

Effects Of Caregivers' Training Programme On Preschoolers' Cognitive Readiness For Transition From Kindergarten To Primary One In Rivers State, Nigeria

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Abstract

This study aimed at determining the effects of caregivers' training program on preschoolers' cognitive readiness for transition from kindergarten to primary one in Rivers State Nigeria. The study adopted quasi-experimental non-equivalent pre-test and post-test design. The population of the study comprised 550 pupils and 78 teachers of pre-primary level. A sample of 111 pupils 48 (experimental) and 73 (control) and 8 teachers were drawn from the population using a multi-stage sampling procedure. The instrument for data collection for this study was an observational rating scale titled: Rating Scale for Observation of Kindergarteners and Primary One Pupils Readiness and Transition (RASOKIPOPRT). Data collected were analysed using mean and standard deviations to answer the research questions, while the hypotheses were tested using Analysis of Covariance (ANCOVA) at 0.05 set as the level of significance. The findings of the study indicated among others that: caregivers' training program was effective in enhancing preschoolers' cognitive readiness towards learning for transition from kindergarten to primary one; school type had little influence on preschoolers' cognitive readiness to learn for transition from kindergarten to primary one. Based on the findings it was recommended among others that: educational planners should accompany the one-year pre-primary curriculum with a training manual for teachers for the effective implementation of the curriculum; regular and effective monitoring of pre-primary school environment should be taken more seriously to ensure compliance to minimum standards. These can help preschoolers get ready cognitively for learning in primary schools.

Keywords: Caregivers' training programme, Cognitive readiness, Kindergarten, Preschoolers, Transition

Introduction

Learning begins from birth to adulthood and continues throughout the life of an individual. Early childhood education is foundational to this learning as the level of education forms the basis of other educational systems (Maduewesi, 2005); although formal learning begins in primary school at age six in most countries of the world. This assertion is supported by the Federal Republic of Nigeria (2014) in the National Policy on Education. Prior to the primary education, however, there is the pre-primary education otherwise known as preschool and children who attend such schools are known as preschoolers.

A preschool is a learning environment that caters for children between the ages of 1 year to 5 years (Swartout-Corbeil, 2015). Preschool is an early childhood programme in which children combine learning with play in a programme run by professionally trained adults, known as caregivers. The author further stated that preschools are

different from traditional day care as emphasis is on learning and development rather than enabling parents to work or pursue other activities. Okondugba (2020) asserted that preschool is any programme within a learning environment outside the home which caters for the needs of children between the ages of 1 year to 5 years prior to formal learning in primary one. A preschooler is any child who has not reached the age of primary school.

The kindergarten programme which is part of preschool is a child-centred, developmentally appropriate, integrated programme of learning for 4 and 5-year-old children. Okondugba defined kindergarten as an early childhood programme which is received by a child outside the home between the ages of 4 to 5 years. The purpose of the programme is to establish a strong foundation for learning in the early years, and to do so in a safe and caring, play-based environment that promotes the physical, social, emotional, and cognitive development of all children (Ontario, 2016). The learning activities within this period prepare children for formal schooling and make them ready to learn. Kindergarteners have plenty energy for play and physical activities such as jumping, running and dancing. They love to be involved in creative activities and also love working together to build up things in a group project. It is a period of high intellectual and language development and there is tremendous capacity to learn new words and talk about whatever they have learnt in storytelling, recitation of poems and rhymes (Morrison, 2004). Kindergartners have to transit to formal learning in primary school which can either be a smooth or difficult developmental milestones for preschoolers. In order to overcome this challenge, readiness of preschoolers is of paramount importance.

Readiness of the child suggests that the child has reached the physical, emotional, cognitive and social capacities to begin school. This means that the child has grown up to the level where he or she is able to deal with the changes between the home and the school environment and cope adequately without fear. Okondugba (2020) opined that readiness refers to preschoolers' attainment of physical, socio-emotional, cognitive capacities as well as learning attitudes to begin formal schooling. School readiness "is a product of the interaction between the child and the range of environmental and cultural experiences that maximize the development outcomes for children" (United Nations International Children Emergency Fund, UNICEF, 2012).

