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Word Recognition from Speech, Syntactic Knowledge, Metacognitive Awareness, Self-Efficacy as determination for L2 Listening Comprehension

Ramli
Universitas Negeri Malang, Universitas Bosowa Makassar, *asnandaramli@yahoo.com*

Nur Mukminatien
Universitas Negeri Malang, Indonesia, *nursunaryo@gmail.com*

Ali Saukah
Universitas Negeri Malang, Indonesia, *alisaukah@yahoo.com*

Johannes Ananto Prayogo
Universitas Negeri Malang, Indonesia, *johannes_songky@yahoo.co.id*

This study investigated the contribution of word recognition from speech (WRS), syntactic knowledge, metacognitive awareness, self-efficacy to L2 listening comprehension among 92 students in English department, UIN Maulana Malik Ibrahim Malang Indonesia. This study applied Multiple Regression. The instruments consisted of tests and questionnaires. The tests were WRS, Grammaticality judgement and sentence comprehension as two components of proceduralized syntactic knowledge, and L2 listening comprehension test. Questionnaires of metacognitive awareness and self-efficacy in listening were also involved. The results of multiple regression analysis (determination coefficient) showed that word recognition from speech 3000 frequency range, syntactic knowledge (grammar and sentence comprehension test), metacognitive awareness, self-efficacy significantly determined L2 listening comprehension. The scores of word Recognition at the 1000 and 2000 frequency word level gave very little unique predictive to the regression model. This finding suggested that all variables should be promoted in learning process for students' successful L2 listening comprehension.

Keywords: word recognition from speech, syntactic knowledge, metacognitive awareness, self-efficacy, L2 listening comprehension

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INTRODUCTION

Listening comprehension is one of the important skills in L2 learning and teaching which needs to be operationalized and employed in FL classrooms to meet the students' learning needs (Graham, 2011; Huang, 2005). The result of listening provides learners with information which helps develop their world knowledge required in language use (Nunan & Newton, 2009). The successful listening comprehension integrates linguistic and non-linguistic knowledge to deliver the foundation of L2 listening comprehension (Prince, 2012). Word recognition and syntactic knowledge are the two linguistic factors (word recognition and syntactic knowledge) which become the knowledge bases that learners use to process and understand the text (Vandergrift & Goh, 2012). Meanwhile, metacognitive awareness also helps learners to proceed their learning and apply more appropriate ways to listen effectively (Bloomfield et al., 2010). However, Vandergrift (2007) also includes self-efficacy as another factor in successful listening comprehension.

In linguistic knowledge, the previous study investigated the contribution of word recognition from speech 1k, 2k, and 3k frequency level as a construct of vocabulary test in listening in ESP context (Matthews & Cheng, 2015). Meanwhile, this present study investigated the relationship between word recognition from speech and L2 listening comprehension test in English Academic Purpose (EAP). Syntactic knowledge also becomes a new insight since this knowledge in L2 listening comparing to lexical and phonological knowledge was also less investigated (Goh, 2005). Therefore, this study designed proceduralized syntactic knowledge which focuses on form and meaning (Ellis, 2005). The previous research about syntactic knowledge on listening comprehension was investigated using untimed written format of the measure of syntactic knowledge (Mecartty, 2000; Liao, 2007). Non-linguistic factors are also encountered; metacognitive awareness and listening self-efficacy. This study was constructed based on learners' need in listening course. The designed proficiency test based on the students' leaning syllabus is considered to be suited to determining the students' L2 listening comprehension (Joyce, 2013). This study is expected to obtain empirical evidence on the contribution among word recognition from speech (WRS), syntactic knowledge, metacognitive awareness, and listening self-efficacy to L2 listening comprehension.

