The Use of Interactive Digital Phonics Show (IDPS) to Enhance Phonological Awareness among Young Learners

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Abstract—While looking forward to the Fourth Industrialised Revolution, the impulse to cater to the needs of Alpha-generation has been put forward in term of industries, economics and education. However, the holistic incorporation of technology especially in education is still lacking due to the gap in adjusting the skills, needs, acceptance and exposure to technology advantages. Therefore, this action research aimed to identify the use of IDPS as a teaching and learning tool in enhancing English phonological awareness among young learners. This study was conducted in a rural school located in Kapit, Sarawak which involved 20 Year 1 pupils and the findings were based on the obtained data from the observations conducted by the four non-participant observers during the three cycle of intervention implementation. The intervention was employed within three cycles and the researchers were focusing on three major themes which were suitability, pupils' reaction and implementation process. Based on the findings, one notable result that can be seen in Cycle 3 was the percentage numbers of excellent level seemed to be majority compared to Cycle 2 and Cycle 1. For Item 1 – 10, 97.5% of percentage numbers were on the excellent level. Meanwhile, Item 11 -20 showed 75% of percentage numbers on the excellent level. In addition, Item 21 to 30 showed that the increment of percentage numbers compared to Cycle 2. The table shows that 82.5% were on the excellent level. Thus, it could be concluded that this intervention helped the pupils to improve on their phonological awareness especially in identifying and manipulating units of oral language. Therefore, young leaners' phonological awareness could be positively assisted by using IDPS as it acted as a self-learning tool with guidance based on the underlined social constructivism theory.

Keywords— social constructivism, phonological awareness, phonics, ICT, young learners

I. INTRODUCTION

Technology has become a vital pillar to the world. It promotes dynamical key elements that urge most of the people to keep track of its speedy transference. While looking forward to the Fourth Industrialised Revolution (FIR), the impulse to cater to the needs of Alpha-generation has been put forward in term of industries, economics and education. However, the holistic incorporation of technology especially in education is still lacking due to the gap in adjusting the skills, needs, acceptance and exposure to technology advantages. This could lead in the reforms of education system of the country especially in term of curriculum change to provide quality education to the people.

In term of the education background of Malaysia, the education system is commended to provide quality education for all young Malaysians to take part and adapt to the swift changes of the general society in the 21st century especially when we are moving forward to Education 4.0, in line with the development of the FIR. Prasad, Maarof & Yamat (2016) stated that this participation requires the young learners to hold the relevant skills and knowledge to empower them to contribute as accountable netizens in a multiracial and multicultural society. Driven by this need for quality education in Malaysia, curriculum reforms are initiated every five years to ensure that the skills and knowledge adopted was one that was emergent in nature and grounded in practice.

One notable reform which has been implemented in Malaysia is that the Common European Framework of Reference (CEFR) aligned curriculum will be executed into the education system by means of Year Three pupils in 2019 was the first batch of CEFR aligned curriculum. The execution of CEFR in Malaysia started with the establishment of English Language Standards and Quality Council (ELSQC) in 2013. The Council aided English Language Teaching Center (ELTC) to help the Ministry of Education to uplift and improve English language proficiency of Malaysian students. The council handled introducing the CEFR framework onto the education system and for developing a roadmap for systematic reforms of English language education. Alignment of education system with CEFR is the important element in the Malaysia Education Blueprint with the aims to boost the level of education to international standards (Azman, 2016). The roadmap is a long-term goal and plan which started from 2013 and expected to end in 2025 with the main aim to give the best language education starting from pre-school up to tertiary education.

In accordance to the implementation of Standard-Based English Language Curriculum (SBELC) and CEFR aligned curriculum onto the education system in Malaysia, both promotes Phonics approach to improve phonological awareness among the young learners. Based on the prior accounts of the execution and teaching of Phonics in Malaysia, as well as reviews of past related studies on the second language acquisition (SLA), one major concern arises. The concern is about various issues related to the incorporation of technology in teaching and learning process. Those issues engrossed in heated debates in term of the holistic implementation in Malaysia. The concern arises starting from the inadequate facilities, Information Communication and Technology (ICT) skills, pupils' needs, general acceptance and limited exposure

to technology advantages. While looking into this aspect briefly, a study carried out by Hitchcock & Noonan (as cited in Chai, Vail & Ayres, 2015) discovered that computer-assisted instruction (CAI) is an effective and efficient method in teaching as it provides more opportunities for practices, instruction can be individualized based on the students' ability and students are often more motivated. Based on the studies conducted by several researchers such as Lonigan, Phillips, Cantor, Anthony & Goldstein; Macaruso, Hook & McCabe; Macaruso & Walker (as cited in Chai, Vail & Ayres, 2015) showed that students benefited from computer-assisted phonological awareness training either when was used as supplementary instruction or when it was used alone.

