



P-ISSN 2355-2794
E-ISSN 2461-0275

Miscue Analysis: A Glimpse into the Reading Process

Revathi Gopal*
Che Ton binti Mahmud

Sultan Idris Education University, Perak, MALAYSIA

Abstract

This paper aims to analyse Form One students' ability in reading prose. A qualitative research method was carried out involving 6 average ability students. The prose "Fair's Fair" by Narinder Dhani was used as an instrument to gauge students' ability in oral reading. The assessment carried out on the reading is miscue analysis, a tool to measure oral reading accuracy at the word level by identifying when and the ways in which the students deviates from the text while reading aloud. Miscues analysed are insertions, hesitation, omission, repetition and substitution. Miscues that maintain the meaning of the sentences are the participants' strengths while miscues which disrupt the meaning of the sentences are the participants' weaknesses. The data collected are analysed using descriptive statistics. The findings show that the percentage of strengths outweighed the percentage of weaknesses for all the participants on the occurrences of miscues. The students' reading behaviour has provided insights into their language cueing system and the strategies they use during the reading process to comprehend a text.

Keywords: Reading, ability, miscues analysis.

1. INTRODUCTION

Reading is a thinking process that involves recognizing words and it allows students to use his or her prior knowledge to make meaning of a text. In this process, miscues occurrences explain students' strategies used to overcome difficulties while reading. A miscue is an unexpected response that occurs when the reader's knowledge of language and concepts of the world may not match up with the text (Goodman, 1996). Miscues are defined as instances in oral reading when a reader reads a text in a way that the person listening would not expect. By analysing student miscues, teachers

*Corresponding author, email: sivarev943@gmail.com

have a glimpse into the reading process (Almazroui, 2007; Goodman & Marek, 1996; Kabuto, 2009; Moore & Brantingham, 2003; Moore & Gilles, 2005; Wilson, 2005). Miscue analysis is an effective technique for examining and evaluating the development of control in the reading process of students. It is an analytical procedure for assessing students' meaning construction from the print and demonstrates the knowledge that a student brings to the text (Goodman, 1996). Additionally, it helps students to become aware that they are better readers than they think they are. Goodman (1996) believes that readers who revalue themselves become more confident and are willing to take risks.

Among the miscues, substitution miscue provides information on three cueing systems: grapho-phonetic, syntactic, and semantic (Rhodes, 1993). The three cueing system is adapted from Turbill (2002). Figure 1 shows the interaction among the three cueing systems.

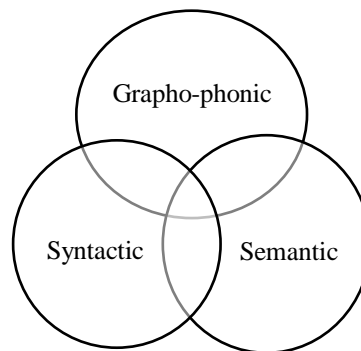


Figure 1. Intersection of the three cueing systems in reading (adapted from Turbill, 2002).

a) Grapho-phonetic cueing system

This cueing system is derived from the relationship between the written forms of letters and letter combinations and their sounds. If the substituted word is acceptable in the aspects of phonics and graphics, it is considered a good miscue. Otherwise, it is a bad miscue.

b) Syntactic cueing system

This cueing system is based on grammar. If words substituted maintain the meaning in the sentence structures and in the paragraph as a whole, the miscue is acceptable.

c) Semantics cueing system

This cueing system is based on the meaning of words, phrases and sentences. If the substituted word maintains the meaning in the aspects of words, phrases and sentences, it is acceptable and considered a good miscue.

2. LITERATURE REVIEW

Various definitions of the reading process are provided by scholars of reading. From the traditional view, reading is defined as decoding words and symbols from the print to construct meaning (Gough, 1972). This notion is characterized as data-driven or text-driven because the focus is on the surface of the text (Shapiro & Riley, 1989). There are two aspects focused on and they are: i) pronunciation, and ii) identification of words and their meaning.

