

The Effectiveness of Using “Punctuation Island” Game for the Improvement of Children’s Basic Punctuation Skills

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ABSTRACT

This research was implemented with the purpose of resolving the Year 5 pupils’ problem of using basic punctuation skills in writing using the “Punctuation Island” digital intervention. Additionally, the game is also executed to improve the researcher’s teaching practice on teaching basic punctuation skills in writing. The participants selected for this research consisted of three pupils whose English Language proficiency ranged from low to average. The “Punctuation Island” digital intervention was developed to gain pupils’ attention and motivation to learn particularly basic punctuation skills. In this research, observation, interviewing, and document analysis were used as the data collection instruments. The researcher analysed the data using a thematic qualitative analysis approach as well as a quantitative data analysis approach using basic statistics. The findings of this research have shown that the participants successfully improved their knowledge of using basic punctuation marks in their writing through the application of the newly achieved skills of using basic punctuation and better involvement in the teaching and learning activity. In conclusion, the researcher was also able to improve his teaching practice by teaching basic punctuation skills through fun and interactive learning and encouraging a student-centred learning environment.

Keywords: *Digital Game; Punctuation Marks; Digital Intervention; Student-Centred Learning*

1. Background

The focus of this digital intervention, called “Punctuation Island,” was to help pupils in Year 5 correctly use basic punctuation marks in their writing tasks. This study involved three participants with low English proficiency levels from the same class. The researcher was confident that this intervention would aid the participants in achieving mastery in using basic punctuation marks, aside from the researcher improving his own teaching practice in using basic punctuation marks.

The researcher was a final year student teacher at the Institute of Teacher Education (ITE) Batu Lintang Campus, situated in Kuching, Sarawak. The researcher is majoring in a Bachelor of Teaching with Honours degree in Teaching of English as a Second Language (TESL), with it also being a minor

subject (language arts). As a student teacher under the *Program Ijazah Sarjana Muda Perguruan* (PISMP) programme, one of the primary requirements involves going through two phases of practicum training in selected schools.

Generally, researchers from ITE will conduct their research during their internship at the same school they went to for their second practicum. However, due to unforeseen circumstances during the COVID-19 pandemic, the practicum unit of the ITE Batu Lintang campus decided that student teachers were to conduct their research during their internship at the school where they went for their first practicum. This is in case some researchers implemented their second practicum in their hometown, which is far from the campus' location. In the researcher's case, the researcher went to a school in a different state during his second practicum, thus having to go back to the school he went to during his first practicum.

The researcher went to a town school situated at the riverside of the Sarawak River, outside of the main city of Kuching, for his first phase of practicum. The name of the school attended by the researcher during the first practicum phase is SK ABC (pseudonyms for names are used hereinafter). SK ABC accommodates around 657 pupils and 55 educators. The pupils of this town school are of the Malay race, as this school is built in between multiple villages that are heavily populated by Malays. The English language proficiency of the pupils in this school ranges from low to high.

In SK ABC, the researcher taught English to Year 5 pupils, oftentimes replacing other teachers who were out of the school. After going through various classes, it can be concluded that the English proficiency level of the pupils in the school was varied, with most of them being at a lower level of proficiency. The researcher believes that this huge range of English language proficiency is due to the diverse backgrounds of the pupils in the classroom.

1.1 Reflection on Teaching and Learning

During the researcher's teaching practice, the pupils with average and low levels of English proficiency would demonstrate errors in using punctuation marks. These errors can be seen in the pupils' worksheets and exercises given by the researcher. Aside from that, the researcher was also informed that the pupils do know that punctuation marks exist, but they are not aware of their essentiality or their functions in writing. Punctuation marks are added in written texts to add meaning through the separation of phrases or sentences, to demonstrate a question, and to convey emotion to readers (Nurwahyuni, 2019). Good writing comes with a good balance of multiple writing components, such as punctuation (Jahin & Idress, 2012). According to the Ministry of Education Malaysia's (2011) KSSR document, pupils should be mastering the basic punctuation skills as early as in Year 2. Therefore, it is essential that pupils, especially those who are already in Year 5, have mastered the basic punctuation skills to write excellently.

