluency. In *Proceedings of DiSS'05, Disfluency in Spontaneous Speech Workshop. 10–12 September 2005* (pp. 1-4). France: Aix-en-Provence.

Connelly, L. M. (2008). Pilot studies. *Medsurg Nursing, 17*(6), 411-2.

Cook, G. (1999). *Discourse*. Oxford: Oxford University Press.

Cook, M., Smith, J., & Lalljee, M. G. (1974). Filled pauses and syntactic complexity. *Language and Speech, 17*, 11—16.

Cooper, R.L. (1968), An elaborated language testing model. In J. Upshur & J. Fata (eds), *Problems in Foreign Language Testing, Language Learning, 28*, 57-65.

Corley, M. (2010). Making predictions from speech with repairs: Evidence from eye movements. *Language and Cognitive Processes, 25*, 706-727.

Corder, S. P. (1983). Strategies of communication. In C. Faerch & G. Kasper (eds.), *Strategies in interlanguage communication* (pp. 15-19). New York: Longman.

Corley, M., MacGregor, L. J., & Donaldson, D. I. (2007). It's the way that you, er, say it: Hesitations in speech affect language comprehension. *Cognition, 105*, 658-668.

Coulthard, M. (1977). *Introduction to discourse analysis*. London: Longman.

Creswell, J. W. (2003). *Research design: qualitative, quantitative, and mixed methods approaches (2nd ed.)*. Thousand Oaks, CA: Sage.

Creswell, J.W. (2005). *Educational research: Planning, conducting and evaluating quantitative and qualitative research (2nd ed.)*. Upper Saddle River, N.J.: Pearson Merrill Prentice Hall.

Creswell, J.W. (2012). *Educational research: Planning, conducting, and evaluating quantitative and qualitative research* (4th ed.), Boston: Pearson.

Creswell, J. W. (2013). *Qualitative inquiry & research design: choosing among five approaches* (3rd ed.). Los Angeles, CA: Sage Publications.

Cucchiarini, C., Strik, H., & Boves, L. (2002). Quantitative assessment of second language learners' fluency: Comparisons between read and spontaneous speech. *The Journal of the Acoustical Society of America*, *111*(6), 2862–2873.

Culatta, R., & Leeper, L. (1988). Dysfluency isn't always stuttering. *Journal of Speech and Hearing Disorders*, *53*, 486-488.

Cutting, J. (2002). *Pragmatics and Discourse*. London: Routledge.

Dance, F.E.X. (1970). The "concept" of communication. *The Journal of Communication*, *20*, 201–210.

Darasawang, P. (2007). English language teaching and education in Thailand: A decade of change. *English in Southeast Asia: Varieties, Literacies and Literatures Newcastle*, D. Prescott (ed.). Cambridge Scholars Publishing,

Darwin, C. (1965). *The Expression of the Emotions in Man and Animals.* Chicago: University of Chicago Press.

de Bot, K. (1992). A bilingual production model: Levelt's "speaking" model adapted. *Applied Linguistics, 13*, 1–24.

de Jong, N., Groenhout, R., Schoonen, R. & Hulstijn, J.H. (2013). Second language fluency: Speaking style or proficiency? Correcting measures of second language fluency for first language behavior. *Applied Psycholinguistics*, *36*(2), 223 - 243.

Dell, G. S. (1986). A spreading activation theory of retrieval in language production. *Psychological Review*, *93*, 283-321.

DeVito, J. A. (1986). *The communication handbook: A dictionary*. New York: Harper & Row.

Dickerson, W.B. (1971). *Hesitation phenomena in the spontaneous speech of non-native speakers of English*. Doctoral Dissertation, Ph.D., Illinois:University of Illinois at Urbana.

Dörnyei, Z. (1995). On the teachability of communication strategies. *TESOL Quarterly*, *29*(1), 55-85.

Dörnyei, Z. & Scott, M.L. (1997). Communication strategies in a second language: Definitions and taxonomies. *Language Learning*, *47*(1), 173-210.

Dudley, H. (1939). Remaking Speech. *Journal of Acoustical Society of America (JASA), 11*(2), 169–177.

Dufour, R., Jousse, V., Est`eve ,Y., B´echet, F., & Linar`es, G. (2009). Spontaneous speech characterization and detection in large audio database., *SPECOM'2009,* St. Petersburg, *21-25 June 2009*, 41-46.

Edwards, J.A. (2001). The Transcription of Discourse . In D. Schiffrin, D. Tannen & H. Hamilton (eds.) *Handbook of Discourse analysis* (pp.321-348). Malden, MA:Blackwell.

Eisenhardt, K. M. (1989). Building theories from case study research. *Academy of Management Review, 14*(4): 532–550.

Eklund, R. (2001). Prolongations: A dark horse in the disfluency stable. In *Proceedings of DiSS '01: Disfluency in Spontaneous Speech Workshop* (pp. 5-8). Edinburgh, UK.

Eklund, R., & Shriberg, E. E. (1998). Crosslinguistic disfluency modelling: A comparative analysis of Swedish and American English human and human-machine dialogue. In *Proceedings of the International Conference on Spoken Language Processing (ICSLP '98)* (pp. 2631-2634). Australia: Sydney.

Ekman, P. & Friesen, W.V. (1969). The repertoire or nonverbal behavior: categories, origins, usage, and coding. *Semiotica, 1*(1), 49-98.

English First. (2013). *English proficiency index (EF EPI).* Retrieved November 21, 2014, from www.ef.com/epi.

Eysenck, M.W., & Keane, M.T. (2010). *Cognitive psychology: A student's handbook.* NY: Psychology Press.

Faerch, C., & Kasper, G. (eds) (1983). Plans and strategies in foreign language communication. In C. Faerch & G. Kasper (eds). *Strategies in Interlanguage Communication* (pp. 20-60). London: Longman.

Fehringer, C., & Fry, C. (2007). Hesitation phenomena in the language production of bilingual speakers. *Folia Linguistica, 41*, 37-72.

Ferreira, F. (1993). Creation of prosody during sentence production. *Psychological Review, 100* , 233-253.

Ferreira, F., Lau, E.F., & Bailey, K.G. (2004). Disfluencies, language comprehension, and tree adjoining grammars. *Cognitive Science. 28*, 721-749.

Fillmore, C. (2001). On fluency. In H. Riggenbach (ed.) *Perspectives on Fluency* (pp. 43-60). Ann Arbor: Michigan University Press.

Finlayson, I. R., & Corley, M. (2012) Disfluency in dialogue: An intentional signal from the speaker?. *Psychonomic Bulletin and Review*, *19*(5), 921-928.

Forman, R. (2011). Humorous language play in a Thai EFL classroom. *Applied Linguistics, 3*(5), 541-565.

Fox Tree, J. E. (1995) The effects of false starts and repetitions on the processing of subsequent words in spontaneous speech. *Journal of Memory and Language, 34*, 709-738.

Fox Tree, J.E. (2001). Listeners use um and uh in spontaneous comprehension. *Memory and Cognition, 29*, 320-326.

Fox Tree, J. E. (2002). Interpreting pauses and ums at turn exchanges. *Discourse Processes, 34*, 37-55.

Fox Tree, J. E., & Clark, H. H. (1997). Pronouncing "the" as "thee" to signal problems in speaking. *Cognition, 62*, 151–167.

Fox Tree, J.E., & Schrock, J.C. (1999). Discourse markers in spontaneous speech: Oh what a difference an "oh" makes. *Journal of Memory and Language, 40*, 280–295.

Fox Tree, J.E. & Schrock, J.C. (2002). Basic meanings of you know and I mean. *Journal of Pragmatics. 34*, 727-747.

Fraenkel, J.R., Wallen, N.E., & Hyun, H.H. (2012). *How to design and evaluate research in education (8th Ed.)* Boston: McGraw-Hill.

Fraser, B. (1990). An approach to discourse markers. *Journal of Pragmatics, 14,* 383-395.

Fraser, B. (1996). Pragmatic markers. *Pragmatics, 6*(2), 167-190.

Fraser, B. (1999). What are discourse markers? *Journal of Pragmatics, 31*, 931-952.

Freed, B. F. (2000). Is fluency, like beauty, in the eyes (and ears) of the beholder? In H. Riggenbach (Ed.), *Perspectives on fluency* (pp. 243-265). Michigan: The University of Michigan Press.

Fromkin, V.A. (1971). The non-anomalous nature of anomalous utterances. *Language*, *47* (1), 27-52.

Fromkin, V.A. & Ratner, N.B. (1998). Speech Production. In J.B. Gleason & N.B. Ratner, (eds.), *Psycholinguistics (2nd ed.)* (pp.309 – 346). Belmont: Thomson Wadsworth.

Fujiwara, T. (2011). Language learning beliefs of Thai EFL university students: dimensional structure and cultural variations. *Electronic Journal of Foreign Language Teaching, 8*(1), 87-107.

Fulcher, G. (2003). *Testing Second Language Speaking.* London: Pearson Education.

Fuller, J. (2003). Use of the discourse marker *like* in interviews. *Journal of Sociolinguistics*, *7*(3), 365-377.

Gall, M. D., Borg, W. R.,& Gall, J. P. (1996). *Educational Research: An Introduction* (6th ed.). White Plains, NY: Longman.

Garrett, M. F. (1975). The analysis of sentence production. In G. Bower (Ed.), *The psychology of learning and motivation* (pp. 133-177). New York: Academic Press.

Gass, S.& Selinker, L. (2008). *Second Language Acquisition: An Introductory Course (3rd ed.)*. New York: Routledge.

Gilabert, R. (2007). Effects of manipulating task complexity on self-repairs during L2 oral Production. *International Review of Applied Linguistics, 45*, 215-240.

Goldman-Eisler, F. (1958). Speech production and the predictability of words in context. *Quarterly Journal of Experimental Psychology. 10*(2), 96-106.

Goldman-Eisler, F. (1961). The distribution of pause duration in speech. *Language and Speech*, *4* , 232-237.

Garcia-Amaya, L. J., (2012).Second language fluency and cognition: The study of Spanish second language development in an overseas immersion program and an at- home foreign language classroom. Doctoral dissertation, Ph.D. Retrieved From *ProQuest Dissertation and Theses Database.* (UMI 3509912).

Gan, Z. (2013). Understanding English speaking difficulties: An investigation of two Chinese populations. *Journal of Multilingual and Multicultural Development, 34* (3), 231-248.

Gleason, J.B.& Ratner, N.B. (1998). *Psycholinguistics* (2nd ed.). Belmont, Calif: Thomson Wadsworth.

Gudykunst, W.B. (2004). *Bridging differences: Effective intergroup communication* (4th ed.). Thousand Oaks: Sage.

Gumperz, J. J. (1997). On the interactional bases of speech community membership. In *Towards a Social Science of Language: Papers in honor of William Labov. Volume 2: Social and interaction and discourse structures,* Guy, G.R.,

Gumperz, J. J. 2001. Contextualization and Ideology in Intercultural Communication. In.*Culture in Communication: Analyses of intercultural situations*, Di Luzio, A.,Günthner, S & Orletti, F. (eds.) (pp. 35-53). Amsterdam and Philadelphia: John Benjamins.

Hall, J. K. (1995). (Re)creating our worlds with words: A sociohistorical perspective Interaction of a face-to-face interaction. *Applied Linguistics*, *16*, 206-232

Halliday, M.A.K. (1970), Language structure and language function. In J. Lyons (ed.). *New horizons in linguistics* (pp. 140-165). London: Penguin.

Halliday, M.A.K. (1978). *Language as a Social Semiotic*. London: Edward Arnold.

Halliday, M. & Hasan, R. (1976). *Cohesion in English*. London: Longman.

Harley, T. (2001). *The psychology of language*. Sussex: Psychology Press.

Hartsuiker, R.J., & Notebaert, L. (2010). Lexical access problems lead to disfluencies in speech. *Experimental Psychology*, *57*, 169-177.

Haskell, T.R. & MacDonald, M.C. (2003). Conflicting cues and competition in subject-verb agreement. *Journal of Memory and Language*, *48*, 760-778.

Hasselgren, A. (1998). *Small words and valid testing: Studies in language testing.* Doctoral dissertation, Ph.D. Bergen: University of Bergen.

Hatch, E.M. & Farhady, H. (1982). *Research design and statistics for applied linguistics*. Rowley, MA: Newbury House.

Heike, A.E. (1981). A content-processing view of hesitation phenomena. *Language and Speech*, *24* (2), 147-160.

Hilton, H.E. (2007). *What pauses reveal about language processing in spoken L2 production*. 6th International Symposium on Bilingualism, Hamburg.

Hilton, H. E. (2008). The link between vocabulary knowledge and spoken L2 fluency. *Language Learning Journal*, *36*, 153-166.

Hoben, J.B. (1954). English communication at Colgate re-examined. *Journal of Communication*, *4*(3), 76-83.

Horii, Y., & Ramig, P. R. (1987). Pause and utterance durations and fundamental frequency characteristics of repeated oral readings by stutterers and nonstutterers. *Journal of Fluency Disorders*, *12* (4), 257-270.

Hoshino, N. (2006). *A psycholinguistic study of native language constraints on speaking words in a second language*. Pensylvania: Pennsylvania State University.

Hotopf, W. (1980). Semantic similarity as a factor in whole-word slips of the tongue. In V. Fromkin (Ed.), *Errors in linguistic performance* (pp. 97-109). London: Academic press.

House, J. (1999). Misunderstanding in intercultural communication: interactions in English as a lingua franca and the myth of mutual intelligibility. In Gnutzmann, C. (Ed.), *Teaching and Learning English as a Global Language* (pp. 73–89). Tu¨ bingen: Stauffenburg,

Hymes, D.H. (1972) On communicative competence. In J.B. Pride & J. Holmes (eds). *Sociolinguistics: Selected Readings* (pp. 269–293). Harmondsworth: Penguin.

Iamsen, S. (2007). *An exploratory study of the factors that lead to the achievement in spoken English : Focusing on the students in the business English program of Suan Dusit Rajabhat University, Bangkok.* New Mexico State University, Retrieved from http://gradworks.umi.com/32/96/3296133.html.

IELTS. (n.d.). *Score processing and reporting*. Retrieved July 3, 2013, from http://www.ielts.org/researchers/score_processing_and_reporting.aspx.

Ivankova, N.V., Creswell, J.W., & Stick, S.L. (2006). *Using Mixed-Methods Sequential Explanatory Design: From Theory to Practice. Field Methods, 18* (1), 3–20.

Jacoby, S., & Ochs, E. (1995). Co-construction: An introduction. *Research on Language and Social Interaction*, *28*, 171-183.

Johnson, F.L. (2000). *Speaking culturally: Language diversity in the United States*. London: Sage.

Johnson, M. (2001). *The art of non-conversation: a reexamination of the validity of the oral proficiency interview*. New Haven: Yale.

Johnson, W. (1961). *Stuttering and what you can do about it.* Minneapolis: University of Minnesota Press.

Johnstone, B. (2000). *Qualitative methods in sociolinguistics*. New York: Oxford University Press.

Kachru, B.B. (1991). Liberation linguistics and the quirk concern. *English Today*, *25*, 3-13.

Kasper, G. (2006). Beyond repair: conversation analysis as an approach to SLA. In K. Bardovi-Harlig, & Z. Dornyei (eds.), *Theme in SLA Research. AILA Review19* (pp. 83-99). Amsterdam: John Benjamins.

Kaur, J. (2009). Pre-empting problems of understanding in English as a lingua franca. In: Mauranen, A., Ranta, E. (eds.) (pp.107–124), *English as a Lingua Franca: Studies and Findings,* Newcastle: Cambridge Scholars Press.

Kendall, T. (2007). Listening to silence: Interpretation and transcription of pause in deposition. In M.T. Turell, M. Spassova, & J. Cicres (eds.), In *Proceedings of the Second European IAFL Conference on Forensic Linguistics/ Language and the Law* (pp. 323-332) Barcelona, IULA, Documenta Universitaria.

Keseling, G. (1992). Pause and intonation contours in written and oral discourse. In D.Stein (ed.), *Cooperating with written texts, The Pragmatics and Comprehension of Written Texts.* Berlin: Mouton de Gruyter.

Kim, S. (2010). Gesture in second language: resources for communication and cognitive mediation (Doctoral dissertation). Retrieved from *ProQuest Dissertation and Theses Database*. (UMI 3424230).

Kircher, T. T. J., Brammer, M. J., Levelt, W. J. M., Bartels, M., & McGuire, P. K. (2004). Pausing for thought: engagement of left temporal cortex during pauses in speech. *Neuroimage*, *21* , 84-90.

Knapp, M. & Hall, J. (2010). *Nonverbal communication in human interaction.* Boston, MA : Wadsworth, Cengage Learning.

Kolk, H.H.J.(1991). Is stuttering a symptom of adaptation or of impairment? In Peters,H. F. M.,Hulstijn, W. & Starkweather, C. W. (eds.) *Speech Motor Control and Stuttering.* Amsterdam:Elsevier.

Kormos, J. (2000). The timing of self-repairs in second language speech production. *Studies in Second Language Acquisition*, *22,* 145-167.

Kormos, J. (2006a). The structure of L2 self-repairs in the speech of Hungarian learners of English. *Acta Linguistica Hungarica*, *53*(1), 53-76.

Kormos, J. (2006b). *Speech production and second language acquisition.* New York: Routledge.

Kormos, J. (2011). Speech production and the cognition hypothesis. In P. Robinson (ed.),*Second language task complexity:Researching the cognition hypothesis of Language learning and performance* (pp. 39-60). Amsterdam: John Benjamins

La Heij, W. (2005). Selection processes in monolingual and bilingual lexical access. In J. F. Kroll & A. M. B. de Groot (eds.), *Handbook of bilingualism: Psycholinguistic approaches* (pp. 289–307). Oxford: Oxford University Press

Lautenschlager, G. J., & Shaffer, G. S. (1987). "Reexamining the component stability of Owen's biographical questionnaire". *Journal of Applied Psychology*, *72*(1), 149-152.

Laver, J. (1995). The temporal organization of speech: continuity and rate. In *Principles of Phonetics* (pp. 534-546).Cambridge: Cambridge University Press.

Lau, E., & F. Ferreira. (2005). Lingering effects of disfluent material on comprehension of garden-path sentences. *Language and Cognitive Processes*, *20*, 633–66.

Lease, M., Johnson, M., & Charniak, E. (2006). Recognizing disfluencies in conversational speech. *IEEE Transactions on Audio, Speech, and Language Processing*, *14*(5), 1566–1573.

Lee, H. (2013). The influence of social situations on fluency difficulty in Korean EFL Learners' oral refulsals. *Journal of Pragmatics*, *50* (1), 168-186.

Lennon, P. (1990). Investigating fluency in EFL: A quantitative approach. *Language Learning*, *40*, 387-417.

Lê Thị Mai.(2011). *An investigation into factors that hinder the participation of university students in English speaking lessons* (MA Thesis). Retrieved October 10, 2014, from http://dl.vnu.edu.vn/bitstream/11126/540/1/04051000606.pdf.

Lesikar, R.V. & Flatley, M.E. (2005). *Basic business communication: Skills for empowering the internet generation.* New York: McGraw-Hill.

Levelt, W. (1983). Monitoring and self-repair in speech. *Cognition*, *14* , 41-104.

Levelt, W. (1989). *Speaking: from intention to articulation.* Cambridge, MA: MIT Press.

Levelt, W., Roelofs, A., & Meyer, A.S. (1999). A theory of lexical access in speech production. *Behavioral and Brain Sciences*, *22* (1), 1-75.

Levinson, S. (1983). *Pragmatics*. Cambridge: Cambridge University Press.

Levinson, S. (2003). *Space in language and cognition*. Cambridge:.Cambridge University Press.

Lickley, R.J. (1994). *Detecting Disfluency in Spontaneous Speech.* Doctoral dissertation, Ph.D., University of Edinburgh.

Liebscher, G. & Dailey-O'Cain, J. (2003) Conversational repair as a role-defining mechanism in classroom interaction. *The Modern Language Journal, 87* (3), 375–90.

Littlejohn, S. W., & Foss, K. A. (2008). *Theories of human communication.* Belmont, CA: Thomson/Wadsworth.

Liu, B. (2013). Effect of first language on the use of English discourse markers by L1 Chinese speakers of English. *Journal of Pragmatics*, *45*, 149-172.

Liu, Y., Shriberg, E., Stolcke, A., Hillard, D., Ostendorf, M., & Harper, M. (2006). Enriching speech recognition with automatic detection of sentence boundaries and disfluencies. *Audio, Speech, and Language Processing, IEEE Transactions*, *14*(5), 1526-1540.

Luangsaengthong, A. (2002). *A comparison of communication strategies for oral communication of first year students with different English learning Achievement*, Unpublished master's thesis, Chulalongkorn University, Bangkok, Thailand.

Luoma, S. (2004). *Assessing speaking.* Cambrideg: Cambridge University Press.

Luzzati, D., 2004. Le fenêtrage syntaxique : une méthode d'analyse et d'évaluation de l'oral spontané. In: *Workshop Modélisation pour l'Identification des Langues (MIDL)*(pp. 13-17). Paris, France.

MacGregor, L.J., Corley, M., & Donaldson, D.I. (2010). Listening to the sound of silence: investigating the consequences of disfluent silent pauses in speech for listeners. *Neuropsychologia, 48*, 3982.

Mackey, A., & Gass, S. M. (2005). *Second language research: methodology and design.* Mahwah, NJ: Lawrence Erlbaum Associates.

Maclay, H. & Osgood, C.E. (1959). Hesitation phenomena in spontaneous English Speech. *Word,15*, 19-44.

Mael, F. A. (1991). A conceptual rationale for the domain and attributes of biodata items. *Personnel Psychology, 44*, 763-927.

Mahl, G. (1957). Disturbances and silences in the patient's speech in psychotherapy. *Journal of Abnormal and Social Psychology, 42* (3-32).

Malasit, Y. & Sarobol, N. 2013. *Communication Strategies Used by Thai EFL Learners.* A proceeding. Retrieved from: http://www.fllt2013. org/ private_folder/Proceeding/802.pdf.

Malik, N. (2012). English as a second language in relation with verbal fluency in SBK women University Quetta. *International Journal of Academic Research in Progressive Education and Development, 1*(1), 99-112.

Matei, M. (2010). Discourse markers as functional elements. *Bulletin of the Transilvania University of Brasov, Series IV: Philology and Cultural Studies, 3*(52), 119-126.

Mareuil, P.B., Habert, B., Benard, F., Adda-Decker, M., Barras, C., Adda, G., & Paroubek, P. (2005). A quantitative study of disfluencies in French broadcast interviews. In *Proceeding of the Workshop Disfluency in Spontaneous Speech (DISS).* France: Aixen-Provence.

Martin, J. G. (1967). Hesitations in the speaker's production and listener's reproduction of utterances. *Journal of Verbal Learning and Verbal Behavior*, *6* (6), 903–909.

Mauranen, A. (2006a). Signaling and preventing misunderstanding in English as lingua franca communication. *International Journal of the Sociology of Language. 177*, 123–150.

Mauranen, A. (2006b). Spoken discourse, academics and global English: A corpus perspective.In R. Huges (Ed.), *Spoken English, TESOL and Applied Linguistics* (pp. 143-158). New York: Palgrave Maemillan.

McConnel, J. & Philipchalk, R. (1992). *Understanding human behavior (7th ed.).* Fort Worth: Harcourt Brace Jovanvich.

McDonough, K. & Sunitham,W.(2009).Collaborative dialogue between Thai EFL learners during self-access computer activities. *TESOL Quarterly*, *43*(2), 231-254.

Meadors, J. & Murray, C. (2014). Measuring nonverbal bias through body language responses to stereotypes. *Journal Of Nonverbal Behavior*, *38*(2), 209-229.

Megyesi, B. & Gustafson- ˇCapková, S. (2001). Pausing in dialogues and read speech: Speaker's production and listeners interpretation. In *Proceedings of the Workshop on Prosody in Speech Recognition and Understanding,* (pp.107-113), October 22-24, 2001, New Jersey, USA.

Menyhárt, K. (2003). Age-dependent types and frequency of disfluencies. *DiSS'03,* 45-48.

Merriam-Webster.(2014). *Merriam-webster online dictionary.* Retrieved from www.Merriam-Webster.com.

Metcalfe, J., & Noom-Ura, S. (2013). Communication strategy use of high and low proficiency learners of English at a Thai university. *LEARN Journal: Language Education and Acquisition Research Network*, *6*(1), 68-89.

Miller, G.R. (1966). On defining communication: another stab. *Journal of Communication*, *16*(2), 88–98.

Miller, G. R., & Hewgill, M. A. (1964). The effects of variations in nonfluency on audience ratings of source credibility. *Quarterly Journal of Speech, 50*, 36-44.

Miller, G. R., & Steinberg, M. (1975). *Between people: A new analysis of interpersonal communication.* Chicago: Science Research Associates.

Moore, N., Hickson, M., & Stacks, D.W. (2010). *Nonverbal communication: Studies and applications*. New York: Oxford University Press.

