

## IMPACT OF PLAY-BASED LEARNING ON COGNITIVE AND SOCIAL DEVELOPMENT IN EARLY CHILDHOOD EDUCATION CENTERS IN ANAMBRA STATE

Anazodo Ogochukwu Gloria

Early childhood Education

Federal college of Education Technical Umunze

[ogoo2019@gmail.com](mailto:ogoo2019@gmail.com)

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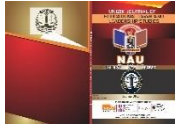
### ABSTRACT

*Play-based learning is turning out to be an effective pedagogical practice in early childhood education (ECE) to develop both cognitive and social aspects of learning. The paper examines the teacher-predicted educational effects of a play-based pedagogical curriculum on preschoolers (4-5 years) in Anambra State, Nigeria, where the ECE has challenges such as culturally irrelevant curriculum and lacks pedagogical reforms. The quasi-experimental character of the study suggested that 120 children in four selected ECE centers within two local government areas (LGAs) were divided into an intervention and a control group, to receive a 12-week play-based curriculum and the standard one, respectively. Cognitive (language, memory, problem-solving) and social aspects (cooperation, empathy, and peer interaction) were assessed with pre-and post-intervention evaluations. The findings indicated substantial differences in the language ability ( $p < 0.01$ ), memory retention ( $p < 0.05$ ), and social cooperation ( $p < 0.01$ ) in the intervention group and the control group. Teachers have reported an increased pedagogical confidence, and parents have reported greater engagement of the children. These results imply that play-based learning can fill in the blanks of the ECE system in Nigeria in favor of child-centered and culturally relevant education. It offers such activities as the integration of play-based policies into the national ECE curricula.*

**Keywords:** Play-based Learning, Early Childhood Education, Cognitive Development, Social Development

### Introduction

Children learn best through play in the early years of their lives, and this would qualify as one of the best practices in pedagogy in early childhood education (ECE). The article discusses the preschoolers (4-5 years) educational results of play-based pedagogical curriculum, as predicted by the teacher, in Anambra State, Nigeria, where the ECE is faced with issues including culturally irrelevant curriculum and deficiency of pedagogical reforms. The quasi-experimental nature of the study implied that 120 children in four selected ECE centers in two local government areas (LGAs) would be assigned an intervention group (to promote play-based curriculum) and a control group (to consume the standard one). Pre-and post-intervention evaluations were used to assess cognitive (language, memory, problem-solving) and social skills (cooperation vs. empathy and peer interaction). The results showed large disparities in the ability on language issues ( $p < 0.01$ ), memory retention ( $p < 0.05$ ) and cooperation to social issues ( $p < 0.01$ ) between the experimental

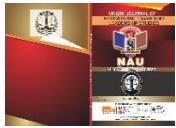


group and the control group. Teachers have documented a sense of increased pedagogical confidence and parents have documented more individual involvement of the children. These findings suggest that play-based learning can patch the gap of the ECE system in Nigeria with the reference to child-centered and culture-relevant education. It can provide the following activities as the key to integrate the policies, which are based on playing, in the national curricula of ECE.

Play-based learning has been researched extensively throughout the world regarding its effects on the early childhood development. In another example, Weisberg et al. (2015) determined that guided play, a play-based setting that is organized by the adults but directed by the children, improves the vocabulary, comprehension, and narrative skills in young children. On the same note Whitebread et al. (2017) showed that play-based activities enhance the executive capabilities of working memory and cognitive flexibility that are important learning factors in academics. In African context, culturally relevant play has been shown to be valuable. Ngasike (2011) demonstrated that indigenous gaming could improve the levels of cognitive activity and cultural pride in young Kenyan learners, whereas Marfo and Biersteker (2011) pointed out that games, particularly the indigenous ones, could serve the purposes of social integration in sub-Saharan Africa. In Nigeria, however, research work on play-based learning in ECE is low. According to Ogunyemi and Ragpot (2015), curricular usually ignores the Nigerian indigenous knowledge systems, and as a result of this negligence, there is lack of cultural resonance and the engagement of the learners is limited. In Anambra State, play-based ECE pedagogies are not a part of formal school curriculum, in sharp contrast to the oral and play-based traditions of the region.