School readiness has three dimensions namely building competencies and preparedness in children, schools and families. It requires that the child has reached a holistic development of the five domains linked with later school performance and behaviour, which are physical well-being and motor development, social and emotional development, approaches to learning, language development, cognition and general knowledge, including Mathematics (Kagan, Lynn & Britto, 2007). School readiness is a complex concept that researchers have more recently organized into five main domains: physical well-being or health and physical development, emotional maturity or social and emotional development, social confidence, sometimes referred to as approaches to learning, language richness or communication, thinking and general knowledge (Pianta, 2003). The focus of this article will be the cognitive readiness of the child.

Cognitive readiness is defined at two different levels (Bierman, Torres, Domitrovich, Welsh & Gest, 2009). At the first level, it is seen as involving academic knowledge that represents a proximal antecedent of early achievements in the domains of emergent literacy and numeracy. At the second level it is also seen as involving more fluid cognitive reasoning skills, the executive function skills that provide a foundation for reasoning and problem solving (Blair, 2006). Another aspect of cognitive readiness is the maths skills which measures logic and pre-numeracy competencies (Ginsburg, Lee & Boyd, 2008; Sophian, 2004). With appropriate cognitive readiness, the teacher can help the kindergartner develop the right approaches towards learning. The transition from kindergarten to primary school takes place smoothly when the cognitive domains in addition to other domains of readiness have been achieved by kindergartners.

Transition refers to key events and/or processes occurring at specific periods or turning points during the life course. According to UNICEF, (2012), transition is defined as children moving into and adjusting to new learning environments, families learning to work with a socio-cultural system (that is, education) and schools making provisions for admitting new children into the system, representing individual and societal diversity. Transition is also seen as the movement of children between the ages of 4-5 years from kindergarten to formal education in primary

school. Transition is generally linked to changes in a person's appearance, activity, status, roles and relationships, as well as associated changes in the use of physical and social space, and/or changing contact with cultural beliefs, discourses and practices, especially where these are linked to changes of setting and in some cases dominant language (Vogler, Crivello & Woodhead, 2008).

Transition to formal learning takes place smoothly when kindergarteners have gained cognitive readiness required for the task of active learning in the primary school. Kindergartners who struggle with a smooth transition to formal learning do so because of their lack of readiness, which comes from "their inability to work independently, (to) form new friendships, and adapt to the expectations of different teachers and routines of primary school" (Dail & McGee, 2008; Dunlop, 2003; Loizou, 2011; Margetts, 2002). The reason for these difficulties stem from the fact that kindergartners face the daunting reality of a discontinuity between their former learning setting and the new one they face in the primary school. They have to deal with the obvious difference between the preschool system practices (which) revolved around caregiving, social relations and play. While the primary school system takes a more structured approach, focusing on a variety of subjects designed to build the child's knowledge and skill base; this focus on instruction resulted in children losing some of their sense of independence as there was an increase in teacher-directed activities (Einarsdottir, 2006; Yeboah, 2002).

This struggle of kindergartners to balance the differences between the early learning settings and primary school can create an adverse educational trajectory, its attendant challenges in the lives of children and fear for schooling in general beyond the primary school level of education. It assumes that teachers have in-depth knowledge of the five domains of readiness especially the cognitive readiness and can measure the attainment of these levels of readiness before children transit to the primary level of education.

The primary education is very important because it is the key to success or failure of the whole system of education. According to the Federal Government of Nigeria (FGN) National Policy on Education (FGN, 2014) primary education is referred to as the education given in institutions for children aged 6-12 years. The duration of primary education shall be six year. Government stipulates that the objectives of primary education are to inculcate permanent literacy and numeracy and ability to communicate effectively; lay a sound basis for scientific and reflective thinking; give citizenship education as a basis for effective participation in and contribute to the life of the society. Other objectives include to mould the character and develop sound attitudes and morals in the child; develop in the child the ability to adapt to the child's changing environment; give the child opportunities for developing manipulative skills that will enable the child function effectively in the society within these limits of the child's capacity; and to provide the child with basic tools for further educational advancement including preparation for trades and crafts of the locality.

