

ASSESSMENT OF THE EFFECT OF STORY TELLING AND PLAY METHODS ON SOCIAL AND COGNITIVE DEVELOPMENT IN SOME NURSERY SCHOOL PUPILS IN POTISKUM METROPOLIS YOBE STATE, NIGERIA

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ABSTRACT

The study aimed to explore the effect of storytelling and play methods on social and cognitive development in some nursery school pupils in Potiskum Metropolis of Yobe state, Nigeria. During the academic year 2021/2022, this was carried. Individual interviews, group discussions, and other research methods were used to gather data. The study sample randomly selected nursery school pupils. The findings in this study showed that storytelling teaching method have effect on oral communication, on writing skill, reading skill and phonological skill development of nursery school pupils. Also, play teaching method have effect on oral communication skill, writing skill, reading skill and phonological skill development of nursery school pupils. It was concluded that through storytelling and playing nursery school pupils perform better and develop confidence in oral communication, reading skill, writing ability and phonological skill of language development and the Federal Government and early childhood teachers should tell pupils daily stories for approximately 10 minutes' minimum to improve pupils' comprehension by using different methods such as puppets, storybooks, and story cards. State Government through the curriculum planners should incorporate storytelling and playing as a teaching strategy in the curriculum of nursery school pupils in Nigeria.

Keywords: cognitive, storytelling, play, teaching method, nursery school pupils, social

INTRODUCTION

Almufdi (2020) described storytelling as the interactive art of using words and actions to reveal the elements and images of a story while encouraging the listener's imagination. Storytelling is one of the practical approaches that help learners of different ages understand text concepts (Isbell *et al.*, 2004; Yaghmour and Obaidat, 2016). Storytelling involves a two-way interaction between a storyteller and one or more listeners. The responses of the listeners influence the telling of the story. In fact, storytelling emerges from the interaction and cooperative, coordinated efforts of teller and audience. In pupils, storytelling provides many psychological and educational benefits, such as enhanced imagination to help visualize spoken words, improved vocabulary, and more refined communication skills. In a study done by Fukushima Medical University, it was observed that there was a significant decrease of the blood flow in the bilateral prefrontal areas during picture-book reading when the subjects were familiarized in comparison to the cases of the subject naïve to the stories with the help of near-infrared spectroscopy (NIRS). However, no significant differences in the blood flow were found during storytelling between the subjects naïve and familiarized to the stories. The results indicated more sustained brain activation to storytelling in comparison with picture-book reading, suggesting possible advantages of storytelling as a psychological and educational medium in pupils.

According to Al-nassar, and Majidal (2010) cognitive development refers to how a person perceives, thinks, and gains an understanding of his or her world through the interaction of genetic and learned factors. Storytelling also helps in optimal Cognitive Development. Cognitive development includes information processing, intelligence, reasoning, language development, and memory which can be enhanced through storytelling. Reading and listening to stories from

different angles helps the child to develop a better understanding of their environment and the people around them.

Isbell *et al.* (2004) stated that storytelling is not only a means of entertainment but also a means of passing on family traditions and cultural history through generations. It can also help your child to explore their interest area. Not only this, there is another takeaway of storytelling! Your child might get into the habit of reading books. Sharing stories, talking and singing every day helps your child's development in many ways. Yaghmour and Obaidat (2016) found that telling stories to young children improves children's perception of reading. The researchers noticed that despite the age long storytelling and plays in nursery schools, information about their effects in cognitive and social development has not been well documented.

Objective of the research

The objective of the study was to assess the effect of storytelling and play methods on social and cognitive development in nursery school pupils in Potiskum Metropolis of Yobe State Nigeria. Specific objectives of the study were to:

1. Determining the effect of storytelling teaching method on oral communication development of nursery school pupils
2. Determining the effect of storytelling teaching method on writing skill development of nursery school pupils
3. Determining the effect of storytelling teaching methods on reading skill development of nursery school pupils
4. Determining the effect of storytelling teaching method on phonological skill development of nursery school pupils
5. Determining the effect of play teaching method on oral communication skill development of nursery school pupils
6. Determining the effect of play teaching method on writing skill development of nursery school pupils
7. Determining the effect of play teaching method on reading skill development of nursery school pupils
8. Determining the effect of play teaching method on phonological skill development of nursery school pupils