The National Policy on Education in Nigeria (2013) is promoting equal and inclusive quality education, child-centered education and culturally relevant education to enhance quality learning and to preserve cultures in line with Sustainable Development Goal 4 (Quality Education). But the problem is that there is a delay in implementation especially in the area of ECE where curriculum is still generic and non-connected in the local context (Adebayo & Ilesanmi, 2020). In Anambra State, the Universal Basic Education Board has made strengthening access to ECE a major priority, yet pedagogical innovation, like finalizing play-based learning, typically is not a part of the discussion (Okeke et al., 2020). This disconnect does not only restrain the cognitive and social growth of young learners but also erodes their cultural identity as they are further subjected to the influences of globalized approaches of education. Research about Nigeria is recent (Okeke et al., 2020; Afolabi & Ogunyemi, 2021) and does not emphasize the possibilities of play-based learning when it comes to ECE pedagogy. Moreover, the effects of play-based learning in the ECE settings in Anambra State have not been reported in a research study before, hence fitting the study as new and topical.

This study has filled this gap by coming up with a culturally customized play-based learning curriculum enhancing the preschoolers in the State of Anambra. It is hoped that by incorporating indigenous games and narrative learner outcomes (e.g., language, memory, problem-solving) and social behavior (e.g., cooperation, empathy, peer interaction) could be improved and cultural identity achieved. The paper localizes play-based learning in the context of the Igbo people of Anambra through literature review, both globally and on the African continent, and helps to



advance the conversation on culturally relevant pedagogy within low-income contexts in Africa. This study will offer policy-relevant, empirical evidence that can influence pedagogical signature and student-teacher interactivity, including eliciting alterations in the Nigerian ECE system to induce play-based learning.

### **Problem Statement**

Although there are already attested advantages of a play-based learning over a teacher-directed, rote-based pedagogy in terms of cognitive and social development of children, Anambra State has implemented teacher-dependent and rote-based curriculum in its ECE curriculum, which restricts interactive and child-centered learning. This causes:

- Decreased participation of the learners as a result of inability to find culturally literate pedagogy.
- Failed to acquire critical thinking, language and social skills.
- Diluted cultural identity, because indigenous play practices are marginalized.

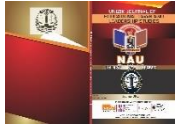
It is relevant to conduct a study like this because of the lack of empirical evidence about the impact of play-based learning in the ECE settings of the state of Anambra. The proposed research will present a validated play-based curriculum that can become the basis of the policy change that would in turn foster the production of teaching materials and encourage cultural preservation in accordance to the policies of education and culture in Nigeria.

### **Objectives**

- To develop a 12-week play-based learning curriculum tailored to Anambra State's cultural context.
- To evaluate its impact on cognitive (language, memory, problem-solving) and social (cooperation, empathy, peer interaction) development among preschoolers.
- To assess teacher and parental perceptions of the curriculum's effectiveness.
- To provide evidence-based recommendations for integrating play-based learning into Nigeria's ECE framework.

### **Literature Review**

A play-based learning approach is a teaching methodology focused on interactive child-initiated kinds of learning to stimulate cognitive, social and emotional development in early childhood learning (ECE) (Pyle et al., 2017). Play is rooted in constructivist theories of psychologist Lev Vygotsky, specifically his sociocultural model of child development (Vygotsky, 1978), and takes prominence within the theory because play has been seen as the method of developing a socio-psychological learning area, or zone of proximal development, within which students learn more abstract cognitive and social aspects. This review gathers the evidence of literature on play-based learning in the global and Africans setting, and it tackles the relevance of play-based learning contents that deal mainly with cognitive and social development of children in Anambra State, where culturally relevant pedagogies have been underused.



### **Global Perspectives on Play-Based Learning**

Worldwide, play-based learning is understood as one of the pillars of quality ECE. Recent published work has involved a scoping review of play-based pedagogies conducted by Pyle et al. (2017) in which guided play (teachers provide structure to child-led exploration) was found to have a positive effect on cognitive outcomes such as problem-solving and language development. Weisberg et al. (2015) also found out that guided play helps in enhancing receptive vocabulary and narrative in preschoolers since the children enter meaningful conversation during the play-related activities. As an illustration, the role-playing activities that involve children in play-acting market vendors will help these children use descriptive language and develop their social and linguistic skills such as turn-taking.

