

## CHAPTER 11

# PHONICS ADVENTURE WITH BARRY: AN INTERACTIVE INTERVENTION FOR EARLY READING STAGE

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### ABSTRACT

In Malaysia, pupils in level 1 are exposed to the use of phonics in their English syllabus which is emphasised in *Dokumen Standard Kurikulum dan Pentaksiran* (DSKP) that by the end of year 2, pupils will be able to recognise and reproduce a range of high frequency target language phonemes. However, 10 low proficiency pupils in SK S have encountered reading difficulty as they were facing difficulties to read simple words. Moreover, the COVID-19 pandemic has worsened the situation where it limits the face-to-face learning interaction between teachers and pupils. Therefore, an interactive digital phonics learning application named Phonics Adventure with Barry (PAWB) is created using Microsoft PowerPoint (PPT) including complementary flashcards equipped with Quick Response code (QR) for hands-on learning. It is hoped that PAWB can improve reading skills among the Year 2 pupils through a constructivism approach. Another objective of this innovation is to increase pupils' motivation and awareness in doing self-directed learning. Furthermore, technology has emerged among society, and it is beneficial to use it in adapting to the current changes of age.

**Key Words:** Phonics, reading, interactive, Microsoft PowerPoint (PPT), Quick Response code (QR)

## 1. INTRODUCTION

Reading is an essential skill for academic and vocational purposes. It enables us to understand the medium of communication in written form (Tehmina, Muhammad Arfan & Shamaila, 2019). Reading skills are also emphasised as one of the main skills in the English language curriculum and are expressed in the English Language Primary School Standard Curriculum (Ministry of Education Malaysia, 2017). Malaysia has adapted the phonics approach in teaching and learning of English for year 1 till year 3 using Common European Framework Reference (CEFR) guidance. However, Muhammad Khalid and Hafizoah (2019) highlighted the weak reading proficiency as one of the main issues among the primary school children. Reading difficulties are often encountered by pupils in school as they begin to enter stages of reading development. Therefore, formal instruction is required to develop full reading skills. Due to COVID-19 outbreak, many alternatives have been made in adapting to the current situation. The use of Information and Communication Technology (ICT) has many advantages in supporting lesson interaction between teachers and pupils. Moreover, the use of ICT can create interactive learning and it can be conducted for all levels of proficiency, which in this study focused on low proficiency pupils. Besides, an interactive approach can increase pupils' interest in learning to read better (Nur & Djuwairiah, 2017).

## 2. LITERATURE REVIEW

Sunde, Furnes and Lundetræ (2020) stated that there are a variety of learning pace and levels of environmental exposure among children. Their lack of literacy skills can also negatively affect their willingness to learn, self-esteem, as well as their performance across the school curriculum. Hence, teachers should be able to address the problems faced by pupils starting from their early stage of reading and provide suitable interventions. According to Cicerchia (n.d.), reading begins with mastering pre-literacy skills, including learning the alphabet and enhancing phonemic awareness. One of the reading difficulties is issues with decoding the words. If children can decode the written code using phonological recording, they should potentially be able to 'translate' all possible words from symbols to sounds using a self-teaching method (Schaars 2019). Prespecified sets of phonic elements, such as grapheme-phoneme correspondences, are sequentially taught and simultaneously used in reading words and text in systematic phonics instruction (Schaars, Segers, & Verhoeven, 2017). This systematic mapping and blending of graphemes into phonemes are called phonological recoding, and this results in actual word decoding. In the early stages of reading, children learn how graphemes consistently correlate to phonemes and how these phonemes can be blended to form words during the early stages of reading development (Schaars, 2019).

Despite phonics being one of the bottom-up approaches towards learning to read, constructivist approaches can be adapted to complement the learning (Siti Soraya Lin, 2021). Learning phonics in the contexts of words and sentences brings meaning and enriches the pupils' learning experience. To support this, ICT has become one of the needs in education to create interactive and meaningful lessons. PowerPoint (PPT) is one of the

most useful aids which comes in the form of presentation software (PS) that lets users display coloured text and graphics with simple motion and sound. It aids in the creation of audio, visual, and audio-visual effects in classrooms and can be quite useful in attracting and maintaining students' attention (Alkash & Al-Dersi, 2013). Apart from that, QR codes have also proven to be quite useful in education. It can be scanned using a variety of smartphone applications from the Play Store. A smart, multipage database can assist users in understanding the data provided in a barcode. As a result, QR Codes should be used to their full potential in learning environments that require large but small material (Bayu, Subagyo, Muhammad Nurtanto, Sugiyono & Heri, 2018).