At the primary education level, teaching shall be by practical, exploratory and experimental methods while the medium of instruction shall be the language of the environment for the first three years and English shall be taught as a subject until the fourth year of primary education when English shall be progressively used as a medium of instruction while the language of the immediate environment and French shall be taught as subjects (FRN, 2014). The first class of primary education is known as primary one or grade one. For the purpose of this study primary one refers to the first class in the primary school with pupils whose average age is six years old. The effective transition of preschoolers from kindergarten to primary one is facilitated by caregivers who nurture them during the preschool years.

A caregiver is any person who is responsible for the nurture, care, and instruction of preschoolers in the kindergarten for they integral development before entry into formal school. World Health Organization (2004) defined caregivers as persons who look after infants and young children. In the preschool programme the caregiver is the significant adult who takes responsibility for the overall welfare and nurturing of children under their supervision. They are also teachers who instruct children in the preschool setting and beyond. Children have a lot of attachment and respect for the teachers in their lives and this attachment manifests in their disposition to listen to the teachers whose attention they seek to attract and sustain. Caregivers shape lives of children especially in the formative years

of 0-6years and the caregivers influence the way children see reality about themselves and others. Preschoolers' cognitive readiness for transition from kindergarten to primary one could be moderated by school type.

School type could be determined by ownership which can be public or private. Public schools are owned and managed by the Federal, State and Local Government for the provision of educational services to the society. Private schools, on the other hand, are owned by private individuals ranging from religious institutions, non-governmental organizations and other private individuals whose aim is to provide services for a specific target population with the view to deliver educational services and to make profit on the long run. Public and private schools are institutions owned as the names denote. The public school in Nigeria is owned by the Federal, State, and Local Governments while the private schools are owned by individuals, associations or organisations (Olasehinde & Olatoye, 2014). There is growing preference for parents to enrol their children into private schools because of the failure of our public institutions of learning. The inability of government at the federal, state and local government levels to provide adequate learning materials coupled with the poor management of public schools has created a free market to privately owned preschool settings which has also been allowed to operate with little or no supervision.

In the study area, caregivers who are saddled with the responsibility of identifying, diagnosing and proffering the right solutions to the problems of the preschoolers under their care and who are supposed to have a detailed knowledge of the domains of readiness appears not to be adequately prepared to attend to this task of transition. Thus, many children leave these preschools unprepared due to lack of readiness to cope with learning experiences and the daunting challenge of formal learning in primary school. This is the problem of the study. Thus, the study is guided by the following purposes;

Purpose of the Study

Generally, the study determined the effects of caregivers' training programme on preschoolers' cognitive readiness for transition from kindergarten to primary one in Rivers State. Specifically, it sought to:

1. Ascertain the effect of caregivers' training program on preschoolers' cognitive readiness for transition from kindergarten to primary one
2. Determine the influence of school type on preschoolers' cognitive readiness for transition from kindergarten to primary one
3. Determine the interaction effects of strategies and school type on preschoolers cognitive readiness for transition from kindergarten to primary one

Research Questions

The following research questions guided the study:

1. What is the effect of caregivers' training program on preschoolers' cognitive readiness for transition from kindergarten to primary one?
2. What is the influence of school type on preschoolers' cognitive readiness for transition from kindergarten to primary one?
3. What is the interaction effect of strategies and school type on preschoolers' cognitive readiness for transition from kindergarten to primary one?

Hypotheses

The following null hypotheses guided the study were tested at 0.05 level of significance:

- Ho₁:** There is no significant effect of caregivers' training programme on preschoolers' cognitive readiness for transition from kindergarten to primary one.
- Ho₂:** There is no significant influence of school type on preschoolers' cognitive readiness for transition from kindergarten to primary one.
- Ho₃:** There is no significant interaction effect of strategies and school types on preschoolers' cognitive readiness for transition from kindergarten to primary one.

Method

The study employed a number of coordinated methods and processes for the purpose of the study to be achieved.

Adherence to ethical standards and Recruitment of Participants

Parents and guardians of the schoolchildren as well as school heads signed written informed consents. The schoolchildren also gave oral informed consent before their inclusion in the study. No financial inducement was given to any of the participants. These were implemented as stipulated with the research ethics of the American Psychological Association (APA), as well as the World Medical Association's Declaration of Helsinki.

