

Developing speaking skill learning materials based on Natural Order Hypothesis

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Abstract

The literature on the teaching of English at higher education in Indonesia reflects that both English and non-English departments pay equal attention to the four language skills, namely speaking, listening, reading, and writing. However, there are still issues in the teaching of speaking skills especially in the English instruction for the non-English majors. This research tried to solve the issues using interventions in the form of learning materials focused on speaking skills based on Natural Order Hypothesis by Brown (1973), Burt (1974, 1975), and Krashen (1982, 2009, 2013) as well as the lesson plans used in the teaching of English for non-English majors in a state university in Yogyakarta. The materials were validated by subject experts and a field trial involving participants of 30 non-English department students was conducted. The effectiveness of the materials was measured using a validated instrument that had been pilot-tested to 10 respondents of the same backgrounds as the participants of the field trial. The research instrument utilized Sugiyono's (2015) formula with the results showing a percentage of 86.37 out of a possible 100%, which means that the materials are in the category of 'highly acceptable'.

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INTRODUCTION

Megawati (2016) stated that the curriculum implemented in Indonesia dictates that it is compulsory for English to be taught in all study programs of higher education institutions. It is due to the fact that English is an international language, and all students are expected to possess English language competence regardless of their study programs. Studies such as Akhyak and Indramawan (2013), Dewi (2014), and Rahmaniah and Asbah (2018) confirmed that English is a compulsory subject that must be taught in all study programs of higher education institutions in Indonesia.

The fact that English is a compulsory subject means that it must also be taught in all non-English majors. In that case, English is taught in the form of English for Specific Purposes in Indonesia, as shown by Rahmaniah and Asbah (2018). Additionally, it is noteworthy that English must be taught communicatively, as stated by Akhyak and Indramawan (2013), who went on to say that speaking is the primary skill that must be developed at higher education level. This is supported by Fanani (2014), who stated that the teaching of English in non-English majors primarily focuses on speaking skills. Furthermore, Dewi (2014) also elaborated that speaking competence is something that English department and non-English department students alike must possess. Non-English department students are also required to be proficient at using English both actively and passively. In other words, they are expected to be able to speak during classroom activities.

The importance of speaking skills is highlighted as much as the other language skills at non-English majors. The students from non-English departments agree that speaking skills are undeniably important. In research about non-English department students' motivations related to their English

language learning, Jin (2014) revealed that students were motivated to be able to converse with many people in English and to be able to freely communicate with native speakers of English. Ninsisana and Nawa (2017) also discovered that most non-English department students prefer English lessons that highlight direct practices, indicating that speaking skills are favoured by the non-English department students.

The placement of speaking skills in ‘highly important’ position in the teaching of English in non-English majors in Indonesia is justified by several studies. For instance, Rezaeyan (2014) stated that not only does speaking competence enhance language competency, but it also promotes language growth, both roles are essential in the improvement of structure, grammar, fluency, vocabulary, and even skills related to socio-cultural aspects. In addition, Haidara (2016) elaborated that people’s personalities, self-image, and knowledge of the world, as well as their ability to reason and express what they think reflects in their oral performance in a foreign language. He also stated that the majority of English learners tend to measure their language competence based on their speaking skills. Similarly, Hastuti (2018) stated that speaking plays a very important role in directly showing learners’ improvements in both learning and acquiring the target language. Speaking skills are of high importance, Shteiwi and Hamuda (2016) stressed that an English teacher must use an appropriate method in order to promote improvement in students’ speaking skills with great effectiveness.

Despite the fact that speaking skills are prioritized as much as the other language skills in the teaching of English at non-English majors, studies have found that there are still issues in the teaching of speaking skills in such majors. Nuraini (2016) revealed a dire issue, which was teachers’ use of native language in their teaching. The use of the native language in language teaching prevents students from improving their speaking skills due to lack of exposure. Aditya (2017) uncovered numbers of issues in the teaching of speaking to non-English major students. The study revealed that speaking-related problems non-English department students encountered were related to grammar, vocabulary, and pronunciation. The findings showed that students could not improve their speaking skills due to doubts over their grammatical accuracy, and on top of that, the students did not get adequate vocabulary and pronunciation drills that were undeniably necessary for the improvement of their speaking competence. This is supported by Dewi and Jimmi (2018) who showed that students who lacked vocabulary faced problems engaging in oral interactions. As a result, they had low confidence when speaking in English.

Other issues in the teaching of English in non-English majors include the fear of making mistake and shyness (Juhana, 2018); anxiety and issues related to the learning environment or the manner in which the lecturer delivers their lectures (Abrar et al., 2018); low or uneven participation during the class (Nikmah, 2019); and unsupportive environment (Ratnasari, 2020). A supportive environment is important for the improvement of students speaking skills. As Mali (2014) study suggested, a clear purpose of conducting specific English-speaking activities, strategies, and positive encouragement from classmates and teachers alike form significant students’ attributions on the improvement of their English-speaking skills. Considering how speaking skills are prioritized as much as other language skills in the teaching of English in non-English majors and how there are many issues in the teaching of such skills, it is fair to say that the development of new speaking skills learning materials to address the said issues needs to be conducted.

Several studies have tried to promote the improvement of students’ speaking skills at university settings such as Ramdani and Rahmat (2018) who concluded with implications for how teachers as curriculum designers should engage students in anxiety-free and use motivating speaking tasks. Kurniawan and Parwati (2018) found several results that may encourage language teachers and testers alike to formulate strategies to improve students’ speaking skills, that is, by considering how a task design affects students’ oral performance.

What distinguishes the current study from previous studies was that the current study tried to develop a set of speaking skills learning materials in the form of a book to improve the speaking skills of non-English department students. The development of new speaking skills learning materials for non-English department students could be based on various hypotheses and the natural order hypothesis (Brown, 1973; Burt, 1974, 1975; Krashen, 1982, 2009, 2013). Wegner (2013) highlighted

the natural order hypothesis as a significant part of his study, stating that the research supported a natural order of acquisition that concern not only children but across all age levels. He also mentioned that the findings directly supported the learning-acquisition hypothesis because they showed that even adults still possess the ability to acquire language. This means that the natural order hypothesis applies to university students as well. The use of the natural order hypothesis in the development of new learning materials could hopefully help non-English department students to acquire English and obtain mastery of speaking skills in a natural manner. This is supported by Bahrani et al. (2014), who elaborated on the test conducted by Bailey, Madden, and Krashen, which revealed that second language learners in the adult age levels displayed a "natural order" that included a total of eight grammatical morphemes Krashen (1982, 2009, 2013) had put in order, which again showed that the natural order hypothesis applies for both children and adults. Thus, it is appropriate for use in both English classes for children and adults. The following figure shows how the said natural order of grammatical morphemes is organized.