Similarly, LaBerge and Samuels (1974) state that reading is a process of mastering small units of printed data before integrating them into larger units. These definitions emphasize data on the page rather than meaning of the text. Smith (1982) contends that readers bring concepts to written material to understand it. This means that readers utilize their prior knowledge to comprehend sentence structures or words. This view has been labelled as concept driven. In this perspective, Smith (1982) proposed the idea that reading is not passive but purposeful and rational, dependent on the prior knowledge and expectations of the reader.

Additionally, Rosenblatt (2004) proposed that the act of reading is transactional between the reader and the text that occurs within certain context. It appears that meaning does not reside in the text but the reader's interaction with it. Each reader may transact a text differently based on his or her prior knowledge. Goodman (1994) defines reading as a socio-psycholinguistic process and in this view; he highlights the idea of context. The term context that Goodman (1994) refers to is the cues from three linguistic systems: grapho-phonics, syntax, and semantics to make meaning. Hence, Goodman (1994) focuses on readers' background knowledge involving cues from three linguistic systems which are grapho-phonics, syntax, and semantics to make meaning.

2.1 Students' Ability in Reading

Students' ability in reading can be gauged through an analysis of the reading process. The miscue patterns which lead to meaning loss in sentences, indicates students' weaknesses. Otherwise, it is considered as students' strengths. The number of miscues which indicate students' weaknesses and strengths is counted in the form of percentages. A high percentage of strengths indicate that students are proficient readers and a low percentage of strengths reveals that students are less proficient readers. By identifying strengths and weaknesses, teachers can help students revalue reading and gain confidence in their ability to read (Moore & Brantingham, 2003). In addition this could measure the effectiveness of an intervention and guide staff development (Davenport, 2002).

3. METHOD

3.1 Research Design

A qualitative approach was used to collect data. The analysis of miscues provided information on the elements that help or hinder students' texts comprehension and their reading strategies used to comprehend texts. The In-Depth Procedure by Goodman et al. (2005) was used to analyse the miscues as it is able to identify how participants make use of miscues to construct meaning during the reading process.

3.2 Research Question

The research question addressed in the study is: What are students' strengths and weaknesses in reading and understanding prose?

3.3 Participants

Six Form One students were selected in this study based on purposive sampling procedures. They scored grade 'B' in their mid-year examination and comprise both genders from different social backgrounds. The participants are all from the Malay race.

3.4 Research Instrument

The reading text used as the research instrument is chapter three (consisting of 56 lines and 7 pages: p. 26-32) from the short story "Fair's Fair" by Narinder Dhani prescribed for Form One secondary school students. This short story is taught in schools. It serves as an instrument to analyse miscue systems which provides insights into how students integrate the language cueing systems during the reading process to construct meaning.

3.5 Data Collection Procedures

Data collected were analysed based on the In-Depth Procedure as outlined by Goodman et al. (2005). This procedure allowed the exploration of the miscues in relation to other miscues produced by the readers within the sentence or the entire story (Goodman et al., 2005). Firstly, the passage was type-written and two copies were made of the passage. One copy was for the participant and the other was for the researchers to be used as a code sheet. Each line in the code sheet was numbered so that miscues were identified at exactly where the miscues occurred.

Next, participants' readings were audio-recorded without any aid from the researchers. Before the recording session began, light conversations were made to reduce the anxiety of the participant and to put him or her at ease. The participant was informed that he or she will not be graded for the reading. As students read, the researchers coded for miscue categories in every line of the passage, if there was any. The possible coding system is shown in Table 1, adapted from Argyle (1989) for the miscues patterns such as substitution, insertion, omission, self-correction, repetition and hesitation.

Table 1. Coding System (Argyle, 1989).

<i>Coding system</i>	
Omission	the (old) tree
Insertion	the old ^ tree
Hesitation	the /old / tree
Substitution	<i>Dray</i> the old tree
Repetition	the old <u>tree</u>
Correction	<i>Tray</i> the old tree

Following are the details on the types of miscue patterns (Goodman et al., 2005):

- a) A substitution miscue: a substitution miscue happens when a reader substitutes incorrect words or phrases to replace the correct text.

- b) Insertion miscue: an insertion miscue is when the reader reads words that are not in the text.
- c) Omission miscue: omission miscue is when a reader does not read words that are in the text.
- d) Correction miscue: correcting and replacing words to their original form in the text is known as correction miscue.
- e) Repetition miscue: readers reread the words or phrases in the text.
- f) Hesitation miscue: while reading some readers pause in front of words in the text.