LITERATURE REVIEW

L2 Listening process is one difficult aspect for learners because they must understand the spoken words quickly and the rate of listening is not always readily controlled (Hulstijn, 2007). The feature that increases the L2 learners' difficulty is speech signal such as lexical segmentation. This feature creates connected words in groups whose sound features are significantly dissimilar when those of the individual words are pronounced separately (Field, 2003). Applying the different types of linguistic and non-linguistic knowledge through bottom-up and top-down processes to conceptualize L2 listening becomes strong influence in the field of L2 listening ((Prince, 2012; Graham & Macaro, 2008). Graham (2006) and Prince (2012) revealed that the complexity of the listening processes involves a larger combination of knowledge sources, linguistic and non-linguistic in which students understand incoming data rapidly. Increasing familiarity

and context is linked to the faster and better word recognition. Meanwhile, both also facilitate word recognition (Solso, 1991).

Recognizing words as a crucial factor for successful listening comprehension in second language development is continuously investigated by Larsen et al., (2008), Staehr (2009), Webb and Rodgers (2009a), Webb and Rodgers (2009b), Jafari and Hashim (2012); Van Zeeland and Schmitt (2013a), Van Zeeland and Schmitt (2013b), Yamamoto, (2014). However, less research has directly studied the role of word recognition from speech (WRS) in listening. Matthews and O'Toole (2013) revealed that students attained significantly higher word recognition levels while undertaking the learning procedures. Continuously, Matthews et al. (2014) showed that there was greater improvement in L2 word recognition from speech when using web-application using web-application. Furthermore, Matthews and Cheng (2015) investigated the relationship between WRS in 1000, 2000, and 3000-word frequency levels and listening comprehension test (IELTS) in 24 different subjects in tertiary level in ESP context. It revealed a significant association between WRS and L2 listening comprehension scores and third thousand frequency level with L2 successful listening comprehension. From the purpose, development of high frequency word recognition from speech (WRS) considerably seems to be helpful model for quizzes that aims to be predictor listener's ability to have L2 listening comprehension in EAP context.

Although vocabulary aspect has been presented in models of L2 listening comprehension, Buck (2001) states syntactic knowledge also has equally been recognized as essential for the perception and interpretation of auditory language. Sun (2002) demands that L2 listeners may find difficulty segmenting streams of speech when many words are connected because of limited syntactic knowledge. Investigating syntactic knowledge in relation to L2 listening comprehension is based on the results from the two previous studies (Mecartty, 2000; Liao, 2007). Mecartty (2000) compared the roles of vocabulary (*K-24*) and syntactic knowledge (*K-24*) in both L2 reading and listening. The two measures were delivered in written form and were untimed. Basically, he described that no significant findings were found with respect to predictive power and the measures of vocabulary and syntactic knowledge covered in the study. Additionally, Liao (2007) explored the link between vocabulary knowledge, syntactic knowledge and L2 listening ability. These results exposed that vocabulary and grammatical knowledge were identified as essential predictors for L2 listening comprehension. The untimed written format of the measure of syntactic knowledge may become the limitation. Therefore, this current study investigates the correlation of word recognition from speech and syntactic knowledge to L2 listening comprehension.

Another aspect which is consciously needed to develop students' listening comprehension is metacognitive awareness. Metacognition helps learners decide what to do in their learning process, so listeners can adopt more appropriate ways to listen effectively (Bloomfield et al., 2010). Awareness of metacognitive processes related to planning, monitoring, and evaluating cognitive processes while doing language activities helps learners to manage, direct, regulate and guide their learning (Wang et al., 2009). According to Goh (2008), metacognitive instruction deals with two purposes. Firstly,