Research questions

1. Does storytelling teaching method have effect on oral communication development of nursery school pupils?
2. Does storytelling teaching method have effect on writing skill development of nursery school pupils?
3. What is the effect of storytelling teaching methods on reading skill development of nursery school pupils?
4. What is the effect of storytelling teaching method on phonological skill development of nursery school pupils?
5. What is the effect of play teaching method on oral communication skill development of nursery school pupils?
6. What is the effect of play teaching method on writing skill development of nursery school pupils?
7. How does play teaching method have effect on reading skill development of nursery school pupils?
8. How does play teaching method have effect on phonological skill development of nursery school pupils?

Importance of the study

The study focused on assessing the comprehensive effects of storytelling and play methods on cognitive development of nursery school pupils in Potiskum Metropolis of Yobe State Nigeria. young pupils' reading comprehension skills and to serve as tools for teachers, parents, researchers, curriculum developers, policy makers and the government.

METHODOLOGY

Research design

The researcher used quasi experimental design in this study. Quasi- experimental design is a type of research design that gives researchers opportunities to obtain data when the sample or participants are subject to treatment. In this design, pre-test and post-test approach are employed to compare the differential effects of storytelling and play teaching methods in the pupils' academic performance. The choice of the design was based on the suggestion of Urdan (2005) who stated that quasi-experimental design should be adopted when a study involves finding out about the effect of a treatment(s) on a group(s) of people

Population for the study

The population for the study was 430 pupils consisted of nursery three pupils in the nine nursery schools in Potiskum metropolis that registered with Primary Education Board Potiskum Local Government, Yobe State in 2021/2022 academic year. The distribution of the population is shown in Table 1.

Table 1: Population for the Study

S/no	Schools	Number of pupils
1.	Amma International School Tudun-Wada layout	60
2.	Federal College of Education (Tech) (FECT) Pre-Primary School	77
3.	ST. Peter Academic and College, Mohammed Idriss Way	74
4.	Ecwa Academic Nursery School, Ecwa Church No 1	64
5.	Our Lady of Fatima Nursery School, PHCN Power Station	63
6.	King Abdoul-Aziz African Institute, Behind General Hospital	72
7.	Igra Academic of Science and Technology, No 4, Garbai street	70
8.	Ansar-un-Deen Modern School, Jujin OC street, Dogon Tebo	73
9.	International Nursery Primary School Abubakar Waziri way	47
Total		600

Source: Primary Education Board Potiskum Local Government, Yobe State (2021/2022).

Sample and Sampling Procedure

The sample for the study was 80 nursery three school pupils in Potiskum metropolis, Yobe State. This sample was selected from two intact classes from Federal College of Education (Tech) (FECT) Pre-Primary School and ST. Peter Academic and College, Mohammed Idriss Way. The reason for selecting 60 participants was based on the suggestions of Shadish *et al.* (2002) who stated that the smaller the number of participants in quasi-experimental research, the more effective and representative the result. They further opined that using smaller number will give the researcher opportunity to manage, control and manipulate the variables during the treatment. The purposive sampling procedure was adopted in the selection of schools used for the study. The reason for the purposive sampling was based on the number of schools that have high population in the study area. Staff School of Federal college of Education (Tech) Pre- Primary School and ST. Peters Academy and College were selected. In order to avoid bias and give equal chance to every child to participate in the study, the researcher used the result of pre achievement test to select the pupils that participated in the study. In order to have participants of the same or nearly the same Intellectual Quotient (IQ), pupils with marks ranged from 55 to 65 were selected and used for the study. The breakdown of the sample is presented in Table 2.

Table 2: Sample for the Study

S/no	Schools	Number of pupils
1.	Federal College of Education (Tech) (FECT) Pre-Primary School	40
2.	ST. Peter Academic and College, Mohammed Idriss Way	40
Total		80

Source: *Field Work (2022)*

RESULTS

Analysis of Demographic Variable

Analysis of pupils' bio data based on the teaching method is presented in Table 3. From Table 3, the storytelling and the play teaching methods were represented by 30 pupils representing 50% respectively. By implication, the two groups of the pupils used for the study were equal.