Morgan, D. L.(1998). Practical strategies for combining qualitative and quantitative methods: Applications to health research. *Qualitative Health Research, 8*, 362–76.

Morgan, D. L. (2007). Paradigms lost and pragmatism regained: Methodological implications of combining qualitative and quantitative methods. *Journal of Mixed Methods Research, 1*(1), 48–76.

Mumford, M. D., Costanza, D.P., Connelly, M.S., & Johnson, J.F. (1996). Item generation procedures and background data scales: implications for construct and criterion-related validity. *Personnel Psychology, 49*, 360-398.

Munby, J.L. (1978). *Communicative syllabus design: a sociolinguistics model for defining the content of purpose- specific language programmes.* Cambridge:Cambridge University Press.

Murar, I. (2008). The functionality of discourse markers in conversational text. *Annals of the University of Craiova, Series Philology, English, Year IX, No.1* (pp. 125-139). Craiova: Editura Universitaria Craiova.

Ngowananchai, J. (2013). Teaching spoken English to L2 learners "an effective approach: natural occurring conversation". *Jurnal Teknologi (Scial Sciences), 65*(2), 47-54.

Nicholson, H. B. (2007). *Disfluency in Dialogue: Attention, Structure and Function*. Doctoral dissertation, Ph.D., University of Edinburgh, Scotland.

Noom-ura, S. (2008). Teaching listening-speaking skills to Thai student with low English proficiency. *Asian EFL Journal, 10*(4), 173-192.

O'Connell, D.C., & Kowal, S. (2005). *Uh* and *Um* revisited: Are they interjections for Signaling delay?. *Journal of Psycholinguistic Research, 34*(6), 555-.576.

O'Shaughnessy, D. (1993). Analysis and automatic recognition of false starts in spontaneous speech. In *Proceedings of the IEEE Conference on Acoustics, Speech, and Signal Processing* (pp. 724-727). Minneapolis, MN. IEEE.

Patanasorn, C. (2010). Effects of procedural content and task repetition on accuracy and fluency in an EFL context (Doctoral dissertation). Retrieved from *ProQuest Dissertation and Theses Database*. (UMI 3425554).

Phaiboonnugulkij, M. & Prapphal, K. (2013). Online speaking strategy assessment for Improving speaking ability in the area of language for specific purposes: The case of tourism. *English Language Teaching*, *6*(9), 19-29.

Plauche, M. & Shriberg, E. (1999). Data-driven subclassification of disfluent repetitions based on prosodic features. In *Proceedings of the 14th International Congress of Phonetic Sciences*, (pp. 1513-1516), San Francisco.

Postma, A., Kolk, H., & Povel, D. (1990). On the relations among speech errors, disfluencies, and self-repairs. *Language and Speech*, *33*(1), 19-29.

Postma, A., & Kolk, H. (1993). The Covert Repair Hypothesis: prearticulatory repair processes in normal and stuttered disfluencies. *Journal of Speech and Hearing Research, 36*, 472-487.

Prapobratanakul, C. & Kangkun, P. (2011). Young ESL learners' strategic competence: What do Thai fourth graders do to enhance communication? In *Proceedings of the International Conference: Expanding Horizons in English Language and Literary Studies* (pp.114-124). Bangkok, Thailand: Chulalongkorn University.

Prapphal, K. (2008). Issues and trends in language testing and assessment in Thailand *Language Testing*, *25* (1), 127-143.

Rabab'ah,G. (2005). Communication problems facing Arab learners of English. *Journal of Language and Learning*, *3*(1), 1740-4983.

Rahimy, R. & Asaei, S.M. (2012). Audio texts and English speaking ability: evidence from Iranian EFL learners. *Academic Research International*, *3* (2), 607-616.

Reddy, D.M. & Wasserman, S.A.(1997). Patient anxiety during gynecologic examinations: Behavioral indicators. *Journal of Reproductive Medicine*, *42*(10), 631-636.

Riazantseva, A. (2001). Second language proficiency and pausing: a study of Russia speakers of English. *Studies in Second Language Acquisition. 23*, 497-526.

Rochester, S. R., & Grill, J. (1973). Production of complex sentences in monologues and dialogues. *Journal of Verbal Learning and Verbal Behavior*,*12*, 203-210.

Rodpradit, S. & Sinwongsuwat, K. (2012). Using scripted and non-scripted role plays to improve English speaking performance of hotel engineering staff. *APHEIT Journal*, *18*(1), 17-25.

Roggia, A.B. (2012). *Eh* as a polyfunctional discourse marker in Dominican Spanish. *Journal of Pragmatics*, *44*, 1783–1798.

Rothwell, J.D. (2004). *In the company of others: An introduction to communication (2nd ed.).* New York: McGraw-Hill.

Rovinelli, R. J., & Hambleton, R. K. (1977). On the use of content specialists in the assessment of criterion-referenced test item validity. *Dutch Journal of Educational Research, 2,* 49-60.

Rudestam, K.E. & Newton, R.R. (2001). *Surviving your dissertation: A comprehensive Guide to content and process (2nd ed.).* Thousand Oaks, CA: Sage Publication Inc.

Ruesch, J. (1957). *Technology and social communication.* Springfield, IL: Charles C. Thomas.

Sabol, J. & Zimmermann, J. (1984). Komunikačná hodnota pauzy. In *Úloha řeči a hudby v životním prostředí . XXIII. Akustická konference,* 225 – 228.

Sajavaara, K. (1987). Second language speech production: Factors affecting fluency. In H. W. Dechert &M. Raupach (eds.), *Psycholinguistic models of production* (pp. 45–65).Norwood, NJ: Ablex.

Sakale,S. (2012). Rethinking speaking skills in EFL (English as a foreign language) settings. *Sino-US English Teaching, 9* (4), 1100-1111.

Salgado, E. F. (2011). *The pragmatics of requests and apologies: Developmental patterns of Mexican students*. Amsterdam, The Netherlands: John Benjamins.

Savignon, S. J. (1983). Communicative competence: theory and classroom practice; texts and contexts in second language learning. *Reading,* MA: Addison-Wesley.

Savova, G., & Bachenko, J. (2003). Prosodic features of four types of disfluencies. In *Proceedings of DiSS '03: Gothenburg Papers in Linguistics,* Gothenburg, Sweden, 91-94.

Schiffrin, D. (1987). *Discourse Markers.* New York: Cambridge University Press.

Schiffrin, D. (2001). Discourse markers: Language meaning and context. In D. Schiffrin, D. Tannen and H. Hamilton (eds.) *Handbook of Discourse analysis*, 54-75. Malden, MA:Blackwell.

Schiffrin, D. (2006) Theory and method in discourse marker research: Revisiting 'and.'In Kerstin Fischer (Ed.), *Approaches to Discourse Particles*. Elsevier.

Schnadt, M.J.(2009). Lexical influences on disfluency production, Doctoral Dissertation, Ph.d., Retrieved from *ProQuest Dissertation and Theses Database*. (AAT U572820)

Schnadt, M.J. & Corley, M. (2006). The influence of lexical, conceptual and planning based factors on disfluency production. *Language, 212* (2), 8-13.

Schmid, M.S. & Fagersten, K.B. (2010). Disfluency markers in L1 attrition. *Language Learning, 60* (4), 753-791.

Schourup, L. (1999). Discourse markers. *Lingua*, *107*, 227-265.

Schourup, L. (2001). Rethinking *well*. *Journal of Pragmatics*, *33*, 1025-1060.

Scollon, R. & Scollon, S. B. K. (2001). *Intercultural communication : a discourse approach.* Malden, Mass., Blackwell Publishers.

Searle, J. R. (1975), A Taxonomy of Illocutionary Acts , In Günderson, K. (ed.), *Language, Mind, and Knowledge* (pp. 344-69). Minneapolis: University of Minneapolis Press.

Segalowitz, N. (2003). Automaticity and second languages. In C.J. Doughty and M.H.Long (eds.), *Handbook of second language acquisition* (pp. 382-408). Oxford: Blackwell.

Shahrestanifar, M. & Rahimy, R. (2014). The effect of lexical Frequency knowledge on Iranian EFL learners' speaking ability. *Modern Journal of Language Teaching Methods, 4* (1), 146-156.

Shooshtari, Z.G., Mehrabi, K., & Mousavinia, S.R. (2013). A Call for Teaching Pronunciation in Iranian Schools. *International Journal of Academic Research in Progressive Education and Development*, *2*(1), 454-465.

Shriberg, E. (1994). *Preliminaries to a theory of speech disfluencies*. Doctoral dissertation, Ph.D., University of California at Berkeley, USA.

Shriberg, E. (1995). Acoustic properties of disfluent repetitions. In *Proceedings of the International Congress of Phonetic Sciences* (pp. 384-387). Sweden: Stockholm.

Shriberg, E. (1996). *Disfluencies in switchboard.* Paper presented at the International Conference on Spoken Language Processing (ICSLP '96), Philedephia, PA.

Silverman, F. & Williams, D.E. (1967). Loci of disfluencies in the speech of stutterers. *Perceptual and Motor Skills*, *24(*3c), 1085-1086.

Sinwongsuwat, K. (2012). Rethinking assessment of Thai EFL learners' speaking skills. *Language Testing in Asia*, *2*(4), 75-85.

Smith, M.C. (2000). Conceptual structures in language production. In L. Wheeldon (Ed.). *Aspects of Language Production.* (pp.331-374). Hove: Psychology Press.

Smith, V. L., & Clark, H. H. (1993). On the course of answering questions. *Journal of Memory and Language, 32* , 25-38.

Smyth, M.M., Morris, P.E., Levy, P., & Ellis, A.W. (1987). *Cognition in action.* Hove,UK: Psychology Press.

Somsai, S., & Intaraprasert, C. (2011). Strategies for coping with face-to-face oral communication problems employed by Thai university students majoring in English. *GEMA Online Journal of Language Studies, 11*(3), 83-96.

Sowden, C. (2012). EFL on a mushroom: the overnight growth in English as a Lingua Franca. *English Language Teaching Journal*, *66*(1), 89-96.

Spencer, S.V.C. (2012). The functions of verbal and nonverbal emotional disclosures to friends during early adolescence: A focus on closeness, friendship satisfaction, and internalizing symptoms. Retrieved from *ProQuest Dissertation and Theses Database.* (UMI 3541157).

Swain, M. (1995) Three functions of output in second language learning. In Cook, G. & Seidlhofer, B. (eds.), *Principles and practice in applied linguistics: studies in honour of H. G. Widdowson* (pp.125–44). Oxford: Oxford University Press.

Swerts, M. (1998). Filled pauses as markers of discourse structure. *Journal of Pragmatics, 30* (40), 485-496.

Tagliamonte, S.A. (2006). *Analysing sociolinguistic variation.* Cambridge, UK: Cambridge University Press.

Tananuraksakul, N. (2013). Power distance reduction and positive reinforcement: EFL learners' confidence and linguistic identity. *International Journal of Language Studies*, *7*(1), 103-116.

Tang, C. (2015). Applications of stalling mechanisms in Chinese-English bilinguals' L1 and L2 spoken discourse. *International Journal of Bilingualism, 19*(1) 92–114.

Tannenbaum, P. H., Williams, F., & Hillier, C. S. (1965). Word predictability in the environments of hesitations. *Journal of Verbal Learning and Verbal Behavior*, *4* , 134-140

Tsuchiya, K. & Handford, M. (2014). A corpus-driven analysis of repair in a professional ELF meeting: Not letting it pass?. *Journal of Pragmatics*, *64,* 117-131.

Tarone, E. (1977). Conscious Communication Strategies in Interlanguage: a Progress Report. In Brown, H. Douglas, Carlos A. Yorio & Ruth Crymes (eds.) *On TESOL'77.* Washington D.C.: TESOL: 194-203

Tashakkori, A., & Teddlie, C. (1998). Mixed methodology: Combining qualitative and quantitative approaches. *Applied Social Research Methods Series, 46.* Thousand Oaks, CA:Sage.

Tissi, B. (2000). Silent pauses and disfluencies in simultaneous interpretation: A descriptive analysis. *The Interpreters' Newsletter*, *10*, 103-127.

Tottie G. (2011). *Uh* and *Um* as sociolinguistic markers in British English. *International Journal of Corpus Linguistics, 16,* 173-197

Treece, E. W., & Treece, J. W. (1982). *Elements of research in nursing (3rd ed.).* St. Louis, MO:Mosby.

Trent, J. (2009). Enhancing oral participation across the curriculum: Some lessons from the EAP classroom. *Asian EFL Journal, 11*(1), 256-270.

Trudgrill, P. (1983). *Sociolinguistics: An Introduction to Language and Society.* New York Penguin.

Tubbs, S.L. & Moss, S. (1981). *Interpersonal communication (2nd ed.).* New York: Random House.

Ugla, R.L., Adnan, N.I., & Abidin, M.J.Z. (2013). Study of the Communication Strategies Used by Iraqi EFL Students. *International Journal of Evaluation and Research in Education (IJERE), 2* (1), 44-50.

Ur, P. (1996). *A course in language teaching.*Cambridge:Cambridge University Press.

Ussama, R. & Sinwongsuwat, K. (2012). Conversation proficiency assessment: A Comparative study of two-party peer interaction and interview interaction implemented with Thai EFL learners. In *Proceedings of the Phuket Rajabhat University National Conference 2012*, Phuket, Thailand.

van Compernolle, R. A., & Lawrence Williams, L. (2011). Thinking with your hands: Speech–gesture activity during an L2 awareness-raising task. *Language Awareness, 20*(3), 203-219.

van Dijk, T. (1979). Pragmatic connectives. *Journal of Pragmatics, 3*, 447–456.

van Hest, E. (1996). *Self-repair in L1 and L2 production.* Tilburg, the Netherlands: Tilburg University Press.

Verdonik, D., Rojc, M., Stabej, M. (2007). Annotating discourse markers in spontaneous speech corpora on an example for the Slovenian language. *Language Resources and Evaluation, 41* (2), 147–180.

Veilleux, N., Brugos, A., Shattuck-Hufnagel, S., & Patterson, A. (2007). *Distribution of disfluencies and errors in English discourse.* 1349- 1352, Retrieved from www.icphs2007.de

Vural, E. (2008). *Disfluency in second language: A study of Turkish speaker of English (MA Thesis)*, Retrieved November 24, 2014, from http://etd.lib.metu.edu.tr/upload/126100/index.pdf.

Wardhaugh, R. (1986). *An Introduction to Sociolinguistics (2nd ed.).* Oxford: Basil Blackwell.

Watanabe, M., & Ishi, C. T. (2000). The distribution of fillers in lectures in the Japanese language. In *The Proceedings of the 6th International Conference on Spoken Language Processing,3,* 167–170.

Watanabe, M., Den, Y., Hirose, K., Miwa, S., Minematsu, N. (2007). Features of pauses and conjunctions at syntactic and discourse boundaries in Japanese monologues.In *INTERSPEECH-2007,* 118-121.

Wang, X. (2009). An investigation of Chinese English learners' use of discourse markers. *US-China Foreign Language,* 32-36.

Weiss, R. S. (1994). *Learning from strangers: The art and method of qualitative interview studies.* New York: Free Press.

Wheeldon, J. P. (2010b). Mapping mixed methods research: Methods, measures, and meaning. *Journal of Mixed Methods Research, 4*(2), 87–102.

Whitman, R. & Boase, P. (1983). *Speech Communication: Principles and Contexts.* New York: Macmillan Publishing.

Widdowson, H.G. (2007), *Discourse analysis.* Oxford: Oxford University Press.

Wingate, M. E. (1984). Fluency, disfluency, dysfluency and stuttering. *Journal of Fluency Disorders, 9*,163-168.

Wiriyachitra, A. (2002). English Language Teaching and Learning in Thailand in this Decade. *Thai TESOL Focus, 15*(1), 4-9.

World Bank. (2012). *Leading with ideas: skills for growth and equity in Thailand.* Retrieved November 25, 2014, from http://documents.worldbank.org/curated/en/2012/01/15940701/leading-ideas-skills-growth-equity-thailand.

Yang, L. (2002). The effect of English proficiency on self-repair behavior of EFL learners. *Shandong Foreign Languages Journal (Shandong Waiyu Jiaoxue), 4*, 74-76.

Yangklang, W. (2013). Improving English stress and intonation pronunciation of the first year students of Nakhon Ratchasima Rajabhat University through an E-Learning. PSU-USM International Conference on Humanities and Social Sciences, *Procedia-Social and Behavioral Sciences*, *91*, 444-452.

Yin, R. K. (2014). *Case study research: design and methods (5th ed.).* Thousand Oaks, CA: Sage Publications.

Yoon, S. (2009). Automated assessment of speech fluency for L2 English learners, Doctoral dissertation, Ph.d., Retrieved from *ProQuest Dissertation and Theses Database*. (UMI 339555).

York, D. (2013). *5 Keys to Great Nonverbal Communication*. Retrieved from http://www.entrepreneur.com/article/230136.

Young, E. (2005). *Assessment for learning: embedding and extending*. Retrieved from www.ltscotland.org.uk/assess/images/Assessment%20for%20Learning %20version%202vp_tcm4-385008.pdf.

Yule, G. (1998). *Pragmatics*. Oxford: Oxford University.

Zellner, B. (1994). Pauses and the temporal structure of speech. In E. Keller (Ed.) *Fundamentals of speech synthesis and speech recognition*. 41-62.

Zhang, S. (2009). The role of input, interaction, and output in the development of oral fluency. *English Language Teaching*, *2(*4),91–100.

Zhao, H. (2013). A study on the pragmatic fossilization of discourse markers among Chinese English learners. *Journal of Language Teaching and Research*, *4*(4), 707-714.

APPENDICES

APPENDICES

FREQUENCIES OF DISFLUENCIES, SPEAKERS' INTENTIONS, AND HEARERS' INTERPRETED

Coding

Code	Sub-Types of Dfs	Abbr.
1	Non-lexicalized Filled Pauses	NLFP
2	Lexicalized Filled Pauses	LFP
3	Unfilled Pauses	UFP
4	Self-repetitions	SREPT
5	Other-repetitions	OREPT
6	Self-initiated repairs	SREPR
7	Other-initiated repairs	OREPR

Speakers' Intentions & Hearers' Interpretations	Abbr.
Speech production difficulties	spd
Textual Functions	tt
Interpersonal Funcitons	intp

ID	Group	DF#	DF Forms	Sub-type Code	DF_Type	Hearers' Interpretations H1	H2	H3	Rep. of Hearers' Interpretations	Speakers' Intentions	Rep.of Intentions
1	1	1	NL-FP (um)	1	Pauses	10 (intp)	10 (intp)	10 (intp)	intp	8	intp
1	1	2	NL-FP (ah)	1	Pauses	10 (intp)	10 (intp)	10 (intp)	intp	2	spd
1	1	3	NL-FP (ah)	1	Pauses	10 (intp)	10 (intp)	10 (intp)	intp	2	spd
1	1	4	NL-FP (uh)	1	Pauses	10 (intp)	3 (tt)	24 (spd)	0	1	spd
1	1	5	UFP	3	Pauses	1 (spd)	2 (spd)	24 (spd)	spd	1	spd
1	1	6	NL-FP(plgt)	1	Pauses	1 (spd)	2 (spd)	24 (spd)	spd	1	spd
1	1	7	NL-FP (ah)	1	Pauses	10 (intp)	10 (intp)	24 (spd)	spd	1	spd
1	1	8	NL-FP (ah)	1	Pauses	10 (intp)	10 (intp)	10 (intp)	intp	13	intp
1	1	9	NL-FP (ah)	1	Pauses	10 (intp)	3 (tt)	10 (intp)	intp	2	spd
1	1	10	NL-FP (uh)	1	Pauses	10 (intp)	23 (tt)	10 (intp)	intp	2	spd
1	1	11	NL-FP (um)	1	Pauses	3 (tt)	5 (tt)	3 (tt)	tt	23	tt
1	1	12	UFP	3	Pauses	3 (tt)	5 (tt)	3 (tt)	tt	23	tt
1	1	13	NL-FP (um)	1	Pauses	10 (intp)	24 (spd)	10 (intp)	intp	21	spd
1	1	14	NL-FP (um)	1	Pauses	10 (intp)	10 (intp)	10 (intp)	intp	15	intp
1	1	15	NL-FP (um)	1	Pauses	15 (intp)	24 (spd)	10 (intp)	intp	23	tt
1	1	16	UFP	3	Pauses	15 (intp)	24 (spd)	10 (intp)	intp	23	tt
1	1	17	SREPT (phr)	4	Repetitions	15 (intp)	24 (spd)	10 (intp)	intp	23	tt
1	1	18	NL-FP (um)	1	Pauses	10 (intp)	12 (intp)	10 (intp)	intp	1	spd
1	1	19	NL-FP (um)	1	Pauses	10 (intp)	24 (spd)	10 (intp)	intp	2	spd
1	1	20	NL-FP (um)	1	Pauses	24 (spd)	24 (spd)	10 (intp)	spd	15	intp
1	1	21	NL-FP (um)	1	Pauses	24 (spd)	24 (spd)	10 (intp)	spd	1	spd
1	1	22	NL-FP (um)	1	Pauses	3 (tt)	23 (tt)	10 (intp)	tt	2	spd
1	1	23	SRPET (w)	4	Repetitions	3 (tt)	23 (tt)	10 (intp)	spd	2	spd
1	1	24	UFP	3	Pauses	1 (spd)	24 (spd)	10 (intp)	intp	1	spd
1	1	25	NL-FP (um)	1	Pauses	24 (spd)	7 (intp)	10 (intp)	intp	15	intp
1	1	26	NL-FP (ah)	1	Pauses	23 (tt)	24 (spd)	19 (intp)	0	23	tt
1	1	27	NL-FP (um)	1	Pauses	23 (tt)	24 (spd)	19 (intp)	0	23	tt
1	1	28	NL-FP (Hmm..)	1	Pauses	23 (tt)	24 (spd)	19 (intp)	0	23	tt
1	1	29	NL-FP (ah)	1	Pauses	10 (intp)	5 (tt)	10 (intp)	int	15	intp

ID	Group	DF#	DF Forms	Sub-type Code	DF_Type	Hearers' Interpretations H1	H2	H3	Rep. of Hearers' Interpretations	Speakers' Intentions	Rep.of Intentions
2	1	1	NL-FP (ah)	1	Pauses	3 (tt)	10 (intp)	10 (intp)	intp	21	spd
2	1	2	NL-FP (uh)	1	Pauses	3 (tt)	10 (intp)	10 (intp)	intp	21	spd
2	1	3	SREPT (w)	4	Repetitions	3 (tt)	10 (intp)	10 (intp)	intp	21	spd
2	1	4	NL-FP (plgt)	1	Pauses	24 (spd)	10 (intp)	10 (intp)	intp	3	tt
2	1	5	SREPT(w)	4	Repetitions	24 (spd)	10 (intp)	10 (intp)	intp	3	tt
2	1	6	UFP	3	Pauses	1 (spd)	24 (spd)	24 (spd)	spd	3	tt
2	1	7	SREPT (phr)	4	Repetitions	1 (spd)	24 (spd)	24 (spd)	spd	3	tt
2	1	8	NL-FP (oh)	1	Pauses	1 (spd)	7 (intp)	7 (intp)	intp	21	spd
2	1	9	SREPT (w)	4	Repetitions	1 (spd)	7 (intp)	7 (intp)	intp	21	spd
2	1	10	SREPT (w)	4	Repetitions	24 (spd)	7 (intp)	13(intp)	intp	1	spd
2	1	11	UFP	3	Pauses	1 (spd)	22 (spd)	24 (spd)	spd	5	tt
2	1	12	SREPR (rev)	6	Repairs	1 (spd)	22 (spd)	24 (spd)	spd	5	tt
2	1	13	NL-FP (ah)	1	Pauses	3 (tt)	2 (spd)	3 (tt)	tt	5	tt
2	1	14	NL-FP (ah)	1	Pauses	24 (spd)	3 (tt)	24 (spd)	spd	23	tt
2	1	15	SREPR (rev)	6	Repairs	24 (spd)	3 (tt)	24 (spd)	spd	23	tt
2	1	16	NL-FP (ah)	1	Pauses	3 (tt)	2 (spd)	2 (spd)	spd	1	spd
2	1	17	NL-FP (ah)	1	Pauses	1 (spd)	2 (spd)	2 (spd)	spd	3	tt
2	1	18	UFP	3	Pauses	1 (spd)	2 (spd)	2 (spd)	spd	3	tt
2	1	19	SREPT (w)	4	Repetitions	1 (spd)	2 (spd)	2 (spd)	spd	3	tt
2	1	20	NL-FP (uh)	1	Pauses	23 (tt)	23 (tt)	3 (tt)	tt	23	tt
2	1	21	OREPT(st)	5	Repetitions	23 (tt)	23 (tt)	3 (tt)	tt	23	tt
2	1	22	SREPR (inst)	6	Repairs	23 (tt)	23 (tt)	3 (tt)	tt	23	tt