learners increase their motivation, thereby becoming less anxious, and more confident. Secondly, listening performance improves with increased confidence (Vandergrift & Goh, 2012; Vandergrift, 2004). Additionally, metacognition lies as the heart of learner-oriented L2 listening comprehension because it is fundamental to help learners involve more effectively with contribution and lead their overall listening development like language input they receive, manage their approach to listening, focus on the spoken message, and boost their performance on listening activity in and out of the classroom (Rahimirad & Shams, 2014). Research on metacognition in second language (L2) listening becomes positive interest among researchers, reviewers, and scholars (Cross, 2015) and some studies on learners' metacognition have exposed the important role of metacognitive knowledge in L2 listening performance (Vandergrift, et al., 2006; Goh & Hu, 2013; Bozorgian, 2014; Rahimi & Abedi, 2015; Vandergrift & Baker, 2015). Goh and Hu (2013) found that learners' metacognitive knowledge scores, their listening performance, and metacognitive awareness in listening were significantly correlated. Applying Metacognitive Awareness in Listening Questionnaire (MALQ) potentially improved metacognitive awareness when listening (IELTS) (Bozorgian, 2014). Giving extra attention to a strategic approach to the listening activities in EAP classrooms and crucial and focus on product-oriented as well as process-oriented listening instruction to foster the leaners' ability to extract content information from listening input effectively (Rahimirad & Moini, 2015). In this current study, to investigate the ability to recognize words from speech and syntactic knowledge as predictions for L2 listening comprehension, metacognitive knowledge is one of the main non-linguistic factors that must be accounted for.

Beside word recognition from speech, syntactic knowledge and metacognitive awareness, successful L2 listening comprehension is also influenced by self-efficacy as the key to understand learners' actions. The first field of L2 listening, one of the most central aspects, is the affective factor (Vandergrift, 2014). Self-efficacy is one of powerful motivational constructs because it covers all aspects of motivational form with causal attributions which affect motivation, performance and affective reaction (Bandura, 1977). In line with the statement, Bandura (1986) defined that self-efficacy is self-judgement of learners' capabilities to complete a task well and becomes the main role in language learning by fostering or blocking learners' progress. Moreover, self-efficacy is personal beliefs about self-capabilities to finish a specific task which strongly influence on the levels of persistence and how they make choices (Graham, 2011). Learning strategies as well as self-efficacy were highly predictive of their general academic performance. When students have self-efficacy, the low academic achievers will have more positive direction of learning attitude and they will logically make a change to students' learning strategies and result in improvement in their academic performance (Yip, 2012). Piechurska and Kuciel (2013) found self-efficacy has given substantial contribution to the understanding of student motivation and language learning achievement. The position of learners' self-efficacy is obviously significant in their perseverance and success, it is crucial to know ways to support learners develop high self-efficacy in language learning contexts and when students have strong sense of self-efficacy, they can be possibly more motivated, put more effort in their strategy use, and

encourage to apply their strategy use in listening activities (Baleghizadeh *et al.*, 2013; Graham, 2011; Anam & Stracke, 2016). Since listening becomes complex and active process of interpretation, self-efficacy leads students to gain higher level of achievement and bear greater willingness to face challenges and to employ effort (Mills et al., 2007). To investigate the ability to recognize words from speech, syntactic knowledge, and metacognitive knowledge as determination for L2 listening comprehension, self-efficacy is one of affective domains must be accounted for.

Research Questions

This present study explored "to what extent do the students' word recognition from speech at the first, second, and third thousand frequency, syntactic knowledge, metacognitive awareness, and self-efficacy determine L2 listening comprehension?"

METHOD

This study employed correlational study and applied multiple regression to analyze the data. It aimed to provide a clear understanding of the correlation of word recognition from speech, syntactic knowledge, metacognitive awareness in listening, self-efficacy in listening to L2 listening comprehension.

Population and Samples

The population was all second semester students at English Language and Letters Department, Faculty of Humanities, UIN Maliki Ibrahim Malang, Indonesia. They had already followed Literal Listening course which concerned on understanding short dialogues and other simple spoken texts of British and American accents to achieve literal comprehension. There were 200 students selected as the targeted population and 92 samples selected using random sampling representing the homogeneous targeted population. According to Gay dan Diehl (1992), the minimum subjects to conduct correlational research are 30 samples.