The participants were from Oyigbo Local Education Authority of Rivers State located in the South-Southern part of Nigeria. The participants in this study were 110 nursery three pre-primary school children made up of 48(experimental group) and 73 (control group) and 8 teachers of pre-primary level. The participants included children in 4 intact classes each in public and private schools. These participants were recruited because they are on the verge of transitioning to primary school where they are expected to demonstrate readiness for learning. The power of sample size was confirmed using Gpower 3.1 software. Participants were included in this study based on the criteria below:

1. Must be transitioning to primary school
2. Willingness to participate in the study
3. Complaining more than usual about school
4. Readily available throughout the period of the study

Only schoolchildren transitioning to primary school were selected and included in the sample. Schoolchildren that did not meet the inclusionary measure were excluded from the study.

Design

The design of the study is quasi-experimental design. Specifically, non-equivalent control group design was used. In this design research participants are not randomly assigned to the experimental and control groups, and both groups take a pre-test and a post-test (Gall, Gall & Borg, 2007). In this design, two intact groups (which were not equivalent) were assigned randomly to treatment conditions while the other two are assigned into control groups. The design is deemed appropriate because it establishes a cause-effect relationship between the independent variables (caregivers' training program) and dependent variables (preschoolers' cognitive readiness for transition from kindergarten to primary one). Recent studies have used this design (Adene et al., 2021; Ejimonye, Onuoha et al., 2020; Ejimonye et al., 2020; Njoku et al., 2020; Ezema et al., 2022; Ugwuanyi et al., 2023).

Measures

The study employed two self-report questionnaires as instruments for data collection, namely; Rating Scale for Observation of Kindergarteners and Primary One Pupils Readiness and Transition (RASOKIPOPRT) and Strategies for Teachers' Advancement of Readiness and Transition to School (S.T.A.R.T.S) manual.

Rating Scale for Observation of Kindergarteners and Primary One Pupils Readiness and Transition: This instrument was developed by the researchers and it has two sections, section (A) deals with the pupils' demographic variables which include: (i) identification number, (ii) school type. Section (B) has 15 items concerned with cognitive

readiness with response options of Always (4) points, Often (3) points, Seldom (2) points, Never (1) point. The observation rating scale was adopted to enable the researcher and his research assistants have a closer look at the children and their ability to acquire and use those prerequisite readiness skills for transition to primary school.

Strategies for Teachers' Advancement of Readiness and Transition to School manual: This training manual was developed by the researchers to train teachers in the treatment group for the implementation of the One-year Pre-Primary School Curriculum. The researcher developed this manual from literature reviewed on readiness and transition to school. The manual enhanced teachers' awareness of cognitive readiness of preschoolers before their transition to school. The manual aimed at preparing caregivers for the implementation of the One-Year Pre-Primary School Education Curriculum developed by the National Educational Research Council (NERDC), supported by the United Nations Children's International Education Fund (UNICEF), and published by the Federal Ministry of Education (FRN, 2014). The manual is organised into six sessions altogether. The first session reflects on the principles of child development, readiness and transition, the second to the fifth sessions look at the four domains of readiness namely: physical, socio-emotional, cognitive, and attitudes to learning. But the programme focused on cognitive readiness. However, the sixth session looks at the relationship between the training manual and the one-year pre-primary curriculum.

Procedure during the implementation of Intervention

The researcher met the head teachers of the schools for permission to use the preschoolers in kindergarten and their class teachers. The teachers were trained with S.T.A.R.T.S manual after the CIPTS (Caregivers' Intervention for Preschoolers Transition to School) questionnaire had been completed to elicit the knowledge of the teachers on transition practices. The manual had six sessions identifying the four domains of readiness and its relationship with the One-Year Pre-Primary School Curriculum. However, the caregivers were trained on the cognitive readiness domain. RASOKIPOPRAAT was used to observe the preschoolers and scores from the observation recorded as pre-test score. After treatment, post observation was done and scores recorded as post-test. The researcher and the trained research assistants observed the children, recording their observations with the rating scale. To avoid experimental bias at the pre-test and post-test stages, and Hawthorne's effect, where faking may occur during an observation session, the researcher alternated the visits of the research assistants to forestall the incidence of faking during the observation session. To reduce teacher variables, the researcher reassured the teachers that the observation was merely for research purposes and not an assessment of their teaching skills for onward report to any monitoring authorities.