ID	Group	DF#	DF Forms	Sub-type Code	DF_Type	Hearers' Interpretations H1	H2	H3	Rep. of Hearers' Interpretations	Speakers' Intentions		Rep.of Intentions
3	1	1	NL-FP (ah)	1	Pauses	24 (spd)	10 (intp)	10 (intp)	intp	21		spd
3	1	2	NL-FP (uh)	1	Pauses	24 (spd)	10 (intp)	10 (intp)	intp	21		spd
3	1	3	NL-FP (ah)	1	Pauses	24 (spd)	1 (spd)	24 (spd)	spd	2		spd
3	1	4	NL-FP (plgt)	1	Pauses	1 (spd)	7 (intp)	10 (intp)	intp	2		spd
3	1	5	UFP	3	Pauses	1 (spd)	7 (intp)	10 (intp)	intp	2		spd
3	1	6	NL-FP (uh)	1	Pauses	24 (spd)	24 (spd)	14 (intp)	spd	5		tt
3	1	7	UFP	3	Pauses	24 (spd)	24 (spd)	14 (intp)	spd	5		tt
3	1	8	UFP	3	Pauses	19 (intp)	6 (intp)	10 (intp)	intp	1	2	spd
3	1	9	NL-FP (uh)	1	Pauses	3 (tt)	3 (tt)	10 (intp)	tt	1		spd
3	1	10	NL-FP (uh)	1	Pauses	24 (spd)	10 (intp)	10 (intp)	intp	21		spd
3	1	11	NL-FP (uh)	1	Pauses	24 (spd)	2 (spd)	14 (intp)	spd	2	21	spd
3	1	12	SREPR (inst)	6	Repairs	24 (spd)	2 (spd)	14 (intp)	spd	2	21	spd
3	1	13	NL-FP (oh)	1	Pauses	24 (spd)	3 (tt)	24 (spd)	spd	2	14	0
3	1	14	NL-FP (uh)	1	Pauses	23 (tt)	10 (intp)	10 (intp)	intp	2		spd
3	1	15	NL-FP (um)	1	Pauses	23 (tt)	15 (intp)	7 (intp)	intp	21		spd
3	1	16	UFP	3	Pauses	24 (spd)	23 (tt)	1 (spd)	spd	1		spd
3	1	17	NL-FP (uh)	1	Pauses	1 (spd)	23 (tt)	7 (intp)	0	1		spd
3	1	18	UFP	3	Pauses	24 (spd)	10 (intp)	24 (spd)	spd	2	21	spd

ID	Group	DF#	DF Forms	Sub-type Code	DF_Type	Hearers' Interpretations			Rep. of Hearers' Interpretations	Speakers' Intentions		Rep.of Intentions
						H1	H2	H3				
4	1	1	NL-FP (ah)	1	Pauses	11 (intp)	24 (spd)	24 (spd)	spd	1		spd
4	1	2	UFP	3	Pauses	11 (intp)	14 (intp)	7 (intp)	intp	14		intp
4	1	3	NL-FP (อืมมม)	1	Pauses	10 (intp)	10 (intp)	7 (intp)	intp	1		spd
4	1	4	NL-FP (um)	1	Pauses	24 (spd)	7 (intp)	17 (intp)	intp	21		spd
4	1	5	UFP	3	Pauses	14 (intp)	14 (intp)	21 (spd)	intp	23		tt
4	1	6	UFP	3	Pauses	21 (spd)	23 (tt)	21 (spd)	spd	23		tt
4	1	7	NL-FP (ah)	1	Pauses	1 (spd)	2 (spd)	1 (spd)	spd	21		spd
4	1	8	NL-FP (plgt/thuuuuuh…)	1	Pauses	1 (spd)	23 (tt)	7 (intp)	0	1		spd
4	1	9	NL-FP (ah)	1	Pauses	1 (spd)	23 (tt)	2 (spd)	spd	2		spd
4	1	10	NL-FP (ah)	1	Pauses	3 (tt)	3 (tt)	17 (intp)	tt	3		tt
4	1	11	UFP	3	Pauses	24 (spd)	3 (tt)	17 (intp)	0	1		spd
4	1	12	UFP	3	Pauses	24 (spd)	4 (spd)	1 (spd)	spd	2		spd
4	1	13	NL-FP (plgt/froooooommmm…)	1	Pauses	24 (spd)	24 (spd)	24 (spd)	spd	21		spd
4	1	14	UFP	3	Pauses	21 (spd)	21 (spd)	21 (spd)	spd	23		tt
4	1	15	NL-FP (อืมมม)	1	Pauses	15 (intp)	10 (intp)	7 (intp)	intp	1		spd
4	1	16	SREPR (del)	6	Repairs	3 (tt)	3 (tt)	2 (spd)	tt	3		tt
4	1	17	NL-FP (ah)	1	Pauses	2 (spd)	13 (intp)	1 (spd)	spd	2	21	spd
4	1	18	OREPT (w)	5	Repetitions	14 (intp)	14 (intp)	14 (intp)	intp	14		intp.
4	1	19	OREPT (s)	5	Repetitions	3 (tt)	3 (tt)	3 (tt)	tt	1		spd
4	1	20	SREPR (rev)	6	Repairs	3 (tt)	3 (tt)	3 (tt)	tt	3		tt
4	1	21	NL-FP (อืมมม)	1	Pauses	8 (intp)	10 (intp)	17 (intp)	intp	7		intp
4	1	22	SREPR (rev)	6	Repairs	3 (tt)	3 (tt)	3 (tt)	tt	2		spd
4	1	23	NL-FP (ah)	1	Pauses	1 (spd)	1 (spd)	1 (spd)	spd	2		spd
4	1	24	SREPR (rev)	6	Repairs	1 (spd)	3 (tt)	3 (tt)	tt	3		tt

ID	Group	DF#	DF Forms	Sub-type Code	DF_Type	Hearers' Interpretations			Rep. of Hearers' Interpretations	Speakers' Intentions				Rep.of Intentions
						H1	H2	H3						
5	1	1	NL-FP (ah)	1	Pauses	10 (intp)	10 (intp)	7 (intp)	intp	18				intp
5	1	2	UFP	3	Pauses	1 (spd)	3 (tt)	21 (spd)	spd	1	2	5		spd
5	1	3	NL-FP (plgt/thuuuuuh…)	1	Pauses	3 (tt)	1 (spd)	17 (intp)	0	13				intp
5	1	4	NL-FP (ah)	1	Pauses	3 (tt)	3 (tt)	17 (intp)	tt	1	5			0
5	1	5	NL-FP (oh)	1	Pauses	15 (intp)	15 (intp)	15 (intp)	intp	1	6	15		intp
5	1	6	NL-FP (ah)	1	Pauses	24 (spd)	1 (spd)	7 (intp)	spd	1				spd
5	1	7	NL-FP (plgt/thuuuuuh…)	1	Pauses	24 (spd)	4 (spd)	17 (intp)	spd	4				spd
5	1	8	NL-FP (um)	1	Pauses	10 (intp)	10 (intp)	6 (intp)	intp	6				intp
5	1	9	UFP	3	Pauses	21 (spd)	19 (intp)	21 (spd)	spd	14				intp
5	1	10	UFP	3	Pauses	20 (intp)	20 (intp)	24 (spd)	intp	3	18	20		intp
5	1	11	NL-FP (ah)	1	Pauses	10 (intp)	2 (spd)	2 (spd)	spd	1	3			0
5	1	12	NL-FP (ah)	1	Pauses	1 (spd)	3 (tt)	7 (intp)	0	1	5	18	20	intp
5	1	13	UFP	3	Pauses	14 (intp)	7 (intp)	21 (spd)	intp	16				intp
5	1	14	NL-FP (อ๊a)	1	Pauses	15 (intp)	15 (intp)	15 (intp)	intp	12	18			intp
5	1	15	UFP	3	Pauses	1 (spd)	5 (tt)	7 (intp)	0	5	7			0
5	1	16	NL-FP (ah)	1	Pauses	3 (tt)	3 (tt)	1 (spd)	tt	1	2	3	5	0
5	1	17	NL-FP (plgt/theeeey..)	1	Pauses	3 (tt)	3 (tt)	1 (spd)	tt	1	2	3	5	0
5	1	18	NL-FP (ah)	1	Pauses	24 (spd)	1 (spd)	1 (spd)	spd	2	3			0
5	1	19	SREPT (phr)	4	Repetitions	14 (intp)	7 (intp)	7 (intp)	intp	20	23			0
5	1	20	UFP	3	Pauses	1 (spd)	6 (intp)	1 (spd)	spd	1	3	13		0
5	1	21	NL-FP (ah)	1	Pauses	1 (spd)	1 (spd)	1 (spd)	spd	1				spd
5	1	22	SREPR (rev)	6	Repairs	3 (tt)	3 (tt)	3 (tt)	tt	3	5			tt
5	1	23	UFP	3	Pauses	1 (spd)	1 (spd)	7 (intp)	spd	1	2	3	9	0
5	1	24	SREPR (inst)	6	Repairs	1 (spd)	1 (spd)	7 (intp)	spd	1	2	3	9	0
5	1	25	NL-FP (plgt/tooo…)	1	Pauses	1 (spd)	2 (spd)	17 (intp)	spd	1	3	9		tt
5	1	26	OREPT (s)	5	Repetitions	15 (intp)	14 (intp)	7 (intp)	intp	1	2	3	9	0
5	1	27	NL-FP (plgt/tooo…)	1	Pauses	1 (spd)	23 (tt)	1 (spd)	spd	1	9			0
5	1	28	NL-FP (plgt/studyyyy…)	1	Pauses	3 (tt)	3 (tt)	1 (spd)	tt	1				spd
5	1	29	SREPR (del)	6	Repairs	3 (tt)	3 (tt)	17 (intp)	tt	2	3	9		tt
5	1	30	SREPR (rev)	6	Repairs	2 (spd)	2 (spd)	21 (spd)	spd	2	3	9		tt

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						H1	H2	H3				
6	2	1	NL-FP (ah)	1	Pauses	23 (tt)	20 (intp)	17 (intp)	intp	24		spd
6	2	2	UFP	3	Pauses	23 (tt)	20 (intp)	17 (intp)	intp	24		spd
6	2	3	NL-FP (plgt/l…)	1	Pauses	24 (spd)	24 (spd)	17 (intp)	spd	14		intp
6	2	4	NL-FP (ah)	1	Pauses	14 (intp)	15 (intp)	1 (spd)	intp	20		intp
6	2	5	NL-FP (อ๋อ)	1	Pauses	1 (spd)	10 (intp)	7 (intp)	intp	2	3	0
6	2	6	NL-FP (plgt/l..…)	1	Pauses	1 (spd)	15 (intp)	17 (intp)	intp	14		intp
6	2	7	NL-FP (plgt/l..…)	1	Pauses	1 (spd)	3 (tt)	17 (intp)	0	14		intp
6	2	8	NL-FP (er...)	1	Pauses	1 (spd)	3 (tt)	1 (spd)	spd	2		spd
6	2	9	SREPT (w)	4	Repetitions	3 (tt)	3 (tt)	3 (tt)	tt	11		intp
6	2	10	UFP	3	Pauses	14 (intp)	1 (spd)	21 (spd)	spd	14		intp
6	2	11	UFP	3	Pauses	14 (intp)	14 (intp)	21 (spd)	intp	20		intp
6	2	12	NL-FP (plgt/l..…)	1	Pauses	1 (spd)	15 (intp)	7 (intp)	intp	15		intp
6	2	13	UFP	3	Pauses	21 (spd)	24 (spd)	21 (spd)	spd	14		intp
6	2	14	SREPR (rev/grammar)	6	Repairs	3 (tt)	3 (tt)	2 (spd)	tt	6		intp
6	2	15	NL-FP (ah)	1	Pauses	15 (intp)	15 (intp)	17 (intp)	intp	15		intp
6	2	16	NL-FP (plgt/l…)	1	Pauses	15 (intp)	15 (intp)	17 (intp)	intp	15		intp
6	2	17	NL-FP (plgt/froommm.…)	1	Pauses	1 (spd)	4 (spd)	17 (intp)	spd	14		intp
6	2	18	UFP + again please	3	Pauses	14 (intp)	23 (tt)	21 (spd)	0	14		intp
6	2	19	NL-FP (ah)	1	Pauses	3 (tt)	19 (intp)	21 (spd)	0	19		intp
6	2	20	NL-FP (um)	1	Pauses	1 (spd)	24 (spd)	5 (tt)	0	1		spd
6	2	21	NL-FP (ah)	1	Pauses	10 (intp)	2 (spd)	5 (tt)	0	13		intp
6	2	22	NL-FP (ah)	1	Pauses	15 (intp)	3 (tt)	7 (intp)	0	15		intp
6	2	23	SREPT (w)	4	Repetitions	3 (tt)	3 (tt)	2 (spd)	tt	16		intp
6	2	24	UFP	3	Pauses	14 (intp)	23 (tt)	21 (spd)	0	18		intp
6	2	25	NL-FP (อ๋อ)	1	Pauses	15 (intp)	15 (intp)	15 (intp)	intp	15		intp
6	2	26	SREPT (w)	4	Repetitions	3 (tt)	3 (tt)	3 (tt)	tt	2		spd
6	2	27	UFP	3	Pauses	21 (spd)	14 (intp)	7 (intp)	intp	9		tt
6	2	28	NL-FP (ah)	1	Pauses	14 (intp)	14 (intp)	7 (intp)	intp	19		intp
6	2	29	NL-FP (ah)	1	Pauses	14 (intp)	15 (intp)	2 (spd)	intp	14		intp
6	2	30	NL-FP (ah)	1	Pauses	1 (spd)	15 (intp)	5 (tt)	0	15		intp
6	2	31	NL-FP (others)	1	Pauses	1 (spd)	15 (intp)	5 (tt)	0	15		intp
6	2	32	NL-FP (ah)	1	Pauses	24 (spd)	10 (intp)	7 (intp)	intp	14		intp
6	2	33	NL-FP (plgt/my.…)	1	Pauses	1 (spd)	3 (tt)	2 (spd)	spd	5		tt
6	2	34	NL-FP (er...)	1	Pauses	2 (spd)	2 (spd)	1 (spd)	spd	14		intp
6	2	35	NL-FP (อืมมม…)	1	Pauses	3 (tt)	24 (spd)	5 (tt)	tt	5		tt
6	2	36	NL-FP (plgt/l..…)	1	Pauses	1 (spd)	2 (spd)	5 (tt)	spd	14		intp
6	2	37	NL-FP (ah)	1	Pauses	3 (tt)	3 (tt)	3 (tt)	tt	4		spd
6	2	38	NL-FP (ah)	1	Pauses	3 (tt)	3 (tt)	3 (tt)	tt	1	2	spd

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						H1	H2	H3							
7	2	1	NL-FP (ah)	1	Pauses	10 (intp)	10 (intp)	7 (intp)	intp	1					spd
7	2	2	UFP	3	Pauses	1 (spd)	3 (tt)	5 (tt)	tt	1	3				0
7	2	3	NL-FP (er)	1	Pauses	15 (intp)	3 (tt)	21 (spd)	intp	6					intp
7	2	4	UFP	3	Pauses	14 (intp)	7 (intp)	7 (intp)	intp	9	10				0
7	2	5	NL-FP (er)	1	Pauses	24 (spd)	15 (intp)	7 (intp)	intp	2	5	14			0
7	2	6	UFP	3	Pauses	14 (intp)	14 (intp)	14 (intp)	intp	1	7	9			0
7	2	7	NL-FP (er)	1	Pauses	24 (spd)	13 (intp)	1 (spd)	spd	15					intp
7	2	8	NL-FP (er)	1	Pauses	23 (tt)	14 (intp)	1 (spd)	0	1	2	3	18		spd
7	2	9	UFP	3	Pauses	2 (spd)	2 (spd)	2 (spd)	spd	8					intp
7	2	10	SREPT (w)	4	Repetitions	2 (spd)	2 (spd)	2 (spd)	spd	8					intp
7	2	11	NL-FP (ah)	1	Pauses	15 (intp)	3 (tt)	21 (spd)	0	7					intp
7	2	12	NL-FP (อ๊ะ)	1	Pauses	10 (intp)	11 (intp)	1 (spd)	intp	15					intp
7	2	13	UFP	3	Pauses	15 (intp)	11 (intp)	7 (intp)	intp	15					intp
7	2	14	UFP	3	Pauses	1 (spd)	14 (intp)	1 (spd)	spd	1	2				spd
7	2	15	UFP	3	Pauses	21 (spd)	7 (intp)	7 (intp)	intp	1	4				spd
7	2	16	NL-FP (er)	1	Pauses	24 (spd)	4 (spd)	4 (spd)	spd	1	4	5	7	8	0
7	2	17	UFP	3	Pauses	14 (intp)	14 (intp)	14 (intp)	intp	1	5	7			0
7	2	18	NL-FP (ah)	1	Pauses	14 (intp)	23 (tt)	7 (intp)	intp	7	8				intp
7	2	19	UFP	3	Pauses	18 (intp)	23 (tt)	14 (intp)	intp	7	8				intp
7	2	20	NL-FP (อ๊ะ)	1	Pauses	15 (intp)	15 (intp)	15 (intp)	intp	14	15	20			intp
7	2	21	NL-FP (uh)	1	Pauses	10 (intp)	10 (spd)	17 (intp)	intp	3	4				0
7	2	22	LFP (and)	2	Pauses	1 (spd)	3 (tt)	17 (intp)	0	3	5				tt
7	2	23	NL-FP (ah)	1	Pauses	3 (tt)	15 (intp)	24 (spd)	0	12					intp
7	2	24	NL-FP (ah)	1	Pauses	1 (spd)	21 (spd)	1 (spd)	spd	1	2	12			spd
7	2	25	SREPR (rev)	6	Repairs	1 (spd)	21 (spd)	2 (spd)	spd	1	2	12			spd
7	2	26	UFP	3	Pauses	3 (tt)	3 (tt)	1 (spd)	tt	2	3				0
7	2	27	NL-FP (ah)	1	Pauses	3 (tt)	3 (tt)	1 (spd)	tt	2	3				0
7	2	28	UFP	3	Pauses	1 (spd)	2 (spd)	2 (spd)	spd	11					intp
7	2	29	UFP	3	Pauses	24 (spd)	7 (intp)	7 (intp)	intp	10	11				intp
7	2	30	NL-FP (ah)	1	Pauses	24 (spd)	3 (tt)	2 (spd)	spd	1	3				0
7	2	31	UFP	3	Pauses	1 (spd)	3 (tt)	1 (spd)	spd	5	11				0
7	2	32	UFP	3	Pauses	1 (spd)	4 (spd)	4 (spd)	spd	3	4				0
7	2	33	UFP	3	Pauses	19 (intp)	7 (intp)	7 (intp)	intp	1	3	5			tt
7	2	34	NL-FP (er)	1	Pauses	19 (intp)	7 (intp)	7 (intp)	intp	1	3	5			tt

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						H1	H2	H3			
8	2	1	NL-FP (plgt/is.…)	1	Pauses	24 (spd)	24 (spd)	24 (spd)	spd	24	spd
8	2	2	NL-FP (uh)	1	Pauses	24 (spd)	24 (spd)	7 (intp)	spd	1	spd
8	2	3	NL-FP (ah)	1	Pauses	24 (spd)	24 (spd)	17 (intp)	spd	1	spd
8	2	4	NL-FP (ah)	1	Pauses	24 (spd)	7 (intp)	7 (intp)	intp	1	spd
8	2	5	NL-FP (ah)	1	Pauses	2 (spd)	3 (tt)	2 (spd)	spd	1	spd
8	2	6	NL-FP (eh)	1	Pauses	2 (spd)	3 (tt)	3 (tt)	tt	1	spd
8	2	7	NL-FP(plgt/I…)	1	Pauses	2 (spd)	3 (tt)	7 (intp)	0	1	spd
8	2	8	NL-FP (plgt/mother.…)	1	Pauses	1 (spd)	2 (spd)	17 (intp)	spd	21	spd
8	2	9	NL-FP (um)	1	Pauses	1 (spd)	24 (spd)	7 (intp)	spd	1	spd
8	2	10	NL-FP (plgt/I...)	1	Pauses	1 (spd)	7 (intp)	17 (intp)	intp	1	spd
8	2	11	NL-FP (um)	1	Pauses	24 (spd)	10 (intp)	7 (intp)	intp	1	spd
8	2	12	NL-FP (ah)	1	Pauses	24 (spd)	3 (tt)	3 (tt)	tt	1	spd
8	2	13	UFP	3	Pauses	5 (tt)	3 (tt)	3 (tt)	tt	1	spd
8	2	14	NL-FP (ah)	1	Pauses	1 (spd)	3 (tt)	2 (spd)	spd	21	spd
8	2	15	NL-FP (ah)	1	Pauses	24 (spd)	3 (tt)	1 (spd)	spd	21	spd
8	2	16	NL-FP (um)	1	Pauses	10 (intp)	10 (intp)	19 (intp)	intp	24	spd
8	2	17	NL-FP (ah)	1	Pauses	24 (spd)	2 (spd)	2 (spd)	spd	21	spd
8	2	18	NL-FP (ah)	1	Pauses	24 (spd)	24 (spd)	2 (spd)	spd	1	spd
8	2	19	NL-FP (um)	1	Pauses	24 (spd)	24 (spd)	7 (intp)	spd	1	spd
8	2	20	NL-FP(plgt/I…/in...)	1	Pauses	24 (spd)	24 (spd)	24 (spd)	spd	1	spd
8	2	21	NL-FP (ah)	1	Pauses	24 (spd)	24 (spd)	24 (spd)	spd	21	spd
8	2	22	NL-FP (ah)	1	Pauses	19 (intp)	14 (intp)	19 (intp)	intp	23	tt
8	2	23	OREPT(w)	5	Repetitions	19 (intp)	14 (intp)	19 (intp)	intp	23	tt
8	2	24	NL-FP (อ๊ะ)	1	Pauses	15 (intp)	15 (intp)	15 (intp)	intp	15	intp
8	2	25	NL-FP(ah)	1	Pauses	15 (intp)	15 (intp)	15 (intp)	intp	15	intp
8	2	26	NL-FP (um)	1	Pauses	24 (spd)	24 (spd)	17 (intp)	spd	1	spd
8	2	27	NL-FP (plgt/about.…)	1	Pauses	2 (spd)	3 (tt)	1 (spd)	spd	24	spd
8	2	28	NL-FP (eh)	1	Pauses	2 (spd)	3 (tt)	7 (intp)	0	24	spd
8	2	29	UFP	3	Pauses	2 (spd)	3 (tt)	1 (spd)	spd	24	spd
8	2	30	SREPT (w)	4	Repetitions	2 (spd)	3 (tt)	2 (spd)	spd	24	spd
8	2	31	UFP	3	Pauses	23 (tt)	7 (intp)	21 (spd)	0	24	spd
8	2	32	NL-FP (plgt/not sure.…)	1	Pauses	23 (tt)	23 (tt)	17 (intp)	tt	24	spd
8	2	33	NL-FP (plgt/am.…)	1	Pauses	23 (tt)	23 (tt)	7 (intp)	tt	24	spd
8	2	34	SREPT (w)	4	Repetitions	24 (spd)	3 (tt)	17 (intp)	0	21	spd
8	2	35	NL-FP (ah) repetiton of (ah)	1	Pauses	24 (spd)	3 (tt)	2 (spd)	spd	1	spd
8	2	36	NL-FP (plgt/mother.…)	1	Pauses	2 (spd)	2 (spd)	2 (spd)	spd	1	spd
8	2	37	NL-FP(ah)	1	Pauses	2 (spd)	3 (tt)	3 (tt)	tt	1	spd
8	2	38	SREPR(rev)	6	Repairs	2 (spd)	2 (spd)	2 (spd)	spd	1	spd
8	2	39	UFP	3	Pauses	24 (spd)	24 (spd)	17 (intp)	spd	24	spd
8	2	40	NL-FP (อืมมม…)	1	Pauses	24 (spd)	24 (spd)	17 (intp)	spd	24	spd
8	2	41	SREPT (w)	4	Repetitions	2 (spd)	24 (spd)	7 (intp)	spd	2	spd
8	2	42	LFP (like ka..)	2	Pauses	2 (spd)	5 (tt)	2 (spd)	spd	2	spd
8	2	43	UFP	3	Pauses	24 (spd)	14 (intp)	21 (spd)	spd	24	spd
8	2	44	NL-FP (ah)	1	Pauses	24 (spd)	23 (tt)	7 (intp)	0	21	tt
8	2	45	NL-FP (ah)	1	Pauses	1 (spd)	24 (spd)	17 (intp)	spd	1	spd