Though the punctuation errors were mentioned and discussed more than once during the lessons, the researcher still discovered the same errors made by the pupils. Interview sessions with the teachers who taught English in Year 5 also claimed that pupils do know about punctuation, but it seems that it is difficult for them to use it in their writing. The reason could be that the pupils were exposed to digital typing on smartphones, where punctuation marks are often neglected. Referring to the problem statement by the researcher about the pupils committing errors in punctuating texts, the researcher felt concerned that if this issue persists, the writing quality among young learners will continue to decline. The researcher was motivated to do further research to address this issue while trying to improve his own teaching practice of basic punctuation skills.

2. Methods

2.1 Participants of the Study

According to Clark *et al.* (2020), action research is a form of educational research used by professionals and practitioners of education to evaluate and bring about improvement in their pedagogical skills as well as professional practice. Therefore, this research has involved the researcher himself as a participant, as one of the objectives of this research is to improve teaching practice. Additionally, three pupils from the Year 5 class were selected through the "purposive sampling" method. In much research, purposive sampling is often utilised due to the samples possessing characteristics that have a relevant purpose to the study (Andrade, 2021), in this case to see if pupils with punctuation skill errors can be improved by using an intervention designed by the researcher. Based on the initial data collection, the researcher found out that these three people had a writing skill level below the average, particularly in terms of using punctuation marks. Thus, these pupils are suitable to be selected as participants in this study. Table 1 below shows a summary of the pupils' brief details and characteristics (all names of participants are pseudonyms).

Table 1: Research participants and their brief details.

Participant name	Age (years)	Gender	Language used at home	English Proficiency Level	Characteristics
Alex	11	Male	Malay	Low	shy, gets distracted easily
Badrul	11	Male	Malay	Low	active, gets distracted easily
Carl	11	Male	Malay	Low	shy, passionate

All participants were 11-year-old males. At home, all participants stated that they speak their mother tongue at home with their family members. All participants had a low level of writing and were mostly passive and easily distracted during English class. Therefore, the researcher had chosen them as the research participants to help improve their basic punctuation skills through the implementation of the approach designed for this research.

2.2 Instrument

The data for this research was collected by utilising three methods: observations, interviews (online) with the researcher's supervising mentor and participants, and document analysis. The observation was aided by field notes that helped the researcher log any relevant information during the implementation of the designed intervention. The interview was done through the social media platform "WhatsApp," as physical interviews were not able to be conducted due to time constraints at the school. Document analysis involves analysing data from the pre-test and post-test worksheets in the action part of this study. All three methods of collecting data helped the researcher answer the research questions.

2.3 Data Analysis

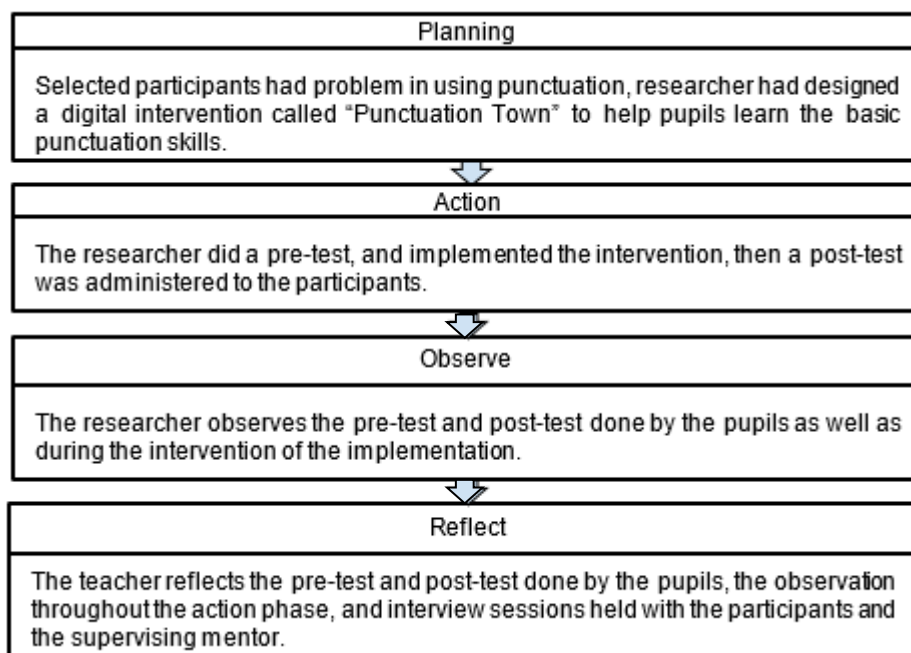
In this research, the researcher analysed the collected data using a mixed method, which involves the integration of qualitative and quantitative data analysis. According to Taguchi (2018), a mixed method