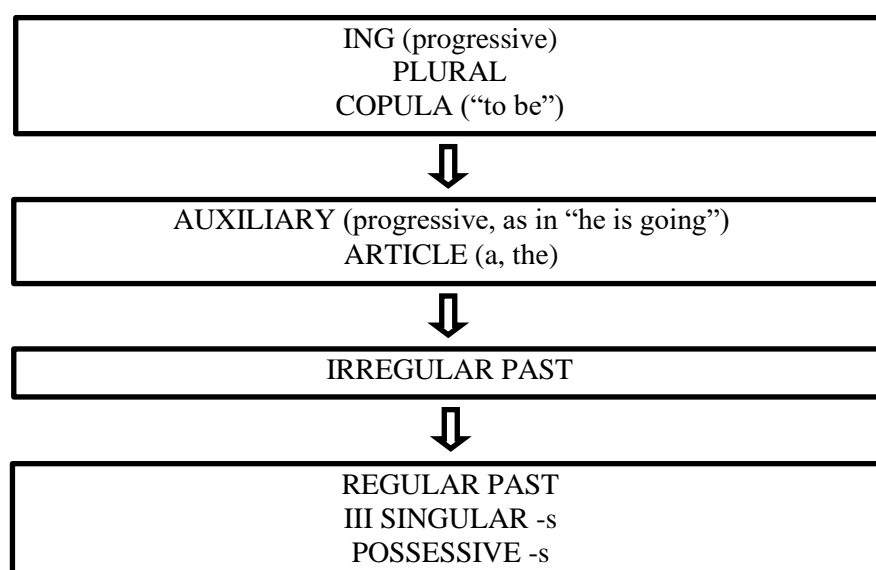


Figure 1. The natural order of acquisition according to Krashen (1982)

The relationship between the grammatical morphemes in the figure above is hierarchical. The grammatical morpheme at the very top of the figure (-ing) is the first morpheme acquired by both children and adults (Krashen, 1982, 2013). The second grammatical morpheme (-s) and the rest are the grammatical morphemes acquired after -ing. However, it is important to note that Krashen (2013) suggested not creating a syllabus that strictly follows the natural order when incorporating the natural order hypothesis into language teaching. Rambe (2014) implied that the natural order hypothesis is strongly related to communication skills and language production, indicating its relation to speaking skills. As such, it is fair to say that using this hypothesis to develop learning materials could help students improve their speaking skills. The development of new speaking skills learning materials based on the natural order hypothesis is also supported by Fardhani (2016), who studied the natural order hypothesis and elaborated that interactions taking place in the classroom trigger meaningful cooperation that could help students accomplish learning in addition to acquisition. Rexhaj et al (2018) shows agreement that the natural order hypothesis was indeed evident in students they observed, it is noteworthy that using this hypothesis to develop materials could help students acquire language more naturally and gain speaking competence as a result. Additionally, the incorporation of natural order hypothesis into language teaching could help a student to simultaneously acquire and learn the target language, given the fact that the natural order that experts proposed consists of grammatical morphemes. Considering the things mentioned earlier, this study tried to focus on 1) the development of speaking skills learning materials based on the natural order

hypothesis; 2) the field trial of the developed materials during the Covid-19 pandemic; 3) the measurement of the acceptability of the developed materials.

METHOD

Respondents

The respondents of this study were thirty non-English department students carefully selected by adhering to a theory proposed by Gay et al. (2012). The study argued that the minimum number of participants for true experimental research is at least thirty. The researchers consulted Gay et al. (2012) purposive sampling method to choose the sample by selecting students who met the criteria of the study. In this study, the criteria of sampling were that the sample must consist of students from non-English majors, and they must be semester 1 students as the book was developed for semester 1 non-English major students.

Instruments

The instrument used in this study was a post-use evaluation questionnaire consisting of 51 items based on components of speaking skills (Harris, 1974; Brown, 2004), universal criteria of material development (Tomlinson & Masuhara, 2013), and criteria of materials development (Badan Standar Nasional Indonesia [BNSP], 2014). The instrument originally consisted of twenty items based on components of speaking skills and universal criteria of material development. However, it was suggested that additional items that cover aspects such as content, presentation, language, and graphics must be added. To measure the reliability of the instrument, a pilot test was conducted, as Gay et al. (2012) stated that to develop one's testing instrument, one must collect validity and reliability data, subsequently adding that before a self-developed testing instrument could be used in a research study, it must be pilot tested involving a group of 5 to 10 people with similar backgrounds to the group that would be tested in the actual study. The pilot test of the instrument involved ten non-English department students. The results of the pilot test were that 100% of the respondents agreed that the instructions in the instrument were clear, 90% of the respondents agreed that the items were easy to understand, and 90% of the respondents agreed that the length of the instrument was acceptable. The instrument was then used to measure the acceptability of the developed materials after the completion of the field trial of the materials.

Procedures

The research design used was Design-Based Research (DBR), which, as Anderson and Shattuck (2012) elaborated, it is a research design that provides a bridge between theory and practice in the classroom. This study was aimed at creating an intervention that comes in the form of speaking skills learning materials for non-English students of higher education. The procedures of this study followed the work of Herrington et al. (2007). The procedures included four cycles. In the first cycle, the researchers conducted exploratory research on the issues in the teaching of speaking skills at higher education of non-English majors. In the second cycle, the researchers developed ideas to solve the problems. In the third cycle, the researchers refined the developed materials based on the suggestions from subject experts. In the final cycle, the researchers conducted a trial of the developed materials and measured the acceptability of the materials in improving the students' speaking skills using a validated instrument by adhering to a theory of post use evaluation of newly developed materials promoted by Tomlinson (2012).