Research Instruments

The Measurement of Word Recognition from Speech (WRS)

The construction mode of word recognition from speech was an adaptation from the previous research (Matthews & O'Toole, 2013; Matthews et al.,2014; Matthews & Cheng, 2015). It was to measure the participants' ability to recognize the targeted words from speech which represent meaning. The items of test were combined with the written stimulus position the targeted words with the blank space. Each item of WRS consisted of one sentence with one missing targeted word. The contextual words in a sentence were at the same word level or more frequent than the targeted word. Matthews and Cheng (2015) state that the frequency level of the lexical content of the written contextual sentences for each item was carefully checked. For the items testing the one thousand (1K) frequency level all contextual lexical items were also from the 1K frequency level and for the second and third thousand-word frequency level, contextual lexical items were predominantly from the 1K level with only a few items from the 2K level to avoid destruction in recognizing the targeted words. The spoken stimulus of

words was general information to limit the potential influence of students' background knowledge. By providing sentence, students were expected to comprehend the context while recognizing the targeted words.

The categorization of word lists 1000, 2000, and 3000 frequency level was taken from British National Corpus (BNC) (Davies, 2004) in comparison with Corpus of Contemporary of American (COCA) (http://www.wordfrequency.info) as the largest freely-available and well- balanced corpus of American English (Davies, 2008). The analysis tool from Vocabulary Profiler on *the Compleat Lexical Tutor* (Cobb, 2013) showed the word frequency bands as determined through analyzing many research corpora BNC-COCA25. The number of WRS used was 22 words in 1K frequency range, 37 words in 2K frequency range, and the words of 3K were dominant in 41 frequency range. The spoken stimulus of WRS test was carefully recorded in normal speed rate using digital recording equipment by a woman native speaker of English. There were 100 sentences as the spoken stimulus with 100 targeted words, 5 seconds periodically were given to recognize the targeted word in each sentence, and around 17 minutes were used to complete this test. The total word length of spoken stimulus was 824 words and the average were 8.24 words in each sentence.

Regarding the ways of scoring word recognition from speech tests, the basic concern was to limit the potential threat to validity caused by the requirement to represent words in the written form. When the students made minor spelling errors they still obtained score based on rubrics (Buck, 2001). The structured scoring rubrics designed by (Matthews & O'Toole, 2013) which produced a very high level of inter-rater reliability as determined by Cohen's Kappa analysis ($N = 91$, $p < .01$) were employed to achieve this goal. The use of the rubric categorized the minor spelling errors and assigned marks for varying levels of word recognition systematically. The marking rubrics assigned full credit (1) to responses which were written in the correct orthographic form and included minor spelling errors which does not impede the scorer's ability to recognize the target word. Half marks (0,5) were assigned for words which could be readily recognized by the scorer even though the errors in the representation of the target word were found. Meanwhile, no credit (0) was given when students answered different word or no answer. There were 79 items used to collect the data of WRS ($\alpha = 0.921$).

Syntactic Knowledge (SK)

Target Structure

The idea to operationalize the proceduralized syntactic knowledge tests was based on criteria offered by Ellis (2005). Firstly, assessing L2 knowledge needs to be *controlled*. L2 learners have limited time to access their knowledge of language and learners successfully complete the task if they have an acceptable level of proceduralized knowledge of *target structure*. Secondly, while measuring the form of sentence, it is also focused on *meaning*. Another concern is that fluent language use requires a focus on meaning rather than on form in both production and comprehension. In this study, measuring syntactic knowledge of learners concerned on their knowledge of forms and meaning which were considered as better measures of proceduralized L2 knowledge.

Two kinds of syntactic knowledge were developed; grammaticality judgment test and sentence comprehension test. The target structures of this test were developed from two positions of research: (a) the studies of cognitive psychology regarding factors contributing to spoken sentence comprehension (Robertson & Joanisse, 2010; Kornilov *et al.*, 2015); (b) corpus studies regarding frequency of basic English grammatical structures using any structural frequencies for a variety of written and spoken corpora (Roland et al., 2007). Sentence comprehension studies focused on comprehension of canonical and non-canonical sentences. The syntactic structures were based on Basic English Grammar course syllabus.