Table 3: Distribution of the pupils based on their groups

Group	Number	Percentage
Storytelling (FCET) pre-primary school	40	50
Play (ST. Peter Academic College)	40	50
Total	80	100

Table 4 shows the effect of storytelling and play teaching methods on oral communication (language development) of nursery school pupils. The result reveals the mean of 61 graded "B" for language development of nursery school pupils taught using storytelling. Those in play had mean score of 56 (C) with standard deviation of 3.63 and 3.55 respectively. From the analysis, storytelling teaching had high effect on oral language skill development while play method had moderate effect on nursery school pupils.

Table 4: Effect of storytelling teaching methods on oral communication development of nursery school pupils in Potiskum Metropolis, Yobe state

Group	N	\bar{X}	Std. Dev	Grade	Effect
Storytelling	40	61	3.63	B	High
Play	40	56	3.55	C	Moderate

Table 5 indicates the analysis of data used to determine research question two. The result reveals the mean score of 57 (C) with standard deviation of 3.63 for writing language skill development of pupils taught using storytelling. Pupils taught using play had mean score of 46 (D) with standard deviation of 3.48. From the analysis, storytelling teaching had moderate effect on writing language skill development while play method had weak effect on nursery school pupils.

Table 5: Effect of storytelling teaching method on writing skill development of nursery school pupils

Group	N	\bar{X}	Std. Dev	Grade	Effect
Storytelling	40	57	3.63	C	Moderate
Play	40	46	3.48	D	Weak

Table 6 indicates the result of research question three with the mean score of 63 (high effect) with standard deviation of 3.81 for nursery school pupils taught using storytelling. Pupils taught

using play had mean score of 52 (moderate effect) with standard deviation of 3.48. From the analysis, the reading skill language development of pupils in storytelling was higher than those in play (63>52) with B and C grades respectively. This implied that using storytelling to teach reading skill in language development is more effective than play.

Table 6: Effect of storytelling teaching method on reading skill development of nursery school pupils

Group	N	\bar{X}	Std. Dev	Grade	Effect
Storytelling	40	63	3.81	B	High
Play	40	52	3.48	C	Moderate

Table 7 reveals the result of data used to answer research question four with the mean score of 61 (high effect) for phonological language development skill of pupils in storytelling against the mean score of 51 (moderate effect) for those in play. The standard deviations were 3.48 and 3.24 with B and C grades respectively. From the analysis the mean score of pupils in storytelling was greater than those in play (61>51). This established that storytelling method of teaching nursery school pupil's phonological skill is highly effective than play method.

Table 7: Effect of storytelling teaching method on phonological skill development of nursery school pupils

Group	N	\bar{X}	Std. Dev	Grade	Effect
Storytelling	40	61	3.48	B	High
Play	40	51	3.24	C	Moderate

Table 8 which test null hypothesis one reveals the mean score of 61 for oral skill language development of pupils in storytelling and 56 for those in play. The standard deviations stood at 3.63 and 3.55 respectively. The calculated value was greater than the critical value (1.99>1.96) and p-value was .001. The analysis therefore revealed that there is significant difference in the performance of the two groups of pupils based on the teaching techniques. Hence, the null hypothesis was rejected. Therefore, this implied that storytelling is significantly effective in teaching nursery school pupils' oral communication skill than play method.

Table 8: Effect of play teaching method on oral communication skill development of nursery school pupils

Group	N	\bar{X}	St. D	Df.	t-cal	t-crit.	P
Storytelling	40	61	3.63				
Play	40	56	3.55	110	1.99	1.96	.001

Table 9 reveals the t-test analysis used to determine null hypothesis two with the mean score of 57 with standard deviation of 3.68 for writing skill language development of pupils in storytelling. Those in play had mean score of 46 with standard deviation of 3.01. The calculated value of 2.10 was found to be greater than the critical value of 1.96. The p-value of .000 obtained signified that there was significant different in the mean performance of the two groups of pupils. The null hypothesis was therefore rejected. Therefore, this implied that storytelling has significant effect in teaching nursery school pupils writing skill than play method.