Data Analysis

The data obtained from the results of the administration of the instrument was calculated using a formula proposed by Sugiyono (2015). The use of the formula to analyse the data was due to the fact that the formula was included in the instrument during the validation process and was deemed valid to be used to measure the acceptability of the materials. The instrument consisted of 51 items of four scales ranging from strongly agree (4) to strongly disagree (1). Collective scores were obtained from the results of the administration of the instrument and were subsequently calculated to measure the acceptability of the developed materials. The percentage obtained from the calculation

using Sugiyono (2015) formula would reflect the acceptability of the developed materials. The degrees of agreement with the questionnaire items, the formula, the description of the formula, and the degrees of acceptability of the developed materials based on the results of the calculation using the formula are shown below.

Table 1. The Degrees of Agreement on the Instrument Items

Degree of Agreement	Score
Strongly Agree	4
Agree	3
Disagree	2
Strongly Disagree	1

$$P = \frac{\text{collective scores}}{\text{ideal score}} \times 100\%$$

P : Percentage

Collective Scores : The sum of all of the scores obtained from the questionnaires

Ideal Score : (Highest Score) x (Number of Respondents)

Table 2. The Measurement of the Acceptability of the Developed Materials

Degree of Acceptability	Score
Highly acceptable	76-100%
Acceptable	51-75%
Less Acceptable	25-50%
Unacceptable	0-25%

FINDINGS AND DISCUSSION

Findings

The development of the speaking skills learning materials began by conducting exploratory research on issues in the teaching of speaking skills in non-English majors as the first cycle of the study. The discovered issues include the use of native language during the class (Nuraini 2016); issues related to grammar, vocabulary, and pronunciation (Aditya, 2017); lack of vocabulary (Dewi & Jimmi, 2018); fear of mistakes and shyness (Juhana, 2018); anxiety (Abrar et al, 2018); low or uneven participation (Nikmah, 2019); and unsupportive environment (Ratnasari, 2020).

The second cycle of the study was developing the materials which were developed based on natural order hypothesis (Brown, 1973; Burt, 1974, 1975; Krashen, 1982, 2009, 2013). Since it is recommended not to develop materials that directly follow the natural order of grammatical morpheme acquisition, as suggested by Krashen (2013), the units in the materials were not arranged following the said order. Instead, the arrangement of the units was based on the official lesson plan used in the teaching of English in non-English majors at a state university in Yogyakarta. The grammatical morphemes in the natural order were used as target languages in the units of the materials. Each unit in the developed materials consists of parts named Learning Objectives, Warmer, Main Activities, Summary, Reflection, and Evaluation. Additionally, since the idea of incorporating the natural order hypothesis into language teaching materials involves the use of input+1, as elaborated by Hong (2008) and Liu (2015), each unit in the materials contained language input that includes a grammatical morpheme which is an order ahead of the grammatical morpheme used as the target language in the current unit. For instance, in a unit that used the regular past form of verbs as the target language, the input+1 would be the verb +s/ -es as iii singular -s is the next grammatical morpheme in the natural order after the regular past form. The descriptions of the material contents are presented in the following table.

Table 3. Descriptions of the Material Contents

Unit	Language Focus	Learning Objectives	Grammatical Morphemes	input + 1
Unit 1	<ul style="list-style-type: none"> - Parts of speech - Word formation: affixations - Noun groups - Sentence components - Basic sentence structures 	Students are able to: <ul style="list-style-type: none"> - answer reading questions - identify the meanings of words in reading texts - identify word classes - use inflected words in sentences - identify the verbs in sentences - translate phrases from English to Indonesian 	Copulas	Auxiliaries
Unit 2	Vocabulary used in the academic contexts	Students are able to: <ul style="list-style-type: none"> - mention the steps of academic reading, - explain the terms used in academic reading, - read for information, - summarize and retell the contents of academic reading texts. 	Auxiliaries	Articles
Unit 3	Terms used in learning at university	Students are able to: <ul style="list-style-type: none"> - read for information, - explain the terms used in university-level lectures - play quizzes and have a discussion about independent learning, - make and present their own study plans. 	Progressive -ing	Plural -s
Unit 4	Terms used in information and sources of information	Students are able to: <ul style="list-style-type: none"> - read for information, - make notes of academic reading texts, - summarize academic reading texts and present the summary in front of the class, - find topics, main ideas detailed information, references, - differentiate between facts and opinions 	Past-irregular	Past-regular
Unit 5	Terms used in ethics of education	Students are able to: <ul style="list-style-type: none"> - read for information, - paraphrase texts, - quote texts, - write a list of references, - present the results of their works. 	Past-regular	Third person singular -s
Unit 6	Vocabulary: names of musical instruments in English	Students are able to: <ul style="list-style-type: none"> - read for information, - perform critical reading, - talk about the results of their works in front of the class 	Third person singular -s	Possessive 's

Unit 7	Terms and definitions from a book chapter in the students' field and how to read and understand them	Students are able to: <ul style="list-style-type: none"> - explain how to prepare a presentation, - get involved in group work, - summarize texts, - make slides for a presentation, - produce a set of PPT slides for a presentation - present in front of the class 	Third person singular -s	Possessive 's
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Table 3 shows a brief yet complete description of the material contents. As stated in Krashen (1982, 2013), the grammatical morpheme for the third singular -s or the verb + -s/ -es is among the last ones in the natural order, indicating that it is probably among the most difficult morphemes to acquire, the morpheme was included twice in the materials. Upon the completion of the materials, it was then validated through expert judgment. The validation of the developed materials was conducted with the official help of university staffs at a state university in Yogyakarta. Two subject experts were asked to validate the materials. The experts were lecturers who specialized in English teaching. The results of the validation process were analysed qualitatively, and the materials were revised accordingly. Revisions, comments, suggestions, and feedbacks from the experts were consulted to revise parts of the materials and add new elements to the materials. It was after revisions and consultations had been done thoroughly that the validation of the materials was completed.