Research also suggests that CAI might be helpful to close the gap between low performers and their peers. Students who scored lowest in the experimental group made significantly more gains than those in the control group, and the gap between those low performers and their regular peers diminished in the treatment group after training (Macaruso, Hook & McCabe, 2006; Macaruso & Walker, 2008). Macaruso and Rodman (2011) extended their previous studies by recruiting younger children and more at-risk students. They employed a pretest-posttest group design to examine the effectiveness of using teacher-implemented CAI to improve phonological awareness skills for preschoolers and low-performing kindergarteners in typical school settings. Both the treatment and control groups made significant gains during the school year. It showed that the pupils who received CAI training scored significantly higher in phonological awareness skills if compared to those who received the same literacy instruction without CAI training. The results indicated that the young children who are at risk can benefit from computer-assisted reading instruction. Thus, there is a need to study on the effectiveness of incorporating technology in Malaysian education system as international researches have shown positive responses towards it.

The purpose of this study is to gain views on the use of IDPS as a teaching and learning tool to enhance English phonological awareness among young learners. Therefore, the objectives of the study are to identify the observers' views on the intervention's suitability, the pupils' reactions towards the intervention and the intervention process throughout the lesson. The conceptual framework of this study is based on the use of technology to improve phonological awareness among young learners. The main underpinning theory of this study is based on the Vygotsky's social constructivism theory which highlighted the learners as the active participants in the learning process. Amineh & Asl (2015) reiterated that learners act as the mediators who can be the mentor and teach each other. Besides, it highlighted the Zone of Proximal Development (ZPD) and More Knowledgeable Other (MKO) to support learners' teaching and learning process. Apart from that, this study also indicated the use of Information and Communication Technology (ICT) in designing the intervention tool to be used in the lesson. The researchers believed that with proper guidance and computer-aided instruction, it will boost the effectiveness and success rating on the use of IDPS to improve phonological awareness among young learners. The brief explanation on the conceptual framework is shown in Figure 1.
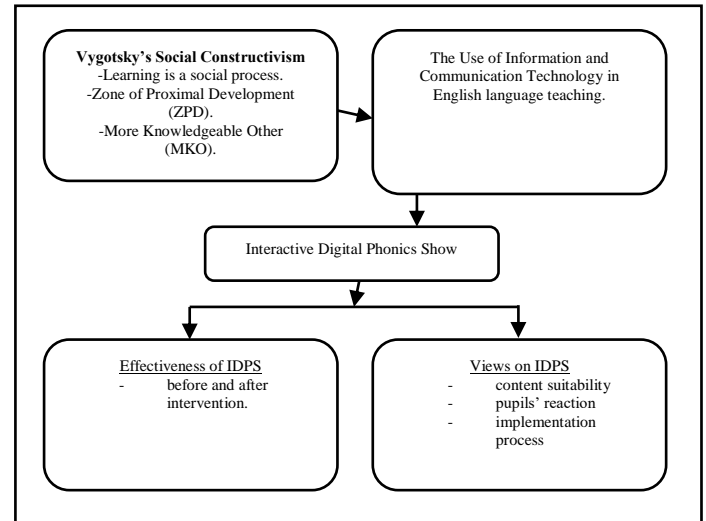

Fig. 1. Conceptual Framework of the Study.

II. LITERATURE REVIEW

Social constructivism is a theory of knowledge in sociology and communication theory that examines the knowledge and understandings of the world that are developed jointly by individuals. This theory assumes that understanding, significance and meaning are developed in coordination with other human beings. The most important elements in this theory are (a) the assumption that human beings rationalize their experience by creating a model of the social world and the way that it functions and, (b) the belief in language as the most essential system through which human beings construct reality (Leeds-Hurwitz as cited in Gerber, Abrams, Onwuegbuzie & Benge, 2014). Vygotsky (1978) stated that cognitive growth occurs first on a social level, and then it can occur within the individual. To make sense of others and construct knowledge on such a social level allow learners to relate themselves to circumstances (Roth, 1999). Roth reiterated that the roots of individuals' knowledge are found in their interactions with their surroundings and other people before their knowledge is internalized.