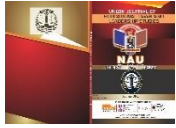
Play aids in executive function, such as working memory and cognitive flexibility- both of which come into play to determine academic success. Whitebread et al. (2017) have concluded that when children engage in play-based activities, i.e., building structures or dramatic play, they improve their planning and ability to control their behavior. In the same manner, Diamond and Lee (2011) stated that play-based interventions enhance the inhibitory control, which is an essential element of executive function, among children aged between 4 and 6 years. These results highlight the cognitive advantages of playing, especially in which organizational activities inherently combine independence and restrictive mentors.

Socially, play-based learning helps in enhancing cooperation and empathy as well as conflict resolutions. Bodrova and Leong, (2015) contend that dramatic play helps in perspective-taking since kids have to act out roles and make decisions based on the situation. It also helps in pro-social behavior since children learn to express feelings and empathize. As an example, children who play in a group develop the abilities to share resources and settle conflicts, which are necessary in order to be socially competent. In a meta-analytic study by Lillard et al. (2013), it was observed that pretend play is significantly effective in boosting social skills, especially in multicultural contexts as children learn to develop new intersections around multiple views. These international studies present a solid basis of incorporating playlearning in low-resource settings such as in Nigeria.

### **Play-Based Learning in African Contexts**

In Africa, culturally relevant play practices have been demonstrated to be able to improve engagement and learning outcomes. In a study by Ng0asike (2011) the role of traditional games among Turkana children of Kenya has been examined through a similar argument of how these activities such as communal dances and storytelling games could help them to develop cultural pride and critical thinking states. Such games were a natural part of local culture, and gave children a reason to master language and find solutions in situations they encountered regularly. In a similar set of arguments, Marfo and Biersteker (2011) have highlighted the fact that African indigenous traditions of play like group songs and cooperative games resonate with communal principles and help in social cohesion among young learners.

Within Nigeria, however, play-based learning in ECE is not implemented widely. According to Ogunyemi and Ragpot (2015), the Nigerian education is full of Western pedagogies, which



stressed rote learning and formal instruction, instead of interactive, child-centered learning. Such disconnection relegates indigenous practices such as traditional games and story telling which are full of cognitive and cultural benefits. Igbo games such as those of pinboard named okwe (a strategy board game) and a team-based group game named ncho (uses coordination) reinforce mathematical logical analyses and group effort-building Book of games but is infrequently adapted in mainstream schooling (Eze, 2018). Such a failure exposes the culture to erosion and demotivates learners especially those found in places like Anambra State where Igbo culture prevails.

### **Cognitive Development Through Play**

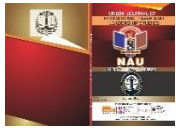
There are significant cognitive benefits of play-based learning which is well-documented. According to Weisberg et al (2015), the guided play has the best effect on vocabulary learning through children engaging in rich and contextualized dialogue. The art of storytelling, e.g. when children narrate stories or make up stories, enhances comprehension and expressive language. Nicolopoulou et al. (2015) have also shown that play interventions, based on telling stories, contribute greatly to improving narrative competence and memory among preschoolers since they can remember the sequence of the story and characters. Such findings are of importance to Anambra State, where oral traditions such as akuko ifo (Igbo folktales) may be exploited as a means of promoting the development of language.

Play also increases memory and problem solving. Some studies have revealed that activities that encourage children to engage in play, like puzzles, or role-playing, heighten working memory because it leaves kids having to hold and coordinate information (Whitebread et al., 2017). One such game, called okwe, requires strategizing and remembering earlier moves, which develops cognitive ability similar to that which is tested on standardized tests, such as the Tower of Hanoi (Klahr & Robinson, 1981). Also, Bergen (2002) indicated that play contributes towards divergent thinking which helps the child in providing the imaginative answers to the issues and this is very important in the growth of the child in both academic life and in the life in general.

### **Social Development Through Play**

Socially, the play-based learning allows the children to hone cooperation and empathy skills as well as interact with their peers. According to Bodrova and Leong (2015), dramatic play also helps children to work together and learn to understand and tolerate each other emotionally, due to the encouragement of the role and rule negotiation. As an example, when children pretend to be communities in a market simulation, they exercise empathy because they think of how others feel. To add on, Singer et al. (2010) concluded that even aggressive behaviors are reduced and high level of prosocial interactions is enhanced because children learn about sharing and resample conflicts in the play- based settings.