Data Analysis

Descriptive statistics of means were used to answer the research questions. The null hypotheses were analysed using Analysis of Covariance (ANCOVA) tested at 0.05 level of significance. The decision rule: the null hypotheses were rejected when P-value was less than 0.05, otherwise the researcher failed to reject the null hypotheses when P-value is greater than 0.05 level of significance. Again, pre-test scores were used as covariates and therefore helped to establish the non-homogeneity or non-equivalence of the two groups before the treatment; furthermore ANCOVA helped control for the errors arising from initial differences as a result of non-randomization on the intact classes.

Results

The result of the study is discussed below;

Research Question One

What is the effect of caregivers' training program on preschoolers' cognitive readiness for transition from kindergarten to primary one?

Table 1: Pre-test and Post-test Mean Scores of the Effect of caregivers' training program on Preschoolers' Cognitive Readiness for Transition from Kindergarten to Primary One

Variable	N	Pre-test		Post-test		Mean Diff
		\bar{X}	SD	\bar{X}	SD	
Caregivers' Training programme	48	23.14	3.95	52.39	3.20	29.25
Control Method	73	26.76	3.11	32.32	4.40	5.56

Key: N = Number of Respondents, \bar{X} = Mean, SD = Standard Deviation.

Result in Table 1 shows the effect of caregivers' training program on preschoolers' cognitive readiness for transition from kindergarten to primary one. The result shows that preschoolers taught using caregivers' training programme (experimental group) had a pre-test mean score of 23.14 with a standard deviation of 3.95 and a post-test mean of 52.39 with a standard deviation of 3.20. The mean gain or difference between the pre-test and post-test means was 29.25. Whereas, preschoolers taught using the conventional method (control group) had a pre-test mean score of 26.76 with a standard deviation of 3.11 and a post-test mean of 32.32 with a standard deviation of 4.40. The mean gain or difference between the pre-test and post-test means was 5.56. For both groups, the post-test mean scores of the preschoolers were greater than the pre-test mean scores, with those taught using the caregivers' training programme (experimental group) having a higher mean gain than those taught using the conventional method (control group). This therefore implies that the caregivers' training programme seem effective in increasing preschoolers' cognitive readiness for transition from kindergarten to primary one than when taught using the conventional method.

Hypothesis One

H₀₁: There is no significant effect of caregivers' training program on preschoolers' cognitive readiness for transition from kindergarten to primary one.

Table 2: Analysis of Covariance (ANCOVA) of the Effect of Caregivers' Training Program on Preschoolers' Cognitive Readiness for Transition from Kindergarten to Primary One

Source	Type III Sum of Squares	df	Mean Square	F	Sig.	Partial Eta Squared
Corrected Model	11984.542 ^a	4	2996.136	223.602	0.00	0.88
Intercept	3920.020	1	3920.020	292.551	0.00	0.71
PreCR	.594	1	.594	.044	0.83	0.00
Group	9498.712	1	9498.712	708.889	0.00	0.85
Schooltype	310.315	1	310.315	23.159	0.00	0.16
Group * Schooltype	2.138	1	2.138	.160	0.69	0.00
Error	1554.334	116	13.399			
Total	209949.000	121				
Corrected Total	13538.876	120				

Result in Table 2 shows that an F-ratio of 708.889 with an associated or exact probability value of 0.00 was obtained with respect to the effect of caregivers' training program on preschoolers' cognitive readiness for transition from kindergarten to primary one. Since the associated probability of 0.00 when compared with 0.05 set as the level of significance was found to be significant because it is less, the null hypothesis three (H₀₁) was therefore rejected. Inference drawn was that there was a significant effect of caregivers' training program on preschoolers' cognitive

readiness for transition from kindergarten to primary one. Furthermore, the η_p^2 (partial eta squared) value of 0.85 was indicative that caregivers' training program accounted for about 85 percent increase in the preschoolers' cognitive readiness for transition from kindergarten to primary one.

