Anima Indonesian Psychological Journal publishes peer reviewed articles with editors and consultants providing detailed assistance for authors to reach publication. The journal publishes research reports and scientific papers in psychology and/or related sciences with the aim to advance science, knowledge, and theory of psychology.

Editor-in-Chief Emeritus: Hari K. Lasmono
Editor-In-Chief
I. B. Siaputra
Director, Centre for Lifelong Learning (CL2)
Head, Laboratory of General Psychology, University of Surabaya

Editorial Board
A. Aditomo, Hari K. Lasmono, I. B. Siaputra

Managing Editor
Thomas S. Iswahyudi

Administration Board
Thomas S. Iswahyudi (General Manager)

Marketing Staff
Sabarianto, Soemarsono, Chusnul, Riawhyno, Tri Lina Rosita, Sunaniah Matrolin, Narpai Wulandoro

Accredited by the Indonesian Directorate General of Higher Education
Ministry of National Education
No. 81/Dikti/Kep/2011, November 15, 2011

Recommended for the Internationalization Grant for Domestic Journals by the Ministry of Education and Culture
No. 1118/E54/HP/2012, April 25, 2012

Anima Indonesian Psychological Journal is published quarterly (first published October 1985)
by the Laboratory of General Psychology
Faculty of Psychology Surabaya University

Editors and Administration Address
Faculty of Psychology, Surabaya University
Jalan Raya Kalirungkut, Surabaya 60293
Call (62-31) 2981246, 2981140
Fax (62-31) 2981271
E-mail: anima@ubaya.ac.id / arli@mitra.net.id

Subscription
Inside Java Rp 150,000.00; Outside Java Rp180,000.00
Overseas US$100.00/volume (four issues, including airmail)
Payable through PermataBank Jemursari, Surabaya, Indonesia. Account number: 291 113 9394 (Hary K. Lasmono)
A copy of the receipt should be send, e-mailed, or fax-ed to the administration address

Instructions to Authors
Guidelines for contributors can be read at inside back cover, which are in accordance with the Publication Manual of the American Psychological Association (6th ed., 2010)
Language Readability Levels of Reading Passages and Comprehension Levels of Exercises in *Scaffolding* English Coursebooks

Lusiana Listianingsih and Ignatius Harjanto
Graduate School of English Education Department
Widya Mandala Catholic University Surabaya

Reading passages should have language readability levels suitably to students’ grade levels. Indeed, reading comprehension exercises should help students develop their competencies in comprehending texts. This study investigated the language readability levels of reading passages and the comprehension levels of exercises in *Scaffolding* for Grades 7, 8, and 9. Assessed using Flesch-Kincaid formula and Fry figure, the language readability levels of reading passages in *Scaffolding* coursebooks were below the grade levels of Indonesia EFL students using the coursebooks. Judged using Barrett’s Reading Comprehension Taxonomy, exercises in *Scaffolding* coursebooks were dominated by literal comprehension and reorganization exercises, and supplemented with low numbers of inferential comprehension and evaluation exercises.

**Keywords:** language readability level, comprehension level, reading passage, exercise

Bacaan dalam buku teks seharusnya mengandung bahasa (kata dan kalimat) yang dapat dimengerti siswa yang menggunakanannya. Latihan yang menyertai bacaan juga seharusnya mengembangkan kemampuan siswa untuk memahami bacaan. Penelitian ini mengevaluasi tingkat keterpahaman bahasa dalam bacaan pada buku teks bahasa Inggris *Scaffolding* oleh siswa, dan seberapa besar latihan yang menyertai bacaan membantu pemahaman bacaan oleh siswa. Hasil evaluasi keterpahaman bahasa dalam bacaan menggunakan formula Flesch-Kincaid dan Fry menunjukkan bahwa bahasa yang digunakan dalam bacaan di bawah tingkat siswa yang menggunakan buku teks tersebut. Hasil evaluasi latihan bacaan menggunakan Taksonomi Barrett menunjukkan bahwa sebagian besar latihan mengembangkan pemahaman literal dan reorganisasi, dengan sebagian kecil latihan mengembangkan pemahaman inferensial dan evaluasi.