Among the miscues, substitution miscue provides more information about the reader compared to other miscues (Davenport, 2002; Goodman et al., 2005). A substitution miscue is based on three aspects (Goodman et al., 2005):

- a) Do the substituted words look like (the) text words? (grapho-phonically acceptable)
- b) Do the substituted words fit grammatically into the sentence? (syntactically acceptable)
- c) Do the substituted words make sense within the whole passage? (semantically acceptable)

The grapho-phonetic cueing system is also known as the phonic cueing system or the phonological cueing system. The prefix 'grapho' means writing. The word 'phonic' relates to sound. Grapho-phonetic analysis refers to letter-sound relationships within a word. The sounds often hint towards a certain meaning as readers read a text (Goodman et al., 2005).

Semantic cues are associated with the overall meaning of the text, both understanding the words and sentences in a text. According to Goodman et al. (2005) systematic syntactic relations include word order, tense, number and gender whereas the semantic cueing system is based upon meaning within context. Semantic understanding is determined by the reader's vocabulary or lexicon (Hynds, 1990, as cited in Goodman, 1996). The advantage of using the in-depth procedure in miscue analysis allows researchers to identify how participants make use of the three miscue systems while substitution miscues patterns occur during the reading process (Goodman et al., 2005).

The miscues that did not change the meaning semantically, syntactically or in the grapho-phonetic cueing system, postulates participants' strength and the miscues which were unaccepted and changed the meaning in the language system were coded as participants' weaknesses. Descriptive statistical analysis was used to analyse the coded miscue patterns from the coding sheet in the form of frequency counts and percentages.

3.6 Technique of Data Analysis

The analysis provides information on: i) occurrences of participants' miscue patterns, ii) miscues on an individual basis, iii) miscues in percentages, and iv) the percentage of strengths and weaknesses on the miscues made by each participant. This information help identify proficient readers among the participants in reading to understand the prose forms. The context in which proficient readers refer to, are those whose miscues maintain the meaning and grammar in print as defined by Goodman (1973).

4. RESULTS

4.1 Occurrences of Participants' Miscue Patterns

4.1.1 Substitution Miscues

Participant 1 line 8, “*And my dad **won't** give us any more*” the contraction ‘won’t’ was substituted with another contraction ‘don’t’, the same parts of speech, a negative form. In this example, the substitution of ‘don’t’ for ‘won’t’ shows that the participant used the middle letter ‘o’ as well as the ending blend, possibly recognizing the ‘on’t’ pattern in the word ‘don’t’. In the graphic cueing system, the word substituted, showed some graphic similarity because both the words look alike at the ending pattern. There are some graphic similarities with the words. Phonic wise the word pronounced correspond a little to the written text especially at the ending part. Therefore, there is some phonic similarity. This reflects the participant’s strength partially.

Grammatically, the word substituted in the phrase changes the meaning syntactically. The word ‘won’t in the sentence means the dad has been giving money but from a certain period, he had stopped giving money. The substituted word ‘don’t’ for ‘won’t’ means he has not been giving money at all. It shows the participant’s weakness. Semantically, the word substituted does not change the meaning within the whole passage. This reflects the participant’s strength.

In line 12, *‘Something fell out of her bag’*. In this sentence the preposition ‘of’ was substituted with the preposition ‘from’, the same parts of speech. The participant had made use of the consonant letter ‘f’ the ending initial, possibly to recognize the word ‘from’ for ‘of’. The pronunciation of the word substituted is unacceptable in the phonic cueing system because there is no phonic similarity and graphically, there is no similarity between the word substituted and the word in print. Therefore, it exhibits the participant’s weakness. Grammatically, the word substituted fits correctly into the sentence and it makes sense within the whole passage. The meaning is not changed either syntactically or semantically. Hence, the miscue is coded as the participant’s strength.