The revisions based on the experts' suggestions included revisions on capitalization errors, grammatical errors, mistyped words, inconsistent uses of words, punctuational errors, lack of audio + video, lack of pronunciation practices, and unnecessary words. The revisions of the units based on the suggestions and feedbacks from the subject experts correlated with McKay and Brown (2015) statement that in relation to the use of English as the international language, it is of high importance for English teachers and learners alike to avoid adhering to native speaker norms and to be sensitive to both local and global standards for the sake of intelligibility. Therefore, the revisions involved revising the words in order to make them more appropriate to the sense of English. The argument for inclusion of audio + video to the materials was correlated with Sachdeva (2011) findings, which stated that the lack of audio-video aids could cause the teaching of speaking to be ineffective.

After the validation of the materials, a field trial was conducted offline in a meeting room. The field trial of the materials involved thirty non-English department students. Students who met the criteria were contacted and after 30 students stated their willingness to participate, letters were sent to their parents to make sure that the parents give their children permission to participate in the project. Since the field trial of the materials was conducted offline during the Covid-19 pandemic, the researchers strictly followed the health protocols during the course. All units in the materials were taught to the participants during the field trial of the developed materials.

The field trial faithfully followed the instructions in the materials. As such, referring to the implications based on statements from Hong (2008), Krashen (2013), and Liu (2015), input+1 was given to the students during the lessons to stay true to the principles of the use of the natural order hypothesis in language teaching. In addition to faithfully following the instructions in the materials and sticking to the principles of use of the natural order hypothesis during the classes, the trial of the materials was also inspired by the work of Harris and Sherblom (2008, p. 5) which is related to the use of group work and pair work as the implementation of the materials involved a lot of group and pair works. Harris and Sherblom (2008, p. 5) stated that in small group communications, all members of the groups become both the senders and receivers, resulting in every member getting opportunities to communicate. Group work and pair work were appropriate for the implementation of the developed materials because the focus of the materials is on speaking skills. The decision related to the number of group members during the implementation of the units was inspired by Harmer (2007) theory that small group work should involve groups that consist of six or fewer students in order to give the students more opportunities to speak. It is noteworthy that Harmer (2007) also stated that group work can dramatically increase the number of talking opportunities for each student and

promote learners' autonomy during the lessons. The same thing could be said about pair works because, in addition to being considered as a technique that can dramatically increase the number of speaking opportunities for students, it is also a technique that has been proven to be effective in improving students' speaking performances, as Mulya (2016) and Jatmiko (2017) had found in their study. The grouping of the students during the field trial was inspired by Brown (2001) on how to ensure successful group works in foreign language classes. As such, the grouping of the students during the field implementation followed Brown (2001) 'ten steps of planning group works' as listed below:

1. Introducing the activities the students needed to do,
2. Modelling the activities with the help of students who had completely grasped the idea of the activities,
3. Giving explicit instructions to further ensure the students' comprehension of the activities,
4. Giving useful expressions that the students would need during the activities,
5. Dividing the class into groups,
6. Assigning the roles of the group members despite the fact that students could do it by themselves in order to ensure more controlled group works,
7. Verifying that all students understood what they were required to do during the tasks,
8. Setting the task in motion,
9. Constantly walking around the class to monitor the tasks,
10. And setting a time for debriefing and gave some feedback to the students.

In the final step, the students were asked to share what they had discussed with their group mates to the class orally. The researchers then gave feedbacks to the student accordingly. During Step 5, the researchers used various techniques that vary from time to time as there were various options available according to Brown (2001) such as using printouts of matching postcards, pictures, drawings, using words that were closely related in meaning to group the students, using words with the same pronunciations, using idiomatic expressions that have been cut to some parts which students had to assemble, and using different definitions of the same words, among others. It is also worth mentioning that the participants were made to keep changing groups during the classes to avoid boredom and monotony. In addition, over the course of the field implementation of the units, the researchers also made sure that the participants paid attention and fully understood the learning materials presented to them because, as supported by Namaziandost and Imani (2020) findings, it is important to conduct comprehension checks during speaking classes.

Discussion

After the completion of the field trial, the researchers then conducted a post-use evaluation to measure the acceptability of the materials. The post-use evaluation involved the use of an instrument in the form of a questionnaire, as Tomlinson and Masuhara (2013) suggested that a post-use evaluation of newly developed materials can be conducted using a questionnaire to measure the effectiveness of the materials. The instrument consisted of 52 items which include eleven items based on components of speaking skills (Harris, 1974; Brown, 2004), 9 items based on the universal criteria of material development (Tomlinson & Masuhara, 2013), and 31 items based on the criteria of materials development (BNSP, 2014). The instrument was validated by subject experts and had been pilot tested on 10 respondents with similar backgrounds to the participants in the field trial. The table below shows the summary of the results that include the number of statements for the different categories of items, the score range was obtained from the calculation of the results for all categories of items, and the categories of the acceptability of the materials are based on the calculated results.

Table 4. Results of the Measurement of the Materials Acceptability Based on Categories

No	Number of Statements	Score Range	Category
Items specifically related to speaking skills			
1.	19 out of 20 statements.	76 - 100%	Highly Acceptable
2.	1 out of 20 statements.	51 - 75%	Acceptable
Items related to content			
3.	12 out of 12 statements.	76 - 100%	Highly Acceptable
Items related to presentation			
4.	5 out of 5 statements.	76 - 100%	Highly Acceptable
Items related to language			
5.	5 out of 5 statements.	76 - 100%	Highly Acceptable
Items related to graphics			
6.	9 out of 9 statements.	76 - 100%	Highly Acceptable

The results of the measurement of the materials' acceptability based on items related specifically to speaking skills showed that out of 20 items in total, 19 items yielded percentages that fell into the category of "Highly Acceptable". The item whose result fell into the category of "Acceptable" was item number 11, with a statement of "The materials enabled you to speak with only a small number of pauses and "ers" or "ums". It was understandable that non-English department students were still not capable of speaking with a small number of pauses after a cycle of field trial. The fact that item number 20 with a statement of "The materials achieved its stated objective, which is the improvement of your speaking skills." yielded a result that fell into the category of "Highly Acceptable" with a percentage of 90.00% was a strong indication that despite still not being able to speak with a small number of pauses, the participants did improve their speaking skills significantly after being exposed to the materials.