Grammaticality judgment (GJT) and sentence comprehension test (SCT)

The first measure of syntactic knowledge was a timed aural grammaticality judgment. The word frequency used in the test was 1000 word-families to avoid compounding syntactic knowledge and WRS test. Correct and incorrect sentences were provided for each targeted structure based on students' listening syllabus course. Therefore, the aural test had a total of 74 items and the total words are 646. The second measure of syntactic knowledge was aural sentence comprehension studies. The target structures were also selected from the students' course syllabus. The word frequency used in test sentences was words from the first 1000 word-families to avoid compounding syntactic knowledge and WRS test. In this test, participants listened to the sentence once and answered a short yes/no comprehension question. There were four items for each targeted structure which needs 7 seconds for SJT, and 8 seconds for SCT) to answer each item of test periodically. Grammatical judgement test applied 49 items ($\alpha = 0.833$). Meanwhile, there were 34 items in sentence comprehension test ($\alpha = 0.747$).

Listening Comprehension Test (LCT)

To develop language test for the purposes of satisfying language learning needs, the test of listening was designed based on the listening syllabus of Islamic State University (UIN) Malik Ibrahim, Malang. This test was administered for students who had passed in Listening I (Literal Listening) course in semester 2. Specifically, there were four basic competences used to develop this test. Firstly, the test was employed for students to comprehend listening texts in the form of short dialogue. They were expected to find the specific or details information from the short conversation. Secondly, the test was designed for students to understand the main ideas and details of dialogues. For the third competence, students were to comprehend the main ideas and details of narrative texts. In this test, the students got some information of the sequences of events. The last basic competence was to comprehend the main ideas and details of descriptive texts. The resources of listening test were adopted from some authentic materials of listening widely used by lecturers in UIN Maulana Malik, Malang.

The listening comprehension test consisted of 6 transcripts, 3 short conversations, 1 dialogue, and narrative and descriptive listening text. The content of the short dialogue in L2 listening comprehension was involved to achieve a social function in some conversation. The question type was multiple choice as adopted listening comprehension test from TOEFL. Like other listening tests, the participants answered the questions with

multiple choices as they heard the stimulus material. The listening material was heard only once. Time allocation provided was approximately 15 minutes to answer and 5 minutes to transfer the answer into an answer sheet. Regarding the scoring listening test, highest stakes of listening tests applied a "correct" or "incorrect" approach to grading responses. Basically, in this listening comprehension test, a point is described for a correct response. Correct answer received 1 mark while incorrect answer did not receive a point (0). A try out was also conducted to the validity of the listening comprehension test after it was being examined by the experts. 35 items were used to collect the data (Cronbach's alpha 0.751).

Metacognitive Awareness of Listening Questionnaire (MALQ)

This questionnaire was used to measure the participants' metacognitive awareness concerning their perceived use of strategies while listening to spoken texts. This research adapted the Metacognitive Awareness Listening Questionnaire (MALQ) which was constructed by Vandergrift, Goh, Mareschal, and Tafaghodtari (2006) and previously implemented by Goh and Hu (2013), Rahimirad and Shams (2014), Bozorgian (2014), Vandergrift and Baker (2015), Rahimirad and Moini (2015). The MALQ, a self-report instrument, consists of 21 randomly ordered items in relation to L2 listening comprehension. The items of questionnaires focus on measuring the perceived use of the strategies and processes underlying five factors related to the regulation of L2 listening comprehension: Problem-solving (5, 7, 9, 13, 17, 19), Planning and Evaluation (1, 10, 14, 20, 21), Mental Translation (4, 11, 18), Person Knowledge (3, 8, 15), and Directed Attention (2, 6, 12,16). Participants responded using a Likert scale from 1 to 6, with 6 signifying full agreement with the item. 21 items were used to collect the data for students' strategy use in listening process ($\alpha = 0.915$).