**Kata kunci:** tingkat keterpahaman bahasa, pemahaman bacaan, bacaan, latihan

*Scaffolding* English coursebooks used by many State Junior High Schools in Indonesia should instil strong foundation in developing English language skills. This is due to the fact that Scaffolding English coursebooks have already gained the approval by Badan Standar Nasional Pendidikan (BSNP), the Indonesia National Education Standards Board, whose tasks are developing, monitoring, and evaluating national education system in Indonesia. This study was conducted to assess the language readability levels of passages and judge the comprehension levels of exercises in Scaffolding English coursebooks.

Multiple roles have been played by coursebooks, as presentation materials, sources of learners’ practice, and ideas for classroom activities. English Language Teaching (ELT) coursebooks also function as reference sources for learners on grammar/vocabulary/ pronunciation (Cunningsworth, 1995). Since ELT’s materials, exercises, and activities are mostly provided by coursebooks, English coursebooks determine most of the teaching content and may act as the standardizer of the students’ quality output (Richards, 2003). In short, English coursebooks should help reach the teaching’s purpose, equip students with the ability to use the language effectively, and mediate learners and the target language. In regard of the roles of English coursebooks, the evaluation of coursebooks is required to ensure that proper materials are provided in the coursebooks. Yet, no study has been done to evaluate *Scaffolding* as widely used English coursebooks in Indonesia.

BSNP as the regulator of Indonesia’s national education standards, including English education stan-
standards, demands that Junior High School students to understand and be able to produce spoken/written texts, manifested in their language skills (listening, speaking, reading, and writing skills). The students are expected to have functional literacy or the ability to use English in fulfilling their everyday life's need. In order to fulfill the demands, language in texts should match the cognitive levels of the students. In other words, language of the texts should be readable for the students using the coursebooks. Indeed, language starting from words, understanding words and sentences in texts would give great contribution in constructing the meaning of the texts. For EFL students, different with L1 students, words and sentences are still their main focus in comprehending texts. The understanding of ideas in the texts would start with understanding letters, morphemes, words, then sentences. Nuttal (2005) defines bottom up as a process of receiving and interpreting information encoded in language form via the medium of print, by recognizing letters and words, and working out sentence structures. Though bottom up is usually used in lower reading process, the core of understanding written ideas (reading comprehension) process is still the continuous development of oral and written ability (Heilman, Blair, & Rupley, 1981).

For those reasons, reading passages in EFL teaching, including EFL teaching in Indonesia, are suggested to be evaluated first using readability formulas/figures. This is inline with Carrell's (1987) suggestion that readability formulas/figures should be considered first before considering the text difficulty in a broader sense.

Language Readability Levels

Readability is used to measure textbooks' difficulty level and the fit of a text to readers, to whom the text is written for. According to Grzybek (2010) readability of a text is affected by linguistic factors and reader factors. Linguistic factors covering semantic (vocabulary) and syntax (sentence) are usually measured using readability formulas/figures (Tamor, 1981). Semantic complexity is related with word length and multiple syllables, while syntactic complexity is related with long sentences made by modifiers, embedded phrases, and clauses. The more syllables or longer words/sentences there are, the more unfamiliar and difficult to understand the texts are.

Nuttal (2005) also suggests that reading passages should be readable by following a certain standard readability index or formula. Many readability formulas/figures have been proposed, such as Fry figure, SMOG formula, and Flesch-Kincaid formula. Three from the most used tools in readability assessment are Fry figure, Flesch-Kincaid formula, and Cloze test. Developed by Fry in 1989 (Ruddell, 2008), Fry figure measures language readability levels based on number of sentences and syllables. For very short texts, three or more samples are needed, for longer texts (≥300 words), three parts of 100 words each from passages are needed. The average number of sentences and syllables per 100 words from the samples/several parts of the passage are needed to enter the Fry figure to have the approximate grade level of a text, which is ranging from 1 to 17+ grades (Fry, 1968). Developed by Flesch and Kincaid, Flesch-Kincaid formula (Beaghole, 2010) uses the average number of syllables per word and the average number of words per sentence. It evaluates texts based on the U.S. school grade levels, score of 8 in Flesch-Kincaid readability score means the text can be understood by the eighth grade students. The other alternative for measuring readability is cloze test. Cloze test estimates how well students engage with a text, whether the students can construct meaning from the text when the words are missing (Ruddell, 2008). It could also be used for validating language readability levels obtained from the readability formulas/figures.