The administration of the first 20 items in the instrument revealed several findings. Firstly, as the first eleven items were based on components of speaking skills (Harris, 1974; Brown, 2004), the items could measure the acceptability of the materials related specifically to the improvement of their speaking skills. Secondly, the next nine items, which were based on the universal criteria of material evaluation conjured by Tomlinson and Masuhara (2013), also effectively measured the acceptability of the developed materials, concluding with an item that required students to state whether the developed materials achieved its stated objective of improving their speaking skills. Additionally, it is worth noting that the items in this first part of the instrument also involved items related to grammar as it is also a part of the components of speaking skills proposed by Harris (1974) and Brown (2004). It also correlated with Ellis (1993, 2003) statement that the explicit knowledge the students gained through grammar instruction could help learners in speaking. The grammar points included in the materials themselves were in fact the grammatical morphemes included in the natural order hypothesis (Brown, 1973; Burt, 1974, 1975; Krashen, 1982, 2009, 2013), on which the development of the materials was based on.

Interestingly, Cullen (2008) also stated that learners are forced to rely solely on lexis and other non-verbal and prosodic features to communicate their ideas without any grammar. This justified the inclusion of grammar in the instrument items because it can help measure students' oral performance. It is also noteworthy that the results obtained from the first 20 items of the instrument indicate that the materials could help promote effective teaching as Alexander (2010, p. 306) suggested that effective teaching should be 'dialogic' and that classroom practices must focus on meeting visible educational goals and allow teachers and students to work together, listen to each other's ideas and share those ideas. The implementation of the materials involved plenty of oral interactions in the form of dialogues during the class and the interactions were meant to meet the goal

of the development of the materials, which was to improve the students' speaking skills. The results of this part of the measurement instrument indicated that the learning materials developed in this study met the said conditions.

The results of the administration of the items related to content showed that all items, which were based on BSNP's (2014) criteria for learning material content quality, yielded results that fall in the category of "Highly Acceptable". Item number 29 showed the highest percentage at 90.00%. The results correlated with Nation (2014) argument that fluency practices in the classroom must be skill specific, in this case, speaking skills which became the focus of the materials and formed the majority of the content. However, he added that there was likely to be a transfer of fluency between the four language skills with the greatest transfer being one that emerges between productive and receptive skills that happen to be in the same mode, for example, speaking and listening. After all, as Ellis (2014) elaborated, competent speakers have to be listeners capable of considering interactional, as well as unpredictable, dynamics of speech at the same time.

The results of the administration of the items related to presentation showed that all items in the category yielded percentages that fall into the category of "Highly Acceptable". Item number 33 showed the highest percentage at 89.16%. This indicated that the materials were presented in a manner that could be beneficial for non-English students. It is worth noting that this part of the instrument dwelled into the difficulty levels of the presented materials as well. It correlated with Baddeley (2004) statement about how students tend to recall details from a problem that is cognitively challenging than one that is easy to solve. This justified the levelling of the materials. Additionally, it was supported by Cummins (2007), who explained that teachers risk decreasing the number of learning opportunities their students could get if they fail to create environments that are intellectually challenging for the students. The results of this specific part of the instrument suggested that the materials managed to ensure that this particular problem did not occur. Furthermore, the results of an item related to the consistency of the manner in which the developed materials were presented also correlated with the fact that the presentation of the materials adhered to theories and findings mentioned in an earlier section of this study (Brown, 2001; Harmer, 2007; Harris and Sherblom, 2008; Mulya, 2016; Carter and McCarthy, 2017; Jatmiko, 2017; Namaziandost and Imani, 2020).

The results of the administration of items related to language showed that all items yielded percentages that fall into the category of "Highly Acceptable" as well. Item number 38 showed the highest percentage at 90.00%. This indicated that the language used in the materials was appropriate and easy to understand. The fact that some items in this category dwelled into grammatical accuracy also correlated with Ellis (1993, 2003) and Cullen (2008) statements about the importance of grammar in improving students' language competence, again alluding to inclusion of the grammar points based on the grammatical morphemes included in the natural order argued by the proponents of natural order hypothesis (Brown, 1973; Burt, 1974, 1975; Krashen, 1982, 2009, 2013). In addition, the fact that the students considered the materials as 'easy to understand' correlated with Hassan (2014) findings, which shows that the most important function of language is to enable humans to communicate meaningfully with one another. Consequently, to communicate meaningfully, one needs to share ideas in a manner that is easy to understand.

The results of the administration of items related to graphics yielded percentages that fall into the category of "Highly Acceptable" as well. Item number 51 in particular showed the highest percentage that fell at 91.66%. It was an indication that the graphics of the materials were appropriate and good enough for non-English department students. It was supported by Rahmawati (2018), which concluded that colourful visuals make learning materials more understandable and as such, making them beneficial to students who use them for their studies.

Upon calculating the overall scores obtained from the results of the administration of the instrument, the researchers calculated the percentage of the acceptability of the materials using formula proposed in Sugiyono (2015). The formula, the description of the formula, and the measurement of the acceptability of the materials using the formula are presented below.

Formula:

$$P = \frac{\text{overall score}}{\text{ideal score}} \times 100\%$$

The descriptions of the formula:

P : Percentage

Overall score : All of the scores obtained from the survey

Ideal score : (Highest score) x (number of respondents)

Measurement using the Formula:

$$P = \frac{5286}{6120} \times 100\%$$

$$P = 86.37\%$$

Adhering to the degree of acceptability for Sugiyono (2015) formula shown in Table 2, it was evident that the acceptability of the developed materials fell into the category of “Highly Acceptable”. The table showed that learning materials are highly acceptable when the percentage obtained from the measurement yield a result between 75% and 100% and the measurement of the acceptable of the materials developed in this study yielded a result of 86.37%.

Having measured the acceptability of the materials developed in this study, it is important to elaborate that this study, which focused on the development of speaking skills learning materials and the measurement of the acceptability of the said materials, was quite similar yet different from previous studies in the same category. For instance, Asjuh, Rahman and Salija (2019), which aimed to develop speaking skills learning materials based on local folktales and used the ADDIE model by McGriff (2000), involved a needs analysis using a questionnaire prior to the development of the materials, comparable to Wahyudi (2016), Oktaviani (2018), Kusumawati (2017) and Dewi and Wiedarti (2020) studies. Faridah and Sulistiono (2018) also involved similar stages, which began with an analysis of the students’ needs as the study implemented a theory from Borg and Gall (1983). This study, however, followed the work of Herrington et al. (2007), and as a result, it began with exploratory research instead of a needs analysis using a questionnaire.