According to McMahon (1997), culture and context in understanding what occurs in society and knowledge construction based on this understanding are emphasized in social constructivism. Kim (2001) pointed out that social constructivism is based on specific assumptions about reality, knowledge, and learning. The Vygotskian perspective assumes that we learn in the presence of other people which are the others who have a better knowledge of certain historical and cultural practices. Vygotsky did not just claim that children learn and develop in the process of engaging in interaction with others; he made this notion of learning with others explicit, in connection with the Zone of Proximal Development (ZPD). In the recent study of Amineh & Asl (2015), Vygotsky believes that learning is a recurrent movement from the existing intellectual level to a higher level which more closely approximates the learner's potential. This movement occurs in the zone of proximal development (ZPD) because of social interaction.

Therefore, this study has highlighted that learning is a social process which occur within the communication with

more than one person. The interaction between some group of pupils will enhance their understanding on certain knowledge, plus the guidance given by the teachers will help them to discover new knowledge and information. The use of ICT in the teaching of English as second language has always been discussed among researchers. This includes the views from Yunus, Lubis & Lin (2009) as they stated that we are all living in the decade of multimedia and the millennium of the Internet and the World Wide Web. Moving towards Fourth Industrial Revolution (FIR) requires individuals to be competent not only in soft skills and technical skills, but it includes the skills in using ICT to enhance their productive skills. Simmons & Hawkins (as cited in Yunus and Suliman, 2014) viewed that ICT is seen as a skill for life, now as important as being literate and numerate. This infers that one without the ICT skill should adapt to the changes as living in the 21st century necessitates an advanced and systematic tool, which can foster a better and more beneficial learning process.

Yunus and Suliman (2014) further supported that ICT appears to be a strength which has influential impacts in business arena as well as the trade, marketing, science, entertainment and most importantly, the education sector. They reiterated that ICT is applied in supporting students to be more effective in their learning. Hence, the researcher highlighted the development of an intervention to enhance phonological awareness among young learners via a tool with integration of ICT which includes illustrations, audios, videos and activities that could supplement the learning. Considine, Horton & Moorman (as cited in Yunus, Salehi & John, 2013) reinforced the use of different media resources for different instruction which include songs, editorial cartoons, video clips and internet resources to engage students in the learning process. A study by Yunus, Nordin, Salehi, Redzuan & Embi (2013) revealed that attracting students' attention, facilitating students' learning process, helping to improve students' vocabulary knowledge and promoting meaningful learning were regarded as the most important advantages of using ICT in teaching ESL reading and writing. Along with the enlightenment, the researcher believed that the use of ICT in teaching Phonics among young learners could portray affirmative responses especially when teaching and the learning processes are being conveyed with the integration of collaboration activities and suitable guidance by teachers and peers.

Phonological awareness describes the understanding, detection, and manipulation of a language sound system on two levels: (1) On the word level, the ability refers to larger phonological units and comprises the isolation of individual words from the speech flow, blending and segmentation of chunks within words, and rhyming of words. (2) On the phoneme level, the ability refers to smaller phonological units and describes the manipulation of individual sound units (phonemes) within words. The development of phonological awareness is an implicit process until children learn the alphabet. With knowledge of letters, phonological awareness increases, because phonemes become audiovisual and explicit processes (Marx as cited in Patscheke, Degé & Schwarzer, 2016). Marx reiterated that children normally begin by segmenting spoken sentences into words. Then, they can segment words into syllables, and finally, they segment words into individual phonemes. Hence, the acquisition and advancement of phonological awareness is an important basis

for reading and writing processes, especially for preschoolers before starting school.

A review of several studies which are related to Phonics is provided here. This is to discuss the outcomes from the studies with different settings. In a local study involving a class of preschoolers on the remote island of Mantani, about 60 kilometres from the town of Kota Belud, Sabah, the preschoolers were taught using the Synthetic Phonics approach (Choon Keong, Kean Wah, Ayob, & Yong Wei, 2011). They learned to recognize the main 42 sounds of English, and how to use these sounds to read and spell, as well as developing visual, listening and memory skills, and becoming familiar with some sight words. According to Choon Keong et al. (2011), the preliminary finding revealed that the preschoolers enjoyed learning using the Synthetic Phonics approach. Their letter reading skills improved by almost five times as indicated in the post-test. The study recommended that the Ministry of Education should continue to develop and support this approach in the newly designed KSSR curriculum to expand the development of basic literacy skills among young children.