Research Question Two

What is the influence of school type on preschoolers' cognitive readiness for transition from kindergarten to primary one?

Table 3: Pre-test and post-test Mean scores of the influence of school type on preschoolers' cognitive readiness for transition from kindergarten to primary one

Variable School Type	N	Pre-test		Post-test		Mean Diff
		\bar{X}	SD	\bar{X}	SD	
Public	64	24.84	4.29	39.57	10.52	14.73
Private	57	25.87	3.32	41.08	10.77	15.21

Key: Number of subjects/respondents, \bar{X} = Mean, SD = Standard Deviation.

Result in Table 3 shows the influence of school type on preschoolers' cognitive readiness for transition from kindergarten to primary one. The result shows that the pre-test mean score of public schools was 24.84 with a standard deviation of 4.29 while the post-test mean was 39.57 with a standard deviation of 10.52. The mean gain or difference between the pre-test and post-test means for public schools was 14.73. On the other hand, the pre-test mean score for private schools was 25.87 with a standard deviation of 3.32 while the post-test mean was 41.08 with a standard deviation of 10.77. The mean gain or difference between the pre-test and post-test means for private schools was 15.21. For both public and private schools, the post-test mean score were greater than their pre-test mean scores, but that of the private schools was slightly higher than that of the public schools. This therefore means that school type had little influence on preschoolers' cognitive readiness for transition from kindergarten to primary one.

Hypothesis Two

H₀₂: There is no significant influence of school type on preschoolers' cognitive readiness for transition from kindergarten to primary one.

Result in Table 2 also showed that an F-ratio of 23.159 with an associated or exact probability value of 0.00 was obtained with respect to the influence of school type on preschoolers' cognitive readiness for transition from kindergarten to primary one. Since the associated exact probability value of 0.00 when compared with 0.05 set as the level of significance was found to be significant because it is less, the null hypothesis seven (H₀₂) was therefore rejected. Thus, inference drawn was that there was a significant influence of school type on preschoolers' cognitive readiness for transition from kindergarten to primary one. Furthermore, the η_p^2 (partial eta squared) value of 0.166 showed that only 16.6 percent variation in preschoolers' cognitive readiness for transition from kindergarten to primary one was due to the influence of school type.

Research Question Three

What is the interaction effect of strategies and school type on preschoolers' cognitive readiness for transition from kindergarten to primary one?

Table 4: Mean and Standard deviation of the Interaction Effect of Strategies and School type on Preschoolers' Cognitive Readiness for Transition from Kindergarten to Primary One

Variable		Pre-test			Post-test		
Strategies	School Type	N	\bar{X}	SD	\bar{X}	SD	Mean Diff
Caregivers' Training programme	Public	28	22.85	4.56	50.89	3.04	28.04
	Private	20	23.55	2.96	54.50	2.03	30.95
Control Method	Public	36	26.38	3.39	30.77	3.16	4.39
	Private	37	27.13	2.81	33.83	4.93	6.70

Result in Table 4 shows the interaction effect of strategies and school type on preschoolers' cognitive readiness for transition from kindergarten to primary one. The result showed that preschoolers from public schools taught using caregivers training programme had a pre-test mean score of 22.85 with a standard deviation of 4.56 and a post-test mean of 50.89 with a standard deviation of 3.04. The difference between the pre-test and post-test means for public schools was 28.04. While preschoolers from private schools taught using caregivers training programme had a pre-test mean of 23.55 with a standard deviation of 2.96 and a post-test mean of 54.50 with a standard deviation of 2.03. The difference between the pre-test and post-test means for the private schools was 30.95. For both preschoolers from public and private schools taught using caregivers training programme, the post-test mean scores were greater than the pre-test means with preschoolers from private schools having a slightly higher mean gain. Also, result in Table 4 showed that preschoolers from public schools taught using the conventional method had a pre-test mean score of 26.38 with a standard deviation of 3.39 and a post-test mean of 30.77 with a standard deviation of 3.16. The difference between the pre-test and post-test means for preschoolers from public schools was 4.39. Whereas, preschoolers from private schools taught using the conventional method had a pre-test mean of 27.13 with a standard deviation of 2.81 and a post-test mean of 33.83 with a standard deviation of 4.93. The difference between the pre-test and post-test means for preschoolers from private schools was 6.70. For both preschoolers from public and private schools taught using the conventional method, the post-test mean scores were greater than the pre-test means scores with preschoolers from private schools having a slightly higher mean gain than their counterparts in public schools.