The exploratory research involved a review of recent studies with the conclusion that speaking skills were prioritized as much as the other language skills during the teaching of English at non-English majors. The exploratory research involved a review of recent studies that discussed issues in the teaching of speaking skills at non-English majors as well. This study is similar to Rohimajaya et al. (2021) study as both did not develop English learning materials by beginning the development stages with needs analysis using questionnaire. However, the trial of the materials developed by Rohimajaya et al. (2021) was conducted online whereas the trial of the materials developed in this study was conducted offline.

Prabandari et al. (2017) developed speaking materials for hotel accommodation students. It was conducted in a comparable manner to how this study was conducted, with Nurmalia and Purbani (2018) being comparable to the current study. However, because these studies were conducted before the Covid-19 outbreak, it was not conducted without the need to follow health protocols. The previous studies, however, involved participants from the same background whereas the current study involved participants from non-English majors selected based on criteria promoted by Gay et al. (2012).

There was also a difference in the manner in which the materials were developed in the study compared to previous studies. In this study, a field trial that involved using the materials to teach 30 participants was conducted. In previous studies, such as Fitriani (2019), the final step of material development was distributing the materials to students without using the materials to teach the said students. The students were then asked to read the materials and measure the materials’ quality by answering questionnaire items. The decision to implement the materials developed in this study by using the materials to teach students in a face-to-face setting was because previous studies revealed that online speaking classes were often ineffective. For example, Laili and Nashir (2020) discovered that the use of Zoom Meetings to teach speaking skills online proved to be ineffective. The study also

revealed that the reason for the ineffectiveness was due to unclear voice (as in unstable internet connection) and the students' lack of comprehension of the materials being taught since English was different from other courses which were delivered in Indonesian (the students' native language). Additionally, Kusuma et al. (2021) also revealed that the teaching of speaking courses online has caused students to face some challenges that inevitably had some negative effects on their feelings.

CONCLUSION

The results revealed that the natural order hypothesis could be assimilated into the teaching of English in non-English majors. This study proved that the hypothesis could be combined with the lesson plan used in non-English majors to create speaking skills learning materials that subject experts deemed valid for use in the teaching of English to non-English department students. Additionally, this study also revealed that the developed materials could help improve the speaking skills of non-English department students as the field trial of the materials involving 30 non-English department students, which adhered to the principles of the incorporation of the natural order hypothesis in language teaching, yielded highly favourable results.

Tomlinson & Masuhara (2013) stated that developed materials can be measured through a post-use evaluation conducted using questionnaire. Additionally, Rukminingsih et al. (2020) stated that developed learning materials can be measured using only a post-test without a pre-test preceding the implementation of the materials. The results of the post-use evaluation of the materials developed in this study, which was conducted after the completion of the field implementation of the materials, showed that the materials proved highly acceptable, with an acceptability score of 86.37% out of a possible 100%.

Naturally, it is undeniable that the materials developed in this study were far from perfect. For instance, as the materials were developed by combining the natural order hypothesis with the lesson plan specifically used in the teaching of English in non-English majors at a state university in Yogyakarta, the materials might not be suitable for the teaching of English at other universities. It is also noteworthy that the materials, despite having contents that are academic in nature as they were based partly on the lesson plan used at a university, were not developed for a specific major. In addition, the materials developed only include the students' book, as the researchers had not been able to finish the teachers' book due to time and fund limitations. Regardless, the results of this research could helpfully give a novel idea of how to incorporate the natural order hypothesis into learning materials that focus on helping non-English department students acquire English more naturally and improve their speaking skills in the process. It is hoped that future researchers can also make use of the errors found in the materials developed in this study as points to revise and improve the development of better materials for similar purposes in future studies.

REFERENCES

- Abrar, M., Mukminin, A., Habibi, A., Asyraf, F., Makmur, M., & Marzulina, L. (2018). "If our English isn't a language, what is it?" Indonesian EFL student teachers' challenges in speaking English. *The Qualitative Report*, 23(1), 129-145.
- Aditya, R. C. A. (2017). "The Difficulties Encountered by Non-English Department Students in Speaking English (A Descriptive Study on Third Semester Students at Education Faculty of University Muhammadiyah of Purwokerto Academic Year 2016/2017)". Unpublished thesis. English Education Department: Universitas Muhammadiyah Purwokerto.
- Akhyak & Indramawan, A. 2013. Improving the Students' English Speaking Competence through Storytelling (Study in Pangeran Diponegoro Islamic College (STAI) of Nganjuk, East Java, Indonesia). *International Journal of Language and Literature*, 1(2).
- Alexander, R. (2010). *Dialogic Teaching Essentials*. University of Cambridge.