Table 9: Effect of play teaching methods on writing skill development of nursery school pupils

Group	N	\bar{X}	St. D	Df.	t-cal	t-crit.	P
Storytelling	40	57	3.68				
Play	40	46	3.01	110	2.10	1.96	.000

Table 10 indicates the analysis which revealed the mean score of 63 and 51 for reading skill language development of pupils in storytelling and for those in play with standard deviation of 3.81 and 3.48 respectively. From the Table, the t-cal was greater than t-crit. ($2.12 > 1.96$). The probability value of .001 obtained indicated that significant difference exists between in the reading skill language development of the two groups of pupils based on the method of teaching adopted. Hence, the null hypothesis was rejected. Therefore, this means that storytelling is significantly effective in teaching nursery school pupils reading skill than play method.

Table 10: Effect of play teaching methods on reading skill development of nursery school pupils

Group	N	\bar{X}	St. D	Df.	t-cal	t-crit.	P
Storytelling	30	63	3.81				
Play	30	51	3.48	110	2.12	1.96	.001

Table 11 shows the analysis with revealed the mean score of 61 for pupils taught using storytelling and 51 for those taught using play method. The standard deviations were 3.48 and 3.24 respectively. The t-cal-value obtained was greater than the t-crit-value ($1.99 > 1.96$). The probability value of 0.00 obtained shows that significant difference exists in the mean performance of the two groups of pupils based on the teaching technique adopted. The null hypothesis is rejected. Therefore, this implied that storytelling has significant effect in teaching nursery school pupils' phonological skill than play method.

Table 11: Effect of play teaching methods on phonological skill development of nursery school pupils

Group	N	\bar{X}	St. D	Df.	t-cal	t-crit.	P
Storytelling	30	61	3.48				
Play	30	51	3.24	110	1.99	1.96	.000

DISCUSSION

The finding of the study revealed the result of research question one which was supported by the performance of nursery school pupils taught using storytelling was better than those taught using play technique. The finding was found to be similar with that of Roslina (2017) who earlier revealed that students overall communicative competence improved better, particularly in the subcategories of grammar and vocabulary after English storytelling classes. Roslina (2017) added that primary school pupils' vocabulary, grammar and expressions were found to be better as a result of storytelling class. Similarly, the study of Roslina (2017) indicated that storytelling integrates and improves the language skills of pupils on a natural way. The author added that through reading text, listen to other people's lines, and play their roles, the integration of reading, listening, and speaking occurs, making language learning natural and more effective. The study of Powell and Murray (2012) also showed that learning through storytelling improves the language acquisition and expression of learners faster. Likewise, the study of Early Childhood Learning

Knowledge Centre (Powell and Murray, 2012) revealed that young pupils learn chiefly by exploring their world using their imagination and engaging in pretend play. The author added that, the link between imaginative, or pretend play, and language is particularly strong.

Research conducted by of Roslina (2017) also indicated that through storytelling, pupils learn to use language to explain what they are doing better. The authors maintained that participating in storytelling helps to develop the vocabularies of pupils as they begin to use new words appropriately, and the importance of reading and writing skills in everyday life becomes apparent by their use of literacy materials that fill the area. According to Yaghmour and Obaidat (2016) storytelling teaches pupils on choice of words wisely so that others will understand exactly what it is they are trying to communicate better than any other method. Yaghmour and Obaidat (2016) reported that as pupils become more familiar with their lines in a play, they become more confident in their use of language. So also, Isbell *et al.* (2004) reported that through storytelling, learners were found to be better in oral communication. The study of Al-nassar *et al.* (2010) further affirmed that when pupils are engaged in storytelling, they learn language in a natural and more efficient way by using body language and facial expressions, making pauses and interruptions, and showing emotions in their interpretations of the play. The recent study of Yaghmour and Obaidat (2016) revealed that there was a statistically significant improvement in the participants' knowledge of the target expressions in a storytelling class compare to those in conventional teaching method

