

# Enhancing Remedial Learners Reading through eLearning

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## **Abstract**

*The advancement and use of technology in classrooms have long since been contributing positive pedagogical impact in the teaching and learning process. It also has created new opportunities to enhance teaching and learning apart from enhancing the utilization of various learning modalities of the learners. Increasingly, technology in the form of eLearning is being utilised in as one of the enables in the teaching and learning process. Such move provides a new dimension in empowering learners to enhance their individual learning capabilities. This paper reports on a case study on applying eLearning in the form of reading module for remedial learners to help them increase their reading performance. The participants, three remedial learners, aged between 8-9 years old used the module over a course of time. Data from the case study were analysed using descriptive analysis involving frequencies and mean scores. The findings showed that there is an increase in terms of performance in reading. The participants also showed less dependency on their teacher in learning to read when using the module. The findings have implication on the pedagogical aspects of teaching and learning reading in remedial classes.*

## **Introduction**

The increasing use of technology in the classrooms has created new learning opportunities for the learners. However,

such advances are not being utilized in schools (Forgave, 2002) and particularly in the remedial programmes many teachers are slow to recognise the benefit of new technology to their learners (Edyburn, 2000). Remedial learners are those identified as having difficulties in reading, writing and arithmetics. The interest of these learners in their learning will be subsequently lost if their learning difficulties are overlooked. One way of sustaining interest of these learners is through the use of technology in their teaching-learning process. As stressed by Manisah (2001), the advancement and use of technology in classrooms can help promote learning and has positive pedagogical impact in the teaching and learning process. In the following sections, this paper provides a brief discussion on remedial education. This paper also discusses the reading module and describes a case study that used the module in the form of eLearning.

## **Remedial Education in Brief**

Remedial education is an educational effort to help learners to overcome their difficulties in learning, specifically in reading, writing and arithmetic (3Rs). This effort is realised through the teaching and learning activities which help learners through the use of suitable alternative approach, learning materials activities to suit their difficulties in learning. In addition, it also stresses on changing learners attitude towards their learning. Therefore, the focus

of remedial education can be seen as providing specific teaching and learning activities to overcome learners' difficulties in 3Rs alongside as helping learners to change their negative attitude towards learning as well as helping learners to increase their motivation in learning (Kementerian Pendidikan Malaysia, 1994). The objectives for remedial programme stress on aspects related to acquiring the basic 3R's skills and attitude development. Among the objectives are:

- enable learners to acquire skills through alternative activities using teaching and learning methods and materials suitable to their interest and ability.
- enable learners to receive individual teaching according to their mental development
- enable learners to be taught using learning materials that are meaningful and suitable to their capabilities
- enable them to experience success in their learning

The remedial teaching and learning activities are conducted by the remedial teacher for Year 1 to Year learners in the primary schools who have been identified as having problems in 3Rs. Such problems are not caused by any mental or physical disabilities. Apart from the performance on the 3R's skills, the identification of potential remedial learners also focuses on five main aspects of emotion and behaviour, social, health, learning readiness and perception (Kementerian Pendidikan Malaysia, 1999). These aspects related to their difficulties in acquiring certain skills compared to their peers may create differences in their achievement level. When the remedial learners are identified, they will follow remedial activities carried out in remedial classes. These learners will be withdrawn from their mainstream classes for a certain time length according to the subject matter,

in this case, Bahasa Malaysia (the national language subject) and/or Mathematics.

Manisah and Mokhtar (2002) stressed that remedial can plan various teaching and learning activities to overcome the difficulties in acquiring the 3R's skills. Remedial teachers can modify the curriculum so that it can be delivered to the learners according to their learning capabilities. Increasingly, more teachers are utilizing technology in the form of eLearning. This has created new opportunities to enhance teaching and learning apart from enhancing the utilization of various learning modalities of the learners. Such move provides a new dimension in empowering learners to enhance their individual learning capabilities. Taking this into context, this paper reports on a case study which discussed the use of eLearning in teaching reading to learners in a remedial class. The reading lessons were prepared in the form of a module to enable remedial learners to learn according to their pace and ability. In the following section, the discussion focuses on the reading module.

### **The Reading Module:**

The reading module was developed as a teaching-learning material to teach Bahasa Melayu, the national language subject compulsory for all learners in schools. Bahasa Melayu too is one of the two subjects that are taught in remedial classes to help learners to overcome their difficulties in acquiring the 3 R's skills. The other subject is Mathematics.

The reading module consists of the reading CD, the module's manual for the teacher, learning materials for 10 sessions, activity worksheets, tests materials and guidelines for writing a lesson plan using the module. The reading CD is an interactive learning CD for reading in Bahasa Melayu. It can be used in classrooms as an electronic reading material in the computer, hence, allowing for eLearning to take place. It has

10 learning sessions which focuses on identifying names and sounds of vowel and consonant alphabets, reading consonant-vowel (CV) syllables and words with vowel-consonant-vowel (VCV) and consonant-vowel-consonant-vowel (CVCV) structures.