Self-Efficacy of Listening Questionnaire (SELQ)

The construction of listening self-efficacy questionnaire was designed based on the operational key terms and indicators. According to some theories, the self-efficacy involved efficacy expectations to the challenge, task levels, self-motivation, and academic achievement (2003; Graham, 2011; Yip, 2012; Dinther et al., 2015; Anam & Stracke, 2016; Hsieh, 2008; Piechurska & Kuciel, 2013). The indicators of listening self-efficacy lied in positive as well as negative statements. The rationale for constructing negative questions aimed to examine students' consistency in the positive questions. 27 items with cronbach's alpha ($\alpha = 0.884$) were developed in questionnaire on listening self-efficacy. In addition, the questionnaire was designed in the form of Likert-scale, or in other words, it was close-ended questionnaire. To obtain students' self-efficacy, they decided if they (1) strongly disagree (2) moderately disagree (3) slightly disagree (4) moderately agree (5) strongly agree to the statements provided. The data of students' responses was analyzed in numerical forms.

Procedures and Analysis

Procedural protocols were used to attempt giving participants clear instruction about their roles. One day was needed to employ the data collection in the end of the semester before semester break towards 92 students. Classroom condition was arranged for

students' comfort and the test reliability. The tests were conducted in sequence (Word Recognition from Speech (WRS) test, Syntactic Knowledge (SK), and then Listening Comprehension test (LCT). The three tests were in auditory. Questionnaires of metacognitive awareness (MALQ) and Self-efficacy in listening (SELQ) were distributed among the participants after administering all the tests. To raise students' understanding, they were given a brief explanation about the purpose of the questionnaire and the way to answer it. Participants took more and less 30 minutes to finish the questionnaires. The test on statistical hypothesis was analyzed using Multiple Regression with the computer software of SPSS. The analysis would reveal whether the students' ability to recognize words from speech, syntactic knowledge, metacognitive awareness, and self-efficacy significantly determined to L2 listening comprehension.

FINDINGS

To what extent do the students' word recognition from speech at the first, second, and third thousand frequency, syntactic knowledge, metacognitive awareness, and self-efficacy determine L2 listening comprehension.

Table 1
Multiple Regression Analysis

Variable	*B*	t-value	*Significant*	Note
Constant	-8.814			
WRS1	0.163	0.964	0.338	Not significant
WRS2	0.046	0.517	0.606	Not significant
WRS3	0.211	2.961	0.004	Significant
SELQ	0.087	3.129	0.002	Significant
MALQ	0.067	2.426	0.017	Significant
SCT	0.174	2.172	0.033	Significant
GCT	0.153	3.316	0.001	Significant
A		= 0.050		
Coefficient correlation (R)		= 0.861		
Coefficient of determination (R2)		= 0.741		
F-value		= 34.408		
F-table ($F_{7,84,0.05}$)		= 2.121		
Significance F		= 0.000		
T-table ($t_{84,0.05}$)		= 1.989		

The table shows that recognition from speech at the level of 3000 frequency level, syntactic knowledge consisting of grammaticality judgement test and sentence comprehension test, their response about the metacognitive awareness and self-efficacy to L2 listening comprehension had significant correlation to L2 listening comprehension unless WRS at 1k (0.338>.05) and 2k (0.606>.05) frequency word level were not significant. Reasonably when students want to improve their listening comprehension, in the same time they must develop their ability to recognize WRS3k, syntactic knowledge, metacognitive awareness, and self-efficacy. Meanwhile, F-value also showed all independent variables were simultaneously contributed to dependent variable (34.408 < 0.05) and the determination of all independent variables to predict an outcome of L2

listening comprehension in the linear regression setting coefficient (R2) was 0.741 which meant students' ability to recognize WRS, syntactic knowledge, metacognitive awareness, and self-efficacy 74, 1 % determined L2 listening comprehension.