ID	Group	DF#	DF Forms	Sub-type Code	DF_Type	Hearers' Interpretations			Rep. of Hearers' Interpretations	Speakers' Intentions			Rep.of Intentions
						H1	H2	H3					
9	2	1	NL-FP (plgt/ammm.…)	1	Pauses	2 (spd)	2 (spd)	7 (intp)	spd	14	23		0
9	2	2	NL-FP (plgt/for.…)	1	Pauses	3 (tt)	24 (spd)	1 (spd)	spd	3	14		0
9	2	3	NL-FP (um)	1	Pauses	1 (spd)	2 (spd)	7 (intp)	spd	3	14		0
9	2	4	NL-FP(plgt/I…)	1	Pauses	3 (tt)	4 (spd)	4 (spd)	spd	1	14	23	0
9	2	5	UFP	3	Pauses	3 (tt)	1 (spd)	7 (intp)	0	1	14	23	0
9	2	6	UFP	3	Pauses	2 (spd)	2 (spd)	2 (spd)	spd	1			spd
9	2	7	SREPR (del)	6	Repairs	3 (tt)	3 (tt)	3 (tt)	tt	1			spd
9	2	8	LFP (like ah…)	2	Pauses	1 (spd)	23 (tt)	1 (spd)	spd	1			spd
9	2	9	UFP	3	Pauses	1 (spd)	4 (spd)	4 (spd)	spd	1			spd
9	2	10	SREPT (w)	4	Repetitions	1 (spd)	4 (spd)	4 (spd)	spd	1			spd
9	2	11	NL-FP (um)	1	Pauses	24 (spd)	4 (spd)	4 (spd)	spd	1			spd
9	2	12	NL-FP (um)	1	Pauses	1 (spd)	10 (intp)	7 (intp)	intp	23			tt
9	2	13	UFP	3	Pauses	1 (spd)	10 (intp)	21 (spd)	spd	23			tt
9	2	14	SREPT(w)	4	Repetitions	17 (intp)	10 (intp)	7 (intp)	intp	23			tt
9	2	15	UFP	3	Pauses	2 (spd)	14 (intp)	14 (intp)	intp	23			tt
9	2	16	NL-FP(plgt/my..)	1	Pauses	2 (spd)	14 (intp)	14 (intp)	intp	23			tt
9	2	17	SREPT(w)	4	Repetitions	2 (spd)	14 (intp)	14 (intp)	intp	23			tt
9	2	18	UFP	3	Pauses	2 (spd)	4 (spd)	24 (spd)	spd	1	14		0
9	2	19	NL-FP (um)	1	Pauses	10 (intp)	10 (intp)	7 (intp)	intp	1	22		spd
9	2	20	UFP	3	Pauses	10 (intp)	10 (intp)	7 (intp)	intp	1	22		spd
9	2	21	NL-FP (plgt/I...)	1	Pauses	1 (spd)	13 (intp)	17 (intp)	intp	14			intp
9	2	22	NL-FP (ah)	1	Pauses	24 (spd)	2 (spd)	7 (intp)	spd	1	3		0
9	2	23	NL-FP(plgt/I….)	1	Pauses	24 (spd)	3 (tt)	17 (intp)	0	1	3		0
9	2	24	OREPT(w)	5	Repetitions	14 (intp)	14 (intp)	14 (intp)	intp	14	23		0
9	2	25	NL-FP (um)	1	Pauses	10 (intp)	24 (spd)	2 (spd)	spd	1	3		0
9	2	26	SREPT (phr)	4	Repetitions	3 (tt)	3 (tt)	17 (intp)	tt	3			tt
9	2	27	UFP	3	Pauses	17 (intp)	23 (tt)	17 (intp)	intp	3	14		0
9	2	28	NL-FP(uh)	1	Pauses	17 (intp)	23 (tt)	17 (intp)	intp	3	14		0
9	2	29	UFP	3	Pauses	10 (intp)	1 (spd)	17 (intp)	intp	3			tt
9	2	30	UFP หุดขาดห้วงเป็นระยะ	3	Pauses	3 (tt)	3 (tt)	5 (tt)	tt	1	2		spd
9	2	31	NL-FP(plgt/is…)	1	Pauses	1 (spd)	2 (spd)	2 (spd)	spd	3			tt
9	2	32	UFP	3	Pauses	1 (spd)	2 (spd)	2 (spd)	spd	3			tt
9	2	33	SREPT (phr)	4	Repetitions	14 (intp)	14 (intp)	21 (spd)	intp	14			intp
9	2	34	UFP	3	Pauses	23 (tt)	21 (spd)	21 (spd)	spd	3			tt
9	2	35	NL-FP (plgt/was.…)	1	Pauses	3 (tt)	3 (tt)	17 (intp)	tt	3	14		0
9	2	36	UFP	3	Pauses	1 (spd)	23 (tt)	7 (intp)	0	1	3		0
9	2	37	SREPT (w)	4	Repetitions	1 (spd)	23 (tt)	17 (intp)	0	1	3		0
9	2	38	NL-FP (plgt/in.…)	1	Pauses	11 (intp)	3 (tt)	1 (spd)	0	1			spd
9	2	39	UFP	3	Pauses	11 (intp)	3 (tt)	2 (spd)	0	1			spd
9	2	40	NL-FP (plgt/by.…)	1	Pauses	1 (spd)	3 (tt)	7 (intp)	0	3			tt
9	2	41	UFP	3	Pauses	11 (intp)	10 (intp)	1 (spd)	intp	21			spd
9	2	42	SREPT (w)	4	Repetitions	3 (tt)	3 (tt)	7 (intp)	tt	14			intp
9	2	43	SREPR (del)	6	Repairs	2 (spd)	3 (tt)	3 (tt)	tt	3			tt
9	2	44	UFP	3	Pauses	11 (intp)	3 (tt)	2 (spd)	0	1			spd
9	2	45	SREPT (w)	4	Repetitions	2 (spd)	3 (tt)	2 (spd)	spd	21			spd
9	2	46	UFP	3	Pauses	2 (spd)	3 (tt)	2 (spd)	spd	21			spd
9	2	47	SREPT (w)	4	Repetitions	3 (tt)	7 (intp)	7 (intp)	intp	3			tt
9	2	48	UFP	3	Pauses	3 (tt)	23 (tt)	2 (spd)	tt	1			spd
9	2	49	SREPT (phr)	4	Repetitions	3 (tt)	23 (tt)	7 (intp)	tt	1			spd
9	2	50	UFP	3	Pauses	3 (tt)	3 (tt)	2 (spd)	tt	14			intp

ID	Group	DF#	DF Forms	Sub-type Code	DF_Type	Hearers' Interpretations			Rep. of Hearers' Interpretations	Speakers' Intentions		Rep.of Intentions
						H1	H2	H3				
10	2	1	NL-FP (ah)	1	Pauses	24 (spd)	8 (intp)	1 (spd)	spd	14		intp
10	2	2	NL-FP(or)..ah	1	Pauses	24 (spd)	10 (intp)	1 (spd)	spd	14		intp
10	2	3	NL-FP (um)	1	Pauses	24 (spd)	3 (tt)	1 (spd)	spd	18		intp
10	2	4	NL-FP (um)	1	Pauses	24 (spd)	24 (spd)	7 (intp)	spd	17		intp
10	2	5	NL-FP(อืมม)	1	Pauses	24 (spd)	24 (spd)	7 (intp)	spd	15		intp
10	2	6	NL-FP (ah)	1	Pauses	24 (spd)	24 (spd)	7 (intp)	spd	8		intp
10	2	7	NL-FP (ah)	1	Pauses	24 (spd)	24 (spd)	1 (spd)	spd	5		tt
10	2	8	NL-FP (ah)	1	Pauses	24 (spd)	24 (spd)	7 (intp)	spd	5		tt
10	2	9	NL-FP (um)	1	Pauses	3 (tt)	24 (spd)	1 (spd)	spd	3		tt
10	2	10	NL-FP (um)	1	Pauses	24 (spd)	10 (intp)	7 (intp)	intp	2		spd
10	2	11	NL-FP (ah)	1	Pauses	1 (spd)	4 (spd)	7 (intp)	spd	3		tt
10	2	12	NL-FP (ah)	1	Pauses	24 (spd)	24 (spd)	7 (intp)	spd	8		intp
10	2	13	NL-FP (ah)	1	Pauses	24 (spd)	1 (spd)	1 (spd)	spd	5		tt
10	2	14	NL-FP (ah)	1	Pauses	3 (tt)	2 (spd)	1 (spd)	spd	13		intp
10	2	15	NL-FP(อืมม)	1	Pauses	15 (intp)	10 (intp)	7 (intp)	intp	14		intp
10	2	16	NL-FP (um)	1	Pauses	1 (spd)	3 (tt)	1 (spd)	spd	21		spd
10	2	17	NL-FP (um)	1	Pauses	24 (spd)	24 (spd)	24 (spd)	spd	13		intp
10	2	18	NL-FP(ah)	1	Pauses	1 (spd)	4 (spd)	17 (intp)	spd	18		intp
10	2	19	LFP(and)	2	Pauses	2 (spd)	4 (spd)	17 (intp)	spd	18		intp
10	2	20	NL-FP (ah)	1	Pauses	3 (tt)	3 (tt)	1 (spd)	tt	21		tt
10	2	21	NL-FP(um)	1	Pauses	3 (tt)	10 (intp)	7 (intp)	intp	8		intp
10	2	22	UFP	3	Pauses	3 (tt)	10 (intp)	7 (intp)	intp	8		intp
10	2	23	NL-FP (ah)	1	Pauses	1 (spd)	4 (spd)	1 (spd)	spd	12		intp
10	2	24	NL-FP (ah)	1	Pauses	24 (spd)	4 (spd)	24 (spd)	spd	12		intp
10	2	25	NL-FP(อืมม)	1	Pauses	15 (intp)	10 (intp)	7 (intp)	intp	3		tt
10	2	26	NL-FP (ah)	1	Pauses	24 (spd)	10 (intp)	7 (intp)	intp	3		tt
10	2	27	NL-FP (ah)	1	Pauses	10 (intp)	3 (tt)	2 (spd)	0	1		spd
10	2	28	NL-FP (ah)	1	Pauses	24 (spd)	3 (tt)	1 (spd)	spd	2		spd
10	2	29	NL-FP(อืมม)	1	Pauses	14 (intp)	10 (intp)	7 (intp)	intp	7		intp
10	2	30	OREPT(phr)	5	Repetitions	15 (intp)	10 (intp)	17 (intp)	intp	7		intp
10	2	31	NL-FP(ah)	1	Pauses	1 (spd)	1 (spd)	2 (spd)	spd	5		tt
10	2	32	UFP	3	Pauses	1 (spd)	1 (spd)	17 (intp)	spd	5		tt
10	2	33	UFP+pardon	3	Pauses	14 (intp)	14 (intp)	1 (spd)	intp	17		intp
10	2	34	NL-FP(อืมม)	1	Pauses	11 (intp)	14 (intp)	2 (spd)	intp	19		intp
10	2	35	SREPT(syllable ex..explain)	4	Repetitions	11(intp)	14 (intp)	7 (intp)	intp	19		intp
10	2	36	OREPT(phr)	5	Repetitions	2 (spd)	14 (intp)	14 (intp)	intp	14		intp
10	2	37	NL-FP (ah)	1	Pauses	24 (spd)	10 (intp)	1 (spd)	spd	5		tt
10	2	38	NL-FP (ah)	1	Pauses	24 (spd)	10 (intp)	1 (spd)	spd	13		intp
10	2	39	NL-FP(อืมม)	1	Pauses	24 (spd)	10 (intp)	7 (intp)	intp	7		intp
10	2	40	NL-FP(plgt/to…)	1	Pauses	24 (spd)	10 (intp)	17 (intp)	intp	7		intp
10	2	41	NL-FP (ah)	1	Pauses	2 (spd)	1 (spd)	1 (spd)	spd	.1		spd
10	2	42	NL-FP (ah)	1	Pauses	24 (spd)	10 (intp)	1 (spd)	spd	1	4	spd
10	2	43	NL-FP (ah)	1	Pauses	2 (spd)	3 (tt)	2 (spd)	spd	5		tt
10	2	44	UFP+me?	3	Pauses	13 (intp)	7 (intp)	7 (intp)	intp	23		tt
10	2	45	NL-FP(อืมม)	1	Pauses	24 (spd)	10 (intp)	7 (intp)	intp	5		tt
10	2	46	NL-FP (ah)	1	Pauses	24 (spd)	6 (intp)	1 (spd)	spd	6		intp
10	2	47	NL-FP (ah)	1	Pauses	24 (spd)	24 (spd)	2 (spd)	spd	4		spd
10	2	48	NL-FP (ah)	1	Pauses	2 (spd)	3 (tt)	1 (spd)	spd	2		spd
10	2	49	NL-FP (ah)	1	Pauses	24 (spd)	3 (tt)	2 (spd)	spd	2		spd
10	2	50	NL-FP(อืมม)	1	Pauses	15 (intp)	10 (intp)	17 (intp)	intp	14		intp
10	2	51	NL-FP (ah)	1	Pauses	24 (spd)	10 (intp)	1 (spd)	spd	8		intp

ID	Group	DF#	DF Forms	Sub-type Code	DF_Type	Hearers' Interpretations			Rep. of Hearers' Interpretations	Speakers' Intentions				Rep.of Intentions
						H1	H2	H3						
11	2	1	NL-FP (ah)	1	Pauses	24 (spd)	24 (spd)	1 (spd)	spd	4	8			0
11	2	2	NL-FP (ah)	1	Pauses	24 (spd)	24 (spd)	7 (intp)	spd	21				spd
11	2	3	NL-FP (rept of ah)	1	Pauses	3 (tt)	3 (tt)	3 (tt)	tt	2	3			0
11	2	4	SREPR(rev)	6	Repairs	3 (tt)	3 (tt)	3 (tt)	tt	2	3			0
11	2	5	NL-FP (plgt/อืมม,…)	1	Pauses	3 (tt)	24 (spd)	1 (spd)	spd	3				tt
11	2	6	SREPR(inst)	6	Repairs	15 (intp)	24 (spd)	7 (intp)	intp	3				tt
11	2	7	NL-FP (ah) +again please	1	Pauses	23 (tt)	10 (intp)	17 (intp)	intp	14				intp
11	2	8	NL-FP (ah)	1	Pauses	24 (spd)	24 (spd)	2 (spd)	spd	11				intp
11	2	9	UFP	3	Pauses	3 (tt)	3 (tt)	2 (spd)	tt	21				spd
11	2	10	NL-FP (ah)	1	Pauses	3 (tt)	3 (tt)	3 (tt)	tt	3	22			0
11	2	11	SRPET(w)	4	Repetitions	3 (tt)	3 (tt)	3 (tt)	tt	3	22			0
11	2	12	SREPR(inst)	6	Repairs	3 (tt)	3 (tt)	3 (tt)	tt	3	22			0
11	2	13	NL-FP (um)	1	Pauses	10 (intp)	5 (tt)	1 (spd)	0	17				intp
11	2	14	UFP	3	Pauses	24 (spd)	24 (spd)	7 (intp)	spd	5	10			0
11	2	15	NL-FP (ah)	1	Pauses	24 (spd)	24 (spd)	17 (intp)	spd	5	10			0
11	2	16	NL-FP(mmmm..)	1	Pauses	1 (spd)	13 (intp)	4 (spd)	spd	4	5			0
11	2	17	NL-FP(อี?)	1	Pauses	20 (intp)	14 (intp)	19 (intp)	intp	14	23			0
11	2	18	OREPT(w)	5	Repetitions	14 (intp)	14 (intp)	14 (intp)	intp	23				tt
11	2	19	NL-FP (ah)	1	Pauses	10 (intp)	3 (tt)	1 (spd)	0	5				tt
11	2	20	UFP	3	Pauses	3 (tt)	5 (tt)	3 (tt)	tt	3				tt
11	2	21	SREPR(del)	6	Repairs	3 (tt)	5 (tt)	3 (tt)	tt	3				tt
11	2	22	NL-FP (ah)	1	Pauses	24 (spd)	24 (spd)	24 (spd)	spd	10	11			intp
11	2	23	NL-FP(plgt/in…)	1	Pauses	24 (spd)	24 (spd)	24 (spd)	spd	10	11			intp
11	2	24	UFP	3	Pauses	24 (spd)	24 (spd)	17 (intp)	spd	5	17			0
11	2	25	NL-FP(ah)	1	Pauses	24 (spd)	24 (spd)	17 (intp)	spd	5	17			0
11	2	26	NL-FP (ah)	1	Pauses	7 (intp)	23 (intp)	7 (intp)	intp	5				tt
11	2	27	SREPR(del)	6	Repairs	3 (tt)	23 (intp)	3 (tt)	tt	3				tt
11	2	28	NL-FP(plgt/you…)	1	Pauses	10 (intp)	23 (intp)	17 (intp)	intp	5				tt
11	2	29	NL-FP(plgt/to…)	1	Pauses	1 (spd)	23 (intp)	2 (spd)	spd	1				spd
11	2	30	NL-FP (ah)	1	Pauses	24 (spd)	24 (spd)	24 (spd)	spd	1	3	5		tt
11	2	31	UFP	3	Pauses	24 (spd)	24 (spd)	24 (spd)	spd	1	3	5		tt
11	2	32	NL-FP (ah)	1	Pauses	3 (tt)	24 (spd)	1 (spd)	spd	1	11			0
11	2	33	SREPT(w)	4	Repetitions	3 (tt)	24 (spd)	1 (spd)	spd	1	11			0
11	2	34	NL-FP (ah)	1	Pauses	1 (spd)	24 (spd)	24 (spd)	spd	1	3			0
11	2	35	UFP+again please	3	Pauses	14 (intp)	14 (intp)	21 (spd)	intp	14				intp
11	2	36	NL-FP (ah) +yes	1	Pauses	15 (intp)	15 (intp)	17 (intp)	intp	15	18			intp
11	2	37	NL-FP (ah)	1	Pauses	24 (spd)	24 (spd)	7 (intp)	spd	2				spd
11	2	38	UFP	3	Pauses	24 (spd)	24 (spd)	17 (intp)	spd	2				spd
11	2	39	NL-FP(plgt/in…)	1	Pauses	1 (spd)	24 (spd)	24 (spd)	spd	3	5			tt
11	2	40	NL-FP (ah)	1	Pauses	24 (spd)	24 (spd)	18 (intp)	spd	1	4	14		spd
11	2	41	NL-FP(OK)	1	Pauses	24 (spd)	24 (spd)	19 (intp)	spd	1	4	14		spd
11	2	42	NL-FP (ah)	1	Pauses	1 (spd)	14 (intp)	18 (intp)	intp	1	4	5		spd
11	2	43	UFP	3	Pauses	3 (tt)	14 (intp)	7 (intp)	intp	1	4	5		spd
11	2	44	NL-FP (ah)	1	Pauses	24 (spd)	3 (tt)	24 (spd)	spd	2				spd
11	2	45	UFP	3	Pauses	20 (intp)	14 (intp)	19 (intp)	intp	14				intp
11	2	46	NL-FP (ah)	1	Pauses	3 (tt)	5 (tt)	3 (tt)	tt	2	3			0
11	2	47	UFP	3	Pauses	3 (tt)	5 (tt)	3 (tt)	tt	2	3			0
11	2	48	SREPR(del)	6	Repairs	3 (tt)	5 (tt)	3 (tt)	tt	2	3			0
11	2	49	OREPT(w)	5	Repetitions	14 (intp)	14 (intp)	19 (intp)	intp	14	19	22		intp
11	2	50	NL-FP(ah)	1	Pauses	14 (intp)	14 (intp)	19 (intp)	intp	14	19	22		intp
11	2	51	NL-FP(อ่อ)	1	Pauses	15 (intp)	15 (intp)	15 (intp)	intp	15				intp
11	2	52	NL-FP (ah)	1	Pauses	10 (intp)	7 (intp)	18 (intp)	intp	1	5			0
11	2	53	NL-FP(um)	1	Pauses	24 (spd)	24 (spd)	18 (intp)	spd	4				spd
11	2	54	SREPT(w)	4	Repetitions	1 (spd)	16 (intp)	2 (spd)	spd	4	5			0
11	2	55	UFP	3	Pauses	3 (tt)	3 (tt)	3 (tt)	tt	5				tt
11	2	56	NL-FP(plgt/I…)	1	Pauses	1 (spd)	8 (intp)	7 (intp)	intp	8	10			intp
11	2	57	NL-FP(ah)	1	Pauses	1 (spd)	8 (intp)	18 (intp)	intp	8	10			intp
11	2	58	SREPR(rev)	6	Repairs	3 (tt)	3 (tt)	3 (tt)	tt	3				tt
11	2	59	NL-FP(อืม)	1	Pauses	24 (spd)	10 (intp)	7 (intp)	intp	5				tt
11	2	60	NL-FP (ah)	1	Pauses	24 (spd)	24 (spd)	7 (intp)	spd	7				intp
11	2	61	SREPT(w)	4	Repetitions	1 (spd)	3 (tt)	3 (tt)	tt	1	3			0
11	2	62	NL-FP(ah)	1	Pauses	1 (spd)	3 (tt)	3 (tt)	tt	1	3			0
11	2	63	SREPR(rev)	6	Repairs	2 (spd)	2 (spd)	2 (spd)	spd	3				tt
11	2	64	NL-FP(plgt/to…)	1	Pauses	1 (spd)	3 (tt)	1 (spd)	spd	1				spd
11	2	65	NL-FP (ah)	1	Pauses	2 (spd)	3 (tt)	2 (spd)	spd	1				spd
11	2	66	SREPT(phr)	4	Repetitions	3 (tt)	5 (tt)	3 (tt)	tt	5				tt
11	2	67	SREPT(w)	4	Repetitions	3 (tt)	17 (intp)	3 (tt)	tt	3	5			tt
11	2	68	NL-FP (ah)	1	Pauses	10 (intp)	24 (spd)	18 (intp)	intp	1	5			0
11	2	69	NL-FP(plgt/I…)	1	Pauses	3 (tt)	23 (tt)	3 (tt)	tt	1	4			spd
11	2	70	SREPT(w)	4	Repetitions	3 (tt)	23 (tt)	3 (tt)	tt	1	4			spd
11	2	71	NL-FP(plgt/do…)	1	Pauses	1 (spd)	23 (tt)	18 (intp)	0	1				spd
11	2	72	NL-FP (ah)	1	Pauses	3 (tt)	3 (tt)	18 (intp)	tt	4				spd
11	2	73	SREPR(inst)	6	Repairs	3 (tt)	3 (tt)	3 (tt)	tt	1	2	3		spd
11	2	74	SREPR(inst)	6	Repairs	2 (spd)	23 (tt)	2 (spd)	spd	2	3			0
11	2	75	NL-FP (ah)	1	Pauses	3 (tt)	3 (tt)	3 (tt)	tt	4				spd
11	2	76	SREPT(w)	4	Repetitions	3 (tt)	3 (tt)	3 (tt)	tt	4				spd
11	2	77	NL-FP (ah)	1	Pauses	24 (spd)	3 (tt)	18 (intp)	0	3				tt