Many studies on language readability levels have been done (Browne, 1996; Yong, 2010; Rahma & Gunadi, 2009). Flesch-Kincaid, Coleman-Liau, and Bormuth formulas were used by Browne (1996) to study Japanese EFL university reading books, third year Japanese High School coursebooks, and USA college-level textbooks. The result showed that language readability levels of the EFL reading books which were varied, were lower than of the High School coursebooks. The highest level were USA college-level coursebooks. Yong (2010) studied the language readability levels of Secondary Science for Brunei Darussalam Book 1 using Fry, Gunning, and Flesch-Kincaid formulas validated by Cloze Test. Fry and Gunning showed the same result of reading age, 15 years, while Flesch-Kincaid of 13 years. Cloze test showed similar result, 65% of the students found the texts were too difficult for them. Language readability studies have also been done in Indonesia, Rahma and Gunadi studied the language readability level of A-level Chemistry 1B for Senior High School.

The same with the result of Cloze test, reading level was in a frustration level for most of the students. Assessment using Fry, Flesch-Kincaid, and Dale-Chall formulas/figure showed that the reading passages were above the students' grade level and suitable for Grade 10-12.
The questions from the studies above is whether the language readability levels obtained from readability formulas/figures are applicable for ESL students as well as for L1 learners. Hamsik (1984) and Greenfield (1999) studied the validity of readability formulas/figure for the ESL/EFL learners. Hamsik (1984) investigated ESL validity of Flesch, Dale-Chall, Fry, and Lorge formulas/figure. Cloze tests on 18 academic passages were given to 40 Intensive English Centre students at an American University. The results showed a positive correlation of .775 to .819 between passages' difficulty measured using Cloze test and readability formulas/figure. Hamsik concluded that the four readability formulas and figure did measure test readability levels of coursebooks used for ESL students and could be used to select materials appropriate to ESL students' reading levels. Greenfield (1999) studied the validity of Flesch-Reading Ease, Flesch-Kincaid, Coleman-Liau, New Dale-Chall, and Bormuth formulas. The testing conducted based on Bormuth's procedures. Fifth-word deletion cloze tests were constructed and administered to 200 Japanese students enrolled in a small liberal arts college. The study showed Pearson correlations .70-.85 between observed EFL mean scores and readability formula scores. The study showed that readability formulas were fundamentally valid for a broad spectrum of English readers, non-native as well as native readers. Both of Hamsik's and Greenfield's studies showed that it was justifiable to convert grade levels of texts obtained from readability formulas/figure, from the native English students' to EFL students', including Indonesia EFL students' grade levels.

Reading Comprehension Levels

The other important factor in helping the students comprehending a passage is the exercises following the passage. BSNP stresses the importance of exercises in promoting the students' critical thinking in order to help them develop their spoken/written skills. In line with what is stressed by BSNP, Vacca (1981) states that students must be guided to respond to meaning at various levels of comprehension. Though reading comprehension is an internal, mental process that can not be observed directly, the result of the process can be observed. Providing various types of question, followed by assessment using a reading comprehension taxonomy would give the estimation of the students' reading comprehension levels. A comprehension taxonomy offers a classification of reading comprehension levels, which would help teachers specify activities aimed at certain comprehension outcomes and identify comprehension tasks that increase students' chance of success (Heilman, Blair, & Rupley, 1981). Barrett's Reading Comprehension Taxonomy (Heilman, et al.) classifies reading comprehension into five levels, literal comprehension, reorganization, inferential comprehension, evaluation, and appreciation. Literal comprehension focuses on explicit ideas and information in the passages, varying from simple to detailed facts. Reorganization requires students to analyze, synthesize, or organize the explicit ideas and information, such as outlining, summarizing, or synthesizing. Inferential comprehension requires students to combine the explicit ideas/informations with intuition/personal experiences to conjecture and hypothesize. Evaluation deals with judgement and focuses on qualities of accuracy, acceptability, or worth, such as judging the validity of the passages' content or judging the moral/value system obtained from the passages. The highest level, appreciation, involves all previously cited cognitive dimension, such as showing the emotional response to literary techniques, styles, or structures of writing.