DISCUSSION

The Contribution of Independent Variables to Dependent Variables

The research question was to explore the contribution of word recognition from speech, syntactic knowledge, metacognitive awareness, self-efficacy to L2 listening comprehension. The results showed that WRS 3k, syntactic knowledge, metacognitive awareness, self-efficacy contributed to L2 listening comprehension ((coefficient determination = 0.741) while WRS at 1k (0.338>.05) and 2k (0.606>.05) frequency word level were not significant. This current study found word recognition from speech particularly played a central role in successful listening comprehension among listeners. The productivity of word recognition from speech under time constraints has a significant value to predict L2 proficient listening comprehension. In line with the previous research, word recognition from speech at 1K, 2K, and 3K frequency level has relationship for listening comprehension using IELTS but only WRS3 had a significant relationship (Matthews & Cheng, 2015). Therefore, vocabulary knowledge is noticeably an important factor for successful listening comprehension in EFL (Staehr, 2009) and the measures of word knowledge facilitated the auditory learning (Milton et al., 2010).

The more students can recognize words, the more potentially they will improve their L2 listening comprehension (Matthews & O'Toole, 2013; Matthews et al., 2014; Matthew & Cheng, 2015). This strongly suggested to expose the practical pedagogical value of measuring WRS. Like other vocabulary tests to recognize high frequency words (Nation, 2001; Schmitt et al., 2001), giving students WRS tests can provide information more explicitly about their strengths and weaknesses of word knowledge status about different word frequency levels. Goh (2002) states that another challenge of word recognition from speech is that students need attention to carefully recognize the phonological form of words because the difficulty may come from the word connection. Word recognition from speech (WRS) brings the two interactions; linguistic (bottom-up processes) and non-linguistics (top-down processes) which become the element of spoken language processing and the substance of listening comprehension (Matthews et al., 2014). This present study found that word recognition from speech contributed to L2 listening comprehension. The evidence was that L2 WRS in listening comprehension is crucial aspect to provide supporting insight of correlation between WRS and L2 listening comprehension which was constructed from syllabus of learners' listening course in EAP context.

This current study also investigated proceduralized syntactic knowledge which consisted of grammaticality judgement and sentence comprehension and those two variables had a significant positive contribution to L2 listening (SCT 0.033 GJT 0.001 <.05). The form (linguistic structure) and meaning (students' exposure to the target form) in L2 learning was impossibly separated (Gill et al.,2013). Like the previous study, syntactic knowledge and L2 listening comprehension were investigated and the finding was that

syntactic knowledge and L2 listening comprehension were weakly correlated due to unstandardized Measures (untimed and written grammar test) and higher measurement error (Mecartty, 2000; Liao, 2007). Then, this current study applied *proceduralized* syntactic knowledge which was more obviously recognized as essential for the perception and interpretation of auditory language and when students have sufficient syntactic knowledge, they may not find difficulty segmenting streams of speech when many words are connected (Buck, 2001; Sun, 2002).

Meanwhile, the significant positive contribution of metacognitive awareness to L2 listening comprehension (0.017<.05) emphasized that metacognitive awareness helped students to find their appropriate strategies to process their listening comprehension. As Vandergrift et al., (2006) stated, metacognitive awareness becomes an essential aspect in the process of L2/FL listening comprehension. They decided what to do in their learning process so listeners could adopt more different ways to listen effectively (Bloomfield, et al., 2010). Metacognition helped learners to plan, monitor, and evaluate their cognitive processes while completing language activities and helped learners to manage, direct, regulate and guide their learning processes (Wang et al., 2009; Vandergrift & Goh, 2012). This is an evidence of awareness of metacognitive processes also becomes a primary aspect of successful L2 listening. When students successfully applied the strategies, their confidence was also increased. Referring to the finding, Metacognition facilitated students on their learning through the sequence of planning, directed and selective attention, monitoring, and evaluation (Vandergrift et al., 2006). From this present study, paying extra attention to metacognition in listening activity in classroom was also essential for learners to effectively interpret the content information from oral input. Metacognitive knowledge is one of the main non-linguistic factors positively which is correlated with L2 listening comprehension (Rahimirad & Shams, 2014; Rahimirad & Moini, 2015).