ID	Group	DF#	DF Forms	Sub-type Code	DF_Type	Hearers' Interpretations			Rep. of Hearers' Interpretations	Speakers' Intentions					Rep.of Intentions
						H1	H2	H3							
12	2	1	NL-FP(eh)	1	Pauses	15 (intp)	10 (intp)	7 (intp)	intp	15					intp
12	2	2	NL-FP(ah)	1	Pauses	10 (intp)	10 (intp)	1 (spd)	intp	1					spd
12	2	3	NL-FP(ah)	1	Pauses	24 (spd)	24 (spd)	1 (spd)	spd	14					intp
12	2	4	UFP+pardon	3	Pauses	14 (intp)	14 (intp)	7 (intp)	intp	14					intp
12	2	5	NL-FP(ah)	1	Pauses	15 (intp)	15 (intp)	7 (intp)	intp	1					spd
12	2	6	NL-FP(อืมม)	1	Pauses	3 (tt)	24 (spd)	1 (spd)	spd	1					spd
12	2	7	NL-FP(ah)	1	Pauses	3 (tt)	8 (intp)	8 (intp)	intp	5					tt
12	2	8	NL-FP(ah)	1	Pauses	1 (spd)	3 (tt)	1 (spd)	spd	4	5				0
12	2	9	NL-FP(plgt/to···)	1	Pauses	3 (tt)	3 (tt)	3 (tt)	tt	4					spd
12	2	10	SREPT(w)	4	Repetitions	3 (tt)	3 (tt)	3 (tt)	tt	4					spd
12	2	11	SREPR(del)	6	Repairs	3 (tt)	3 (tt)	3 (tt)	tt	2	3	5			tt
12	2	12	NL-FP(ah)	1	Pauses	3 (tt)	1 (spd)	1 (spd)	spd	2	3	5	7		tt
12	2	13	SREPT(w)	4	Repetitions	3 (tt)	3 (tt)	3 (tt)	tt	1	2	3	7	9	0
12	2	14	SREPR(rev)	6	Repairs	3 (tt)	3 (tt)	3 (tt)	tt	1	2	3	7	9	0
12	2	15	NL-FP(ah)	1	Pauses	24 (spd)	10 (intp)	7 (intp)	intp	1	2	4	7		spd
12	2	16	NL-FP(plgt/thuuhh..)	1	Pauses	3 (tt)	10 (intp)	3 (tt)	tt	1	2				spd
12	2	17	UFP	3	Pauses	3 (tt)	24 (spd)	3 (tt)	tt	1	2				spd
12	2	18	SREPT(w)	4	Repetitions	3 (tt)	10 (intp)	3 (tt)	tt	1	2				spd
12	2	19	NL-FP(ah..ah)	1	Pauses	1 (spd)	3 (tt)	7 (intp)	0	1					spd
12	2	20	NL-FP(ah)	1	Pauses	3 (tt)	3 (tt)	3 (tt)	tt	1	2	3			spd
12	2	21	SREPR(inst)	6	Repairs	13 (intp)	13 (intp)	3 (tt)	intp	1	2	3			spd
12	2	22	NL-FP(ah)	1	Pauses	2 (spd)	3 (tt)	2 (spd)	spd	4	2	5			spd
12	2	23	NL-FP(plgt/shee···)	1	Pauses	2 (spd)	3 (tt)	2 (spd)	spd	4	2	5			spd
12	2	24	NL-FP(ah)	1	Pauses	1 (spd)	4 (spd)	4 (spd)	spd	4	5				0
12	2	25	SREPT(w)	4	Repetitions	1 (spd)	4 (spd)	4 (spd)	spd	4	5				0
12	2	26	NL-FP(ah)	1	Pauses	3 (tt)	3 (tt)	7 (intp)	tt	4	2				spd
12	2	27	SREPR(del)	6	Repairs	3 (tt)	3 (tt)	3 (tt)	tt	5					tt
12	2	28	NL-FP(um)	1	Pauses	2 (spd)	24 (spd)	1 (spd)	spd	3	5				tt
12	2	29	NL-FP(plgt/shee..)	1	Pauses	2 (spd)	24 (spd)	3 (tt)	spd	3	5				tt
12	2	30	NL-FP(ah)	1	Pauses	24 (spd)	14 (intp)	17 (intp)	intp	14					intp
12	2	31	SREPT(w)	4	Repetitions	3 (tt)	3 (tt)	7 (intp)	tt	1					spd
12	2	32	NL-FP(ah)	1	Pauses	24 (spd)	5 (tt)	24 (spd)	spd	17					intp
12	2	33	NL-FP(ah)	1	Pauses	3 (tt)	3 (tt)	3 (tt)	tt	17					intp
12	2	34	SREPR(rev)	6	Repairs	3 (tt)	3 (tt)	3 (tt)	tt	17					intp
12	2	35	NL-FP(ah)	1	Pauses	3 (tt)	3 (tt)	3 (tt)	tt	1					spd
12	2	36	SREPT(phr)	4	Repetitions	3 (tt)	14 (intp)	7 (intp)	intp	5					tt
12	2	37	NL-FP(ah)	1	Pauses	2 (spd)	2 (spd)	1 (spd)	spd	17					intp
12	2	38	NL-FP(ah)	1	Pauses	24 (spd)	15 (intp)	7 (intp)	intp	14	15				0
12	2	39	NL-FP(ah)	1	Pauses	1 (spd)	3 (tt)	1 (spd)	spd	1					spd
12	2	40	NL-FP(um)	1	Pauses	1 (spd)	3 (tt)	1 (spd)	spd	1					spd
12	2	41	NL-FP(ah)	1	Pauses	1 (spd)	3 (tt)	4 (spd)	spd	1	5				0
12	2	42	LFP(like..ah)	2	Pauses	1 (spd)	3 (tt)	4 (spd)	spd	1	5				0
12	2	43	SREPT(w)	4	Repetitions	1 (spd)	3 (tt)	4 (spd)	spd	1	5				0
12	2	44	NL-FP(ah)	1	Pauses	24 (spd)	3 (tt)	7 (intp)	0	15					intp
12	2	45	NL-FP(ah)	1	Pauses	1 (spd)	5 (tt)	7 (intp)	0	1					spd
12	2	46	NL-FP(อืมม)	1	Pauses	1 (spd)	3 (tt)	2 (spd)	spd	2					spd
12	2	47	LFP(like..ah)	2	Pauses	1 (spd)	3 (tt)	2 (spd)	spd	2					spd
12	2	48	SREPT(w)	4	Repetitions	3 (tt)	3 (tt)	3 (tt)	tt	4					spd
12	2	49	NL-FP(ah)	1	Pauses	24 (spd)	3 (tt)	2 (spd)	spd	1					spd
12	2	50	OREPT(w)	5	Repetitions	9 (tt)	9 (tt)	9 (tt)	tt	14					intp
12	2	51	NL-FP(plgt/I···)	1	Pauses	3 (tt)	7 (intp)	9 (tt)	tt	14					intp
12	2	52	UFP	3	Pauses	3 (tt)	10 (intp)	17 (intp)	intp	14					intp
12	2	53	NL-FP(ah)	1	Pauses	24 (spd)	9 (tt)	2 (spd)	spd	14	20				intp
12	2	54	UFP	3	Pauses	14 (intp)	14 (intp)	2 (spd)	intp	15					intp
12	2	55	NL-FP(ah)	1	Pauses	24 (spd)	24 (spd)	2 (spd)	spd	1					spd
12	2	56	NL-FP(plgt/teacher···)	1	Pauses	1 (spd)	3 (tt)	1 (spd)	spd	13					intp
12	2	57	UFP	3	Pauses	3 (tt)	3 (tt)	3 (tt)	tt	3					tt
12	2	58	NL-FP(ah)	1	Pauses	3 (tt)	3 (tt)	3 (tt)	tt	3					tt
12	2	58	SREPR(rev)	6	Repairs	3 (tt)	3 (tt)	3 (tt)	tt	3					tt
12	2	60	NL-FP(ah)	1	Pauses	14 (intp)	14 (intp)	7 (intp)	intp	14					intp
12	2	61	OREPT(phr)···my grades..	5	Repetitions	14 (intp)	14 (intp)	7 (intp)	intp	14					intp
12	2	62	NL-FP(อืมม)	1	Pauses	24 (spd)	24 (spd)	7 (intp)	spd	15					intp
12	2	63	NL-FP(อืมม)	1	Pauses	15 (intp)	10 (intp)	2 (spd)	intp	2					spd
12	2	64	NL-FP(อืมม)	1	Pauses	1 (spd)	24 (spd)	3 (tt)	spd	1					spd
12	2	65	SREPR(del)	6	Repairs	1 (spd)	24 (spd)	3 (tt)	spd	1					spd
12	2	66	UFP+pardon	3	Pauses	23 (tt)	14 (intp)	7 (intp)	intp	14					intp
12	2	67	UFP	3	Pauses	14 (intp)	14 (intp)	17 (intp)	intp	2					spd
12	2	68	NL-FP(ah)	1	Pauses	14 (intp)	14 (intp)	7 (intp)	intp	2					spd
12	2	69	NL-FP(ah)	1	Pauses	24 (spd)	24 (spd)	3 (tt)	spd	4					spd
12	2	70	NL-FP(อืมม)	1	Pauses	3 (tt)	3 (tt)	3 (tt)	tt	2					spd
12	2	71	SREPT(w)	4	Repetitions	3 (tt)	3 (tt)	3 (tt)	tt	2					spd
12	2	72	SREPR(inst)	6	Repairs	3 (tt)	3 (tt)	3 (tt)	tt	2					spd
12	2	73	UFP	3	Pauses	2 (spd)	3 (tt)	17 (intp)	0	4					spd
12	2	74	NL-FP(ah)	1	Pauses	2 (spd)	3 (tt)	17 (intp)	0	4					spd
12	2	75	NL-FP(อืมม)	1	Pauses	24 (spd)	24 (spd)	7 (intp)	spd	15					intp
12	2	76	NL-FP(ah)	1	Pauses	24 (spd)	24 (spd)	2 (spd)	spd	1					spd
12	2	77	NL-FP(plgt/is···)	1	Pauses	2 (spd)	2 (spd)	17 (intp)	spd	2					spd
12	2	78	SREPR(del)	6	Repairs	2 (spd)	2 (spd)	17 (intp)	spd	2					spd
12	2	79	SREPR(inst)	6	Repairs	3 (tt)	3 (tt)	3 (tt)	tt	3					tt
12	2	80	SREPT(w)	4	Repetitions	3 (tt)	3 (tt)	3 (tt)	tt	1					spd
12	2	81	NL-FP(ah)	1	Pauses	3 (tt)	3 (tt)	3 (tt)	tt	7					intp
12	2	82	SREPT(w)	4	Repetitions	3 (tt)	3 (tt)	3 (tt)	tt	7					intp
12	2	83	NL-FP(ah)	1	Pauses	3 (tt)	3 (tt)	3 (tt)	tt	1					spd
12	2	84	SREPT(w)	4	Repetitions	3 (tt)	3 (tt)	3 (tt)	tt	1					spd
12	2	85	NL-FP(ah)	1	Pauses	3 (tt)	13 (intp)	2 (spd)	0	2					spd
12	2	86	NL-FP(ah)	1	Pauses	3 (tt)	2 (spd)	2 (spd)	spd	12					intp
12	2	87	NL-FP(plgt/to..)	1	Pauses	3 (tt)	1 (spd)	1 (spd)	spd	12					intp
12	2	88	SREPT(w)	4	Repetitions	3 (tt)	3 (tt)	2 (spd)	tt	12					intp
12	2	89	LFP(like)	2	Pauses	3 (tt)	1 (spd)	1 (spd)	spd	3					tt
12	2	90	SREPR(del)	6	Repairs	3 (tt)	3 (tt)	3 (tt)	tt	3					tt
12	2	91	SREPT(phr)	4	Repetitions	3 (tt)	3 (tt)	7 (intp)	tt	2	5				0
12	2	92	NL-FP(ah)	1	Pauses	1 (spd)	3 (tt)	1 (spd)	spd	7					intp
12	2	93	NL-FP(plgt/thuuh..)	1	Pauses	24 (spd)	3 (tt)	17 (intp)	0	3					tt
12	2	94	NL-FP(um)	1	Pauses	24 (spd)	10 (intp)	2 (spd)	spd	7					intp
12	2	95	LFP(like..ah)	2	Pauses	24 (spd)	10 (intp)	1 (spd)	spd	7					intp
12	2	96	SREPR(rev)..she..uh..he	6	Repairs	2 (spd)	3 (tt)	2 (spd)	spd	3					tt
12	2	97	NL-FP(ah)	1	Pauses	1 (spd)	3 (tt)	1 (spd)	spd	1					spd
12	2	98	UFP	3	Pauses	23 (spd)	23 (spd)	17 (intp)	spd	14					intp
12	2	99	SREPT(inst)	4	Repetitions	14 (intp)	14 (intp)	7 (intp)	intp	14					intp
12	2	100	NL-FP(อือ)	1	Pauses	15 (intp)	15 (intp)	15 (intp)	intp	15					intp
12	2	101	UFP	3	Pauses	3 (tt)	3 (tt)	2 (spd)	tt	5					tt
12	2	102	NL-FP(ah)	1	Pauses	3 (tt)	3 (tt)	1 (spd)	tt	5					tt
12	2	103	NL-FP(ah)	1	Pauses	3 (tt)	3 (tt)	7 (intp)	tt	5					tt
12	2	104	NL-FP(plgt/to...)	1	Pauses	3 (tt)	3 (tt)	2 (spd)	tt	5					tt
12	2	105	NL-FP(ah)	1	Pauses	24 (spd)	3 (tt)	7 (intp)	0	7					intp
12	2	106	SREPT(w)	4	Repetitions	24 (spd)	3 (tt)	2 (spd)	spd	7					intp
12	2	107	SREPT(w)	4	Repetitions	3 (tt)	3 (tt)	1 (spd)	tt	5					tt
12	2	108	NL-FP(ah)	1	Pauses	24 (spd)	3 (tt)	1 (spd)	spd	5					tt

ID	Group	DF#	DF Forms	Sub-type Code	DF_Type	Hearers' Interpretations			Rep. of Hearers'	Speakers' Intentions		Rep.of Intentions
						H1	H2	H3	Interpretations			
13	2	1	NL-FP(um)	1	Pauses	24 (spd)	8 (intp)	2 (spd)	spd	2	9	spd
13	2	2	SREPT(phr)	4	Repetitions	3 (tt)	6 (intp)	3 (tt)	tt	6		intp
13	2	3	NL-FP(ah)... I,I,I think…	1	Pauses	3 (tt)	14 (intp)	3 (tt)	tt	6		intp
13	2	4	NL-FP(ah)	1	Pauses	24 (spd)	10 (intp)	2 (spd)	spd	6		intp
13	2	5	NL-FP(um)	1	Pauses	24 (spd)	3 (tt)	7 (intp)	0	3		tt
13	2	6	NL-FP(um)	1	Pauses	10 (intp)	7 (intp)	7 (intp)	intp	10		intp
13	2	7	NL-FP(ah) ah... faculty	1	Pauses	3 (tt)	1 (spd)	3 (tt)	tt	2		spd
13	2	8	NL-FP(ah) +education	1	Pauses	3 (tt)	2 (spd)	1 (spd)	spd	1		spd
13	2	9	NL-FP(อืมมม)	1	Pauses	24 (spd)	24 (spd)	17 (intp)	spd	12		intp
13	2	10	UFP	3	Pauses	3 (tt)	2 (spd)	2 (spd)	spd	3		tt
13	2	11	NL-FP(ah) I've been…ah…	1	Pauses	3 (tt)	2 (spd)	2 (spd)	spd	3		tt
13	2	12	UFP+ pardon	3	Pauses	14 (intp)	14 (intp)	21 (spd)	intp	14	19	intp
13	2	13	SREPT(w) (I,I think…)	4	Repetitions	10 (intp)	13 (intp)	2 (spd)	intp	5		tt
13	2	14	NL-FP(ah)	1	Pauses	24 (spd)	1 (spd)	1 (spd)	spd	3		tt
13	2	15	NL-FP (um) +…my teacher	1	Pauses	10 (intp)	3 (tt)	17 (intp)	intp	3		tt
13	2	16	NL-FP(ah) her name is…ah…	1	Pauses	6 (intp)	4 (spd)	2 (spd)	spd	1		spd
13	2	17	UFP	3	Pauses	24 (spd)	24 (spd)	24 (spd)	spd	5		tt
13	2	18	NL-FP(ah)	1	Pauses	24 (spd)	24 (spd)	24 (spd)	spd	5		tt
13	2	19	UFP	3	Pauses	23 (tt)	14 (intp)	7 (intp)	intp	14		intp
13	2	20	NL-FP(um)	1	Pauses	23 (tt)	14 (intp)	7 (intp)	intp	14		intp
13	2	21	SREPT(w) (in, in. in…)	4	Repetitions	2 (spd)	5 (tt)	3 (tt)	tt	14		intp
13	2	22	UFP (I think…+silence)	3	Pauses	24 (spd)	3 (tt)	1 (spd)	spd	5		tt
13	2	23	SREPT (culture, culture) w	4	Repetitions	3 (tt)	1 (spd)	1 (spd)	spd	13		intp
13	2	24	NL-FP(um)	1	Pauses	3 (tt)	1 (spd)	1 (spd)	spd	13		intp
13	2	25	SREPT(w) I, I, saw…	4	Repetitions	3 (tt)	3 (tt)	3 (tt)	tt	23		tt
13	2	26	NL-FP(ah)	1	Pauses	3 (tt)	3 (tt)	2 (spd)	tt	1		spd
13	2	27	NL-FP(plgt) say….	1	Pauses	3 (tt)	3 (tt)	17 (intp)	tt	1		spd
13	2	28	SREPT(w)(and, and)	4	Repetitions	10 (intp)	3 (tt)	5 (tt)	tt	1		spd
13	2	29	NL-FP(ah)	1	Pauses	10 (intp)	23 (tt)	2 (spd)	0	1		spd
13	2	30	LFP(like)	2	Pauses	1 (spd)	23 (tt)	17 (intp)	0	1		spd
13	2	31	NL-FP(uh)	1	Pauses	1 (spd)	23 (tt)	17 (intp)	0	1		spd
13	2	32	SREPT(phr) I can, I can + laughte	4	Repetitions	14 (intp)	4 (spd)	2 (spd)	spd	11		intp
13	2	33	NL-FP(um)	1	Pauses	24 (spd)	24 (spd)	7 (intp)	spd	1	3	0
13	2	34	UFP	3	Pauses	24 (spd)	24 (spd)	7 (intp)	spd	1	3	0
13	2	35	SREPT(w) (I,I stay)	4	Repetitions	3 (tt)	3 (tt)	3 (tt)	tt	5		tt
13	2	36	NL-FP(ah) at...ah….	1	Pauses	10 (intp)	4 (spd)	24 (spd)	spd	1		spd
13	2	37	NL-FP(um) about...um…	1	Pauses	10 (intp)	24 (spd)	1 (spd)	spd	5		tt
13	2	38	NL-FP(um) +by…	1	Pauses	24 (spd)	7 (intp)	7 (intp)	intp	21		spd
13	2	39	UFP (silence…motocycle)	3	Pauses	24 (spd)	7 (intp)	7 (intp)	intp	21		spd
13	2	40	SREP(rev) very. very, it's very…	6	Repairs	3 (tt)	2 (spd)	3 (tt)	tt	9		tt
13	2	41	SREP(rev) it's have ah/it's has ah	6	Repairs	3 (tt)	3 (tt)	3 (tt)	tt	1		spd
13	2	42	NL-FP(um)	1	Pauses	15 (intp)	14 (intp)	7 (intp)	intp	14		intp
13	2	43	SREPT(phr) about my my family	4	Repetitions	15 (intp)	14 (intp)	7 (intp)	intp	14		intp
13	2	44	NL-FP(uh)	1	Pauses	24 (spd)	7 (intp)	17 (intp)	intp	5		tt
13	2	45	NL-FP(ah)	1	Pauses	10 (intp)	7 (intp)	7 (intp)	intp	5		tt
13	2	46	UFP(I'm…silence…very pround..of	3	Pauses	24 (spd)	7 (intp)	2 (spd)	spd	17		intp
13	2	47	NL-FP(อืมมม)	1	Pauses	24 (spd)	24 (spd)	17 (intp)	spd	5	9	tt
13	2	48	UFP(because….)	3	Pauses	1 (spd)	3 (tt)	2 (spd)	spd	5		tt
13	2	49	NL-FP(ah)	1	Pauses	3 (tt)	3 (tt)	3 (tt)	tt	3		tt
13	2	50	SREP(rev)	6	Repairs	2 (spd)	3 (tt)	2 (spd)	spd	2		spd
13	2	51	NL-FP(ah) ...ah…lovely friends	1	Pauses	1 (spd)	3 (tt)	1 (spd)	spd	5		tt
13	2	52	NL-FP(uh)	1	Pauses	24 (spd)	6 (intp)	17 (intp)	intp	13		intp
13	2	53	UFP(it's….)	3	Pauses	24 (spd)	7 (intp)	7 (intp)	intp	2		spd
13	2	54	NL-FP(ah)	1	Pauses	24 (spd)	24 (spd)	2 (spd)	spd	5		tt
13	2	55	SREPT(phr) I,I get three point eig	4	Repetitions	24 (spd)	24 (spd)	3 (tt)	spd	5		tt
13	2	56	SREPT(w) eight, eighty-four	4	Repetitions	1 (spd)	24 (spd)	1 (spd)	spd	3		tt
13	2	57	SREP(rev)	6	Repairs	1 (spd)	24 (spd)	1 (spd)	spd	3		tt
13	2	58	UFP(silence+pardon)	3	Pauses	22 (spd)	20 (intp)	20 (intp)	intp	19		intp
13	2	59	NL-FP(อืมมม)	1	Pauses	14 (intp)	20 (intp)	17 (intp)	intp	19		intp
13	2	60	SRERT(w) I, I don' t…	4	Repetitions	14 (iotp)	20 (intp)	17 (intp)	intp	19		intp
13	2	61	NL-FP(อ๋อ)	1	Pauses	15 (intp)	15 (intp)	17 (intp)	intp	5		tt
13	2	62	SREPT(phr) I think, I think	4	Repetitions	10 (intp)	3 (tt)	7 (intp)	intp	5		tt
13	2	63	NL-FP(อืมมม)	1	Pauses	24 (spd)	24 (spd)	2 (spd)	spd	5		tt
13	2	64	SREPT(w) I, I want to be..	4	Repetitions	24 (spd)	24 (spd)	17 (intp)	spd	5		tt
13	2	65	NL-FP(um)	1	Pauses	24 (spd)	2 (spd)	17 (intp)	spd	5		tt
13	2	66	SREP(del) in…soldier	6	Repairs	1 (spd)	2 (spd)	2 (spd)	spd	1		spd
13	2	67	SREPT(w) soldier English teacher	4	Repetitions	1 (spd)	2 (spd)	1 (spd)	spd	1		spd
13	2	68	SREPT(w) I,I like, I like, I like	4	Repetitions	3 (tt)	3 (tt)	3 (tt)	tt	1		spd
13	2	69	NL-FP(ah) ..ab..soldier	1	Pauses	13 (intp)	3 (tt)	3 (tt)	tt	1		spd
13	2	70	NL-FP(plgt) I like to beee….ah…t	1	Pauses	24 (spd)	3 (tt)	3 (tt)	tt	12		intp
13	2	71	NL-FP(plgt) twooo….carreers	1	Pauses	1 (spd)	1 (spd)	4 (spd)	spd	1		spd
13	2	72	UFP	3	Pauses	1 (spd)	2 (spd)	7 (intp)	spd	1		spd
13	2	73	SREPT(w) my, my parents	4	Repetitions	1 (spd)	2 (spd)	7 (intp)	spd	1		spd
13	2	74	SREPT(phr) it's, it's ah…	4	Repetitions	15 (intp)	3 (tt)	7 (intp)	intp	1		spd
13	2	75	NL-FP(ah) +	1	Pauses	15 (intp)	3 (tt)	17 (intp)	intp	1		spd
13	2	76	SREP(del) they are my heros	6	Repairs	15 (intp)	3 (tt)	7 (intp)	intp	1		spd
13	2	77	NL-FP(uh)	1	Pauses	24 (spd)	3 (tt)	3 (tt)	tt	5		tt
13	2	78	NL-FP(uh)	1	Pauses	24 (spd)	2 (spd)	2 (spd)	spd	5		tt
13	2	79	SREP(rev) I born, I was born	6	Repairs	24 (spd)	3 (tt)	3 (tt)	tt	9		tt
13	2	80	LFP (and….)	2	Pauses	24 (spd)	1 (spd)	7 (intp)	spd	5		tt
13	2	81	SREPT(phr) they, they, taught, th	4	Repetitions	10 (intp)	1 (spd)	5 (tt)	0	1	18	0
13	2	82	NL-FP(ah) ..ah…about	1	Pauses	24 (spd)	1 (spd)	2 (spd)	spd	1		spd
13	2	83	NL-FP(ah)	1	Pauses	13 (intp)	3 (tt)	3 (tt)	tt	1		spd
13	2	84	SREP(del)	6	Repairs	13 (intp)	2 (spd)	2 (spd)	spd	1		spd
13	2	85	UFP	3	Pauses	22(spd)	14 (intp)	7 (intp)	intp	5		tt
13	2	86	SREPT(w) I, I think its' the same	4	Repetitions	22(spd)	14 (intp)	2 (spd)	spd	5		tt