Result of research question two shows that nursery school pupils in storytelling performed better on written language skill development than those in play technique. To support this finding, Isbell *et al.* (2004) maintained that, primary school pupils are more active and open to participating in storytelling because they are not afraid to make mistakes; hence pupils tend to get high scores on written communication. Isbell *et al.* (2004) and Yaghmour and Obaidat (2016) posited that through storytelling, pupils learn to use language to explain what they are doing. The authors maintained that participating in storytelling helps to develop the vocabularies of pupils as they begin to use new words appropriately, and the importance of reading and written skills in everyday life becomes apparent by their use of literacy materials that fill the area. Similarly, the study of Al-nassar *et al.* (2010) showed that storytelling increases motivation to learn language which often leads to greater success in communication and proficiency in written communication among pupils. In the same lane, the study of Isbell *et al.* (2004) and Yaghmour and Obaidat (2016) also indicated that idea of using storytelling as a way to improve learners' writing skills. The study of Yaghmour and Obaidat (2016) also showed that deep experiences through storytelling help develop questioning, responds, and general skills of pupils.

The result of research question three revealed that reading skill language development of nursery school pupils in storytelling was better than those in play technique. The outcome of the study is similar with that of Al-nassar *et al.* (2010) who reported that storytelling gives pupils opportunities for developing their communicative and writing skills in authentic and dynamic situations. The study of Isbell *et al.* (2004) further confined that storytelling provides pupils with practical experience in communicating, both written and oral enrich the oral and written communication of the pupils. Equally, the study of Al-nassar *et al.* (2010) (2008) also lamented that participating in storytelling helps to develop the vocabularies of pupils as they begin to use new words appropriately, and the importance of reading and writing skills in everyday life becomes apparent by their use of literacy materials that fill the area. A research work by Isbell *et al.* (2004) further affirmed that the timing and structure inherent in storytelling and dance may help pupils syntactic understanding; rhythm is a predictor of future reading abilities. So also, the recently Al-nassar *et al.* (2010) reported that, through storytelling pupils share the opportunity to expand their problem solving skills both verbally and non-verbally, making room for a sense of creativity. As well, pupils practice and build upon various communication skills through the use of body language, written facial expressions and different voices. Buttressing the result, Yaghmour and Obaidat (2016) reported that the reading skills of learners improve as a result of the storytelling experience. The

author added that, the repetition of the lines while students were actively engaged in storytelling practice seems to help them learn and possibly improves their reading skills that appeared in the storytelling. Similarly, Almufdi (2020) remarked that storytelling enhances the comprehension, reading and verbal interaction of pupils in school.

The analysis of data indicated that phonological skill language development of nursery school in storytelling was better than those in play. The finding is similar with that of Almufdi (2020) who reported that creative storytelling has influence on pupils' language development. The author emphasized that, by using their bodies and voices to storytelling the characters' words and actions, pupils' language development develops generally. The study of Almufdi (2020) further confirmed that storytelling play promotes the use of reading, speaking, phonological skill and listening skills among pupils. The authors added that when pupils take part in this type of play, they practice words they have heard others say, and realize that they must listen to what other "players" say in order to be able to respond in an appropriate fashion. Al-nassar *et al.* (2010) argued that pupils learn how to express themselves faster through storytelling. The authors added that experiences through storytelling help develop the questioning, responds, and general skills of pupils. Similarly, Almufdi (2020) maintained that students in storytelling have advantage over those in conventional teaching technique because they learn their lines better through storytelling. Al-nassar *et al.* (2010) posit that storytelling elements and points of knowledge – how to use storytelling and foreign language teaching via impromptu performances and storytelling games to encourage students to engage in logical thinking, make speculations on the characters' mental states, develop the ability to expressive themselves in a second language and strengthen writing skills in a fun and interesting learning environment. The general outcome of the study could be attributed to the ability of pupils to acquire practical knowledge and better performance through reading, memorization and rehearsal.

CONCLUSION

Based on the findings of this study, it is concluded that through storytelling and playing nursery school pupils perform better and develop confidence in oral communication, reading skill, writing ability and phonological skill of language development.

RECOMMENDATIONS

Based on the findings of the study, the following recommendations were made

1. Engage parents to support pupils' comprehension. Teachers should send a weekly story to parents.to read to their pupils at home
2. Engage parents to support pupils' comprehension. Teachers should send a weekly story to parents.to read to their pupils at home
3. The researcher suggested follow-up studies to determine storytelling's effectiveness in improving. primary students' reading comprehension skills.

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