### 3. METHODOLOGY

The implementation of PAWB is carried out among 10 low proficiency pupils from Year 2. They are selected based on their low performance in reading skill which consists of band 1, 2 and 3 with the guidance of DSKP. In addition, the ADDIE model is selected for PAWB development. The ADDIE model relies on each stage being done in the given order but with a focus on reflection and iteration. The details are shown in Table 1.

Table 1: PAWB Development

Analysis	The pupils' problem is analysed to identify the target and goals.
Design	PAWB is designed in both PPT and hands-on complementary flashcards. The PPT is recommended for users with laptops, computers, tablets while the flashcards can be used with simpler devices such as smartphones as well as tablets.
Develop	PAWB is developed through Microsoft PowerPoint. The design of the hands-on complementary flashcards is generated with the combination of QR codes. The QR codes are embedded with demonstrative videos of pronunciation for each phonics item, words, and sentences.
Implementation	PAWB is implemented among 10 pupils of SK S in separate sessions with the allocation of 2-hour self-directed learning for each.
Evaluation	The results are evaluated through pre-test and post-test, and interviews.

PAWB operation is presented in Figure 1 by using a flow chart. The flow chart shows the general algorithm of the system. The program starts with the main interface and users are naturally directed to try each activity by the 4 set stages. Input on phonics (including words, sentences, pictures, and demonstrative videos of pronunciation) provided in Stage 1 (Let's Read Together). In Stage 2 (Check your reading!), users are able to revise and check their own pronunciation of the phonics item and words. Stage 3 (Choose the correct card!) and stage 4 (Game: Saving Barry!) provide users with quizzes and gamified learning experiences in which they could implement the input in a fun and meaningful way. As PAWB encourages self-directed learning, users are given the authority to lead their own learning session through their independent exploration of the system.