of data analysis where qualitative and quantitative data analysis is combined allows the researcher to obtain information regarding changes in patterns as well as address the factors causing the pattern change. This means that by utilising the qualitative data analysis to support the quantitative data analysis, the researcher can obtain information that justifies the answers for this research. Thus, data from field notes and interview transcriptions were analysed qualitatively using the thematic analysis approach, while data from the pre-test and the post-test in both cycles were analysed quantitatively.

For this research, one of the data collection methods used is observation. Walshe, Ewing & Griffiths (2012) stated that observations were used in the research to study the participants' behaviour and their actions. The researcher used observation to study the participants' characteristics, such as their knowledge and attitude, and their interactions, especially during the implementation. Observations were also used with the participants to see their non-verbal behaviour when they interact with the intervention. Figure 22 shows a form that was used as a field note to log any information obtained relevant to the research by the researcher during the implementation of the intervention.

This action research was implemented using a systematic approach based on Kemmis, McTaggart & Nixon (2014) action research model. This model consists of four stages that could be repeated in cycles. The stages include planning, acting, observing, and reflecting. This model allows the researcher to improve one's teaching practice while addressing problems faced by pupils in terms of learning. Using the four stages of the Kemmis, McTaggart & Nixon (2014) model, the actions taken during the research could be summarised using Figure 1 below.

Figure 1: Actions carried out during the action research according to the Kemmis, McTaggart & Nixon (2014) model.



3. Results

Through this action research, particularly the implementation of the intervention, the participants' basic punctuation skills have successfully improved after going through two cycles of the intervention. This improvement can be seen in Table 1 and Figure 1 which show the marks achieved by the participants.

Table 2: Scores achieved by participants in both cycles.

Participant name	Age (years)	Gender	Language used at home	English Proficiency Level	Characteristics
Alex	11	Male	Malay	Low	shy, gets distracted easily
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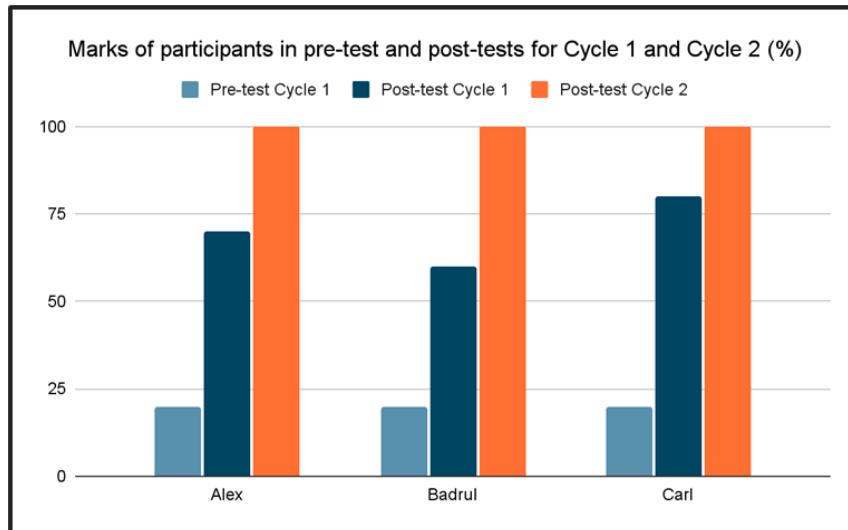


Figure 1: Scores of participants in both cycles.

This action research has helped the pupils improve their basic punctuation skills through the "Punctuation Town" digital intervention. The digital intervention has encouraged the pupils to apply their basic punctuation skills. This can be seen through the upward trending of the bar graph of the pupils' pre-test and post-test results in both cycles during the action stage. The pupils went from not knowing and not using the basic punctuation marks in their writing to fully using them in their sentences.