In line 18, *“It must be that woman’s purse,” said Sam*. The pronoun ‘it’ is used to describe a thing in the sentence but was substituted with a personal pronoun ‘I’. In this example, there is a high possibility that the participant made use of the vowel letter ‘i’ in the beginning blend and omits the consonant letter ‘t’. In the graphic cueing system, there is some similarity but no phonic similarity. Therefore, the strategy used is the participant’s weakness. In the aspect of grammar, the substituted word does not fit in the sentence nor does it make sense within the whole passage. There is change in the meaning and the sentence is ungrammatical. The miscue is coded as a weakness.

In line 29, *“Wow! There’s a lot of money in her”*. In this example, the article ‘a’ was substituted with the verb-to-be ‘are’. Most probably the participant made use of the vowel letter ‘a’ at the beginning blend to come up with the word ‘are’, a verb-to-be. There is some similarity graphically and no phonic similarity. The pronunciation does not match with the written word. Hence, it is the participant’s weakness. Grammatically, the word substituted does not fit in the phrase as there will be two verbs- to-be, ‘is’ and ‘are’ in the sentence. As such, syntactically and semantically the substituted word is unaccepted. The miscue shows the participant’s weakness.

In line 32, “*You **could** keep it*”, said Raj. Participant 1 substituted the modal verb ‘could’ to another modal verb ‘should’, which is the same parts of speech. The participant used the middle letters ‘ou’ and the ending blend ‘ld’ to recognize the word ‘should’. As such, there is high graphic similarity and some similarity in the phonic cueing system. This is coded as the participant’s strength. The word substituted is acceptable and fits in the sentence grammatically although the degree of certainty between the two modal verbs differs. Within the whole passage, the word does not change the meaning neither in the sentence. The miscue made is strength.

Participant 3 made two substitution miscues. In line 14, “*She walked on **up** the street*”. The preposition ‘up’ [ʌp] was substituted with ‘ap’ [æp] which is not a word. In the phonic system, there is some phonic similarity and some graphic similarity. Probably the participant used the ending consonant letter ‘p’ in the word ‘up’ to recognize the non-word ‘ap’ [æp]. This reflected the participant’s weakness. The substitution of non-word does not make any sense neither in the sentence nor within the whole passage. It is unaccepted syntactically. Therefore, the miscue is coded as a weakness.

In line 48, “*...**gave** me five pounds! Now I can*”. The word ‘gave’ in the phrase was substituted with the word ‘give’. The participant made use of the beginning consonant letter ‘g’ and the ending pattern ‘ve’ to recognize the word ‘give’. There is high graphic and phonic similarity in the word substituted with the word in print. This exhibits the participant’s strength. The word substituted does not change the meaning of the phrase. Syntactically, the substituted word is accepted. It is the participant’s strength. However, the word ‘give’ is the present tense form of the verb which does not fit grammatically in the phrase because the story is in the past tense. There was no attempt made by the participant to correct the miscue. Semantic wise, the miscue is coded as a weakness.

Participant 4 made four substitution miscues. Line 29, “*Wow! There’s a lot of money in **here**.*” In this example, the substitution of ‘there’ for ‘here’ shows that the participant used the word ‘here’ to recognize the word ‘there’. There is high graphic and phonic similarity in the ending pattern. The miscue is coded as the participant’s strength. In this sentence, the word ‘there’ fits grammatically and within the whole passage. It makes sense because the meaning is not distorted. As such, it is coded as the participant’s strength.

In line 37, “*He saw the woman standing **at** the bus stop*”. The preposition ‘at’ is substituted with the preposition ‘of’. The words are of the same parts of speech. There are no graphic and phonic similarities between both the words. It is coded as the participant’s weakness. The substitution which changes the meaning of the sentence is unaccepted both syntactically and semantically. So, the miscue is coded as a weakness.

In line 54, “*And we can **eat** lots of candy floss*”. The letter ‘s’ was added to the word ‘eat’. In the grapho-phonic cueing system, there are high graphic and phonic similarities. It is coded as the participant’s strength. The addition of the phoneme /s/ does not distort the meaning of the sentence. However, it is incorrect semantically because a verb which follows a modal verb must be in the base form. There was not any attempt made by the participant to correct the miscue. Therefore, the miscue exhibits a weakness.