Hypothesis Three

H₀₃: There is no significant interaction effect of strategies and school types on preschoolers' cognitive readiness for transition from kindergarten to primary one.

Result in Table 2 also showed that an F-ratio of 0.160 with an associated or exact probability value of 0.69 was obtained with respect to the interaction effect of strategies and school types on preschoolers' cognitive readiness for transition from kindergarten to primary one. Given that the associated or exact probability value of 0.69 when compared with 0.05 set as the level of significance was found not significant because it is greater, the null hypothesis eleven (H_{03}) was not rejected. Hence, the conclusion drawn was that there was no significant interaction effect of strategies and school types on preschoolers' cognitive readiness for transition from kindergarten to primary one. Besides, the η_p^2 (partial eta squared) value of 0.001 showed that zero (0) percent variation in preschoolers' mean scores was due to the interaction effect of strategies and school types. This result shows that there was no significant interaction effect of strategies and school types on preschoolers' cognitive readiness for transition from kindergarten to primary one.

Discussion

The result of the study shows that the caregivers' training program was effective in increasing preschoolers' cognitive readiness for transition from kindergarten to primary one than the conventional method. There was a significant effect

of caregivers' training program on preschoolers' cognitive readiness for transition from kindergarten to primary one.

The training program influenced the cognitive capacities of preschoolers as it imparted their critical thinking, literacy and numeracy skills. The views of preschoolers seemed limited and narrow before the commencement of the research. Through the training program they began to brainstorm solutions to difficult problems when asked, observed differences when objects are compared and contrasted, categorized objects in appropriate order (size, colour, weight and height), created ideas from their personal thought, could think outside the classroom or school setting using real life examples on any given task. Critical thinking for the preschoolers became real. This agrees with Bailin and Siegel (2003) who argued that critical thinking is a comprehensive way of looking at reality, which embodies practical applications to conceptual ideas. Critical thinking is perceived as something more than ordinary thinking.

It was observed that preschoolers' literacy skills became more sharpened as they could name and identify letters of the alphabet, produce rhyming words, spell and pronounce correct sounds of words, read five or more sight words at a time and state story structure after listening to a story. This development confirms that true literacy entails children being able to recognize letters in relation to their sounds, analyse the structure of speech and read effectively knowing the meaning of words as they are used (Steinberg, Vandell & Bornstein, 2011). Numeracy skills which were somewhat challenging for preschoolers seemed facilitated. Preschoolers were able to count and identify numeric symbols from 1-20, grip pencil correctly and trace well on paper, identify colours and basic geometric shapes, differentiate between similarities and differences in objects solve simple additions and subtraction, the clear indication that numeracy was not just about numbers. Numeracy has to do with recognising patterns, sorting and categorising objects, talking about time and the patterns of the day, measuring and calculating amounts, arranging objects in space and identifying shapes, are all examples of mathematical thinking that contribute to numeracy.

The result of the study shows that school type had little influence on preschoolers' cognitive readiness for transition from kindergarten to primary one. There was a significant influence of school type on preschoolers' cognitive readiness for transition from kindergarten to primary one. The school type was not a factor as both preschoolers in the public and private schools had similar learning materials for critical thinking, literacy and numeracy. The finding of the study shows that there was no significant interaction effect of strategies and school types on preschoolers' cognitive readiness for transition from kindergarten to primary one. Cognitive readiness and strategy did not depend on school type nor did cognitive readiness and school type depend on strategy. In other words, cognitive readiness comes as a result application of the caregivers' training program whether it be public or private school.

Limitation of the Study

Though this study recorded positive outcomes like other studies, there are some limitations found. The major limitation of the study was considering that the sample used for the study is not too large, some may ask if the study could be replicated and still observe similar effects using the same sample size. This is because most researchers believe that small samples usually have low statistical power. However, the sample size of the present study did not affect the power estimate which means that Strategies for Teachers' Advancement of Readiness and Transition to School manual had a true effect on enhancing preschoolers' cognitive readiness resulting to good transition from kindergartners to primary one.