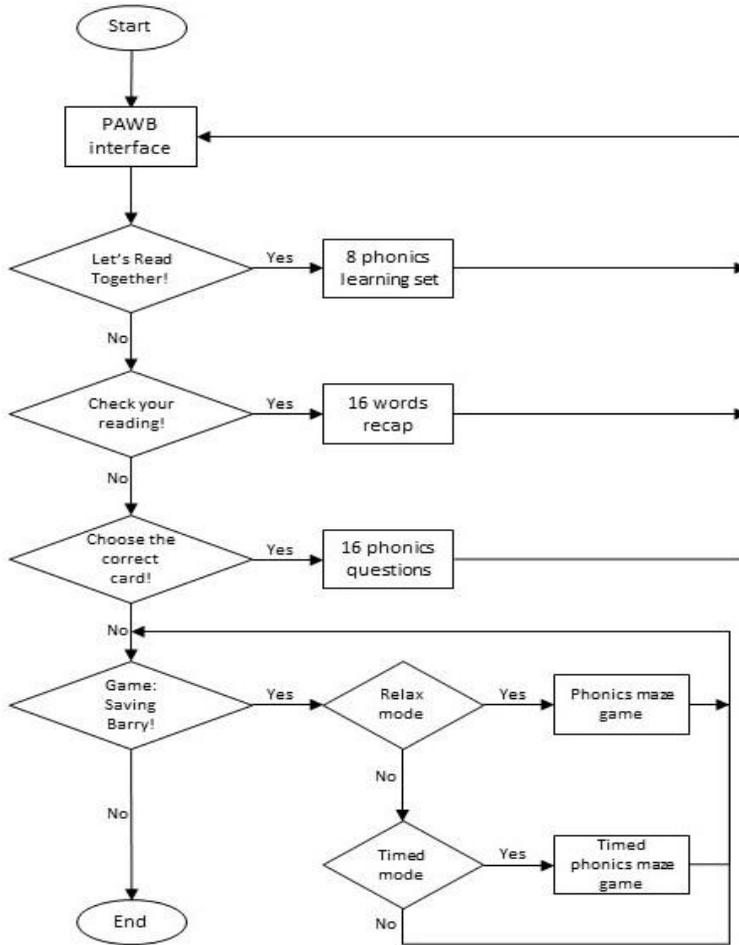


Figure 1: PAWB system flowchart



Figure 2: PAWB main interface and QR code-embedded flashcards

Separate sessions for all 10 pupils were conducted to evaluate the effectiveness of PAWB in improving the pupils' phonics mastery and their motivation in conducting self-directed learning. Each pupil went through a pre-test and were briefed about the learning application before being allocated 2 hours to explore PAWB on their own. A post-test and interview were conducted at the end of the session for data collection. The feedback was jotted down in journals. The results of this investigation are presented in the next section that follows.

#### 4. RESULTS AND DISCUSSION

This section presents the results and findings of the effectiveness of PAWB in improving the pupils' phonics mastery and their motivation in conducting self-directed learning. As mentioned in the previous section, a pre-test and post-test were conducted among 10 Year 2 pupils consisting of low proficiency pupils. The results were as follows.

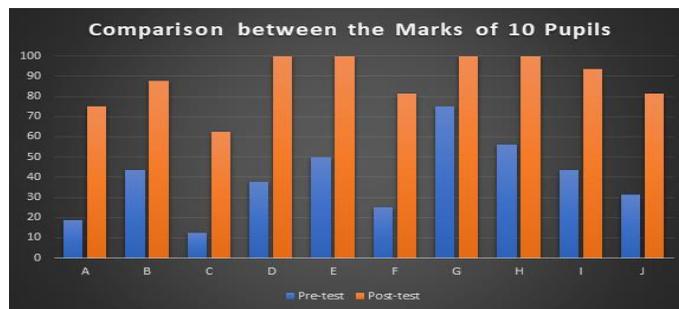


Figure 3: The comparison between the marks of 10 pupils.

Based on Figure 3, all pupils showed improvement in their pronunciation after the learning session. Only 4 pupils were able to obtain full marks (Pupil D, E, G, and H). It is also observed that the pupil who got the lowest mark for the pre-test showed an increase of 50% during the post-test. Meanwhile, the highest increase was recorded by Pupil D (62.5%) and the lowest was by Pupil G (25%). Pupil G, however, obtained the highest marks for pre-test in comparison with other pupils, hence the notably low increase in marks. The pupils' average percentage increase is 48.75%, indicating the positive improvement in pupils' phonics mastery.

The effectiveness results of PAWB through the interviews and observations are discussed in the following terms, which are response, attraction, and motivation. Most pupils showed a positive response halfway through their self-directed learning sessions. They listened to and repeated the pronunciation of each phonic item, words, and sentences, throughout all the stages. Pupil C, however, particularly showed slower and lesser response than the others while exploring the application. This is notably obvious, and the interviews afterwards revealed that she is not used to gadgets and any digital learning applications at home. Nonetheless, Pupil C expressed her interest in using PAWB again if given the chance. Furthermore, the pupils displayed interest in the application due

to its colourful interface and the animations. Pupil I highlighted the background of PAWB, mentioning how the main character and all the planets look like a cartoon series he would watch on television. The pupils are motivated to learn phonics using PAWB and most of them asked permission to explore the application again after the session ended. The pupils also showed interest in the hands-on flashcards. They expressed their excitement while scanning the QR codes to watch the demonstrative videos of the pronunciation. Therefore, these findings indicate the high potential of PAWB being used to learn phonics in a fun and meaningful way among the users who need it.

## 5. CONCLUSION

This study has shown that PAWB, alongside the complementary flashcards could be used to intervene the lack of reading skills through self-directed phonics learning. Positive outcomes of PAWB are shown in the results of the 10 pupils, as well as the interviews and observations. Given the flexibility of PAWB, it can be used offline, which complements the current issue of pandemic where certain pupils are being left out in terms of education. PAWB increases pupils' interest and motivation, and encourages self-directed learning. It is hoped that future studies could implement PAWB among other pupils with various economic, cultural, and geographical backgrounds. On the other hand, PAWB can also be improved by adding more phonics items, activities, and features to ensure that it could provide richer learning experience for the pupils.

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