- Anderson, T., & Shattuck, J. (2012). Design-based research: A Decade of progress in education research? *Educational Researcher*, 41(1), 16-25.
<https://doi.org/10.3102/0013189X11428813>
- Asjuh, N., Rahman, M. A. & Salija, K. (2019). Developing Local Folktale-Based English Materials for Teaching Speaking Skill in Senior High School. *Universitas Negeri Makassar*. Retrieved January, 11, 2022, from: <http://eprints.unm.ac.id/12935/1/06.%20Artikel.pdf>
- Badan Standar Nasional Indonesia. (2014). *Instrumen Penilaian Buku Ajar*. Retrieved January, 13, 2017, from: <http://bsnp-indonesia.org/2014/05/28/instrumen-penilaian-buku-teks-pelajaran-tahun-2014/>
- Baddeley, A. D. (2004). *The Psychology of Memory*. In A. Baddeley, M. Kopelman, & B. Wilson (Eds.), *The Essential Handbook of Memory Disorders for Clinicians*. John Wiley & Sons, Ltd.
- Bahrani, T., Tam, S. S., & Nekoueizadeh, M. (2014). Second Language Acquisition in Informal Setting. *Theory and Practice in Language Studies*, 4(8), 1714-1723.
- Borg, W. R. and Gall, M. D. (1983). *Educational Research. An Introduction*. Longman Inc.
- Brown, R. (1973). *A First Language*. Harvard University Press.
- Brown, H. Douglas. 2001. *Teaching by Principles. An Interactive Approach to Language Pedagogy*. Longman.
- Brown, H. Douglas. 2004. *Language Assessment: Principles and Classroom Practices*. San Francisco State University.
- Carter, R. and McCarthy, M. (2017). Spoken Grammar: Where are We and Where are We Going?. *Applied Linguistics*, 38(1), 1–20.
- Cullen, R. (2008). Teaching grammar as a liberating Force. *ELT Journal*, 62, 772-780.
- Cummins, J. (2007). Rethinking Monolingual Instructional Strategies in Multilingual Classrooms. *Canadian Journal of Applied Linguistics*, 10, 221–240.
- Dewi, A. (2014). *Perception of English: A Study of Staff and Students at Universities in Yogyakarta, Indonesia*. Cambridge Scholars Publishing.
- Dewi, N., & Jimmi, J. (2018). The Correlation Between Vocabulary Mastery and Self Esteem on Students' Speaking Skill. *Wanastra: Jurnal Bahasa Dan Sastra*, 10(1), 78–83.
<https://doi.org/10.31294/w.v10i1.2998>
- Dewi, R., & Wiedarti, P. (2020). Developing culture-based materials with integrated performance assessment. *LingTera*, 7(2), 141-148. <https://doi.org/10.21831/lt.v7i2.18508>
- Dulay, H. and Burt, M. (1974). Natural sequences in child second language acquisition. *Language Learning*, 24, 37-53.
- Ellis, R. (1993). Second language acquisition and the structural syllabus. *TESOL Quarterly*, 27, 91–113.

- Ellis, R. (2003). *Task-based Language Learning and Teaching*. Oxford University Press.
- Ellis, R. (2014). Principles of Instructed Second Language Learning. In M. Celce-Murcia, D. M. Brinton & M. A. Snow (2014). *Teaching English as a second or foreign language* (pp. 31–45). National Geographic Learning/Heinle Cengage Learning.
- Fanani, A. (2014). Identifying non-English Department Student Weakness Points on Commonly Found EPT Grammar Problems (a students' need analysis). *Educate Jurnal Pendidikan Bahasa dan Sastra*, 3(2), 24. UNIPDU.
- Fardhani, A. E. (2016). Teacher's Language of Instruction and Student's Second Language Acquisition. *Pancaran Pendidikan*, 5(1) 119-132.
- Faridah, F. & Sulistiono, E. (2018). Designing English Learning Materials for Informatic Study Program at Engineering Faculty of Islamic University of Lamongan. *E-Link Journal*, 5(1).
- Fitriani, Y. (2019). Developing a Guideline of English Teaching Materials Based on Local Culture for VII Graders in Paser Regency East Kalimantan. *INOVISH JOURNAL*, 4(2).
- Gay, L. R., Mills, G. E., & Airasian, P. W. (2012). *Educational Research: Competencies for Analysis and Applications*. Pearson.
- Haidara, Y. (2016). Psychological Factors Affecting English Speaking Performance for English Learners in Indonesia. *Universal Journal of Educational Research*, 4(7), 1501-1504. <https://doi.org/10.13189/ujer.2016.040701>
- Harmer, J. (2007). *The Practice of English Language Teaching 4th eds*. Pearson Longman.
- Harris, D. (1974). *Testing English as a Second Language*. Mc Graw Hill Book Company.
- Harris, T., dan Sherblom. (2008). *Small Group and Team Communication*. Pearson Education Inc.
- Hassan, A. (2014). The Effect of Using Task-Based Learning in Teaching English on the Oral Performance of the Secondary School Students. *International Interdisciplinary Journal of Education* 3(2).
- Hastuti, F.D (2017). Managing Effective English Speaking Skill Assessment for Non-English Major Students. *MABIS*, 8(2), 82-92.
- Hong, Y. (2008). "On Teaching Strategies in Second Language Acquisition". *US-China Education Review*, 5(1), 61-67.
- Jatmiko, J. (2017). The Implementation of Pair Work to Improve Students' English Speaking to the Second Semester at Pharmacist Program of Health Sciences Faculty of Kediri University. *English Education Journal of English Teaching and Research*, 2(1), 13. <https://doi.org/10.29407/jetar.v2i1.733>
- Jin, M. (2014). A Case Study of Non-English Major College Students' Motivation in English Language Learning. *Open Journal of Modern Linguistics*, 4(2), 252-259.
- Juhana. (2018). Psychological Factors That Hinder Students from Speaking in English Class (A Case Study in a Senior High School in South Tangerang, Banten, Indonesia). *Journal of Education and Practice*, 3(12), 100-110.