For each session, the learner will choose an alphabet by clicking on the picture featuring the selected alphabet. The lessons in each session are introduced in three stages and in gradual manner. The first stage consists of the introduction of the consonant alphabet and accompanying vowel alphabets, the syllables with consonant-vowel (CV) structure and the words with vowel-consonant-vowel (VCV) and consonant-vowel-consonant-vowel (CVCV) structures. The second stage is reading single words. These words are accompanied with visual support to enhance understanding. The third stage is the reading of single paragraph stage. All stages are supported with auditory support to ensure that correct pronunciation takes place as well as features like the `back` and `forward` keys are provided to enable learners to learn reading at their own pace. As such, the said features provide a new dimension in empowering learners to enhance their individual learning capabilities.

The manual was prepared as a guide book for the teacher on the usage of the module. The activity worksheets are reinforcement materials for all learning sessions. Each learning sessions has four activity worksheets for different types of activities which are writing alphabets, writing open syllable with consonant-vowel (CV) structure, writing words with vowel-consonant-vowel (VCV) and consonant-vowel-consonant-vowel (CVCV) structures and colouring pictures.

The tests materials consist of pre-test and post-test materials on reading words with consonant-vowel-consonant-vowel (CVCV) structures, and test materials based on the 10 learning sessions. The scores in the tests will be analysed descriptively using means and percentages and later compared according to the five scores of reading level which are described in Table 1.

To find out the effectiveness of the reading module, a case study on the remedial learners.

### The Study

The case study was carried out in one remedial class which involved three remedial learners. These learners have not acquired

**Table 1: Descriptions of Reading Scores**

Scores	Description	Details
1	not able to read at all	Not responding at all/ Being quiet more than 2 minutes/Incorrect response/Guessing
2	able to identify alphabet only	Either naming or giving the sound of alphabets/ both naming and giving the sound of alphabets.
3	able to read syllables	Reading syllables without combining them to form a word/ Spell out words but stops more than 5 seconds before proceeding to spell more.
4	moderate reading	Read by spelling out / Read but stops between syllables not more than 5 seconds
5	smooth reading	Reading without spelling out words

the reading skills in Bahasa Melayu that involves words of single syllable with vocal-consonant-vocal (VCV) structure, for example, *api* and words with vocal-consonant-vocal-consonant(CVCV)structure, for example, *baba*. The participants of the study was selected based on the following criteria:

- a.their achievement in Bahasa Melayu subject in the school-based progress evaluation (*Penilaian Kemajuan Berasaskan Sekolah*), and
- b.their achievement in *Instrumen Penentu Penguasaan 3M*, an instrument used to assess potential learners for the remedial programme.

The data of this study were collected through the pre-test, post-test and the learning sessions tests that were analysed

descriptively using mean score and percentages. The effectiveness of using the reading module was measured by comparing the difference between mean scores in the pre and post-tests results. In addition, learning behaviours of the participants were observed and noted during the learning sessions.

**Results and Discussion**

There is evidence that with adequate support in teaching and learning, remedial learners can perform as equally well as their mainstream peers (Kamdi, 1990; A. Aziz, 1997). The participants in this study showed some progress in their reading skill. Positive differences in the mean scores in reading for all participants are noted as in Table 2.

**Table 2 Mean Scores of Participants in the Pre and Post Tests in Reading**

Participants	Pre-test	Post-test
Participant 1	2.1	4.1
Participant 2	2.1	4.3
Participant 3	1.1	4.0

Keys: Mean score scale

Score	Reading level
1	not able to read at all
2	able to identify alphabet only
3	able to read syllables
4	moderate reading
5	smooth read

The mean scores for the pre-test showed that Participants 1 and 2 were only at the level of Score 2, able to identify alphabets only. Participant 3 scored the lowest mean score, thus, putting him at the level of Score 1, not able to read at all. Participant 3 was observed to only recognize the alphabets ‘u’ and ‘o’. She was also unable to read words with two syllables of consonant-vowel-consonant-vowel (CVCV) structure. The results of the post-test showed an increase in the mean score for all of the participants. The

mean scores showed that the participants were able to read moderately. All of them were at the reading level of Score 4, moderate reading.