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14	2	1	NL-FP(ah)	1	Pauses	24 (spd)	24 (spd)	17 (intp)	spd	21			spd
14	2	2	UFP+pardon	3	Pauses	24 (spd)	24 (spd)	7 (intp)	spd	14			intp
14	2	3	NL-FP(ah)	1	Pauses	15 (intp)	15 (intp)	15 (intp)	intp	1	14		0
14	2	4	LFP(and)	2	Pauses	15 (intp)	15 (intp)	15 (intp)	intp	1	14		0
14	2	5	UFP	3	Pauses	21 (spd)	7 (intp)	21 (spd)	spd	22			spd
14	2	6	NL-FP(อ่อ)	1	Pauses	15 (intp)	3 (tt)	15 (intp)	intp	8			intp
14	2	7	UFP	3	Pauses	15 (intp)	3 (tt)	15 (intp)	intp	8			intp
14	2	8	UFP	3	Pauses	3 (tt)	2 (spd)	3 (tt)	tt	1	3		0
14	2	9	UFP	3	Pauses	1 (spd)	3 (tt)	7 (intp)	0	17	22		0
14	2	10	UFP	3	Pauses	10 (intp)	14 (intp)	7 (intp)	intp	15			intp
14	2	11	NL-FP(ah)	1	Pauses	10 (intp)	14 (intp)	7 (intp)	intp	15			intp
14	2	12	NL-FP(อ่อ)	1	Pauses	15 (intp)	15 (intp)	15 (intp)	intp	15			intp
14	2	13	NL-FP(um)	1	Pauses	10 (intp)	3 (tt)	15 (intp)	intp	1	3		0
14	2	14	UFP	3	Pauses	2 (spd)	1 (spd)	21 (spd)	spd	2	5		0
14	2	15	NL-FP(ah)	1	Pauses	11 (intp)	15 (intp)	15 (intp)	intp	3			tt
14	2	16	NL-FP(อืมม)	1	Pauses	23 (tt)	23 (tt)	17 (intp)	tt	19	22		0
14	2	17	UFP+pardon	3	Pauses	23 (tt)	23 (tt)	17 (intp)	tt	19	22		0
14	2	18	UFP	3	Pauses	23 (tt)	23 (tt)	21 (spd)	tt	5	22		0
14	2	19	NL-FP(ah)	1	Pauses	10 (intp)	3 (tt)	10 (intp)	intp	14			intp
14	2	20	UFP	3	Pauses	23 (tt)	21 (spd)	21 (spd)	spd	8	22		0
14	2	21	UFP	3	Pauses	23 (tt)	21 (spd)	21 (spd)	spd	22			spd
14	2	22	SREPT(w)	4	Repetitions	3 (tt)	6 (intp)	1 (spd)	0	3	22		0
14	2	23	NL-FP(um)	1	Pauses	10 (intp)	10 (intp)	24 (spd)	intp	2			spd
14	2	24	UFP	3	Pauses	10 (intp)	10 (intp)	19 (intp)	intp	22			spd
14	2	25	NL-FP(ah)	1	Pauses	10 (intp)	10 (intp)	19 (intp)	intp	22			spd
14	2	26	SREPT(w)	4	Repetitions	3 (tt)	3 (tt)	4 (spd)	tt	1	3		0
14	2	27	UFP	3	Pauses	23 (tt)	23 (tt)	21 (spd)	tt	1	14	22	spd
14	2	28	NL-FP(ah)	1	Pauses	23 (tt)	23 (tt)	21 (spd)	tt	1	14	22	spd
14	2	29	UFP	3	Pauses	23 (tt)	1 (spd)	1 (spd)	spd	22			spd
14	2	30	UFP	3	Pauses	21 (spd)	21 (spd)	21 (spd)	spd	22			spd
14	2	31	NL-FP(ah)	1	Pauses	21 (spd)	21 (spd)	21 (spd)	spd	22			spd
14	2	32	UFP	3	Pauses	23 (tt)	23 (tt)	21 (spd)	tt	22			spd
14	2	33	NL-FP(อ่อ)	1	Pauses	15 (intp)	15 (intp)	15 (intp)	intp	15			intp
14	2	34	SREPT(phr)	4	Repetitions	3 (tt)	1 (spd)	3 (tt)	tt	3			tt
14	2	35	NL-FP(um)	1	Pauses	10 (intp)	10 (intp)	7 (intp)	intp	14	22		0
14	2	36	OREPT(snt)	5	Repetitions	10 (intp)	10 (intp)	7 (intp)	intp	14	22		0
14	2	37	UFP	3	Pauses	1 (spd)	1 (spd)	1 (spd)	spd	8			intp
14	2	38	SREPT(phr)	4	Repetitions	1 (spd)	1 (spd)	1 (spd)	spd	8			intp
14	2	39	NL-FP(ah)	1	Pauses	3 (tt)	3 (tt)	2 (spd)	tt	2			spd
14	2	40	SREPR(inst)	6	Repairs	3 (tt)	7 (intp)	3 (tt)	tt	3	8		0
14	2	41	SREPT(phr)	4	Repetitions	2 (spd)	21 (spd)	2 (spd)	spd	3	6		0
14	2	42	UFP	3	Pauses	2 (spd)	21 (spd)	2 (spd)	spd	3	6		0
14	2	43	UFP	3	Pauses	1 (spd)	10 (intp)	1 (spd)	spd	3			tt
14	2	44	NL-FP(ah)	1	Pauses	1 (spd)	1 (spd)	1 (spd)	spd	1			spd
14	2	45	NL-FP(ah)	1	Pauses	3 (tt)	3 (tt)	2 (spd)	tt	1	3		0
14	2	46	UFP	3	Pauses	21 (spd)	23 (tt)	21 (spd)	spd	22			spd
14	2	47	UFP	3	Pauses	23 (tt)	21 (spd)	21 (spd)	spd	22			spd

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						H1	H2	H3							
15	2	1	NL-FP(ah)	1	Pauses	10 (intp)	10 (intp)	15 (intp)	intp	15					intp
15	2	2	OREPT(w)	5	Repetitions	15 (intp)	14 (intp)	15 (intp)	intp	15	21				0
15	2	3	NL-FL(อ๊อ)	1	Pauses	15 (intp)	14 (intp)	15 (intp)	intp	15	21				0
15	2	4	NL-FP(ah)	1	Pauses	2 (spd)	2 (spd)	17 (intp)	spd	14					intp
15	2	5	UFP	3	Pauses	11 (intp)	24 (spd)	1 (spd)	spd	14					intp
15	2	6	UFP	3	Pauses	21 (spd)	21 (spd)	21 (spd)	spd	1	14				0
15	2	7	NL-FP(ah)	1	Pauses	10 (intp)	5 (tt)	2 (spd)	0	1					spd
15	2	8	UFP	3	Pauses	23 (tt)	7 (intp)	3 (tt)	tt	2					spd
15	2	9	UFP	3	Pauses	14 (intp)	14 (intp)	21 (spd)	intp	2					spd
15	2	10	UFP	3	Pauses	14 (intp)	14 (intp)	21 (spd)	intp	1	2	18			spd
15	2	11	OREPT(w)	5	Repetitions	14 (intp)	14 (intp)	21 (spd)	intp	1	2	18			spd
15	2	12	NL-FP(ah)	1	Pauses	10 (intp)	24 (spd)	21 (spd)	spd	1	2				spd
15	2	13	SREPT(w)	4	Repetitions	3 (tt)	11 (intp)	3 (tt)	tt	6	9	13			intp
15	2	14	UFP	3	Pauses	20 (intp)	3 (tt)	21 (spd)	0	14					intp
15	2	15	OREPT(w)	5	Repetitions	14 (intp)	14 (intp)	21 (spd)	intp	1	23				0
15	2	16	UFP	3	Pauses	23 (tt)	14 (intp)	21 (spd)	0	1	2				spd
15	2	17	NL-FP(ah)	1	Pauses	15 (intp)	15 (intp)	15 (intp)	intp	1	5	6	15		intp
15	2	18	NL-FP(ah)	1	Pauses	24 (spd)	3 (tt)	17 (intp)	0	21					spd
15	2	19	NL-FP(plgt/l…)	1	Pauses	24 (spd)	3 (tt)	17 (intp)	0	21					spd
15	2	20	NL-FP(ah)	1	Pauses	1 (spd)	3 (tt)	1 (spd)	spd	22					spd
15	2	21	NL-FP(ah)	1	Pauses	3 (tt)	24 (spd)	24 (spd)	spd	22					spd
15	2	22	OREPT(phr)	5	Repetitions	14 (intp)	14 (intp)	19 (intp)	intp	22					spd
15	2	23	NL-FP(plgt/my…)	1	Pauses	24 (spd)	3 (tt)	17 (intp)	0	13					intp
15	2	24	SREPR(rev)	6	Repairs	3 (tt)	3 (tt)	3 (tt)	tt	9					tt
15	2	25	NL-FP(ah) +laughter	1	Pauses	3 (tt)	14 (intp)	19 (intp)	intp	2	3	8			0
15	2	26	NL-FP(ah)	1	Pauses	24 (spd)	3 (tt)	17 (intp)	0	8					intp
15	2	27	NL-FP(ah)	1	Pauses	3 (tt)	3 (tt)	3 (tt)	tt	5	9				tt
15	2	28	SREPT(w)	4	Repetitions	3 (tt)	3 (tt)	3 (tt)	tt	5	9				tt
15	2	29	NL-FP(อืมม)	1	Pauses	23 (tt)	23 (tt)	21 (spd)	tt	8	10				intp
15	2	30	NL-FP(ah)	1	Pauses	24 (spd)	24 (spd)	17 (intp)	spd	6	18				intp
15	2	31	UFP	3	Pauses	23 (tt)	23 (tt)	19 (intp)	spd	10					intp
15	2	32	NL-FP(อืมม) +laugher	1	Pauses	23 (tt)	23 (tt)	19 (intp)	tt	10					intp
15	2	33	NL-FP(ah)	1	Pauses	10 (intp)	23 (tt)	21 (spd)	0	22	23				0
15	2	34	NL-FP(um)	1	Pauses	1 (spd)	24 (spd)	24 (spd)	spd	5	6				0
15	2	35	UFP	3	Pauses	1 (spd)	24 (spd)	24 (spd)	spd	5	6				0
15	2	36	UFP+laughter	3	Pauses	23 (tt)	23 (tt)	19 (intp)	tt	10	19	22	23		intp
15	2	37	NL-FP(ah)	1	Pauses	24 (spd)	23 (tt)	19 (intp)	0	14	15				intp
15	2	38	UFP	3	Pauses	24 (spd)	24 (spd)	3 (tt)	spd	21					spd
15	2	39	NL-FP(um)	1	Pauses	24 (spd)	7 (intp)	17 (intp)	intp	1	2	3			spd
15	2	40	NL-FP(ah)	1	Pauses	10 (intp)	3 (tt)	3 (tt)	tt	3					tt
15	2	41	NL-FP(ah)	1	Pauses	10 (intp)	3 (tt)	2 (spd)	0	3	5				tt
15	2	42	LFP(and)	2	Pauses	1 (spd)	3 (tt)	3 (tt)	tt	7					intp
15	2	43	NL-FP(ah)	1	Pauses	1 (spd)	3 (tt)	3 (tt)	tt	7					intp
15	2	44	NL-FP(ah)	1	Pauses	24 (spd)	1 (spd)	1 (spd)	spd	11					intp
15	2	45	OREPT(w)	5	Repetitions	23 (tt)	14 (intp)	19 (intp)	intp	14					intp
15	2	46	UFP	3	Pauses	23 (tt)	23 (tt)	17 (intp)	tt	1	10	19	22	23	0
15	2	47	NL-FP(plgt/l…)	1	Pauses	23 (tt)	23 (tt)	21 (spd)	tt	1	10	19	22	23	0

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16	2	1	NL-FL(ah)	1	Pauses	3 (tt)	8 (intp)	7 (intp)	intp	5			tt
16	2	2	NL-FP(ah)	1	Pauses	3 (tt)	2 (spd)	17 (intp)	0	5			tt
16	2	3	NL-FP(plgt/amm…)	1	Pauses	3 (tt)	2 (spd)	17 (intp)	0	5			tt
16	2	4	SREPT(phr)	4	Repetitions	2 (spd)	24 (spd)	2 (spd)	spd	1	7		0
16	2	5	SREPR(w/pronunciation)	6	Repairs	2 (spd)	24 (spd)	2 (spd)	spd	1	7		0
16	2	6	NL-FP(ah)	1	Pauses	14 (intp)	3 (tt)	1 (spd)	0	1			spd
16	2	7	UFP	3	Pauses	14 (intp)	3 (tt)	2 (spd)	0	1			spd
16	2	8	NL-FP(plgt/and..)	1	Pauses	1 (spd)	3 (tt)	17 (intp)	0	1			spd
16	2	9	UFP	3	Pauses	14 (intp)	14 (intp)	7 (intp)	intp	20			intp
16	2	10	NL-FP(plgt/in...)	1	Pauses	1 (spd)	4 (spd)	24 (spd)	spd	10			intp
16	2	11	NL-FP(plgt/eightyyy...)	1	Pauses	1 (spd)	24 (spd)	24 (spd)	spd	1			spd
16	2	12	UFP	3	Pauses	1 (spd)	7 (intp)	7 (intp)	intp	5			tt
16	2	13	UFP	3	Pauses	2 (spd)	3 (tt)	1 (spd)	spd	5			tt
16	2	14	NL-FP(um)	1	Pauses	24 (spd)	10 (intp)	24 (spd)	spd	3			tt
16	2	15	UFP	3	Pauses	19 (intp)	23 (tt)	7 (intp)	intp	3			tt
16	2	16	SREPT(w)	4	Repetitions	3 (tt)	4 (spd)	3 (tt)	tt	1	9	20	0
16	2	17	SREPT(w)	4	Repetitions	3 (tt)	3 (tt)	3 (tt)	tt	1			spd
16	2	18	NL-FL(ah)	1	Pauses	1 (spd)	3 (tt)	21 (spd)	spd	3	5		tt
16	2	19	UFP	3	Pauses	1 (spd)	4 (spd)	21 (spd)	spd	5			tt
16	2	20	NL-FP(plgt/and..)	1	Pauses	1 (spd)	1 (spd)	3 (tt)	spd	3	7		0
16	2	21	SREPT(w)	4	Repetitions	3 (tt)	24 (spd)	1 (spd)	spd	1			spd
16	2	22	OREPT(w-Srisongkram	5	Repetitions	24 (spd)	14 (intp)	14 (intp)	intp	24			spd
16	2	23	UFP	3	Pauses	2 (spd)	23 (tt)	14 (intp)	0	2			spd
16	2	24	NL-FL(ah)	1	Pauses	1 (spd)	3 (tt)	1 (spd)	spd	1			spd
16	2	25	NL-FL(ah)	1	Pauses	21 (spd)	14 (intp)	21 (spd)	spd	5			tt
16	2	26	UFP	3	Pauses	1 (spd)	2 (spd)	24 (spd)	spd	2			spd
16	2	27	UFP	3	Pauses	14 (intp)	10 (intp)	1 (spd)	intp	5			tt
16	2	28	UFP	3	Pauses	23 (tt)	23 (tt)	21 (spd)	tt	5			tt
16	2	29	NL-FP(um)	1	Pauses	3 (tt)	21 (spd)	21 (spd)	spd	3			tt
16	2	30	SREPT(w)	4	Repetitions	3 (tt)	21 (spd)	21 (spd)	spd	3			tt
16	2	31	UFP	3	Pauses	3 (tt)	3 (tt)	21 (spd)	tt	3	7		0
16	2	32	SREPR(del)	6	Repairs	3 (tt)	3 (tt)	21 (spd)	tt	3	7		0
16	2	33	NL-FP(plgt/I...)	1	Pauses	1 (spd)	3 (tt)	2 (spd)	spd	11			intp
16	2	34	UFP	3	Pauses	21 (spd)	23 (tt)	21 (spd)	spd	20			intp
16	2	35	NL-FP(um)	1	Pauses	6 (intp)	6 (intp)	2 (spd)	intp	3			tt
16	2	36	NL-FP(plgt/in...)	1	Pauses	24 (spd)	3 (tt)	24 (spd)	spd	1			spd
16	2	37	SREPT(w)	4	Repetitions	1 (spd)	3 (tt)	7 (intp)	0	2			spd
16	2	38	UFP	3	Pauses	3 (tt)	3 (tt)	3 (tt)	tt	2			spd
16	2	39	SREPR(del)	6	Repairs	3 (tt)	3 (tt)	3 (tt)	tt	2			spd
16	2	40	UFP	3	Pauses	1 (spd)	4 (spd)	1 (spd)	spd	3			tt
16	2	41	NL-FP(plgt/I...)	1	Pauses	3 (tt)	3 (tt)	3 (tt)	tt	5	7		0
16	2	42	UFP	3	Pauses	3 (tt)	3 (tt)	3 (tt)	tt	5	7		0
16	2	43	SREPT(phr)	4	Repetitions	2 (spd)	2 (spd)	3 (tt)	spd	2			spd
16	2	44	SREPR(inst)	6	Repairs	2 (spd)	3 (tt)	3 (tt)	tt	2			spd

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17	3	1	NL-FP(plgt/ammm…)	1	Pauses	1	8	7	intp	6			intp
17	3	2	NL-FP(ah)	1	Pauses	24	10	7	intp	21			spd
17	3	3	UFP	3	Pauses	24	24	1	spd	14			intp
17	3	4	NL-FP(อะ?)	1	Pauses	19	14	19	intp	14			intp
17	3	5	UFP	3	Pauses	23	23	21	tt	14			intp
17	3	6	NL-FP(ah)	1	Pauses	3	11	3	tt	1	2		spd
17	3	7	SREPR(rev)	6	Repairs	3	11	3	tt	1	2		spd
17	3	8	NL-FP(ah)	1	Pauses	3	3	17	tt	21			spd
17	3	9	SREPR(inst)	6	Repairs	3	3	3	tt	7	9		0
17	3	10	NL-FP(ah)	1	Pauses	3	3	3	tt	7	9		0
17	3	11	UFP	3	Pauses	14	14	7	intp	15	18		intp
17	3	12	OREPT(w)	5	Repetitions	14	14	7	intp	15	18		intp
17	3	13	NL-FP(ah)	1	Pauses	1	3	17	0	21			spd
17	3	14	UFP+again please	3	Pauses	21	23	21	spd	23			tt
17	3	15	UFP	3	Pauses	21	23	21	spd	23			tt
17	3	16	NL-FP(ah)	1	Pauses	1	23	7	0	3			tt
17	3	17	UFP	3	Pauses	22	3	1	spd	2	15		0
17	3	18	NL-FP(ah)	1	Pauses	22	3	1	spd	2	15		0
17	3	19	UFP	3	Pauses	1	3	1	spd	2	5	14	0
17	3	20	NL-FP(ah)	1	Pauses	3	3	17	tt	22	23		0
17	3	21	NL-FP(ah)	1	Pauses	2	1	2	spd	10	11		intp
17	3	22	SREPT(w)	4	Repetitions	2	1	2	spd	10	11		intp
17	3	23	NL-FP(ah)	1	Pauses	3	1	24	spd	3	12		0
17	3	24	NL-FP(ah)	1	Pauses	3	3	3	tt	5	13		0
17	3	25	SREPT(w)	4	Repetitions	3	3	3	tt	5	13		0
17	3	26	LFP(and)	2	Pauses	3	3	3	tt	1	3		0
17	3	27	SREPT(w)	4	Repetitions	3	3	3	tt	1	3		0
17	3	28	UFP	3	Pauses	1	24	21	spd	18			intp
17	3	29	NL-FP(plgt/l…)	1	Pauses	3	24	21	spd	18			intp
17	3	30	UFP	3	Pauses	3	24	2	spd	18			intp
17	3	31	NL-FP(plgt/l…)	1	Pauses	23	24	7	0	18			intp
17	3	32	SREPT(w)	4	Repetitions	2	3	4	spd	15			intp
17	3	33	UFP	3	Pauses	23	24	21	spd	1	23		0
17	3	34	SREPT(w) there there	4	Repetitions	1	3	2	spd	1	2	22	spd
17	3	35	NL-FP(ah)	1	Pauses	1	3	17	0	10			intp
17	3	36	NL-FP(ah)	1	Pauses	3	3	2	tt	15			intp
17	3	37	UFP	3	Pauses	14	14	19	intp	18	19		intp
17	3	38	UFP	3	Pauses	21	14	21	spd	14	19		intp
17	3	39	NL-FP(ah)	1	Pauses	3	3	2	tt	1	2	5	spd
17	3	40	SREPR(inst) do ah do better	6	Repairs	3	3	2	tt	1	2	5	spd
17	3	41	UFP	3	Pauses	11	24	7	intp	14	15		intp
17	3	42	NL-FP(ah)	1	Pauses	1	3	1	spd	17			intp
17	3	43	NL-FP(ah)	1	Pauses	1	5	17	0	10			intp
17	3	44	UFP+again please	3	Pauses	14	24	21	spd	19	23		0
17	3	45	UFP	3	Pauses	23	23	19	tt	23			tt
17	3	46	SREPT(w)	4	Repetitions	23	23	21	tt	23			tt
17	3	47	UFP	3	Pauses	2	3	7	0	2			spd
17	3	48	NL-FP(ah)	1	Pauses	2	3	7	0	2			spd
17	3	49	UFP	3	Pauses	2	2	2	spd	1	2		spd
17	3	50	NL-FP(ah)	1	Pauses	2	2	2	spd	1	2		spd
17	3	51	SREPT(w) I I want to ah police	4	Repetitions	1	2	1	spd	14	21		0
17	3	52	UFP	3	Pauses	23	24	21	spd	1			spd
17	3	53	OREPT(w) here?	5	Repetitions	14	14	19	intp	19			intp
17	3	54	NL-FP(ah)	1	Pauses	1	3	7	0	21			spd
17	3	55	SREPT(w) he he	4	Repetitions	1	3	2	spd	17			intp
17	3	56	NL-FP (ah)	1	Pauses	1	3	7	0	17			intp
17	3	57	UFP he….clever	3	Pauses	3	24	1	spd	1	2	4	spd
17	3	58	SREPR(rev) he is a clever	6	Repairs	3	24	1	spd	1	2	4	spd
17	3	59	SREPT(phr) he can he can good job	4	Repetitions	3	3	3	tt	2	4		spd
17	3	60	SREPR(rev) he can do good job	6	Repairs	3	3	3	tt	2	4		spd
17	3	61	UFP+again please	3	Pauses	21	7	21	spd	19	22	23	0
17	3	62	SREPT(phr) begin my life	4	Repetitions	14	14	19	intp	18			intp
17	3	63	UFP	3	Pauses	22	10	21	spd	1	2	23	spd
17	3	64	NL-FP(ah)	1	Pauses	1	10	2	spd	14	23		0
17	3	65	UFP	3	Pauses	23	24	7	0	5			tt

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						H1	H2	H3							
18	3	1	NL-FP(ah)	1	Pauses	24	7	1	spd	21					spd
18	3	2	UFP (I…like)	3	Pauses	17	3	1	0	6	14	16			intp
18	3	3	UFP	3	Pauses	14	8	7	intp	3	5				tt
18	3	4	UFP (I like…)	3	Pauses	21	2	1	spd	1					spd
18	3	5	UFP (has many….alternative)	3	Pauses	1	5	1	spd	1					spd
18	3	6	UFP+เอรา?ัน	3	Pauses	24	3	1	spd	1	3	5			tt
18	3	7	UFP (short pause)	3	Pauses	24	4	24	spd	15	21				intp
18	3	8	UFP	3	Pauses	21	23	21	spd	5					tt
18	3	9	NL-FP(ah)	1	Pauses	23	23	21	tt	5					tt
18	3	10	UFP	3	Pauses	23	23	21	tt	1	2	5	14		spd
18	3	11	UFP+again please	3	Pauses	14	14	7	intp	19					intp
18	3	12	OREPT(w) strength	5	Repetitions	14	14	14	intp	14					intp
18	3	13	UFP	3	Pauses	23	23	21	tt	23					tt
18	3	14	UFP (do….teacher)	3	Pauses	1	2	1	spd	3	6				0
18	3	15	UFP (is….)	3	Pauses	1	3	1	spd	1					spd
18	3	16	UFP	3	Pauses	8	7	7	intp	23					tt
18	3	17	SREPT(w) I I like	4	Repetitions	3	10	2	0	5	7				0
18	3	18	UFP (change…)	3	Pauses	21	10	21	spd	1					spd
18	3	19	UFP (I like to change…..)	3	Pauses	23	23	2	tt	1	5				0
18	3	20	UFP	3	Pauses	17	23	2	0	1					spd
18	3	21	UFP	3	Pauses	1	10	1	spd	1					spd
18	3	22	NL-FP(plgt/l….)	1	Pauses	1	10	10	intp	1					spd
18	3	23	SREPT(phr) I'm I'm poor	4	Repetitions	11	1	2	spd	13					intp