- Krashen, S. (1982). *Principles & Practice in Second Language Acquisition*. Pergamon Press Inc.
- Krashen, S. D. (2009). *Principles and Practice in Second Language Acquisition, 1st Internet Ed.* Pergamon.
- Krashen, S. D. (2013). *Second Language Acquisition: Theory, Applications, and Some Conjectures*. Cambridge University Press.
- Krashen, S. (2013). The Case for Non-targeted, Comprehensible Input. *Journal of Bilingual Education Research & Instruction*, 15(1), 102- 110.
- Kurniawan, E., & Parwati, E. (2018). The effect of a narrative structure and English proficiency on university students' speaking performance: Pausing patterns. *Indonesian Journal of Applied Linguistics*, 8, 402-408. <https://doi.org/10.17509/ijal.v8i2.13306>
- Kusuma, I.P.I, Mahayanti, N.W.S., Gunawan, M.H., Rachman, D., & Pratiwi, N.P.A. (2021). How well do e-portfolios facilitate students' learning engagement in speaking courses during the COVID-19 pandemic? *Indonesian Journal of Applied Linguistics*, 11(2), 351-363. <https://doi.org/10.17509/ijal.v11i2.30583>
- Kusumawati, F. P. (2017). Developing English Learning Material for Speaking Skill Based on ADDIE. *Premise Journal*, 6(1).
- Laili, R.N. & Nashir, M. (2020). The Use of Zoom Meeting for Distance Learning in Teaching English to Nursing Students during Covid-19 Pandemic. *UICELL Conference No 4 Proceedings 2020*. Retrieved January 11, 2022, from: <https://journal.uhamka.ac.id/index.php/uicell/article/view/6290>
- Liu, D. (2015). A Critical Review of Krashen's Input Hypothesis: Three Major Arguments. *Journal of Education and Human Development*, 4(4), 139-146.
- Mali, Y. C. G. (2014). Students' Attributions on Their English Speaking Enhancement. *Indonesian Journal of Applied Linguistics*, 4(2), 32-43.
- McGriff, S. J. (2000). *Instructional System Design (ISD): Using the ADDIE Model*. Instructional Systems. College of Education, Penn State University.
- Mckay, S. L. and Brown, J.D. (2015). *Teaching and Assessing EIL in Local Contexts Around the World (1st ed.)*. Routledge. <https://doi.org/10.4324/9781315769097>
- Megawati, F. (2016). Kesulitan Mahasiswa Dalam Mencapai Pembelajaran Bahasa Inggris Secara Efektif. *PEDAGOGIA: Jurnal Pendidikan*, 5(2), 147. <https://doi.org/10.21070/pedagogia.v5i2.246>
- Mulya, R. (2016). Teaching Speaking by Applying Pair Work Technique. *English Education Journal*, 1, 74–86.
- Namaziandost, E. & Imani, A. (2020). Compensatory Strategies and Iranian Intermediate EFL Learners' Speaking Fluency: Focusing on Self-Repetition and Comprehension Check Strategies. *International Journal of Linguistics, Literature and Translation (IJLLT)*, 3(3). <https://doi.org/10.32996/ijllt.2020.3.3.11>

- Nikmah, S. U. (2019). Linguistic Difficulties Encountered by Non-English Department Students in Speaking English (A Study at Walisongo English Club UIN Walisongo). Unpublished thesis. English Education Department: Universitas Islam Negeri Walisongo.
- Ninsisana, W. & Nawa A.T. (2019). Analisis Kebutuhan Bahasa Inggris Mahasiswa Jurusan Ekonomi Syariah. *Tapis: Jurnal Penelitian Ilmiah*, 3(1), 17-38.
<https://doi.org/10.32332/tapis.v3i1.1514>
- Nuraini, K. (2016). The Barriers of Teaching Speaking English for EFL Learners. *ELLITE: Journal of English Language, Literature, and Teaching*, 1(1).
<https://doi.org/10.32528/ellite.v1i1.159>
- Nurmalia, M., & Purbani, W. (2018). Developing extensive reading supplementary materials for XI grad students at madrasah. *LingTera*, 5(2), 112-119. <https://doi.org/10.21831/lt.v5i2.16510>
- Oktaviani, Dian. (2018). Developing English Learning Material of Basic Vocabulary for Young Learners". Unpublished thesis. English Study Program: Jambi University. Retrieved January 11, 2022, from:
<https://repository.unja.ac.id/3805/1/RRA1B214008%20-%20ARTIKEL.pdf>
- Prabandari, R., Sutarsyah, C. & Mahpul, M. (2017). Developing English Speaking Materials for Tenth Grade Students of Hotel Accommodation Study Program at SMKN 1 Sukadana. *U-JET: Unila Journal of English Teaching*, 6(4).
- Rahmaniah, R. & Asbah, A. (2019). The Speaking Difficulties Encountered by Non-English Students in Language Classroom. *Linguistics and ELT Journal*, 9(22).
<https://doi.org/10.31764/leltj.v12i2.749>.
- Rambe, S. (2014). The Natural Approach: *Theory and Guidance for Classroom Practices*, 2 (1), 49.
- Ramdani, J. M. & Rahmat (2018). Promoting speaking spontaneity in large classes: An action research approach in an Indonesian EFL setting. *Indonesian Journal of Applied Linguistics*, 8, 388-401. <https://doi.org/10.17509/ijal.v8i2.13304>
- Ratnasari, A.G. (2020). EFL Students' Challenges in Learning Speaking Skills: A Case Study in Mechanical Engineering Department. *Journal of Foreign Language Teaching and Learning*, 5(1), 20-38. <https://doi.org/10.18196/ftl.5145>
- Rexhaj, Xh. et al. (2018). Acquisition of Albanian as a first language from the perspective of natural order hypothesis. *Thesis*, 7 (2).
- Rezaeyan, M. (2014). On the impact of task-based teaching on the academic achievement of Iranian EFL learners (case study: female high school students in Yasuj). *International Journal of Language Learning and Applied Linguistics World (IJLLALW)*, 7(3), 476-493.
- Rohimajaya, N. A., Sudirman, A. & Hamer, W. (2021). Developing English Materials for the Students of Information System Department at Technology and Information Faculty, Mathla'ul Anwar University Banten. *LANGUAGE CIRCLE: Journal of Language and Literature*, 15(2).
- Rukminingsih, Adnan, G., & Latief, M. A.(2020). *Metode Penelitian Pendidikan, Penelitian Kuantitatif, Penelitian Kualitatif, Penelitian Tindakan Kelas*. Erhaka Utama.

- Sachdeva, M. S. (2011). *A New Approach to Teaching of English in India*. Tandon Publications.
- Shteivi, A. & Hamuda, A. (2016). Oral Communication Problems Encountering English Major Students: Causes & Remedies. *International Journal of Social Science and Humanities Research*, 4(2), 19-26.
- Sugiyono (2015). *Metode Penelitian Kombinasi (Mix Methods)*. Alfabeta.
- Tomlinson, B. (2012). Materials development for language learning and teaching. *Language Teaching*, 45(2), 143-179.
- Tomlinson, B., & Masuhara, H. (2013). Adult Coursebooks. *ELT Journal*, 67(2), 233-249.
- Wahyudi. 2016. Developing English Materials Based on Content-based Approach for Nursing Students of STIKES Payung Negeri Pekanbaru. *Proceeding of the Fourth International Seminar on English Language Teaching (ISELT-4)*.
- Wegner, J. P. (2013). The Application of Second Language Acquisition Theory to New Testament Greek Pedagogy. Unpublished thesis. Honors Program: Liberty University.