Method

Flesch-Kincaid formula (Beaglehole, 2010) and Fry figure (Ruddell, 2008) were chosen to assess language readability levels of reading passages in the coursebooks. Flesch-Kincaid formula is widely used in the U.S. education to assess short or long passages. Fry figure is also highly used to assess Junior/Senior High School texts and for varied reading levels (the first grade until college year level). Hamsik (1984) and Greenfield (1999) claimed that language readability levels obtained from Flesch-Kincaid formula and Fry figure were valid for English native learners as well as non-native learners, accordingly, the language readability levels were converted to Indonesia EFL students' grade levels. Comprehension levels of exercises were judged using Barrett's Reading Comprehension Taxonomy, which provides a detailed classification of reading comprehension levels.

Results

Flesch-Kincaid scores give U.S. school grade levels, ranging from one to twelve. While Fry scores give approximate English native students' grade levels from the first grade until the college year, ranging
Table 1
The Average Flesch-Kincaid and Fry Scores for Each Text Type in Scaffolding for Grade 7

<table>
<thead>
<tr>
<th>Text Type</th>
<th>Average Flesch-Kincaid Readability Score</th>
<th>Average Fry Readability Score</th>
</tr>
</thead>
<tbody>
<tr>
<td>Letter</td>
<td>2</td>
<td>-</td>
</tr>
<tr>
<td>Announcement</td>
<td>5</td>
<td>-</td>
</tr>
<tr>
<td>Birthday card</td>
<td>4</td>
<td>-</td>
</tr>
<tr>
<td>Short note</td>
<td>1</td>
<td>-</td>
</tr>
<tr>
<td>Descriptive text</td>
<td>3</td>
<td>6</td>
</tr>
<tr>
<td>Procedural Text</td>
<td>4</td>
<td>4</td>
</tr>
<tr>
<td>All text type</td>
<td>3</td>
<td>5</td>
</tr>
<tr>
<td>Reading Passages in Scaffolding for Grade 7</td>
<td></td>
<td>4</td>
</tr>
</tbody>
</table>

Table 2
The Average Flesch-Kincaid and Fry Scores for Each Text Type in Scaffolding for Grade 8

<table>
<thead>
<tr>
<th>Text Type</th>
<th>Average Flesch-Kincaid Readability Score</th>
<th>Average Fry Readability Score</th>
</tr>
</thead>
<tbody>
<tr>
<td>Announcement</td>
<td>9</td>
<td>-</td>
</tr>
<tr>
<td>Descriptive text</td>
<td>6</td>
<td>8</td>
</tr>
<tr>
<td>Recount text</td>
<td>4</td>
<td>5</td>
</tr>
<tr>
<td>Dialogue</td>
<td>3</td>
<td>3</td>
</tr>
<tr>
<td>Narrative text</td>
<td>8</td>
<td>-</td>
</tr>
<tr>
<td>Legend</td>
<td>5</td>
<td>6</td>
</tr>
<tr>
<td>Fable</td>
<td>5</td>
<td>5</td>
</tr>
<tr>
<td>All text type</td>
<td>6</td>
<td>6</td>
</tr>
<tr>
<td>Reading Passages in Scaffolding for Grade 8</td>
<td></td>
<td>6</td>
</tr>
</tbody>
</table>

Table 3
The Average Flesch-Kincaid and Fry Scores for Each Text Type in Scaffolding for Grade 9

<table>
<thead>
<tr>
<th>Text Type</th>
<th>Average Flesch-Kincaid Readability Score</th>
<th>Average Fry Readability Score</th>
</tr>
</thead>
<tbody>
<tr>
<td>Procedural text</td>
<td>6</td>
<td>7</td>
</tr>
<tr>
<td>Report</td>
<td>12</td>
<td>14</td>
</tr>
<tr>
<td>Legend</td>
<td>7</td>
<td>8</td>
</tr>
<tr>
<td>Narrative text</td>
<td>6</td>
<td>7</td>
</tr>
<tr>
<td>Fable</td>
<td>2</td>
<td>2</td>
</tr>
<tr>
<td>All text type</td>
<td>7</td>
<td>8</td>
</tr>
<tr>
<td>Reading Passages in Scaffolding for Grade 9</td>
<td></td>
<td>8</td>
</tr>
</tbody>
</table>

from one until seventeen. Every passage in Scaffolding English coursebooks could be assessed using Flesch-Kincaid formula, while only some of the passages could be assessed using Fry figure. Four out of seventeen passages in Scaffolding for Grade 7, fifteen out of twenty passages in Scaffolding for Grade 8, and twenty five out of thirty passages in Scaffolding for Grade 9 could be assessed using Fry figure. Fry figure was made on 100 words basis, while some passages in Scaffolding contain less than 100 words in each passage. The average of Flesch-Kincaid and Fry scores for each text type in Scaffolding coursebooks are presented in Tables 1 until 3.