Participant 5 made three substitution miscues. In line 20, “*That’s what **fell** out of her bag.*” The word ‘fell’ was substituted with a present tense word ‘fall’. In this example, the participant made use of the consonant letter ‘f’ in the beginning as well as

'll' in the ending blend, possibly recognizing the 'll' pattern in the word 'fall'. In the grapho-phonetic cueing system, there is a high graphic similarity and some phonic similarity. The miscue is coded as strength for the participant because the substituted word did not change the meaning of the sentence. However, semantically it is ungrammatical because the substituted word is in the present form and within the whole passage, it is unacceptable. As such, the miscue is coded as the participant's weakness.

Participant 6 made only one substitution miscue. In line 26, "*What shall we do?*" asked Raj. The personal pronoun 'we' is substituted with 'I' which is a personal pronoun, too. In the grapho-phonetic cueing system, there is no graphic or phonic similarity. At the sentence level, the meaning is not distorted and is grammatical. Within the whole passage, it is ungrammatical because there are three characters involved, not one. So, the miscue is the participant's weakness.

There was a similar substitution miscue which occurred among Participants 1, 4 and 5. In line 46, "*Lee ran back to Raj and Sam*", the past tense form of the verb 'ran' is substituted with the present tense form 'run'. Probably these participants made use of the consonant letter 'r' in the beginning and 'n' in the ending to recognize the word 'run'. In the grapho-phonetic cueing system, there is high graphic similarity and some phonic similarity. It is strength for the participants. At the sentence level, the substituted word did not distort the meaning. As such, it is accepted syntactically. It is strength for the participants. Within the whole passage, the substituted word is unacceptable because the passage is in the past tense. Therefore, semantically, it is ungrammatical and is coded as the participants' weakness.

4.1.2 Insertion Miscues

Insertion miscue occurred among Participants 1, 3 and 5. Insertion miscues were made when a word is added in between two words. For Participant 1, in line 12 "*Something fell out of her ^ bag.*" The preposition 'of' inserted in the sentence did not distort the meaning but semantically it is unaccepted because two prepositions in a sentence is ungrammatical. The strategy used showed the participants' weakness.

Participant 3, in line 50 "*We can go on ^ the ghost train,*" The preposition 'in' is added in between the words. The addition of the word 'in' makes the sentence ungrammatical as it is redundant. It is coded as the participant's weakness. Participant 5, in line 39 "*You dropped ^ your purse,*" said Lee. The word 'out' was added in between the words. This is unnecessary and forms an ungrammatical sentence. In sum, the insertion strategy used in reading by the participants affected the meaning of all the sentences. This miscue is coded as the participants' weakness.

4.1.3 Omission Miscues

For Participant 1, line 6 "*My mum hasn't got any jobs for us*". The verb 'got' is omitted. Omission led to an incorrect sentence. Participant 3, line 33 "*Then you could have a really good...*". The word 'really' is omitted in the phrase. Both omission in the sentences and phrase do not affect the meaning syntactically. The causes of word omission are when reading is done too quickly (Goodman, 1973).

However, Goodman (1973) as cited in Wixson (1979) pointed out that as readers become more proficient they tend to omit known words that are unnecessary for understanding rather than unknown words. In this study, as observed by the researchers,

the occurrence of omission miscues is due to the participants' fast reading. Thus, this supports Goodman's (1973) findings on omission miscues. Nevertheless, the strategy used by the participants did not change the meaning of the sentences. Hence, it reflects the participant's strengths.

4.1.4 Repetition Miscues

Repetition was common among Participants 2, 3, 4, 5 and 6. The words repeated by Participant 2, were 'purse' in line 17, and 'Thank you' in line 41. Participant 3 repeated the word 'but' in line 13, and in line 16, 'Raj'. In line 26 the phrase, 'asked Raj', in line 32 "You could keep it" and in line 39 the word 'dropped' was repeated.

Participant 4 repeated the word 'asked' in line 4 and in line 42, the phrase 'a good boy'. Participant 5 in line 6, the phrase 'hasn't got' was repeated. Participant 6 in line 1, the word 'money' and the phrase 'on up' were repeated in line 14. According to Wixson (1979), repetition takes place when the reader is confirming the meaning of the word or struggling with it. Readers repeat words when they are uncertain of the words and want to make sense of the passage. As such, these miscues are coded as the participant's strength.