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						H1	H2	H3							
19	3	1	NL-FP(ah)	1	Pauses	10	10	7	intp	21					spd
19	3	2	NL-FP(ah)	1	Pauses	10	10	7	intp	21					spd
19	3	3	UFP+again please	3	Pauses	24	5	21	spd	14					intp
19	3	4	NL-FP(อ๋อ)	1	Pauses	15	15	15	intp	5	15				0
19	3	5	NL-FP(ah)	1	Pauses	15	15	15	intp	5	15				0
19	3	6	UFP	3	Pauses	15	15	15	intp	5	15				0
19	3	7	UFP+again please	3	Pauses	14	14	21	intp	14					intp
19	3	8	NL-FP(อ๋อ)	1	Pauses	15	15	15	intp	15					intp
19	3	9	UFP+again please	3	Pauses	14	14	21	intp	14					intp
19	3	10	NL-FP(um)	1	Pauses	10	10	17	intp	1	3	5			tt
19	3	11	UFP	3	Pauses	10	10	17	intp	1	3	5			tt
19	3	12	NL-FP(ah)	1	Pauses	1	2	2	spd	1	3	5			tt
19	3	13	NL-FP(ah)	1	Pauses	1	1	1	spd	2					spd
19	3	14	UFP+again please	3	Pauses	14	14	21	intp	14					intp
19	3	15	NL-FP(ah)	1	Pauses	10	10	2	intp	1	5				0
19	3	16	NL-FP(plgt/I···)	1	Pauses	2	1	7	spd	5					tt
19	3	17	UFP (I think···.)	3	Pauses	1	1	1	spd	5					tt
19	3	18	UFP+again please	3	Pauses	23	14	21	0	14					intp
19	3	19	UFP	3	Pauses	23	23	21	tt	23					tt
19	3	20	NL-FP(ah)	1	Pauses	1	1	1	spd	1					spd
19	3	21	UFP	3	Pauses	14	7	7	intp	14	23				0
19	3	22	NL-FP(ah)	1	Pauses	10	10	7	intp	2					spd
19	3	23	UFP	3	Pauses	9	9	7	tt	14					intp
19	3	24	SREPT(w) ขอนแก่น	4	Repetitions	14	14	7	intp	14					intp
19	3	25	NL-FP(ah)	1	Pauses	1	1	2	spd	1					spd
19	3	26	NL-FP(อืมม)	1	Pauses	23	23	7	tt	23					tt
19	3	27	UFP	3	Pauses	23	23	24	tt	23					tt
19	3	28	SREPT(phr) my grades	4	Repetitions	14	14	19	intp	14					intp
19	3	29	SREPT(w) in in Loei	4	Repetitions	2	14	7	intp	14	23				0
19	3	30	OREPT(w) strength	5	Repetitions	19	7	19	intp	14	23				0
19	3	31	UFP	3	Pauses	23	23	21	tt	23					tt
19	3	32	SREPT(w) what what	4	Repetitions	23	21	21	spd	23					tt
19	3	33	SREPT(w) my my skill	4	Repetitions	24	14	7	intp	14	23				0
19	3	34	UFP	3	Pauses	23	21	21	spd	1					spd
19	3	35	NL-FP(um)	1	Pauses	23	21	21	spd	1					spd
19	3	36	NL-FP(ah)	1	Pauses	24	3	2	spd	5					tt
19	3	37	NL-FP(ah)	1	Pauses	1	1	1	spd	5					tt
19	3	38	UFP	3	Pauses	2	2	7	spd	5					tt
19	3	39	NL-FP(um)	1	Pauses	2	2	7	spd	5					tt
19	3	40	NL-FP(ah)	1	Pauses	10	3	1	0	1	5				0
19	3	41	NL-FP(ah)	1	Pauses	10	10	1	intp	5					tt
19	3	42	NL-FP(ah)	1	Pauses	3	3	1	tt	1	5				0
19	3	43	UFP	3	Pauses	23	23	21	tt	23					tt

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						H1	H2	H3			
20	3	1	UFP	3	Pauses	23	23	21	tt	8	intp
20	3	2	UFP	3	Pauses	23	23	17	tt	1	spd
20	3	3	SREPT(w) I,I	4	Repetitions	23	23	21	tt	1	spd
20	3	4	UFP	3	Pauses	3	5	1	tt	1	spd
20	3	5	SREPT(w) I,I	4	Repetitions	3	5	1	tt	1	spd
20	3	6	UFP + yes	3	Pauses	11	14	7	intp	24	spd
20	3	7	NL-FP(ah)	1	Pauses	3	3	3	tt	1	spd
20	3	8	SREPT(phr)	4	Repetitions	3	3	3	tt	1	spd
20	3	9	UFP	3	Pauses	1	3	3	tt	21	spd
20	3	10	NL-FP(plgt/is····..)	1	Pauses	1	3	17	0	1	spd
20	3	11	UFP	3	Pauses	1	3	7	0	1	spd
20	3	12	SREPT(w) I,I	4	Repetitions	1	7	7	intp	1	spd
20	3	13	NL-FP(plgt/to····..)	1	Pauses	1	3	17	0	3	tt
20	3	14	SREPR(rev)	6	Repairs	3	3	3	tt	3	tt
20	3	15	NL-FP(plgt/I····..)	1	Pauses	1	3	17	0	1	spd
20	3	16	LFP(and) and···there have attraction	2	Pauses	1	17	17	intp	24	spd
20	3	17	UFP	3	Pauses	1	3	2	spd	1	spd
20	3	18	UFP (such as····.)	3	Pauses	1	24	24	spd	24	spd
20	3	19	UFP	3	Pauses	3	3	3	tt	3	tt
20	3	20	SREPR(rev)	6	Repairs	3	2	2	spd	3	tt
20	3	21	UFP	3	Pauses	23	23	21	tt	24	spd
20	3	22	NL-FP (plgt/lo..cated..in···)	1	Pauses	2	3	1	spd	24	spd
20	3	23	UFP (···from)	3	Pauses	11	3	1	0	24	spd
20	3	24	OREPT(phr)	5	Repetitions	15	14	15	intp	24	spd
20	3	25	NL-FP(um)	1	Pauses	15	16	15	intp	24	spd
20	3	26	NL-FP(plgt/I····.)	1	Pauses	3	3	3	tt	3	tt
20	3	27	SREPR(del)	6	Repairs	3	3	3	tt	3	tt
20	3	28	UFP (but I..I..think I can do it better)	3	Pauses	6	6	2	intp	24	intp
20	3	29	SREPR(del)	6	Repairs	15	15	7	intp	24	spd
20	3	30	NL-FP(I sss····.)plgt···	1	Pauses	3	3	2	tt	21	spd
20	3	31	NL-FP (plgt/to···)	1	Pauses	1	1	17	spd	24	spd
20	3	32	UFP (but..I..)	3	Pauses	3	5	3	tt	1	spd
20	3	33	OREPT(w) hero	5	Repetitions	15	14	7	intp	1	spd
20	3	34	NL-FP(plgt/for····.)	1	Pauses	2	3	2	spd	1	24 spd
20	3	35	SREPR(rev) are>were	6	Repairs	3	3	3	tt	2	spd
20	3	36	NL-FP(plgt/my..)	1	Pauses	3	3	3	tt	24	spd
20	3	37	NL-FP(ah)	1	Pauses	3	3	3	tt	24	spd
20	3	38	OREPR(inst)	7	Repairs	3	3	3	tt	24	spd
20	3	39	LFP(and)	2	Pauses	3	3	3	tt	24	spd
20	3	40	UFP (they have a lot of···)	3	Pauses	3	3	3	tt	24	spd
20	3	41	UFP	3	Pauses	11	7	7	intp	24	spd
20	3	42	UFP	3	Pauses	1	23	2	spd	1	spd
20	3	43	NL-FP(plgt/my···)	1	Pauses	1	23	3	tt	1	spd

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						H1	H2	H3							
21	3	1	NL-FP(ah)	1	Pauses	2	8	17	intp	2					spd
21	3	2	UFP	3	Pauses	1	4	24	spd	3					tt
21	3	3	NL-FP(ah)	1	Pauses	1	3	2	spd	1	3	8			0
21	3	4	UFP (member of…)	3	Pauses	3	3	3	tt	9					tt
21	3	5	NL-FP(ah) have..ah..member	1	Pauses	24	2	2	spd	4	9				0
21	3	6	SREPT(w) member member o	4	Repetitions	3	4	3	tt	2	3	1			spd
21	3	7	NL-FP(uh) is..ub..3 persons	1	Pauses	1	1	1	spd	14	8				intp
21	3	8	NL-FP(ah)	1	Pauses	12	10	7	intp	8					intp
21	3	9	NL-FP(ah)	1	Pauses	15	1	7	intp	1					spd
21	3	10	NL-FP(ah) because..ah...	1	Pauses	24	3	1	spd	2					spd
21	3	11	UFP (my mother…she…)	3	Pauses	2	2	2	spd	2	8				0
21	3	12	NL-FP(ah)	1	Pauses	1	3	17	0	8					intp
21	3	13	SREPR(rev) she want..she nee	6	Repairs	3	3	3	tt	1					spd
21	3	14	NL-FP(er)	1	Pauses	19	23	1	0	20	23				0
21	3	15	UFP	3	Pauses	19	23	2	0	20	23				0
21	3	16	NL-FP(plgt/I…sh…)+sorry	1	Pauses	19	23	24	0	23					tt
21	3	17	NL-FP(ah)	1	Pauses	2	10	7	intp	2	8				0
21	3	18	SREPR(rev) I like..I think...	6	Repairs	3	3	3	tt	8					intp
21	3	19	SREPT(w) this this place	4	Repetitions	24	3	3	tt	3					tt
21	3	20	UFP	3	Pauses	1	23	1	spd	3					tt
21	3	21	LFP(and)	2	Pauses	1	23	1	spd	3					tt
21	3	22	UFP	3	Pauses	1	23	1	spd	3					tt
21	3	23	SREPT(w) very very	4	Repetitions	1	1	4	spd	1					spd
21	3	24	NL-FP(ah)	1	Pauses	24	10	7	intp	1					spd
21	3	25	NL-FP(ah) in ah…	1	Pauses	1	4	1	spd	3					tt
21	3	26	UFP	3	Pauses	1	4	1	spd	3					tt
21	3	27	UFP	3	Pauses	19	14	23	intp	14	24				0
21	3	28	UFP	3	Pauses	3	23	23	tt	3	14	24			0
21	3	29	SREPT(phr) my family my fa	4	Repetitions	24	14	23	0	3	14	24			0
21	3	30	NL-FP(ah) my family….	1	Pauses	24	16	24	spd	8					intp
21	3	31	UFP	3	Pauses	21	21	23	spd	24					spd
21	3	32	UFP	3	Pauses	19	23	23	tt	3					tt
21	3	33	SREPR(inst) I think..I think so	6	Repairs	19	23	23	tt	3					tt
21	3	34	SREPT(phr) my school	4	Repetitions	3	14	5	tt	24					spd
21	3	35	UFP	3	Pauses	20	23	23	tt	19	24				0
21	3	36	NL-FP(ah)	1	Pauses	21	21	23	spd	23					tt
21	3	37	UFP	3	Pauses	21	21	23	spd	23					tt
21	3	38	NL-FP(ฮ่อ)	1	Pauses	15	16	2	intp	3					tt
21	3	39	UFP sometime….	3	Pauses	24	3	1	spd	1					spd
21	3	40	NL-FP(ah) and…ah...	1	Pauses	24	3	2	spd	1					spd
21	3	41	NL-FP (plgt/I…)	1	Pauses	10	10	2	intp	2					spd
21	3	42	NL-FP(ah) is…ah...	1	Pauses	24	5	2	spd	1					spd
21	3	43	UFP about...	3	Pauses	14	23	23	tt	24					spd
21	3	44	UFP	3	Pauses	23	23	23	tt	24					spd
21	3	45	NL-FP (plgt/I…)	1	Pauses	1	21	1	spd	3					tt
21	3	46	SREPT(phr) I want to, I want	4	Repetitions	1	23	1	spd	3					tt
21	3	47	SREPT(w) my, my skill.	4	Repetitions	3	21	2	spd	2					spd

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						H1	H2	H3			
22	3	1	NL-FP(ah) I'm..ah..	1	Pauses	24	10	1	spd	6	intp
22	3	2	NL-FP(ah) is ah..	1	Pauses	24	4	1	spd	21	spd
22	3	3	NL-FP(ah)	1	Pauses	24	10	2	spd	9	tt
22	3	4	SREPR(inst) my name ah my	6	Repairs	24	10	2	spd	9	tt
22	3	5	NL-FP(ah)	1	Pauses	24	15	4	spd	4	spd
22	3	6	NL-FP(ah)	1	Pauses	24	24	2	spd	2	spd
22	3	7	SREPR (rev) 3 uh 4 years	6	Repairs	3	3	3	tt	1	spd
22	3	8	UFP	3	Pauses	21	23	21	spd	23	tt
22	3	9	NL-FP(ah)	1	Pauses	8	23	21	0	22	spd
22	3	10	NL-FP(ah)	1	Pauses	23	14	21	0	22	spd
22	3	11	UFP	3	Pauses	23	14	21	0	22	spd
22	3	12	NL-FP(ah)	1	Pauses	12	10	21	intp	23	tt
22	3	13	UFP (I…)	3	Pauses	12	10	21	intp	23	tt
22	3	14	SREPT(phr) I want, I..want..to	4	Repetitions	3	3	2	tt	2	spd
22	3	15	NL-FP(ah) ah…at Loei	1	Pauses	23	14	14	intp	1	spd
22	3	16	NL-FP(um)	1	Pauses	15	23	1	0	4	spd
22	3	17	NL-FP(ah) is ah..	1	Pauses	24	3	1	spd	2	spd
22	3	18	NL-FP(ah)	1	Pauses	23	23	7	tt	1	spd
22	3	19	UFP	3	Pauses	23	23	21	tt	1	spd
22	3	20	NL-FP(plgt/I…)	1	Pauses	1	21	1	spd	1	spd
22	3	21	UFP	3	Pauses	2	21	2	spd	1	spd
22	3	22	NL-FP(ah)	1	Pauses	1	21	1	spd	2	spd
22	3	23	NL-FP(ฉa?)	1	Pauses	19	14	19	intp	14	intp
22	3	24	UFP+again please	3	Pauses	23	19	19	intp	13	intp
22	3	25	UFP	3	Pauses	23	23	21	tt	14	intp
22	3	26	NL-FP(ah)	1	Pauses	24	10	1	spd	14	intp
22	3	27	UFP	3	Pauses	24	10	1	spd	14	intp
22	3	28	UFP	3	Pauses	21	21	19	spd	14	intp
22	3	29	NL-FP(um)	1	Pauses	24	24	7	spd	1	spd
22	3	30	UFP	3	Pauses	24	24	19	spd	1	spd
22	3	31	NL-FP(ah)	1	Pauses	24	4	24	spd	21	spd
22	3	32	NL-FP(ah) ah..ah	1	Pauses	23	10	7	intp	2	spd
22	3	33	UFP	3	Pauses	1	24	2	spd	2	spd
22	3	34	NL-FP(um) I like..um..teacher	1	Pauses	1	24	1	spd	1	spd
22	3	35	UFP	3	Pauses	23	23	19	tt	14	intp
22	3	36	OREPT(phr) done better	5	Repetitions	14	23	14	intp	13	intp
22	3	37	UFP	3	Pauses	21	21	19	spd	14	intp
22	3	38	NL-FP(plgt/I…)	1	Pauses	10	10	7	intp	20	intp
22	3	39	UFP	3	Pauses	10	10	7	intp	20	intp
22	3	40	NL-FP(um) um..it's ah..	1	Pauses	23	10	19	intp	22	spd
22	3	41	UFP	3	Pauses	23	21	19	0	22	spd
22	3	42	UFP I want to be a teacher (dr	3	Pauses	11	2	2	spd	14	intp
22	3	43	NL-FP(plgt/my…)	1	Pauses	1	7	17	intp	1	spd
22	3	44	OREPT (w) star?	5	Repetitions	14	7	19	intp	2	spd
22	3	45	UFP	3	Pauses	21	21	19	spd	14	intp
22	3	46	NL-FP(ah)	1	Pauses	14	21	19	intp	20	intp
22	3	47	OREPT(w) life	5	Repetitions	21	23	19	0	20	intp
22	3	48	UFP (long pause)	3	Pauses	21	21	19	spd	14	intp

ID	Group	DF#	DF Forms	Sub-type Code	DF_Type	Hearers' Interpretations H1	H2	H3	Rep. of Hearers' Interpretations	Speakers' Intentions		Rep.of Intentions
23	3	1	UFP	3	Pauses	23	23	23	tt	1		spd
23	3	2	NL-FP(ah)	1	Pauses	23	23	23	tt	1		spd
23	3	3	NL-FP(er) er…sleeping	1	Pauses	23	10	23	tt	3		tt
23	3	4	OREPT(sent) tell me about yourself	5	Repetitions	10	23	14	intp	16		intp
23	3	5	NL-FP(อ่อ)	1	Pauses	24	15	15	intp	11		intp
23	3	6	UFP+again please	3	Pauses	14	23	23	tt	23		tt
23	3	7	NL-FP(er)	1	Pauses	24	10	1	spd	1		spd
23	3	8	UFP	3	Pauses	23	23	23	tt	5		tt
23	3	9	UFP+again please	3	Pauses	14	14	24	intp	23		tt
23	3	10	UFP	3	Pauses	23	23	23	tt	23		tt
23	3	11	NL-FP(อืม)	1	Pauses	23	19	23	tt	22		spd
23	3	12	UFP+laughter	3	Pauses	23	19	23	tt	22		spd
23	3	13	UFP	3	Pauses	23	19	7	intp	23		tt
23	3	14	NL-FP(plgt/I…come from..)	1	Pauses	12	2	2	spd	11		intp
23	3	15	SREPR(del) nature er…tourism	6	Repairs	2	3	3	tt	3		tt
23	3	16	NL-FP(ah)	1	Pauses	24	10	1	spd	5		tt
23	3	17	NL-FP(er)	1	Pauses	11	10	21	intp	1	6	0
23	3	18	UFP+laughter..middle (talking about grades)	3	Pauses	11	10	21	intp	1	6	0
23	3	19	NL-FP(plgt/I…think)	1	Pauses	11	3	17	intp	11		intp
23	3	20	NL-FP(plgt/I…)	1	Pauses	2	10	7	intp	11		intp
23	3	21	UFP	3	Pauses	3	1	7	0	4		spd
23	3	22	NL-FP(อืมม)	1	Pauses	3	1	7	0	4		spd
23	3	23	UFP	3	Pauses	8	10	2	intp	1		spd
23	3	24	NL-FP(เอื่ม) เอื่ม..guide	1	Pauses	8	10	7	intp	1		spd
23	3	25	UFP	3	Pauses	23	23	7	tt	23		tt
23	3	26	LFP(and)	2	Pauses	23	23	19	tt	23		tt

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						H1	H2	H3				
24	3	1	UFP	3	Pauses	14	20	7	intp	1	2	spd
24	3	2	OREPT(phr) myself	5	Repetitions	15	20	7	intp	1	2	spd
24	3	3	UFP	3	Pauses	1	23	21	spd	5		tt
24	3	4	SREPT(w) 4.4 years	4	Repetitions	1	13	1	spd	3		tt
24	3	5	UFP + again please	3	Pauses	19	7	21	intp	3		tt
24	3	6	UFP (long pause)	3	Pauses	1	7	21	spd	2		spd
24	3	7	NL-FP(ah)	1	Pauses	10	10	21	intp	18		intp
24	3	8	UFP+again please	3	Pauses	14	14	21	intp	19		intp
24	3	9	UFP	3	Pauses	21	23	21	spd	19		intp
24	3	10	UFP	3	Pauses	21	23	21	spd	18		intp
24	3	11	LFP(like) I like···	2	Pauses	21	21	21	spd	13	18	intp
24	3	12	UFP	3	Pauses	21	21	21	spd	13	18	intp
24	3	13	UFP	3	Pauses	14	14	7	intp	3		tt
24	3	14	OREPT(w) ขอนแก่น?	5	Repetitions	14	3	24	0	3		tt
24	3	15	UFP (ขอนแก่น is ah···.)	3	Pauses	1	1	7	spd	1	4	spd
24	3	16	LFP (and) and..very	2	Pauses	1	1	1	spd	1		spd
24	3	17	UFP	3	Pauses	1	1	1	spd	1		spd
24	3	18	UFP (many···.)	3	Pauses	1	1	1	spd	1		spd
24	3	19	UFP	3	Pauses	21	5	21	spd	19		intp
24	3	20	NL-FP(ah)+ขานแก่น	1	Pauses	14	4	24	spd	6		intp
24	3	21	UFP + again please	3	Pauses	14	23	21	0	1		spd
24	3	22	UFP	3	Pauses	21	21	21	spd	19		intp
24	3	23	UFP	3	Pauses	21	21	21	spd	19		intp
24	3	24	UFP (grade···)	3	Pauses	14	23	1	0	11		intp
24	3	25	OREPT(w) grade···	5	Repetitions	14	23	21	0	11		intp
24	3	26	UFP	3	Pauses	14	21	21	spd	3		tt
24	3	27	OREPT(phr) at school	5	Repetitions	14	21	21	spd	3		tt
24	3	28	NL-FP(ah) I think ah..	1	Pauses	3	10	3	tt	3		tt
24	3	29	UFP	3	Pauses	3	10	3	tt	3		tt
24	3	30	SREPT(phr) I think good	4	Repetitions	3	10	3	tt	3		tt
24	3	31	OREPT(w) best	5	Repetitions	14	14	21	intp	5		tt
24	3	32	UFP	3	Pauses	21	23	21	spd	19		intp
24	3	33	SREPR(inst)	6	Repairs	1	8	2	spd	3		tt
24	3	34	NL-FP(ah) I want..ah..I want to be..	1	Pauses	1	8	3	0	3		tt
24	3	35	NL-FP(ah)	1	Pauses	21	23	21	spd	18		intp
24	3	36	UFP	3	Pauses	21	23	21	spd	18		intp
24	3	37	UFP	3	Pauses	21	21	21	spd	1		spd
24	3	38	UFP	3	Pauses	21	21	21	spd	3		tt
24	3	39	UFP	3	Pauses	21	23	7	0	19		intp
24	3	40	UFP	3	Pauses	21	21	21	spd	19		intp

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						. H1	H2	H3							
25	3	1	NL-FP (ah)	1	Pauses	2	2	2	spd	3	9				tt
25	3	2	SPEPR (rev)	6	Repairs	3	2	3	tt	3	9				tt
25	3	3	SPREP (del)	6	Repairs	3	1	1	spd	3	9				tt
25	3	4	UFP	3	Pauses	24	24	24	spd	2	3	5	9	15	tt
25	3	5	NL-FP(um)	1	Pauses	11	24	2	spd	2	9				0
25	3	6	UFP	3	Pauses	11	24	10	intp	2	9				0
25	3	7	NL-FP (uh)	1	Pauses	24	2	4	spd	9					tt
25	3	8	UFP	3	Pauses	24	2	10	spd	9					tt
25	3	9	NL-FP(um)	1	Pauses	11	10	10	intp	22					spd
25	3	10	UFP	3	Pauses	11	10	10	intp	22					spd
25	3	11	NL-FP(um)	1	Pauses	4	10	10	intp	9	22	23			tt
25	3	12	UFP	3	Pauses	4	10	10	intp	9	22	23			tt
25	3	13	NL-FP(um)	1	Pauses	9	2	2	spd	3	22				0
25	3	14	SREPR (inst)	6	Repairs	9	2	2	spd	3	22				0
25	3	15	SPREP (rev)	6	Repairs	3	2	2	spd	9	13				0
25	3	16	NL-FP (ah)	1	Pauses	3	4	4	spd	1	3	9			tt
25	3	17	NL-FP (um)	1	Pauses	3	4	4	spd	1	3	9			tt
25	3	18	SPEPT(w)	4	Repetitions	3	4	4	spd	1	3	9			tt
25	3	19	SREPR (inst)	6	Repairs	3	4	4	spd	1	3	9			tt