As can be seen, Flesch-Kincaid scores and Fry scores tend to be similar, only for Descriptive Text in Scaffolding for Grade 7, Flesch-Kincaid score tends to be different from Fry score. The average Flesch-Kincaid scores for passages in Scaffolding for Grades 7, 8, and 9 are three, six, and seven, while the average Fry scores are five, six, and eight. According to Flesch-Kincaid, the language of passages in Scaffolding for Grades 7, 8, and 9 are readable for the third, sixth, and seventh grade native English students. While according to Fry, the language of passages in Scaffolding for Grades 7, 8, and 9 are readable for the fifth, sixth, and eighth grade native English students.
The average Flesch-Kincaid and Fry scores of reading passages in *Scaffolding* for Grades 7, 8, and 9 are four, six, and eight. In other words, the language of passages in *Scaffolding* for Grades 7, 8, and 9 are suitable for the fourth, sixth, and eighth native English students as well as EFL students, while it is supposed to be for the seventh, eighth, and ninth grade Indonesia EFL students.

Tables 1 until 3 also show the range of Flesch-Kincaid or Fry scores for each serie of coursebooks, which are very wide. For *Scaffolding* for Grade 7, the range of Flesch-Kincaid scores are one until five, while the range of Fry scores are four until six. For *Scaffolding* for Grade 8, the range of Flesch-Kincaid are three until nine and Fry scores are three until eight. While for *Scaffolding* for Grade 9, the range of Flesch-Kincaid scores are two until twelve and Fry scores are two until fourteen. The range of Flesch-Kincaid and Fry scores indicate that the language of reading passages in each serie of *Scaffolding* coursebooks are very varied in their language readability levels. The language of some passages can be understood by elementary grade native English students (the second until the fifth grade) or Indonesia EFL students (the first until the sixth grade), while some can only be understood by middle and high schools native English students (the sixth until the twelfth grade) or Indonesia EFL students (the seventh until the twelfth grade). Figures 1 until 6 show the order of Flesch-Kincaid and Fry scores for each text type based on the appearance of the passages.

As can be seen, either assessed using Flesch-Kincaid formula or Fry figure, the language readability levels of the passages are not well ordered. Some text types began with a difficult passage and ended with an easy one, such as Letter and Procedural Text in *Scaffolding* for Grade 7. Descriptive Text in *Scaffolding* for Grade 7 began with a difficult passage, followed by and stabil with easy ones. Other text types began with an easy passage, followed by a difficult one, and ended with an easy one, such as Announcement in *Scaffolding* for Grade 7, Descriptive Text and Legend.
Discussion

Hamsik (1984) and Greenfield (1999) studies justified the language readability levels obtained from Flesch-Kincaid formula and Fry figure to be directly converted from native English students’ to EFL students’ grade levels. The language readability levels of passages in Scaffolding for Grades 7, 8, and 9 are for the fourth, sixth, and eighth grade of native English students as well as Indonesia EFL students. The language readability levels of passages in Scaffolding coursebooks are below the grade levels of Indonesia EFL students using the coursebooks. The coursebooks appear to be failing in fulfilling the demand of BSNP, to provide passages that match the cognitive abilities
or suit to the students’ grade levels. The writers of the coursebooks seem disregarding the importance of language readability levels (vocabulary and sentences), which are usually measured using readability formulas/figures. Indeed, the coursebooks have provided short functional texts and essays related to the students’ everyday life as demanded by BSNP for Junior High School coursebooks, but without appropriate language (vocabulary and sentences). Even though readability formulas/figures do not cover all factors needed in providing reading passages meeting students’ grade level, they could be used as the first assessment of passages. If the level of competence required to read a particular text could be established in front, the text could then be more accurately matched with the readers (Ruddell, 2008). Nuttal (2005) stresses that a readability formula could be used as a yardstick to measure the readability of passages for the students. Supporting Nuttal, Ruddell (2008) argues that not using readability formulas/figures would be equally as limiting as the problems inherent in the formulas themselves. The passages’ language readability is very important to be assessed, since EFL students’, including Indonesia EFL students’ English is still one of the most important factors determining the students’ reading comprehension. Having passages whose language suit to students’ grade levels would help the students comprehend the passages and further, develop their reading skills.