In a journal review of eight international articles related to Phonics by Jamaludin, Alias & Johari (2018), it was established that phonological knowledge (as developed in phonics instruction) is undeniably effective to develop reading skills, even for readers with limited exposure to English. Jamaludin et al. (2018) confirmed via their reviews that students who were exposed to phonics instruction were able to read fluently compared to their counterparts. Some of the studies that they have reviewed even highlighted that students acquired reading skills faster compared to the control groups. The findings of some of the selected studies have also recognized some contributing factors on reading success namely; interest, gender, age and type of phonics instruction. Thus, the studies conducted and reviewed here indicate that the Phonics-based programme, especially the ones related to Synthetic Phonics were successful in getting their young learners to read at a faster pace. Some of the studies also indicated that the Phonics programme worked well in a second language situation. So, this study attempts to identify the observers' views on the intervention's suitability, the pupils' reactions towards the intervention and the intervention process throughout the lesson.

III. METHODOLOGY

This study employed an action research design, based on the action research model by Kemmis and McTaggart (1988). The reasons behind using this action research model were not about following the model's steps stanchly, however the researcher wanted to investigate whether the research participants have a strong and dependable sense of development and evolution in their practices, their understanding of their practices and the situations in which they practice.

The participants of this study were chosen using purposive sampling method. This research involved Year 1 pupils in a rural school located in Kapit, Sarawak. Furthermore, 20 pupils of the research participants (consisted of 12 males, 8 females and they are all Iban ethnicity) were from one mixed-ability class and all of the pupils were directly involved in this study due to the fact that one of the researchers is their English subject teacher. Besides, this research also involved four non-

participant peer observers, who are English teachers from the same school. The peer observers consisted of three females and one male teacher. Among them was the Head of English panel whereby she monitored and guided the researcher along the processes of conducting this research at school. All of the peer observers are TESL trained and having experiences within the range of 1 – 5 years in teaching English in primary schools as well as knowledgeable and competent in phonological awareness skills among young learners.

The classroom observational checklist was adopted from a survey form entitled *Factors Affecting the Teaching of the Phonics Approach in the New Standard-Based English Language Primary Curriculum (SBELC)* which was developed by Rabindra Dev Prasad as part of his PhD research (Prasad, Maarof & Yamat, 2016). Then, the researcher adapted some of the items in the survey form into an observational checklist. The researcher then presented the observation checklist to two experts who were lecturers from a local university and an institute of teacher education to be validated. The content validity of the classroom observational checklist was determined with the help of two experts in the field of TESL. They have vast experiences in English language teaching and training. The observational checklist consists of three sections and each section has ten items. The items were mainly developed to see the views from peer observers based on three major themes.

a) Contents' suitability.

b) Pupils' reactions

c) Implementation process throughout the lesson

This study was conducted in three phases. All phases attempted to address the research questions posited for the study. The first phase of the study focused on the administering of the First Screening which took place before the intervention process. Meanwhile, the second phase focused on the intervention process which involved three cycles of lesson implementation. The first cycle was fixated to introduce Interactive Digital Phonics Show (IDPS) and gives deliberate practices to the pupils to intensify the familiarity towards IDPS. Besides, the researchers also implemented a trial observation with the peer observers based on the classroom observation checklist. The peer observers were briefed on the purpose of the study and the items in the observation checklist. Reflections are then made based on those mentioned above. Next, the second cycle was focusing on the use of IDPS as the teaching and learning tool by the teacher and pupils. Thus, the real deal on using the intervention tool took place in this cycle. The first real observation by the peer observers also took place during this cycle. Reflections are being made at the end of the second cycle. Finally, the third cycle took place in the third week which focused on the intervention process and classroom observation. At the end of the third cycle, all the collected data were tabulated and to be analyzed. Finally, the third phase of the study focused on the administering of the Second Screening which took place after the intervention process. The overview of data collection procedures is shown in Table 1.

TABLE I. OVERVIEW OF DATA COLLECTION PROCEDURES

Intervention Phase	Data Collection	Remarks
Phase 1: Before	*First Screening* - Scores from Reading	Conducted by the

	screening - Scores from Writing screening	researcher.
intervention (Quantitative data)		
Phase 2: During intervention (Qualitative data)	*First Cycle* - Introduction to IDPS - Trial observation - Reflection	Conducted by the researcher and the peer observer.
	Second Cycle - Implementation of IDPS - Observation 1 - Reflection	
	Third Cycle - Implementation of IDPS - Observation 2 - Reflection	
Phase 3: After intervention (Quantitative data)	*Second Screening* - Scores from Reading screening - Scores from Writing screening	Conducted by the researcher.