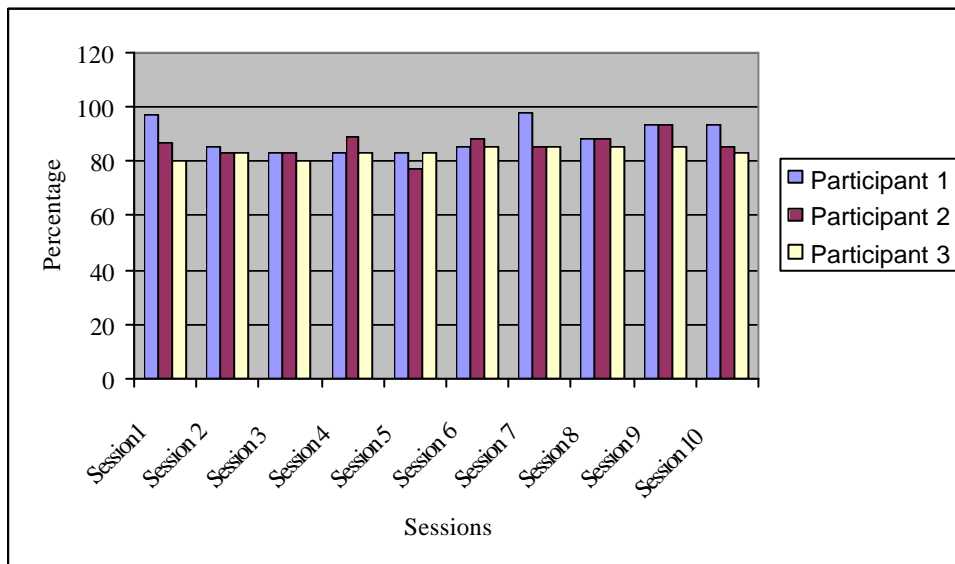
The differences in the mean scores in Table 2 indicated that the use of appropriate teaching-learning materials is important to allow learners to follow the teaching-learning process. In the case of the participants in this case study, the use of the reading module via eLearning has helped in increasing positive learning outcomes. This

is evidenced in the performance of the participants in the evaluation carried out at the end of the learning sessions. There were ten learning sessions and after each session, the participants were given a written test to evaluate their learning outcomes. The performance of the participants during the learning sessions is presented in Table 3 and Figure 1.

**Table 3: Performance (in Percentages) of the Participants during the Learning Sessions**

Participants	S 1	S 2	S 3	S 4	S 5	S 6	S 7	S 8	S 9	S 10
Participant 1	97	85	83	83	83	85	98	88	93	93
Participant 2	87	83	83	89	77	88	85	88	93	85
Participant 3	80	83	80	83	83	85	85	85	85	83

Key:  
S : Learning session



**Figure 1: Performance (in Percentages) of the Participants during the Learning Sessions**

In line with the performance of the participants in the learning sessions, the high score level of all of the participants too showed that graded stages used in teaching reading via eLearning have positive impact in their reading. All participants showed consistent score level as shown in Table 4.

The study has observed that the participants were less dependent on their teacher during their learning sessions. Qualitative findings based on the observation made throughout the study noted that the participants were more responsible for their learning and showed behaviours of learning independently. The participants could recognise alphabets and were able to read words, sentences and texts in the reading module on their own. This could be due to the fact that they were able to monitor their learning interactively using the computer mouse. Time on task was also increased. The participants showed less non-learning behaviours like day dreaming and walking about the class as the reading module provided them with lots of learning

activities. This enabled them to stay focused in their learning.

As eLearning provides teaching and learning process to have a combination of text, audio and animation, the reading module used in the study catered for learners with different learning modalities, visual learners, auditory learners and kinesthetic learners, to learn. This has created less stress and anxiety in learning as the participants were allowed to learn at their own pace. They were observed to be actively engaged in their learning using the interactive buttons in the module.

Participants	S 1	S 2	S 3	S 4	S 5	S 6	S 7	S 8	S 9	S 10
Participant 1	4.8	4.2	4.1	4.1	4.2	4.2	4.9	4.6	4.6	4.1
Participant 2	4.3	4.1	4.1	4.4	3.8	4.3	4.2	4.3	4.6	4.2
Participant 3	4.0	4.1	4.0	4.1	4.2	4.2	4.2	4.2	4.2	4.0

**Table 4 Mean Scores of the Participants during the Learning Sessions**

Keys:

S: Learning session

Mean score scale

Score Reading level

- 1 not able to read at all
- 2 able to identify alphabet only
- 3 able to read syllables
- 4 moderate reading
- 5 smooth read

## Conclusion

In order to promote meaningful learning, different kinds of means can be used by teachers in their classroom. The case study discussed in this paper provided some evidence that eLearning can be used in different settings. New opportunities as well as new challenges were created apart from enabling remedial learners to be actively involved in their learning. This is made possible by having appropriate module content according to the learners' reading level. As stated by Vaughn et al. (1998), by providing appropriate reading materials, remedial learners can be actively involved in their learning. Such move is encouraged in order to increase confidence among these learners. This allows for teachers to promote independent learning among their learners. In addition, positive attitude towards the use of computer can be instilled through such active participation while using the module.

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