The intervention has also encouraged the pupils to be more involved in the teaching and learning sessions. This can be seen through the field notes taken by the researcher during the observation. During the observation, the participants were excited when they discovered that they would be learning through playing a game. The participants were also asking questions to the researcher, which demonstrates their inquisitive traits. Involvement could also be seen when the pupils asked if they could play another round during the intervention.

Apart from improving the participants' basic punctuation skills, the researcher also managed to improve his teaching practice, specifically on basic punctuation skills. The researcher managed to make his teaching and learning sessions more interactive and fun. The use of games to teach basic punctuation skills has proven to be interactive and fun during an interview session conducted with the participants of the research.

The researcher also promoted a student-centred learning environment for the participants through this action research. This is because the intervention requires the pupils' full engagement for the learning to happen. This helps the pupils be independent in their learning while only needing simple guidance from the researcher in using the intervention. In other words, the researcher managed to promote one of the 21st-century learning styles where pupils are more independent in their learning.

4. Discussion

4.1 Qualitative Data Analysis

Qualitative data analysis is a source of description to explain how and why things happened, which helps most researchers explore new understandings through the information gathered from words or what has been witnessed by the researcher (Miles, Huberman & Saldaña 2018). This research uses thematic data analysis to analyse the data qualitatively. According to Castleberry & Nolen (2018), thematic data analysis involves the identification, analysis and report of patterns that will eventually reduce and join data to produce a theme among the analysed data to be used, especially in answering research questions.

Using the field notes and interview transcriptions, the researcher did an analysis to figure out the theme that could be concluded from the vast amount of data obtained. The process of reducing and conjoining collected qualitative data is done by first identifying the essential keywords (also known as codes) that are relevant to the research. The researcher then categorises the keywords from the field notes and interview transcripts and then identifies the theme of the data collected by comparing the categories of the keywords. Figures 2 and 3 below show a sample of how the researcher analyses data using the thematic data analysis method.

FIELD NOTE

Remarks: Fest Cycle Of Action

Date	22/04/2022
Time	08:40 a.m. - 09:00 a.m.
Activity	Implementation of "Panchajanya Marka" digital intervention

Criteria Observed

- Participants' behaviour and knowledge in using basic punctuation marks
- Participants' reaction and participation
- Non-verbal cues (body movements, facial expressions)

*use pseudonym for names

- participants look excited when the researcher introduced the intervention
- participants are more active ← continuously asking questions about ← particulars in the intervention
- one of them said "interesting" as they go round while the intervention (game)
- During the implementation:
 - *Alok - they gets easily distracted
 - *Bashu - gets easily distracted, active, asking questions
 - *Carl - participate when using the intervention but shy
- Bashu complained about not being able to differentiate between cranes and fall (spotted) spikes. Alok complained the dialogues were too long.
 - *"Sir I don't know how to change the colour of the birds!"
 - *"Banyanya chika Gabya, Mr. 214."
- Bashu screamed "Yes!" when he managed to answer the questions from the intervention correctly. correctly saying.
- Carl said → "Sir can you give them both main per tree?"

Pupils felt interested

Pupils' involvement

Positive feedback from pupils

Figure 2: Identifying and categorising keywords from field notes.

INTERVIEW TRANSCRIPT WITH RESEARCH PARTICIPANTS	
Researcher	Hello, class. I created this group to interview about the Punctuation Island game we played earlier in the class
Participant A	Hello.
Participant C	Hello, Mr. Zili.
Participant B	Hai, Mr. Zili.
Researcher	Right, hope you all are having a good day. I want to ask you all a few questions and I will only go to the next question when everybody answers it, okay?
Participant C	Ok, Mr. Zili.
Researcher	My first question is: Do you like to learn about punctuation?
Participant A	Yes, Mr. Zili. I like learning punctuation but nya susah sikit cikgu.
Participant B	Yes, sir.
Participant C	I like learning punctuation!
Researcher	Ok, good. Do you think punctuation is important?
Participant C	Yes, punctuation is very important, Mr. Zili.
Participant B	Punctuation penting, Mr. Zili.
Participant A	Yes, sir.
Researcher	Why is punctuation important, class?
Participant B	Because it helps me to tell if the sentence is ended or if I ask questions, Mr. Zili.
Participant A	Because when I read, I know the sentence dah habis mun ada full stop... also like Azizan say... mun ada question mark, maksudnya ayat lek question sentence...
Participant C	Punctuation helps me to tell if the person is shouting, sir... they use exclamation mark >!
Participant B	Like... "Yay!".
Researcher	Good one, class. Ok, next question. Can you use all the four punctuation marks that you learned from Punctuation Island?
Participant A	Yes sir! I use the question mark = ? to ask questions and full stop to end sentences.
Participant B	Yes, Mr. Zili... comma, full stop, exclamation mark, and question mark I use.
Participant B	Sir, nanga kmi pake comma I separate items in sentence like you teach us.
Participant C	Mr. Zili... I know how to use full stop... comma... question mark... and exclamation mark to write sentence. Thanks to game punctuation island.
Participant A	Yes, we learn it from the punctuation island name.