At the end of every cycle, the researcher and the four peer observers reflected on the processes happened during the particular cycle and discussed about the suitability of contents, pupils' behaviour towards the intervention and the implementation process throughout the lesson. Those discussions were made verbally by the researcher and observers. The researcher jotted down the notes based on the reflections being conducted especially the improvements that should be done during the next cycle.

IV. FINDINGS AND DISCUSSIONS

The structured observations were conducted in the second phase of the research. It involved three cycles of the intervention implementation. Besides, there were four non-participants peer observers who took the role in conducting three classroom observations, one of the observations was a trial observation. The results gained from the classroom observation checklist showed positives outcomes with a few issues which will be discussed according to the research objectives. The results obtained from the observations is shown in Table 2.

TABLE II. SUCCESS RATINGS OF THE OBSERVATIONS

Observed Items	Success Ratings		
	Cycle 1	Cycle 2	Cycle 3
Suitability *Item 1 - 10*	Excellent = 6 (15%) Apparent = 26 (65%) Satisfactory = 8 (20%)	Excellent = 28 (70%) Apparent = 12 (30%) Satisfactory = 0 (0%)	Excellent = 39 (97.5%) Apparent = 1 (2.5%) Satisfactory = 0 (0%)
Pupils' reaction *Item 11 - 20*	Excellent = 1 (2.5%) Apparent = 20 (50%) Satisfactory = 18 (45%) Not displayed = 1 (2.5%)	Excellent = 21 (52.5%) Apparent = 19 (47.5%) Satisfactory = 0 (0%)	Excellent = 30 (75%) Apparent = 10 (25%) Satisfactory = 0 (0%)
Implementation Process *Item 21 - 30*	Excellent = 0 (0%) Apparent = 29 (72.5%) Satisfactory = 11 (27.5%)	Excellent = 28 (70%) Apparent = 12 (30%) Satisfactory = 0 (0%)	Excellent = 33 (82.5%) Apparent = 7 (17.5%) Satisfactory = 0 (0%)

Table 2 shows the success ratings of the observations conducted by the peer observers. It shows the success ratings' comparison between Cycle 1, Cycle 2 and Cycle 3. In Cycle 1, the level of Apparent seemed to be majority if compared to the level of Excellent and Satisfactory. For Item 1 to 10 under the theme of suitability, the observers were able to see the suitability of IDPS with 65% success rating. Then, it followed by 20% and 15% of satisfactory and excellent levels respectively. For Item 11 to 20 under the theme of pupils' reaction, it showed 50% of apparent level for the items while both excellent and not displayed level showed 2.5%. Somehow or rather, the level of satisfactory showed 45% for the items under pupils' reaction's theme. In addition, Item 21 to 30 under the theme of implementation process showed 72.5% of apparent level and 27.5% of satisfactory level. As a trial observation was conducted in Cycle 1, the researcher would like the peer observers to see the suitability of IDPS to be used as the intervention and monitor the pupils' reactions as well as the implementation process. Then, the reflection based on the trial observation was instigated at the end of Cycle 1 to see improvements and changes to be made before moving on to Cycle 2. Based on the verbal reflection, the researchers noted that the pupils were not familiar with the use of IDPS which was integrated with ICT. Thus, the observers suggested that the teacher in-charged would give more deliberate practices to get the pupils to feel comfortable and interact well using the IDPS. With that, any progress to increase their phonological skills will be able to be achieved.

Meanwhile, the level of Excellent seemed to be majority in Cycle 2. For Item 1 to 10, it showed that 70% were on the excellent level, while 30% were on the apparent level. It shows that the observers have seen that IDPS surely suit the pupils in term of pupil-centred, media resources and supplementary activities. Besides, Item 11 to 20 showed that there were an increment number of percentages of excellent level. In Cycle 1, the level of excellent showed only 2.5% but the number had increased to 52.5% in Cycle 2, and another 47.5% were on the apparent level. After conducting the intervention in the second cycle, the percentage numbers showed that the pupils got really associated to the IDPS. They have got to interact well with the intervention tool after deliberate practices been done with the them. In addition, Item 21 to 30 showed the majority of percentage numbers on the excellent level which was 70% and another 30% were on the apparent level. It showed that the process went well with the pupils in term of clear instruction, pupils' level of proficiency, media resources such as illustrations, audios and videos, and the systematic arrangement of IDPS. Based on the reflection conducted at the end of Cycle 2, both the researcher and peer observers agreed that the words, visuals, songs, activities and instructions included in the IDPS were executed systematically according to the level of Year 1 pupils.