Communal play is in line with cultural beliefs of collectivism in Africa. The paper by Amoako and Okanta (2014) on Ghanaian traditional games demonstrates that a small group activity, e.g., a circle game, contributes to the strengthening of social connections and development of communicating abilities. In Nigeria, Okeke et al. (2020) reported that due to the teacher-centered approaches to ECE, social skills do not develop because students cannot communicate freely with



each other. The lack of cooperation behaviors could be addressed by culturally incorporating culturally relevant group play in the Igbo community in the form of Igbo group games.

### **Challenges and Gaps in Nigerian ECE**

Despite the evidence on play-based learning, the constraints in the ECE system in Nigeria make it difficult to implement this concept of learning. According to Ogunyemi and Ragpot (2015), some of the challenges include inadequate training of teachers, insufficient resources and lack of specific policies. Teachers are not well-prepared to engage kids in play-based education and learn to promote memorization by using didactic instead of play-based approaches (Ajayi & Ogunyemi, 2016). In Anambra State, curricula have been generic and not paying attention to local play practices, whereas the Universal Basic Education Board has enhanced access to ECE (Eze, 2018). This discord devalues cultural importance, and participatory learning.

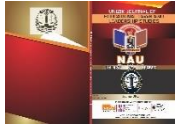
Furthermore, parents tend to be not highly involved in Nigerian ECE because of their socioeconomic backgrounds and the way they do not recognize the role of play in the learning process (Okeke et al., 2020). Parents might regard play as something superficial because they focus on academic exercises and ignore playing (Akinrotimi & Olowe, 2016). This is important to address these perceptions through community participation to the success of the play being used as such type of intervention.

### **Theoretical Highlight**

This research is based on the sociocultural theory by Vygotsky (1978), who believes that play helps in cognitive and social development because it is in this context that children move with their peer groups and adults. According to Vygotsky, children learn to behave at a level above their current involvement through the support of the teachers or peers through play. Ecological systems theory describes the behavior of children as shaped by social organizations, custodial organizations and cultural and physical environments (Bronfenbrenner, 1979). Igbo tradition as a cultural and physical environment would therefore influence the development of children. This study is consistent with these frameworks by incorporating culturally relevant play to facilitate whole-person growth in all its ECE settings in Anambra State.

### **Research Gap**

Although there is increasing evidence of the usefulness of play-based learning globally and in Africa, research on how different protocols can be implemented through early childhood education in Nigeria and more so, in Anambra State remains scarce. The current research (e.g., Okeke et al., 2020; Ogunyemi & Ragpot, 2015) emphasizes support and teacher preparation methodology without referring to pedagogical innovations such as play-based learning. There is no recorded research on the use of a culturally proximate play-based curriculum in the Anambra ECE centers, so the proposed is novel and timely.



## **Methods**

### **Design of the Study**

A quasi-experimental approach was applied, and there was a pre- and post-intervention assessment used to measure the effect of the play-based learning curriculum. There are four public ECE centres in two LGAs (Awka South and Onitsha North) in Anambra State, which were selected. There were two centers (one LGA) within the intervention (play-based curriculum), and two centers (one LGA) acting as control (standard curriculum).

### **Participants**

- ❖ **Children:** 120 preschoolers (aged 4–5 years, 60 per group) were selected through the stratified random sampling to ensure gender (50% male, 50% female) and socioeconomic balance.
- ❖ **Teachers:** 8 ECE teachers (2 per school) were trained to implement the curriculum.
- ❖ **Parents:** 60 parents (15 per school) participated to reinforce play activities at home.

### **Intervention**

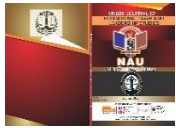
A 12 weeks play-based curriculum was designed that includes culturally relevant activities, such as traditional Igbo games (i.e., Okwe, ncho), storytelling in groups and role-playing on the basis of Igbo folktales. The curriculum also focused on free-play with guidance by the teacher to strike a proper balance between self-discovered play and teacher-directed play. The training of teachers covered a 2-week period on play-based pedagogy with an emphasis on how play can be used to facilitate cognitive and social development

### **Data Collection**

- **Cognitive Outcomes:** Assessed using standardized tools:
  - ✓ Language: Peabody Picture Vocabulary Test (PPVT) for receptive vocabulary (Dunn & Dunn, 2007).
  - ✓ Memory: Digit Span Test for working memory (Wechsler, 2008).
  - ✓ Problem-Solving: Tower of Hanoi task for executive function (Klahr & Robinson, 1981).
- **Social Outcomes:** Measured through teacher and parent reports using the Social Skills Improvement System (SSIS) (Gresham & Elliott, 2008), assessing cooperation, empathy, and peer interaction.
- **Teacher and Parent Perceptions:** Collected through semi-structured interviews and Likert-scale surveys post-intervention.
- **Baseline and Post-Intervention:** Assessments were conducted before and after the 12-week period.