4.1.5 Hesitation Miscues

Hesitation miscue was also common among Participants 1, 3, 4, 5 and 6. The participants paused in between the words. Participant 1, in line 22 "They all looked at the / purse". Participant 3, line 6 "My mum / hasn't got any jobs for us," and in line 12 "Something fell out / of / her bag" Participant 3 paused twice. Participant 4, in line 12 paused twice "Raj, Sam and Lee went / to / look", and paused in line 50 "We can go / on the ghost train". Besides, Participant 5 paused in line 22 "They all / looked at the purse". Finally, Participant 6 paused once in the second line "He had to find / some more" and in line 28, "Lee picked up the / purse". The reason for hesitation is believed that the readers are trying to decode the word that follows the pause (Husztai, 2008). This strategy used exhibits the participants' strengths.

4.1.6 Inversion Miscues

Inversion miscue may indicate fluent reading where the reader is adapting to what is written in a form close to familiar speech (Husztai, 2008). Only one inversion miscue occurred among the Form One participants. Participant 1 made the miscue in line 40, "Here it is". The words 'it is' is reversed to 'is it'. The inversion miscue did not make a drastic change in the meaning. Hence, it is regarded as the participants' strength.

4.2 Analysis of Participants' Miscue Patterns

Participants' miscues were analysed. Table 2 shows the number of substitution miscues accepted and not accepted in the three aspects: grapho-phonetic, semantic and syntactic cueing systems and their total, the number of other miscues produced by each participant and the overall total of the miscues.

Substitution miscues were analysed within three aspects which are grapho-phonetic cueing system, syntactic and semantic cueing. In the grapho-phonetic cueing system, the

‘graphic’ characters of a word explains how much the miscue does look like what was expected in the print whereas the phonic character of a word denotes the sound made by combining various letters (Goodman, 1973).

By attending to the graphic and phonic features of a word, the degree to which participants used the grapho-phonic system is indicated by interpreting whether they are of high graphic similarity, some graphic similarity or no graphic similarity. Interpretation of the phonic cueing data is explained in the same ways, which are high phonic similarity, some phonic similarity and no phonic similarity. If there is some graphic and phonic similarity with the substituted words, the graph-phonic cueing system is accepted and reflected as the participants’ strength.

Grammatical function is addressed through the substitution miscues. Miscues that were acceptable with no meaning change syntactically (words that fit into the sentence) and semantically (words that fit into the whole passage) are reflected as the participants’ strength. Miscues that changed the meaning syntactically and semantically indicate loss of meaning in construction (Ebersole, 2005) and is reflected as the participants’ weakness.

Substitution miscue analysis revealed that there were 17 substitution miscues occurrences in the participants’ oral reading. There were 12 acceptance of grapho-phonic cueing system, 12 acceptance of syntactic cueing, and 4 acceptance of semantic cueing.

Table 2. Analysis of participants’ miscue patterns.

Participants	Words in text	Miscue	Substitution			Omission	Hesitation	Insertion	Repetition	Inversion	Correction
			G A	S A	S A						
1	won't	<i>don't</i>	/	/	/	1	1	1	-	1	-
	of	<i>from</i>	x	/	/						
	it	<i>I</i>	x	x	x						
	can't	<i>can</i>	/	x	/						
	a	<i>are</i>	x	x	x						
	could	<i>should</i>	/	/	/						
	ran	<i>run</i>	/	/	x						
2	-	-	-	-	-	-	-	-	2	-	-
3	up	<i>ap</i>	/	x	x	1	1	1	6	-	-
	gave	<i>give</i>	/	/	x						
4	here	<i>there</i>	/	/	x	-	3	-	2	-	-
	at	<i>of</i>	x	x	x						
	ran	<i>run</i>	/	/	x						
	eat	<i>eats</i>	/	/	x						
5	fell	<i>fall</i>	/	/	x	-	1	1	1	-	-
	can't	<i>can</i>	/	/	x						
	ran	<i>run</i>	/	/	x						
6	we	<i>I</i>	x	/	x	-	2	-	2	-	-

Keywords (adapted from Goodman, 1996):

GA – acceptance of grapho-phonic cueing system

SA – acceptance of syntactic cueing (words substituted fit grammatically into the sentence)

SA – acceptance of semantic cueing (words substituted make sense within the whole passage)

(/) Accepted

(x) Not accepted

Omission miscue showed two occurrences, in which Participants 1 and 3 each produced one. Data indicated eight occurrences for hesitation miscue. Participants 1, 3 and 5 produced one hesitation miscue whereas Participant 4 produced three and Participant 6 produced two. As for insertion miscue, data showed that there were three occurrences. Participants 1, 3 and 5, each made an insertion miscue.