There is a gradation of language readability levels of passages in Scaffolding for Grades 7, 8, and 9 along with the grade level increase. The difference between the language readability level and the students’ grade level is also smaller with the grade level increase. Compared with the students’ grade levels, the language readability level of passages in Scaffolding for Grades 7 is three levels lower, Scaffolding for Grade 8 is two levels lower, and Scaffolding for Grade 9 is 1 level lower. Due to the material specification change issued by BSNP, from very short functional texts/essays for Grade 7 to short functional texts/essays for Grades 8 and 9. Functional texts and essays in Scaffolding for Grades 8 and 9 are having longer words and sentences, which increase their language readability levels, and thus lower their language readability levels’ differences to the students’ grade levels.

The range of language readability levels of passages in Scaffolding are is very wide. Some passages only need elementary students to understand the passages, while others might need university grade level students to understand the passages. The language readability levels of passages might have graduation within a coursebook, but their levels should not be too far from

![Figure 5. Flesch-Kincaid scores in Scaffolding for Grade 9.](image)

![Figure 6. Fry scores in Scaffolding for Grade 9.](image)

the students’ grade level. Reading passages having language readability levels far below the students’ grade levels might lose the interests of the students, while reading passages having language readability levels far above the students’ grade levels might frustrate the students only for trying to understand the words and sentences in the passages in order to comprehend the passages.

The language readability levels for each text type is also not well ordered within one coursebook. Some text types began with a difficult passage and ended with an easy one, while others began with an easy passage but followed by difficult and easy passages one after the other. Cunningsworth (1995) mentions the importance of materials taught to be graded along with the progress of a course. The language readability levels of passages which are not well ordered might confuse the students about the levels should be achieved in the teaching. The students would be frustrated facing difficult passages in front, or they would loose their interests learning easy passages after learning the difficult ones.

Barrett suggests five levels of reading comprehension, literal comprehension, reorganization, inferential comprehension, evaluation, and appreciation. The exer-
up levels.

Conclusion and Suggestions

The language readability levels of reading passages in Scaffolding English coursebooks are below the levels of Indonesia EFL students using the coursebooks although they were graded with the students’ grade levels. The comprehension levels of exercises in Scaffolding coursebooks are not proportional. Most of the exercises are dominated by literal comprehension exercises, followed by adequate reorganization exercises, and very low numbers of inferential comprehension and evaluation exercises. The comprehension levels of exercises in Scaffolding coursebooks increase along with the students’ grade levels increase, but there is only a small increase in inferential comprehension and evaluation exercises. According to assessment using Flesch-Kincaid formula/Fry figure, and Barret’s Reading Comprehension Taxonomy, the coursebooks fail to provide reading passages meeting students’ grade levels and exercises that promote students’ critical thinking as demanded by BSNP, as the regulator of national education standards in Indonesia. This failure will inhibit the development of the students’ comprehension skills, and further, their reading skills.

In regard of the result of the study, teachers using Scaffolding English coursebooks might supplement the passages in the coursebooks with passages which have suitable language (words and sentences) to the students’ grade levels to facilitate the students’ reading comprehension skill development. Teachers might also add exercises working on inferential comprehension, evaluation, and appreciation levels, to help the students learn to deepen their understanding of the passages’ content. The same suggestion goes to the writers of Scaffolding coursebooks, the writers should consider the language readability levels in writing passages by using readability formulas/figures, to help the students develop their reading skills in a graded way. It is also suggested that the writers of Scaffolding coursebooks provide more exercises at higher levels of comprehension to help the students move into higher reading comprehension skills.

Further study may also be done for evaluating the readability of the passages in Scaffolding coursebooks which consider reader factors, such as backgrounds, interests, and text familiarity of the students. Study on the types of exercises (multiple choice, true or false, or comprehension questions) may also be done. Last, the study on other widely used coursebooks may be done to obtain the best possible English coursebooks for achieving the BSNP demands on reading texts and exercises.

References