### **Data Analysis**

Paired t-tests and ANCOVA were used in comparison of pre- and post-intervention scores between groups and controlling of differences at baseline. Thematic analysis of the qualitative data generated in the interviews was conducted on the NVivo software. The research study was granted ethics by the Anambra State Ministry of Education. Parents and teachers gave informed consent.



Consent of the child was obtained by verbal agreement Data were anonymized in order to safeguard the privacy of the participants.

## Results

### Cognitive Outcomes

Table 1 summarizes cognitive outcomes. The intervention group showed significant improvements in language (PPVT:  $t(58) = 4.32, p < 0.01$ ), memory (Digit Span:  $t(58) = 3.15, p < 0.05$ ), and problem-solving (Tower of Hanoi:  $t(58) = 3.78, p < 0.01$ ) compared to the control group. Effect sizes were moderate to large (Cohen's  $d = 0.6-0.9$ ).

**Table 1:** *Cognitive Outcomes (Pre- and Post-Intervention)*

Measure	Group	Pre-Mean (SD)	Post-Mean (SD)	t-value	p-value	Cohen's d
PPVT (Language)	Intervention	65.2 (8.4)	78.9 (7.1)	4.32	<0.01	0.9
	Control	64.8 (7.9)	66.3 (8.2)	0.87	0.39	0.2
Digit Span (Memory)	Intervention	4.5 (1.2)	5.8 (1.0)	3.15	<0.05	0.7
	Control	4.4 (1.3)	4.6 (1.2)	0.65	0.52	0.1
Tower of Hanoi	Intervention	3.2 (0.9)	4.5 (0.8)	3.78	<0.01	0.8
	Control	3.1 (1.0)	3.3 (0.9)	0.92	0.36	0.2

### Social Outcomes

Table 2 presents social outcomes. The intervention group showed significant gains in cooperation (SSIS:  $t(58) = 4.10, p < 0.01$ ) and empathy ( $t(58) = 3.45, p < 0.01$ ), with moderate improvements in peer interaction ( $t(58) = 2.98, p < 0.05$ ). The control group showed no significant changes.

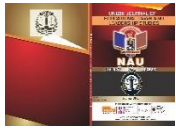
**Table 2:** *Social Outcomes (Pre- and Post-Intervention)*

Measure	Group	Pre-Mean (SD)	Post-Mean (SD)	t-value	p-value	Cohen's d
Cooperation	Intervention	12.3 (2.1)	15.8 (1.9)	4.10	<0.01	0.8
	Control	12.1 (2.0)	12.4 (2.2)	0.76	0.45	0.1
Empathy	Intervention	10.5 (1.8)	13.2 (1.7)	3.45	<0.01	0.7
	Control	10.4 (1.9)	10.7 (1.8)	0.82	0.42	0.2
Peer Interaction	Intervention	11.8 (2.0)	13.9 (1.8)	2.98	<0.05	0.6
	Control	11.7 (2.1)	12.0 (2.0)	0.69	0.49	0.1

Teachers indicated higher levels of confidence when accessing the play-based activities as children were more active and expressive. Parents reported that there were better communications and cultural awareness of the children especially through the process of story telling and the use of traditional games. Thematic analysis revealed three themes as follows; improved interactions, cultural affiliation, and teacher empowerment.

## Discussion

The results of this study indicate that culturally adapted learning curriculum that involves play in preschools results in a significant increase in the cognitive and social development of the early childhood education (ECE) center students in Anambra State of Nigeria. These findings are substantiated by similar study experiences around the world and other regions; hence, there is a significant argument proving the introduction of play-based pedagogies to Nigeria ECE



framework. We discuss the implications of these findings on the context of cognitive and social outcomes, cultural relevance, teacher and parental roles and limitations and locate them within a broader body of research.