For the next cycle, which was Cycle 3, the researcher and peer observers closely monitored the progress that the pupils have made after the intervention process took place. One notable result that can be seen in Cycle 3 was the percentage numbers of excellent level seemed to be majority compared to Cycle 2 and Cycle 1. For item 1 to 10, 97.5% of percentage numbers were shown in the table and the remaining 2.5% were on the apparent level. Based on the result, it showed that the peer observers agreed with IDPS suited the pupils in term of many aspects such as media resources, pronunciation, activities, strategy and time the IDPS could provide to the pupils. However, one of the peer observers was still being skeptical on the pronunciation aspect and the researcher believed that the accent factor may influence the decision. Apart from that, 75% of percentage numbers were on the excellent level while another 25% were on the apparent level for Item 11 to 20. In relation to that, most of the 25% came from Item 11, Item 19 and Item 20. The observers seen that some of the pupils could not interact very well with IDPS, however with guidance and practices given by the teacher as the facilitator seemed to cater the complications. Besides, Item 19 and Item 20 were focusing on the blending and segmenting skills which could be rather difficult for some pupils especially when they are still young and need more opportunities to develop their knowledge in Year 1 and onwards. In addition, Item 21 to 30 showed that the increment of percentage numbers compared to Cycle 2. The table shows that 82.5% were on the excellent level while the remaining 17.5% were on the apparent level. The observers agreed on the excellence of clear instruction being portrayed in IDPS, systematic arrangement, balanced level of proficiency, brilliant use of media resources and promoting learner-centered. There were slightly different opinions given by the observers in term of the supplementary activities given to the pupils. Based on the reflection, this might be predisposed by the other factors such as how well the pupils can perceive the enrichment and remedial activities given to them. All of these will be further discussed in the next sub-section.

Contents' suitability of Interactive Digital Phonics Show

The researchers answered this question based on the results from the observation checklist under the theme of suitability of IDPS. The study showed that the observers agreed on the contents of IDPS are suitable to be used as a tool to improve the phonological awareness among young learners. Based on the findings shown in Table 2, the level of Apparent seemed to be majority in Cycle 1 if compared to the level of Excellent and Satisfactory. For Item 1 to 10, the observers were able to see the suitability of IDPS with 65% success rating. Then, it followed by 20% and 15% of satisfactory and excellent levels respectively. As a trial observation was conducted in Cycle 1, the researcher would like the peer observers to see the suitability of IDPS to be used as the intervention and monitor the pupils' reactions as well as the implementation process. Then, the reflection based on the trial observation was instigated at the end of Cycle 1. Moving on to Cycle 2, it showed that 70% were on the excellent level while 30% were on the apparent level. It shows that the observers have seen that IDPS surely suit the pupils in term of pupil-centred, media resources and supplementary activities. One notable result that can be seen in Cycle 3 was the percentage numbers of excellent level seemed to be majority compared to Cycle 2 and Cycle 1. For item 1 to 10, 97.5% of percentage numbers were shown in the table and the remaining 2.5% were on the apparent level. Based on the result, it showed that the peer observers agreed with IDPS suited the pupils in term of many aspects such as media resources, pronunciation, activities, strategy and time the IDPS could provide to the pupils. However, the peer observers were still being skeptical on the pronunciation aspect and the researcher believed that the accent factor may influence the decision. It shows that the songs, rhymes, rhythms, stories, visuals and audios featured in the tool made lesson more enjoyable and meaningful. Thus, it promotes learner-centred

learning environment which can supplement the teaching and learning processes to achieve success.

This is line with a study conducted by Yunus and Suliman (2014) which supported that ICT appears to be a strength which has influential impacts in business arena as well as the trade, marketing, science, entertainment and most importantly, the education sector. They reiterated that ICT is applied in supporting students to be more effective in their learning. Hence, the researcher highlighted the development of an intervention to enhance phonological awareness among young learners via a tool with integration of ICT which includes illustrations, audios, videos and activities that could supplement the learning. Considine, Horton and Moorman (as cited in Yunus, Salehi & John, 2013) also reinforced on the use of different media resources for different instruction which include songs, editorial cartoons, video clips and internet resources to engage students in the learning process. By including media resources which could help to attract pupils' attention, increase their motivation to learn and get them to learn more effectively, it clearly shows that IDPS could help in providing affirmative ideas to enhance phonological awareness among the young leaners.