In addition, L2 listening comprehension was also influenced by students' self-efficacy. The contribution of self-efficacy was a symmetric significant positive contribution (0.002<.05) to L2 listening comprehension. Students' listening success was significantly determined by their self-efficacy. This finding revealed the important position of learner beliefs and attributions in listening success. In line with the previous research, Mills et al. (2006) that found self-efficacy beliefs become better predictors of success than previous achievement. For that reason, the evaluation of self-efficacy beliefs in listening in L2/EF language can provide a valuable awareness into the understanding of students' self-perceptions of their capabilities to process and control this spoken input. Good self-efficacy provides more confidence about students' listening and contribute to their ability to comprehend the passage (Graham, 2007). Baleghizadeh et al. (2013) also stated that self-efficacy can affect students' listening determination and success. Therefore, helping students grow their high self-efficacy in language learning becomes crucial because when increasing self-efficacy, students' negative emotions may change into a pleasurable and sustaining lifelong experience (Piechurska-Kuciel, 2013). The current study finally showed that how self-efficacy contributed to the students' language skills particularly in L2 listening comprehension (Hsieh, 2008; Graham, 2011).

Implication and Limitation of This Study

A combination of linguistic factor (bottom-up processes) and non-linguistic factors (top-down) become the sources of listening comprehension, the present study highlights the need to put more attention on bottom-up processes in teaching and testing listening. the findings of the present study discovered the need to grow the learners' ability on word recognition from speech particularly at the third frequency level as the dominant contribution for better comprehension and the L2 listeners need to be competent on these grammars/structures of sentence and sentence comprehension to comfort their L2 listening comprehension. Metacognitive awareness and self-efficacy of students were also necessary to be trained and encouraged in listening activities.

Small size of the sample was likely to hamper the researcher to generalize the result of larger population as well as the strength of correlation and it was the restrictions of this present study. Besides, the variable must be employed in better construct validity or test-retest reliability to see the relationship to L2 listening comprehension because the pilot study was just employed from the small group of students to decide the time constructs. Also, there were no follow-up questions to deeply understand their metacognitive and efficacy since this study only focused on the contribution among the tests and questionnaires to L2 listening comprehension.

CONCLUSION AND SUGGESTIONS

Based on the findings, word recognition from speech (WRS3), syntactic knowledge, metacognitive awareness, and self-efficacy have a significant determination of L2 listening comprehension. The capability to recognize high frequency vocabulary from speech and the contribution of understanding syntactic knowledge (the sentence structure and meaning) become the important area of knowledge to support the growth of students' L2 listening comprehension. Moreover, students can control and regulate their listening activities and decide what appropriate strategies are used for their effective listening when metacognitive awareness can be applied. At last, the essential position of students' self-efficacy on their listening achievement can raise the students' listening success.

English teachers can provide word recognition from speech and syntactic knowledge tasks in listening based on students' need as the basis of comprehending more complex spoken language. Moreover, A need for English teachers to activate students' metacognition to help teacher recognize students' strengths and weaknesses. Besides, Self-efficacy is essential to know students' belief on their specific task in listening. Teachers can motivate students to have more positive direction of learning attitude on their achievement. Lastly, further researchers are suggested to compare the size of relationship between other learning variables and L2 listening comprehension with larger sample or more advanced level of learners. It can also be suggested for researchers to investigate the variables as predictors for listening in qualitative method using interview or retrospective data to observe students' internal cognitive.

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