The total number of occurrences for repetition miscue is 13. All the participants except Participant 1 produced the miscue. Participant 2 produced two, Participant 3 produced six, Participant 4 produced two, Participant 5 produced one and Participant 6 produced two. Finally, there was an inversion miscue in which Participant 1 was responsible for.

4.3 Percentage of Miscues

The percentage for each miscue is calculated by the total number of each miscue divided by the overall total number of the miscue patterns and is multiplied by 100 (percentage of miscue patterns = total of each miscue patterns ÷ overall total miscues x 100 %).

Data show forty-four (44) miscues. The percentage for omission miscues is 5% (n=2) and substitution miscues indicate 40% (n=17). The percentage for the insertion miscues is 7% (n=3) whereas the percentage for repetition miscues is 30% (n=13). As for an inversion miscue, the percentage is 2% (n=1) and the percentage for hesitation miscues is 19% (n=8). However, none of the participants made self-correction.

Additionally, the percentage for the three aspects (grapho-phonetic, syntactic and semantic cueing system) which explains the substitution miscues is calculated, too. The total substitution miscues is 17. The number of grapho-phonetic cueing system which is acceptable is 71% (n=12). As for syntactic cueing system, the total number accepted is also 71% (n=12) and semantically accepted substitution miscues revealed 24% (n=4). Similarly, the percentage for the unaccepted substitution miscues in the three aspects (grapho-phonetic, syntactic and semantic cueing system) is calculated. Data show that 29% (n=5) substitution miscues were unaccepted grapho-phonetically. Syntactically unaccepted substitution miscues also indicate 29% (n=5). In the semantic aspect, the substituted words unaccepted is 76% (n=13).

5. DISCUSSION

The pattern of miscues in oral reading can suggest the participants' strengths as well as their weaknesses (Goodman, 1969). They provide a glimpse and insights on how they were made in order to understand what is really going on in the reader's mind when a text is read (Goodman, 1969). Individual strengths and weaknesses are calculated in the occurrences of participants' miscues.

In the analysis of participants' strengths and weaknesses on the occurrences of miscues, the percentage of strengths outweighed the percentage of weaknesses for all the participants. The results suggest that Participant 2 is a proficient reader because the participant only made two repetition miscues in which the meaning and grammar were maintained. Next, Participant 6 is the second in the list because of the participant's least percentage of weaknesses (2%). Further, the medium ability readers are Participants 3, 4 and 5 because the type of miscues they produced indicates less percentage of

weaknesses. Participant 1 is less proficient than the others because the participant's percentage of weaknesses showed 14% which is the highest percentage of weaknesses among all the participants.

6. CONCLUSION

Miscue analysis helps students better understand the reading process and become more confident readers. Students are made aware of the many strategies and thinking processes that occur when reading. By increasing their awareness they are able to monitor their own comprehension while reading and become proficient readers. Teachers are able to systematically examine students' reading behaviours that indicate their reading strengths and weaknesses in a focused and manageable way (Argyle, 1989). Hence, this helps them to make decisions about upcoming reading instruction. Insights gained from miscue analysis can help both the students and teacher achieve success.