Pupils' reactions towards the Interactive Digital Phonics Show

The findings' discussions to answer this research question is based on the theme of pupils' reactions. For Item 11 to 20 in Cycle 1, it showed 50% of apparent level for the items while both excellent and not displayed level showed 2.5%. Somehow or rather, the level of satisfactory showed 45% for the items under this theme. Based on the verbal reflection conducted at the end of Cycle 1, the researchers noted that the pupils were not familiar with the use of IDPS which was integrated with ICT. Thus, the observers suggested that the teacher in-charged would give more deliberate practices to get the pupils to feel comfortable and interact well using the IDPS. With that, any progress to increase their phonological skills will be able to achieve. Moving onto Cycle 2, Item 11 to 20 showed that there were an increment number of percentages of excellent level. In Cycle 1, the level of excellent showed only 2.5% but the number had increased to 52.5% in Cycle 2, and another 47.5% were on the apparent level. After conducting the intervention in the second cycle, the percentage numbers showed that the pupils got really associated to the IDPS. They have got to interact well with the intervention tool after deliberate practices been done with the them.

This finding is line with a study carried out by Yunus, Nordin, Salehi, Redzuan & Embi, (2013) which revealed that attracting students' attention, facilitating students' learning process, helping to improve students' vocabulary knowledge and promoting meaningful learning were regarded as the most important advantages of using ICT. Along with the enlightenment, the researcher believed that the use of ICT in teaching Phonics among young learners could portray affirmative responses especially when teaching and the learning processes are being conveyed with the integration of collaboration activities and suitable guidance by teachers and peers. Apart from that, 75% of percentage numbers were on the excellent level while another 25% were on the apparent level for Item 11 to 20. In relation to that, most of the 25% came from Item 11, Item 19 and Item 20. The observers seen that some of the pupils could not interact very well with IDPS,

however with guidance and practices given by the teacher as the facilitator seemed to cater the complications.

Besides, Item 19 and Item 20 were focusing on the blending and segmenting skills which could be rather difficult for some pupils especially when they are still young and need more opportunities to develop their knowledge in Year 1 and onwards. Based on the findings, majority of the observers agreed that the pupils were able to identify and distinguish the shape of the letters in the alphabet. In addition, they were able to recognize and articulate initial, medial and final sounds in single syllable words. Marx (as cited in Patscheke, Degé & Schwarzer, 2016) indicated that the development of phonological awareness is an implicit process until children learn the alphabet. With knowledge of letters, phonological awareness increases, because phonemes become audiovisual and explicit processes. Marx reiterated that children typically begin by segmenting spoken sentences into words. Then, they can segment words into syllables, and finally, they segment words into individual phonemes. Hence, the acquisition and advancement of phonological awareness is an important basis for reading and writing processes. Therefore, this becomes the basis for the 25% of apparent success rating to support the arguments that the IDPS was able to help pupils to blend phonemes into words and read it aloud. The pupils were also able to segment words into phonemes and spell it out.

The Implementation Processes of Interactive Digital Phonics Show Throughout the Lesson.

Under the theme of the implementation process throughout the lesson, this research question is being discussed. In Cycle 1, Item 21 to 30 under the theme of implementation process showed 72.5% of apparent level and 27.5% of satisfactory level. Meanwhile, Item 21 to 30 in Cycle 2 showed the majority of percentage numbers on the excellent level which was 70% and another 30% were on the apparent level. Item 21 to 30 in Cycle 3 showed that the increment of percentage numbers compared to Cycle 2. The table shows that 82.5% were on the excellent level while the remaining 17.5% were on the apparent level. The observers agreed on the excellence of clear instruction being portrayed in IDPS, systematic arrangement, balanced level of proficiency, brilliant use of media resources and promoting learner-centered. There were slightly different opinions given by the observers in term of the supplementary activities given to the pupils. Based on the reflection, this might be predisposed by the other factors such as how well the pupils can perceive the enrichment and remedial activities given to them.