Pupils' awareness of the importance of punctuation

Pupils' application of punctuation skills

Figure 3: Identifying and categorising keywords from interview transcripts.

After identifying and categorising words from the collected data, especially interviews and field notes, the categories are reduced to come up with a theme using the thematic qualitative analysis approach to answer the research questions posed. Figure 28 shows the thematic qualitative analysis done by the researcher with the data gathered in this action research.

In a mixed method approach, Taguchi (2018) argued that integrating qualitative and quantitative data analysis enables researchers to learn about changes in patterns and investigate the underlying variables behind these changes. The study, according to Walshe, Ewing, and Griffiths (2012), used observations to look at the participants' behaviour and actions. The researcher investigated the participants' knowledge, attitudes, and interactions through observation, especially during the implementation phase. The action research model created by Kemmis, McTaggart, and Nixon (2014), which consists of four steps that can be repeated in cycles, served as the foundation for this study's methodical methodology.

CODES/KEYWORDS	CATEGORY	THEME
able to detect errors able to explain errors able to correct errors	Application of basic punctuation skill knowledge	Pupils apply the knowledge of basic punctuation skills.
punctuate sentences correctly detect errors aware of the rules	Remember and understand rules of punctuation	
"interesting" look excited excitement	Pupils are interested	
excited active constantly asking questions actively asking questions	Pupils want to involve	Pupils are more encouraged to be involved.
"Yay!" "Yes!" "Sir, when are we playing again?" Smiling and giggling	Pupils gave positive feedback	
"can move around"	Interactive learning	Fun and interactive learning.
"learn while playing games" "learning is more fun this way"	Fun learning	
independently student-centred learning	Pupils learning independently	Promote a student-centred learning environment.
able to learn on their own researcher only facilitates	Pupils have confidence	

Figure 4: Thematic qualitative analysis done by the researcher for this action research.

Research done by Dehghanzadeh *et al.* (2021) showed positive results when games were used in education, especially to teach language skills. Through the action stage of this research, the researcher noticed a few problems that could make the intervention better. The first problem encountered by the researcher in the first cycle was, the participants got confused while using the intervention because they could not see the differences between symbols because the print was too small. Secondly, the participants got off-track during the gameplay because they were not provided with a proper map; therefore, they did not know which direction to go. Another limitation of this research is the intervention, which relies solely on pupils' sight to learn things. The intervention involved was only through reading skills to deliver the lesson input to the pupils. Whereas the intervention could be way better if audio, such as voiceovers, were provided to complement the reading that the participants were doing by themselves. This would help the pupils understand the tone of the characters in the game better.

Another limitation of this research was the lack of resources, such as the availability of multiple devices. The researcher had only one device to use during the intervention. Thus, the participants had to take turns using the intervention. The intervention could be conducted simultaneously with all the participants if the researcher had more devices.

5. Conclusion

In conclusion, the "Punctuation Town" digital intervention has helped the pupils improve their basic punctuation skills through their ability to apply their knowledge of basic punctuation skills and their full involvement in the learning session. Additionally, the researcher also had a chance to improve his teaching practice to teach basic punctuation marks by making his lessons more fun and interactive as well as promoting student-centred learning. The use of games to educate contributed a lot to this research, which helped in answering the research questions and thus proving that gamification is relevant in the 21st century.

6. Declarations

Ethics approval and consent to participate: In the data collection process, electronically informed consent was obtained from the participants.

Conflict of interests: Not applicable

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