### **Cognitive Outcomes**

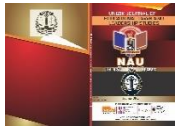
The considerable gains in language (Peabody Picture Vocabulary Test,  $p < 0.01$ ), memory (Digit Span Test,  $p < 0.05$ ), and problem-solving (Tower of Hanoi,  $p < 0.01$ ), experienced by the intervention group confirm the world-wide evidence of the effectiveness of play-based learning. According to Weisberg et al. (2015), guided play, which concentrates on both child-driven exploring and adult scaffolding, promotes the vocabulary and executive function development through active participation in language- and problem-solving activity. Whitebread et al. (2017) echoed the same idea of the stimulation of working memory and cognitive flexibility due to the play when children are exposed to rules and roles in playing traditional games. Other activities involved in this study, including playing the Igbo board game, okwe, which required strategy, and role-playing based on folktales probably served as a source of a kind of a guided technical development, in the sense that Vygotsky (1978) envisioned in his proposal of the zone of proximal development.

The author was able to show in the African setting that, play among the Kenyan pastoral children facilitated cognitive engagement through linking learning to cultural practices (NgAsike, 2011). The study is taking it a step further and examining how integration of Igbo games and story telling filled in the gap between cultures and cognitive development in Nigeria. Contrary to household investigation of Ngasike, however, this study takes place in formal early childhood education environments with its structured educational curriculum demonstrating the possibility of such scale in institutional settings. This is even more apparent in the realization that the Nigerian ECE curricula focus more on Western pedagogies leaving aside indigenous knowledge systems (Ogunyemi and Ragpot, 2015). The mental improvements shown here point to recessive learning as a possible solution to this deficiency, providing a ludic alternative to memorization that is common in Nigerian schools (Awopegba et al., 2017).

### **Social Outcomes**

The pronounced gains of the intervention group in the area of cooperation ( $p < 0.01$ ), empathy ( $p < 0.01$ ), and interaction with peers ( $p < 0.05$ ) support the tenet of Bodrova and Leong (2015) that playing enables children to develop social competence through establishing roles and negotiating with peers, resolving conflicts, etc. Curriculum features such as storytelling circles and games played by children together promoted the development of the essential skills of turn-taking and taking the viewpoint of others known as perspective-taking. These results correlate with Lillard et al. (2013), a meta-analysis that proved that pretend play contributes to social skills development, as it enables the child to role-play the situations they will encounter in the real world within their minds without any risks.

In particular, play-based learning is especially valuable in Nigeria, where teachers commonly adopt teacher-centered strategies that do not allow the children to interact as much as needed



(Okeke et al., 2020). It can be presumed that the culturally familiar activities that the curriculum included, such as performance of the Igbo folktales, enhanced the group solidarity and cultural identity, as observed in the studies of indigenous schooling in Africa (Serpell, 2017). The example of work by Serpell in Zambia reveals the importance of cultural contexts of play, which helps to inculcate feelings of belonging, which is absolutely necessary in multicultural areas such as Anambra State, where Igbo culture dominates but does not receive enough recognition in the school-based education system. The medium effect sizes (Cohen  $d = 0.6-0.8$ ) in the social outcomes indicate that play-based learning can make a contribution to achieve the Nigerian ECE policy objective of fostering whole-person development (Federal Republic of Nigeria, 2013).

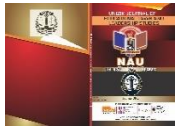
### **Cultural Relevance and Engagement**

Teachers and parents attested that the curriculum appeal to the learners through the integration of the Igbo culture through traditional games and the teaching of traditional stories. This concurs with the outcomes of Ngasike (2011) which reveal that culturally relevant pedagogy can make children more motivated through making connections between learning and their experience. In the case of Anambra State, this loss of connection between school and the home setting as observed by Ogunyemi and Ragpot (2015) is one of the impediments to engagement. Incorporating previously known and used practice in a curriculum like ncho (a cooperative game) and akuko ifo (folktales) broke this barrier and made the employees feel that ownership and pride about their culture. This is reinforced by the Dei (2000) who notes that cultural continuity and resilience accruing through indigenous knowledge systems in African education is contrasted to the erosion that is manifested within the western-centric curriculums.