The 82.5% of excellent success rating rated by the peer observers showed that the instructions, illustrations, audio, examples, number of words and sentence patterns featured in the IDPS suit the pupils and promotes the Phonics approach. The implementation of the IDPS went smoothly with a few divergences were made to cater to the added needs upon reflections being carried out at the end of cycle 1 and cycle 2 of the intervention processes. This is in line with the article review done by Jamaludin et al. (2018) that phonological knowledge (as developed in phonics instruction) is undeniably effective to develop reading skills, even for readers with limited exposure to English. Jamaludin et al. (2018) also confirmed via their reviews that students who were exposed to phonics instruction were able to read fluently compared to their counterparts. Thus, the studies indicate that the Phonics-based

programme, especially the ones related to Synthetic Phonics were successful in getting their young learners to read at a faster pace.

Overall, the researcher found that the use of IDPS in enhancing phonological awareness among young learners is seemed to be effective to a certain extent. All four observers were agreed on most of the items that IDPS provides suitability of content to the pupils, and pupil's responses to IDPS seemed to be positive and the implementation process went smoothly with several improvements made upon reflections conducted by the researcher and peer observers.

Research Implication

As proposed by the researchers, the implementation of the IDPS in the learning process of the young learners to improve their phonological awareness has shown positive outcomes. However, there was a limitation in the study that can be altered to show more pertinent data to the conducted study. It is regarding the approach by the teacher to overcome the disruptive behaviors among a few learners which occurred during the intervention processes. This is essential for the teacher to remedy the problems as it affects the efficacy of the intervention. Despite the problems, it is known that teaching a big number of pupils in a classroom could be challenging to handle predominantly those pupils who have limited English speaking backgrounds and came from lower socio-economic backgrounds who can afford inadequate technology exposures. Therefore, teachers in schools play dominant role as the central of all information access. It shows the significance of teachers' roles in bringing technology closer to the pupils.

As projected by the researcher, this study gives more dimensions to the English teachers to find alternatives in their teaching and learning pedagogy, specifically in the primary teaching education. Based on the positive outcomes towards the implementation of IDPS in improving young leaners' phonological awareness, it could offer teachers to come out with an effective strategy in teaching phonological awareness skills to be steered in their classroom teaching. As shown in the findings of this research, the IDPS also cater the different learning styles of the young learners. As teachers begin to understand learning styles more effectively, it is clear why multimedia is good for all learners and why a variety of media is more effective. Multimedia fundamentally speaks to the different types of learning preferences that one person has and has the potential to impart knowledge to a diverse class or group.

Throughout the implementation of the research, the researchers have directly and indirectly observed what are the other factors, elements or aspects which could be further discussed in this section. One of it is regarding the contents of the intervention tool. During the first cycle when the trial observation was conducted, there were opinions from the observers to improve on certain aspects which could help the effective execution of the intervention process. Thus, the researchers have made some changes to the intervention tool to accommodate the level of pupils' proficiency. Hence, the researchers who are concerned to extend this study should have thorough views on their research participants' needs and settings. As specified by the researchers, different individuals have dissimilar preferences.

Apart from that, the practicality aspect needs further deliberations while conducting the research. Knowing that the research participants of this study came from limited English-speaking backgrounds and low socio-economic families who cannot afford broader exposure to technologies, the practicality on using IDPS as a teaching and learning tool in the lessons may display complex hitches to them in term of the basic use of technology in learning. This situation can be shown based on the observations conducted in Cycle 1 as the peer observers found out that the pupils did show limited interaction with the IDPS at the beginning of the intervention processes. Therefore, the teacher had to guide and helped the pupils so that they could portray comfortable and practical use of the intervention tool as well as reducing the complexity in the basic use of technology. This matter leads us to the aspect of deliberate practices for the pupils as it could assist them in using the tool more competently. At the beginning of the process, the pupils seemed to experienced difficulties while using the tool. However, with more practices, guidance and helps from the teacher, eventually they became familiar with it. Therefore, the future researches should take into considerations the aspects being discussed above.

V. CONCLUSION

The findings of the study clarified that the IDPS portrayed positive outcomes in improving young learners' phonological awareness. Furthermore, most the Year 1 pupils have shown improvement in the second screening whereby there were increment in numbers of scores after the intervention processes took place. Nevertheless, there were a few of them who did not perform well, and the researchers perceived that there were other external factors manipulating the behaviours. Judging from the glitches, there were a few resolutions which have been addressed by the researchers to overcome it. In conclusion, it is hoped that this study could be one of the reagents for more studies of this area in Malaysia. It is anticipated that the studies could benefit from the processes of this study was carried out. Consequently, English teachers, officers, lecturers and other academics are urged to take this study to another stage where issues mentioned are revisited in various forms of research.

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