ID	Group	DF#	DF Forms	Sub-type Code	DF_Type	Hearers' Interpretations			Rep. of Hearers' Interpretations	Speakers' Intentions					Rep.of Intentions
						H1	H2	H3							
26	3	1	UFP	3	Pauses	8	8	7	intp	14	23				0
26	3	2	UFP	3	Pauses	8	14	7	intp	1	5				0
26	3	3	NL-FP(ah)	1	Pauses	1	1	21	spd	2	11	18			intp
26	3	4	NL-FP(ah)	1	Pauses	10	10	21	intp	1	2				spd
26	3	5	SREPT(w) about about ah 4,4	4	Repetitions	14	14	7	intp	3	5				tt
26	3	6	UFP (I think…)	3	Pauses	1	3	7	0	1					spd
26	3	7	NL-FP(ah)	1	Pauses	1	3	17	0	1					spd
26	3	8	UFP (Loei…_)	3	Pauses	3	4	4	spd	1	3				0
26	3	9	SREPT(w) in, interesting+sile	4	Repetitions	3	4	4	spd	1	3				0
26	3	10	UFP	3	Pauses	8	20	21	intp	23					tt
26	3	11	NL-FP(ah) I like_ah…	1	Pauses	3	3	1	tt	1	3	5			tt
26	3	12	UFP	3	Pauses	23	23	1	tt	2					spd
26	3	13	NL-FP(ah) ..ah.. at Loei	1	Pauses	2	23	2	spd	2					spd
26	3	14	UFP+again please	3	Pauses	14	14	21	intp	1	14				0
26	3	15	UFP	3	Pauses	23	23	21	tt	14					intp
26	3	16	NL-FP(อ๊อ)	1	Pauses	15	15	15	intp	14					intp
26	3	17	SREPT(w) I,I like..	4	Repetitions	3	3	1	tt	1	2				spd
26	3	18	NL-FP(ah)	1	Pauses	3	3	2	tt	1	2				spd
26	3	19	UFP (in front…)	3	Pauses	3	2	3	tt	2	5				0
26	3	20	NL-FP(ah)	1	Pauses	3	2	3	tt	2	5				0
26	3	21	NL-FP(ah) ah..about..	1	Pauses	14	7	21	intp	5	14	19			intp
26	3	22	SREPT(w) about about ah	4	Repetitions	14	7	21	intp	5	14	19			intp
26	3	23	UFP (…,Loei Rajabhat)	3	Pauses	23	23	21	tt	5	14				0
26	3	24	SREPT(w) my my morther an	4	Repetitions	12	8	1	intp	3	14				0
26	3	25	UFP	3	Pauses	21	7	21	spd	3	14	23			tt
26	3	26	NL-FP(ah)	1	Pauses	21	8	21	spd	1	5	6			0
26	3	27	UFP	3	Pauses	21	23	21	spd	1	5	6			0
26	3	28	SREPT(w) วัล วัล หนองนวง	4	Repetitions	23	23	21	tt	1	5	6			0
26	3	29	UFP	3	Pauses	21	21	21	spd	2					spd
26	3	30	NL-FP(ah)	1	Pauses	15	15	15	intp	5					tt
26	3	31	NL-FP(aa..)	1	Pauses	15	15	15	intp	5					tt
26	3	32	UFP+again please	3	Pauses	23	14	21	0	19					intp
26	3	33	UFP	3	Pauses	21	7	21	spd	19	23				0
26	3	34	NL-FP(ah)	1	Pauses	1	21	21	spd	1	5				0
26	3	35	UFP	3	Pauses	1	21	21	spd	1	5				0
26	3	36	SREPT(w) I,I like	4	Repetitions	3	3	3	tt	1	5				0
26	3	37	UFP	3	Pauses	1	23	2	spd	5					tt
26	3	38	NL-FP(ah)	1	Pauses	1	3	2	spd	9					tt
26	3	39	SREPR(del) my teacher ah..sh	6	Repairs	1	3	2	spd	9					tt
26	3	40	UFP (about….)	3	Pauses	11	19	19	intp	5					tt
26	3	41	UFP	3	Pauses	21	23	21	spd	5					tt
26	3	42	UFP(long pause)	3	Pauses	21	23	21	spd	1	2	4	14	23	spd
26	3	43	NL-FP(ah)	1	Pauses	21	23	21	spd	1	2	4	14	23	spd
26	3	44	UFP (I think I…)	3	Pauses	21	21	21	spd	1	3				0
26	3	45	UFP	3	Pauses	21	21	21	spd	5	14				0
26	3	46	UFP	3	Pauses	21	21	2	spd	5	14				0
26	3	47	UFP	3	Pauses	15	21	21	spd	3	14	5			tt
26	3	48	SREPT(phr) I want teacher, I	4	Repetitions	15	21	21	spd	3	14	5			tt
26	3	49	NL-FP(ah) ..ah..because	1	Pauses	3	3	3	tt	5					tt
26	3	50	NL-FP(ah)	1	Pauses	3	3	3	tt	1	3	5			tt
26	3	51	SREPT(phr) he can ah take ca	4	Repetitions	3	3	3	tt	1	3	5			tt
26	3	52	UFP+again please	3	Pauses	21	7	21	spd	19					intp
26	3	53	UFP (I like to change….)	3	Pauses	21	21	21	spd	5					tt
26	3	54	UFP	3	Pauses	21	21	21	spd	5					tt
26	3	55	UFP	3	Pauses	21	21	21	spd	4	5				0

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27	3	1	NL-FP (ah)	1	Pauses	24	10	10	intp	8					intp
27	3	2	NL-FP (ah)	1	Pauses	24	10	10	intp	14					intp
27	3	3	SREPT (w)	4	Repetitions	24	10	10	intp	14					intp
27	3	4	NL-FP (ah)	1	Pauses	24	10	10	intp	3	4				0
27	3	5	NL-FP (ah/rept. of ah)	1	Pauses	3	24	24	spd	2					spd
27	3	6	NL-FP (ah)	1	Pauses	21	24	24	spd	23					tt
27	3	7	NL-FP (ah)	1	Pauses	21	23	21	spd	4	9	17	23		tt
27	3	8	NL-FP (ah)	1	Pauses	23	23	15	tt	1	17				0
27	3	9	UFP	3	Pauses	23	23	15	tt	1	17				0
27	3	10	NL-FP (er)	1	Pauses	1	1	2	spd	1	3				0
27	3	11	NL-FP (um)	1	Pauses	23	23	10	tt	23					tt
27	3	12	UFP	3	Pauses	23	23	10	tt	23					tt
27	3	13	UFP	3	Pauses	21	21	21	spd	6	7	9			intp
27	3	14	NL-FP (um)	1	Pauses	23	23	10	tt	1	3	17			0
27	3	15	NL-FP (ah)	1	Pauses	20	1	10	intp	1	3	9			tt
27	3	16	NL-FP (um)	1	Pauses	20	1	10	intp	1	3	9			tt
27	3	17	NL-FP (ah)	1	Pauses	21	1	21	spd	1	2	17			spd
27	3	18	OREPT (w)	5	Repetitions	23	1	23	tt	1	2	17			spd
27	3	19	NL-FP (ah)	1	Pauses	1	24	21	spd	1	2				spd
27	3	20	UFP	3	Pauses	1	24	21	spd	1	2				spd
27	3	21	NL-FP (um)	1	Pauses	19	7	2	intp	1	2	7			spd
27	3	22	NL-FP (ah)	1	Pauses	1	2	1	spd	3	23				tt
27	3	23	UFP	3	Pauses	1	2	2	spd	3	23				tt
27	3	24	NL-FP (oh)	1	Pauses	21	7	21	spd	1	2	6	7		spd
27	3	25	UFP	3	Pauses	21	7	21	spd	1	2	6	7		spd
27	3	26	NL-FP (ah) + again pls	1	Pauses	23	23	10	tt	2	23				0
27	3	27	SREPT (w)	4	Repetitions	1	2	2	spd	2	3	14	6	17	intp
27	3	28	NL-FP (ah)	1	Pauses	3	2	2	spd	1	2	4	6		spd
27	3	29	NL-FP (um)	1	Pauses	3	2	3	tt	1	2	4	6		spd
27	3	30	SREPR (rev)	6	Repairs	3	2	2	spd	1	2	4	6		spd
27	3	31	NL-FP (er+laughter)	1	Pauses	23	23	23	tt	1	2	3	4	23	spd
27	3	32	SREPR (del)	6	Repairs	23	23	23	tt	1	2	3	4	23	spd
27	3	33	NL-FP (ah)	1	Pauses	3	7	3	tt	2	3	6	7	17	intp
27	3	34	NL-FP (ah)	1	Pauses	24	2	10	spd	21					spd
27	3	35	NL-FP (ah)	1	Pauses	21	23	21	spd	1	2	4			spd
27	3	36	UFP	3	Pauses	21	23	21	spd	1	2	4			spd
27	3	37	NL-FP (plgt)	1	Pauses	3	2	2	spd	1	2	4	6		spd
27	3	38	SREPT(st)	4	Repetitions	3	2	3	tt	1	2	4	6		spd
27	3	39	NL-FP (ah)	1	Pauses	3	5	5	tt	1	2	4	6		spd

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						H1	H2	H3			
28	3	1	NL-FL(ah)	1	Pauses	24	10	1	spd	21	spd
28	3	2	NL-FL(plgt/am…)	1	Pauses	24	10	17	intp	6	intp
28	3	3	NL-FL(plgt/am…)	1	Pauses	24	2	24	spd	21	spd
28	3	4	NL-FL(ah)	1	Pauses	8	15	1	intp	5	tt
28	3	5	UFP	3	Pauses	8	15	1	intp	5	tt
28	3	6	NL-FL(ah)	1	Pauses	1	2	2	spd	1	spd
28	3	7	SREPR(rev) I am, I came fron	6	Repairs	11	3	3	tt	1	spd
28	3	8	LFP(and)	2	Pauses	1	3	3	tt	5	tt
28	3	9	NL-FP(plgt/I learn…)	1	Pauses	1	3	3	tt	5	tt
28	3	10	NL-FP(er) in er…	1	Pauses	3	3	3	tt	6	intp
28	3	11	SREPR(del) I learn...I study in	6	Repairs	3	3	3	tt	6	intp
28	3	12	UFP	3	Pauses	23	23	21	tt	20	intp
28	3	13	NL-FP(อ่อ) …4 years	1	Pauses	15	15	15	intp	15	intp
28	3	14	UFP+again please	3	Pauses	23	14	21	0	14	intp
28	3	15	NL-FP(อ่อ…)	1	Pauses	1	15	15	intp	1	spd
28	3	16	UFP	3	Pauses	1	3	21	spd	1	spd
28	3	17	SREPT(w) I,I,I	4	Repetitions	8	15	15	intp	1	spd
28	3	18	NL-FP(อืมม)	1	Pauses	23	23	21	tt	5	tt
28	3	19	UFP	3	Pauses	23	23	17	tt	5	tt
28	3	20	OREPT(phr) come to Loei	5	Repetitions	14	23	21	0	14	intp
28	3	21	NL-FP(อ่อ…)	1	Pauses	15	15	15	intp	15	intp
28	3	22	NL-FL(ah)	1	Pauses	8	3	2	0	5	tt
28	3	23	UFP (I like….)	3	Pauses	17	3	2	0	1	spd
28	3	24	SREPT(w) I,I,I have	4	Repetitions	23	23	21	tt	1	spd
28	3	25	NL-FP (ah…+)	1	Pauses	23	23	2	tt	1	spd
28	3	26	UFP	3	Pauses	17	2	2	spd	1	spd
28	3	27	UFP	3	Pauses	23	23	21	tt	21	spd
28	3	28	NL-FP(ah)	1	Pauses	23	23	21	tt	21	spd
28	3	29	UFP	3	Pauses	15	15	15	intp	14	intp
28	3	30	NL-FL(อ่อ…)	1	Pauses	15	15	15	intp	14	intp
28	3	31	NL-FP(ah) live in..ah..	1	Pauses	21	23	21	spd	1	spd
28	3	32	UFP	3	Pauses	23	23	21	tt	1	spd
28	3	33	NL-FP(ah)	1	Pauses	11	7	2	intp	3	tt
28	3	34	UFP(ขอนแก่น…)	3	Pauses	15	15	15	intp	5	tt
28	3	35	NL-FL(อ่อ)	1	Pauses	15	4	7	intp	5	tt
28	3	36	NL-FP(ah)	1	Pauses	17	3	7	intp	5	tt
28	3	37	UFP	3	Pauses	15	3	7	intp	5	tt
28	3	38	LFP(and)	2	Pauses	21	3	21	spd	3	tt
28	3	39	UFP+ laughter, I'm not sure	3	Pauses	23	22	17	0	3	tt
28	3	40	UFP (ขอนแก่น…)	3	Pauses	15	15	21	intp	3	tt
28	3	41	OREPT(w) school	5	Repetitions	15	14	7	intp	15	intp
28	3	42	NL-FP(อ่อ)	1	Pauses	15	14	7	intp	15	intp
28	3	43	UFP+pardon	3	Pauses	10	4	21	spd	14	intp
28	3	44	NL-FP(อ่อ…)	1	Pauses	14	23	15	intp	1	spd
28	3	45	UFP	3	Pauses	14	23	15	intp	1	spd
28	3	46	UFP (in…my school)	3	Pauses	1	15	1	spd	2	spd
28	3	47	OREPT(w) grade	5	Repetitions	14	14	7	intp	14	intp
28	3	48	laughter+NL-FL(โอ้ว..)	1	Pauses	23	23	21	tt	5	tt
28	3	49	UFP	3	Pauses	21	22	21	spd	21	spd
28	3	50	NL-FP(อืมม)	1	Pauses	8	14	7	intp	21	spd
28	3	51	SREPT(phr) dream job	4	Repetitions	14	14	7	intp	14	intp
28	3	52	UFP	3	Pauses	14	22	2	spd	5	tt
28	3	53	NL-FL(ah)	1	Pauses	2	22	2	spd	5	tt
28	3	54	SREPT(phr) my dream job ah	4	Repetitions	8	23	1	0	1	spd
28	3	55	NL-FP(ah) ah…different	1	Pauses	1	1	17	spd	3	tt
28	3	56	NL-FP(โอ้ว)	1	Pauses	8	15	15	intp	5	tt
28	3	57	NL-FP(ah) is ah…	1	Pauses	1	10	1	spd	2	spd
28	3	58	NL-FP(ah)	1	Pauses	21	3	1	spd	2	spd
28	3	59	UFP	3	Pauses	21	3	1	spd	2	spd
28	3	60	UFP+again please	3	Pauses	21	22	21	spd	14	intp
28	3	61	NL-FP(อืมม)	1	Pauses	10	22	17	intp	14	intp
28	3	62	UFP	3	Pauses	21	22	21	spd	14	intp
28	3	63	NL-FP(ah)	1	Pauses	1	22	7	spd	5	tt
28	3	64	SREPT(w) I,I would like	4	Repetitions	3	22	7	0	5	tt

ID	Group	DF#	DF Forms	Sub-type Code	DF_Type	Hearers' Interpretations			Rep. of Hearers' Interpretations	Speakers' Intentions			Rep.of Intentions
						H1	H2	H3					
29	3	1	NL-FP(ah)	1	Pauses	24	10	17	intp	6			intp
29	3	2	NL-FP(ah)	1	Pauses	20	10	17	intp	3			tt
29	3	3	NL-FP(ah)	1	Pauses	24	10	17	intp	3	9		tt
29	3	4	UFP	3	Pauses	24	10	1	spd	4	11		0
29	3	5	NL-FP(ah)	1	Pauses	24	10	7	intp	4	11		0
29	3	6	NL-FP(ah) +again please	1	Pauses	15	10	17	intp	5			tt
29	3	7	NL-FP(ah)	1	Pauses	24	10	17	intp	10			intp
29	3	8	UFP+again please	3	Pauses	15	14	23	intp	10			intp
29	3	9	NL-FP(ah)	1	Pauses	24	10	17	intp	5			tt
29	3	10	NL-FP(ah) I think…ah..	1	Pauses	24	10	17	intp	24			spd
29	3	11	NL-FP(ah)	1	Pauses	24	3	3	tt	9			tt
29	3	12	UFP	3	Pauses	24	3	2	spd	9			tt
29	3	13	NL-FP(plgt/I…)	1	Pauses	24	3	3	tt	9			tt
29	3	14	SREPT(w) I,I,I	4	Repetitions	24	3	2	spd	9			tt
29	3	15	NL-FP(ah) I very good…	1	Pauses	3	3	1	tt	24			spd
29	3	16	SREPT(phr)	4	Repetitions	3	2	2	spd	24			spd
29	3	17	NL-FP(อืมม)	1	Pauses	17	14	17	intp	23			tt
29	3	18	SREPT(w) I,I like	4	Repetitions	3	3	2	tt	23			tt
29	3	19	UFP(long pause)	3	Pauses	21	23	21	spd	1			spd
29	3	20	NL-FP(ah…yeah)	1	Pauses	9	18	17	intp	5	9	18	tt
29	3	21	NL-FP(ah)	1	Pauses	24	10	7	intp	24			spd
29	3	22	SREPT(w) I,I,I	4	Repetitions	24	10	2	spd	24			spd
29	3	23	NL-FP(in…ah)	1	Pauses	24	3	24	spd	5			tt
29	3	24	NL-FP(ah)	1	Pauses	24	1	1	spd	14			intp
29	3	25	NL-FP(อ๋อ)	1	Pauses	15	15	7	intp	3			tt
29	3	26	NL-FP(ah)	1	Pauses	15	15	1	intp	3			tt
29	3	27	NL-FP(อ๋อ)	1	Pauses	24	2	1	spd	11			intp
29	3	28	SREPT(w) my my family	4	Repetitions	24	2	7	spd	11			intp
29	3	29	NL-FP(er)	1	Pauses	24	4	21	spd	5			tt
29	3	30	UFP(ขอนแก่น…)	3	Pauses	24	4	21	spd	5			tt
29	3	31	NL-FP(is…ah..)	1	Pauses	1	10	1	spd	1			spd
29	3	32	NL-FP(ah)	1	Pauses	1	3	1	spd	8	12		intp
29	3	33	NL-FP(ah)	1	Pauses	1	3	5	tt	1			spd
29	3	34	LFP(and)	2	Pauses	20	3	5	tt	24			spd
29	3	35	NL-FP(ah)	1	Pauses	24	3	5	tt	17			intp
29	3	36	NL-FP(ah such as…)	1	Pauses	24	3	24	spd	17			intp
29	3	37	NL-FP(ah Khonkaen zoo ah…)	1	Pauses	24	3	24	spd	1			spd
29	3	38	NL-FP(ah)	1	Pauses	24	10	24	spd	1			spd
29	3	39	NL-FP(ah)	1	Pauses	5	3	2	tt	1			spd
29	3	40	UFP	3	Pauses	5	10	7	intp	1			spd
29	3	41	SREPT(w) my my school	4	Repetitions	5	10	2	0	1			spd
29	3	42	NL-FP(อ๋อ)	1	Pauses	15	15	15	intp	14	15		intp
29	3	43	NL-FP(ah)	1	Pauses	15	15	15	intp	14	15		intp
29	3	44	SREPT(w) I,I like	4	Repetitions	15	15	15	intp	14	15		intp
29	3	45	UFP	3	Pauses	21	14	21	spd	15			intp
29	3	46	NL-FP(ah)	1	Pauses	21	23	21	spd	15			intp
29	3	47	SREPT(w) มัธ..มัธยม one	4	Repetitions	3	4	4	spd	3			spd
29	3	48	NL-FP(ah ..ah to 6)	1	Pauses	24	3	1	spd	2			spd
29	3	49	UFP	3	Pauses	24	3	1	spd	2			spd
29	3	50	NL-FP(อืมม)	1	Pauses	15	14	2	intp	5	14		0
29	3	51	SREPT(w) I, I think	4	Repetitions	24	14	17	intp	5	14		0
29	3	52	NL-FP(ah..)	1	Pauses	13	10	2	intp	4			spd
29	3	53	NL-FP(ah I think…ah..)	1	Pauses	1	3	2	spd	1			spd
29	3	54	NL-FP(ah)	1	Pauses	1	10	2	spd	1			spd
29	3	55	NL-FP(ah)	1	Pauses	24	3	2	spd	7	8		intp
29	3	56	UFP	3	Pauses	24	3	7	0	21			spd
29	3	57	SREPT(w) I,I	4	Repetitions	24	3	7	0	21			spd
29	3	58	NL-FP(อืมม not yet)	1	Pauses	10	3	2	0	21			spd
29	3	59	NL-FP(อืมม)	1	Pauses	21	23	21	spd	21			spd
29	3	60	UFP	3	Pauses	21	23	21	spd	21			spd
29	3	61	OREPT(phr) Do you have sh…	5	Repetitions	14	14	14	intp	19			intp
29	3	62	NL-FP(ah)	1	Pauses	14	14	14	intp	19			intp
29	3	63	NL-FP(because ah…)	1	Pauses	10	3	2	0	15			intp
29	3	64	NL-FP(ออ…)	1	Pauses	10	10	5	intp	3	15		0
29	3	65	UFP	3	Pauses	10	10	7	intp	3	15		0
29	3	66	SREPT(phr) I. I teach, I teach	4	Repetitions	10	10	17	intp	3	15		0
29	3	67	NL-FP(ah)	1	Pauses	20	4	17	intp	23			tt
29	3	68	NL-FP(plgt/near…)	1	Pauses	3	4	17	0	23			tt
29	3	69	NL-FP(อืมม)	1	Pauses	21	23	21	spd	24			spd
29	3	70	laughter+UFP	3	Pauses	21	14	21	spd	24			spd
29	3	71	UFP (may be it's o.k.)	3	Pauses	13	3	3	tt	1			spd

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						H1	H2	H3							
30	3	1	NL-FP (ah)	1	Pauses	24	10	10	intp	1	14				0
30	3	2	NL-FP (ah)	1	Pauses	24	2	2	spd	1	6				0
30	3	3	NL-FP (uh)	1	Pauses	24	2	2	spd	1	6				0
30	3	4	SREPT (w)	4	Repetitions	24	2	2	spd	1	6				0
30	3	5	NL-FP (uh)	1	Pauses	1	3	2	spd	1	6	13			intp
30	3	6	NL-FP (er)	1	Pauses	1	3	2	spd	1	6	13			intp
30	3	7	NL-FP (ah)	1	Pauses	20	1	1	spd	2					spd
30	3	8	NL-FP (uh)	1	Pauses	21	1	1	spd	2					spd
30	3	9	SREPT (w)	4	Repetitions	1	3	4	spd	1					spd
30	3	10	SREPT (w)	4	Repetitions	1	1	1	spd	6					intp
30	3	11	SREPR (inst)	6	Repairs	23	10	1	0	6					intp
30	3	12	NL-FP (ah)	1	Pauses	23	10	7	intp	24					spd
30	3	13	NL-FP (uh)	1	Pauses	23	10	1	0	24					spd
30	3	14	NL-FP (ah)	1	Pauses	24	10	10	intp	10					intp
30	3	15	NL-FP (uh)	1	Pauses	24	10	10	intp	10					intp
30	3	16	SREPT (w)	4	Repetitions	24	10	10	intp	10					intp
30	3	17	NL-FP (ah)	1	Pauses	20	7	10	intp	24					spd
30	3	18	NL-FP (uh)	1	Pauses	23	7	21	0	24					spd
30	3	19	NL-FP (ah)	1	Pauses	21	24	21	spd	24					spd
30	3	20	NL-FP (ah)	1	Pauses	21	24	21	spd	14	23				0
30	3	21	NL-FP (um)	1	Pauses	21	24	21	spd	14	23				0
30	3	22	UFP	3	Pauses	21	24	21	spd	14	23				0
30	3	23	OREPT (phr)	5	Repetitions	21	24	21	spd	14	23				0
30	3	24	UFP+again pls	3	Pauses	21	24	21	spd	22	24				spd
30	3	25	UFP	3	Pauses	21	24	21	spd	22	24				spd
30	3	26	NL-FP (ah)	1	Pauses	10	10	10	intp	4	23				0
30	3	27	NL-FP (uh)	1	Pauses	10	10	10	intp	4	23				0
30	3	28	NL-FP (plgt/initial consonant s	1	Pauses	10	10	10	intp	4	23				0
30	3	29	NL-FP (ah)	1	Pauses	1	7	10	intp	22					spd
30	3	30	NL-FP (um)	1	Pauses	3	7	10	intp	22					spd
30	3	31	UFP	3	Pauses	1	7	10	intp	22					spd
30	3	32	NL-FP (ah)	1	Pauses	1	3	1	spd	4					spd
30	3	33	SREPT (w)	4	Repetitions	1	3	1	spd	4					spd
30	3	34	NL-FP (ah)	1	Pauses	23	3	1	tt	1	22				spd
30	3	35	NL-FP (eh)	1	Pauses	23	3	1	tt	1	22				spd
30	3	36	SREPT(w)	4	Repetitions	2	3	2	spd	1	22				spd
30	3	37	NL-FP (uh)	1	Pauses	3	3	1	tt	21	22				spd
30	3	38	NL-FP (um)	1	Pauses	2	3	1	spd	21	22				spd
30	3	39	SREPR (inst)	6	Repairs	3	3	1	tt	21	22				spd
30	3	40	NL-FP (um)	1	Pauses	1	3	1	spd	2					spd
30	3	41	NL-FP (eh)	1	Pauses	10	3	2	0	2					spd
30	3	42	NL-FP (plgt/and)	1	Pauses	10	3	1	0	2					spd
30	3	43	SREPT (w)	4	Repetitions	1	3	1	spd	2					spd
30	3	44	NL-FP (ah)	1	Pauses	23	1	1	spd	22					spd
30	3	45	NL-FP (um)	1	Pauses	23	1	2	spd	22					spd
30	3	46	SREPR (inst)	6	Repairs	23	1	1	spd	22					spd
30	3	47	NL-FP (ah)	1	Pauses	1	22	10	spd	1	22				spd
30	3	48	NL-FP (uh)	1	Pauses	1	22	10	spd	1	22				spd
30	3	49	SREPT (w)	4	Repetitions	1	22	10	spd	1	22				spd
30	3	50	NL-FP (ah)	1	Pauses	1	23	10	0	1	22				spd
30	3	51	NL-FP (eh)	1	Pauses	3	23	21	tt	1	22				spd
30	3	52	NL-FP (plgt/and)	1	Pauses	3	23	21	tt	1	22				spd
30	3	53	UFP	3	Pauses	1	23	21	spd	1	22				spd
30	3	54	SREPT (w)	4	Repetitions	1	23	10	0	1	22				spd
30	3	55	NL-FP (uh)	1	Pauses	1	23	10	0	10	22				0
30	3	56	NL-FP (um)	1	Pauses	1	23	10	0	10	22				0
30	3	57	UFP	3	Pauses	1	23	10	0	10	22				0
30	3	58	SREPT (w)	4	Repetitions	1	23	10	0	10	22				0
30	3	59	NL-FP (plgt/and)	1	Pauses	21	23	21	spd	1					spd
30	3	60	UFP	3	Pauses	21	23	21	spd	1					spd