REFERENCES

- Almazroui, K. M. (2007). Learning together through retrospective miscue analysis: Salem's case study. *Reading Improvement*, 44(3), 153–168.
- Argyle, S. B. (1989). Miscue analysis for classroom use. *Reading Horizons*, 29(2), 93-102.
- Davenport, M. R. (2002). *Miscues not mistakes*. Portsmouth, NH: Heinemann.
- Dhami, N. (2014). *Fair's fair. Literature component for secondary schools. Form 1 (Student's Edition.)*. Marang: Zulfashah Book Service.
- Ebersole, M. (2005). Reflecting on miscues in content area reading. *Academic Exchange Quarterly*, 9(2), 1-9.
- Goodman, K. S. (1969). Analysis of reading miscues. *Reading Research Quarterly*, 5, 9-30.
- Goodman, K. S. (1973). Miscue analysis: Applications to reading instruction (pp. 3-18). Urbana, IL: NCTE.
- Goodman, K. S. (1994). Reading, writing, and written texts: A transactional sociopsycholinguistic view. In A. Flurkey & J. Xu (Eds.), *On the revolution of reading: The selected writings of Kenneth S. Goodman* (pp. 3-45). Portsmouth, NH: Heinemann.
- Goodman, K. S. (1996). *On reading*. Portsmouth, NH: Heinemann.
- Goodman, Y. M., & Marek, A. (1996). *Retrospective miscue analysis*. Katonah, NY: Richard C. Owen Publishers Ltd.
- Goodman, Y. M., Watson, D. J., & Burke, C. L. (2005). *Reading miscue inventory: From evaluation to instruction* (2nd ed.). Katonah, NY: Richard C. Owen Publishers.
- Gough, P. B. (1972). One second of reading. In J. F. Kavanaugh & I. G. Mattingly (Eds.), *Language by ear and by eye* (pp. 331-358). Cambridge, MA: MIT Press.
- Huszi, I. (2008). The micro level of reading miscues: Case studies of six learners. *WoPaLP*, 2, 105-118.

- Kabuto, B. (2009). Parents and children reading and reflecting together: The possibilities of family retrospective miscue analysis. *Reading Teacher, 63*(3), 212–221.
- LaBerge, D., & Samuels, S. J. (1974). Toward automatic information and processing in reading. *Cognitive Psychology, 6*, 293-323.
- Moore, R. A., & Brantingham, K. L. (2003). Nathan: A case study in reader response and retrospective miscue analysis. *Reading Teacher, 56*(5), 466–474.
- Moore, R. A., & Gilles, C. (2005). *Reading conversations: Retrospective miscue analysis for struggling readers*. Portsmouth, NH: Heinemann.
- Rhodes, L. K. (1993). *Literacy assessment: A handbook of instruments*. Portsmouth, NH: Heinemann.
- Rosenblatt, L. M. (2004). The transactional theory of reading and writing. Theoretical models and processes of reading. *International Reading Association, 48*, 1363-1398.
- Shapiro, J., & Riley, J. (1989). Ending the great debate in reading instruction. *Reading Horizons, 30*(1), 67-78.
- Smith, F. (1982). *Understanding reading*. New York: Holt, Rinehart & Winston.
- Turbill, J. (2002). The four ages of reading philosophy and pedagogy: A framework for examining theory and practice. *Reading Online, 5*(6). Retrieved from http://www.readingonline.org/international/inter_index.asp?HREF=/international/turbill4/index.html
- Wilson, J. (2005). *The relationship of dynamic indicators of basic early literacy skills (DIBELS) oral reading fluency to performance on Arizona's instrument to measure standards (AIMS)*. Tempe, AZ: Tempe School District No. 3.
- Wixson, K. L. (1979). Miscue analysis: A critical review. *Journal of Reading Behaviour, XI*(2), 163-175.

[Received 25 September 2017; revised 8 December 2017; accepted 15 February 2018]

THE AUTHORS

Revathi Gopal is a school teacher and she is currently pursuing her doctoral degree in Sultan Idris Education University, Perak, Malaysia. She has been teaching the English language for twenty-three years in primary and secondary schools in Perak. She has a great passion for teaching and she aspires to upgrade the English language proficiency of Malaysian school students. Her areas of interest are reading and literature.

Che Ton binti Mahmud is currently a senior lecturer at the Faculty of Languages and Communication, Sultan Idris Education University, Perak, Malaysia. She received her doctoral degree in 2005. She has over thirty-five years of teaching experience. She has taught English language in both primary and secondary schools and also involved in the training of TESL pre-service and in-service teachers in teachers' training colleges in Malaysia. She was a teacher trainer for fifteen years before she joined Sultan Idris Education University. Her areas of interests are teacher education, TESL methodology, literature as resource and English phonetics and phonology.