The qualitative results, especially theme of cultural connectivity, align with those of UNESCO (2017) on the role of culturally responsive education as a means of attaining Sustainable Development Goal 4 (Quality Education). Malawi is an example of where colonial legacies sidelined indigenous pedagogy (Awopegba et al., 2017), which implies that the success of this study could imply that play-based learning, in addition to catering to developmental needs, also serves cultural preservation. Nevertheless, the initial reluctance of some of the teachers to change who had been used to conventional practices point to the fact that professional development should be solid to ensure the changes can be embraced with ease, as noted by Adeyemi and Adeyinka (2010) in their research on Nigerian ECE teacher preparedness.

### **Teacher and Parental Roles**

The heightened confidence in engaging in play-based practices on the part of teachers speaks to the significance of professional development, as indicated by Pyle et al. (2017) who concluded that teacher professional development is essential to play-based pedagogy. The training during this study was focused on skills involved in scaffolding play which falls in line with the Cople and Bredekamp (2009) outline of developmentally appropriate practice. The training period was however, not too long, and continued support may further bring improvement in the implementation of the programs according to Hamre et al. (2012).



Parent involvement was also an important factor as its role was to reinforce what had been taught during play at home due to time needs of the parents. The claims by the parents that their children experience enhanced communication and cultural awareness can be explained using model on partnerships between schools and families developed by Epstein (2011), since this theory places emphasis on the contribution made by parents in extending learning opportunities beyond the school. In Nigeria, where parental involvement in ECE is usually low because of socioeconomic issues (Okeke et al., 2020), the success of the study in engaging parents speaks to the potential of culturally relevant interventions to develop buy-in on the local level. Parent workshops would be a good addition to future interventions as suggested by Hornby (2011).

### **Limitations and Future Directions**

Although this study makes contributions, it is subject to limitations. Generalizability to other environments in Nigeria is low due to sample size (120 children), and the fact that the study is limited to two LGAs. Also, it is possible that the long-lasting effect of cognitive and social benefits in play-based learning is not reflected in the 12-week intervention protocol. To the extent that the ability to manage their world through Igbo oral tradition may have cultural specificities, the use of the same tools, such as the PPVT, though valid, may not describe the cognitive effort completely (Serpell, 2017). To obtain a reliable estimation of the long-term effects, future studies should encompass a larger, more heterogeneous sample and follow-up studies are also needed.

The fact that the study was conducted on public ECE centers does not include private institutions, where a large part of the preschool population of Anambra goes. Comparative works between the public and the private settings would be helpful in understanding what can be scaled up. Although the curriculum took cultural differences into consideration, it did not embrace the gender aspects of play likes and dislikes which might affect the outcomes as highlighted by Cherney and London (2006). The next versions should address female/male relationships in play-based education.

### **Policy Implications**

The results indicate that play-based learning should be used in the ECE curriculum of Nigeria, as stated in the National Policy on Education (2013). Policy makers should pay more attention to teacher training plans, focusing on the directions towards play-based pedagogy and cultural relevance and invest in material resources, such as traditional game sets. The policy brief of the study supplies stakeholders with a path to follow on implementation. The findings reflect in the global discussion between culturally responsive education and have provided an example to be emulated by the other countries in Africa who have been facing the same problems (UNESCO, 2017).

### **Conclusion**

This paper highlights the transformational possibilities of play-based learning within the ECE contexts in Anambra State contributing to cognitive, social and cultural deficiencies of the existing system. Given the facilitation of the intervention through Igbo cultural practices, the former contributed not only to the developmental results but also to cultural sustainability, which is consistent with the global and national education objectives. There is still research to conduct and



policy advocacy that needs to take place to extend this approach beyond proof of concept so that the youngest learners in Nigeria can access the benefits of engaging, culturally resonant education.

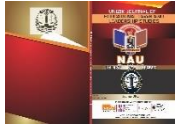
Play-based learning is thus a viable, culturally acceptable way of enhancing cognitive and social developments in schools in Anambra State. A research study on the 12-week curriculum found positive results, which makes it possible to include it in the educational system of Nigeria. The policymakers are advised to emphasize teacher training and curriculum change in order to enhance child-centered pedagogies. The piece is meaningful to the discourse of ECE globally and in South Africa, as this study advocates the quality education tool, play, as a means to preserve the cultures passed along to the children.

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