Another limitation could be the paucity of literature by indigenous authors; research on readiness and transition seems relatively novel to most scholars in Nigeria and African. This made the researcher rely heavily on materials from authors in the West whose cultural, political, and socio-economic milieu differ significantly from the researcher's immediate environment.

Future Directions

This caregivers' training program has been shown to be effective in enhancing a smooth transition of preschoolers from kindergarten to primary one in both public and private schools given the cognitive readiness which the preschoolers had attained. The school type made little or no difference in the level of readiness that was attained by

the preschoolers. It is suggested that future researches use this training programme on enhancing smooth transition of preschoolers from kindergarten to primary one based on gender.

Conclusions

Based on the findings of the study, the following conclusions are made:

The caregivers' training program has been effective in preschoolers' readiness for transition from kindergarten to primary one in Rivers State Nigeria. Remarkably physical readiness of preschoolers has been enhanced, socio-emotional readiness to cope with other pupils in the classroom has increased among preschoolers, their cognitive capacity in numeracy and literacy sharpened and their attitudes towards learning better enhanced for their engagement in formal learning. This experience is not exactly the same for preschoolers in the control group of the study.

The school type had little influence on preschoolers' physical, socio-emotional, cognitive and attitudes towards learning. It was observed that preschoolers in public schools demonstrated a high level of readiness despite the limitation experienced in their learning environment. This indicates that pupils in public preschools can benefit from an enhanced caregivers' training program and have the same level of readiness that preschoolers in private schools enjoy. This creates a level playing field for children to be ready for the next educational demand of transition into primary school. When children are able to have the same opportunities in learning, their environment notwithstanding, they are able to compete favourably at terminal examinations and are better equipped to enjoy learning and have greater educational achievements. In as much as caregivers in both public and private schools are given similar training, and they adhere to the demands of the training program, they are better able to help preschoolers get ready and transition to formal learning.

There was a significant interaction effect of strategies and school types on preschoolers' physical and socio-emotional readiness for transition from kindergarten to primary one. Physical activities engage preschoolers with their caregivers and their peers and in this process, they build a social network of friendship among themselves. Consequently, the social network makes each one ready as an individual and affects other member of the group through repeated group engagements like running, skipping, jumping, sack race, drawing and painting in common and so on. The same group dynamics also occur when preschoolers learn to share common items in the classroom and learn to take turns to use common instructional materials. This helps them to learn patience and accommodation of others in the group. Learning to help their peers brings out the empathetic aspect of their personality and keeps them conscious of the needs of others as they seek to meet their own needs. Learning to avoid aggression also keeps their passions and anger in check to help them function better with others in the classroom context and beyond when they avoid aggression they are able to resolve conflict more creatively.

There was no significant interaction effect of strategies and school types on preschoolers' cognitive readiness and attitudes to learning for transition from kindergarten to primary one. Cognitive readiness and attitudes to learn are personalized effects directed at individual competencies. It shows that the less engaged preschoolers are with their caregivers and other peers, the less friendly they become. This perhaps explains why there is no interaction between strategies and school type in cognitive readiness and attitudes to learning. Preschoolers do individualized work during the course of their cognitive development in numeracy and literacy; there is a concentration on the ability of each learner to understand the instructions. This process seems to isolate the learners and confine them to their individual spaces during the instruction. There is a feeling, which suggests that each learner is responsible for his or her own comprehension of the lesson delivered.

Educational Implications of the Study

The findings of the study have dire implications for education and childhood education in particular in Nigeria. The results have largely shown the effects of caregivers' training program on preschoolers' readiness and transition to formal learning in primary school. It demonstrates that preschoolers' cognitive readiness is important before transition to primary school. The findings of the study also revealed that school type (whether public or private school) has little significant influence on the readiness on preschoolers' transition from kindergarten to primary one.

The implications of the findings of this study is that although there has been a provision by the Federal Government of Nigeria (FGN) through the One-year Pre-Primary School Education curriculum developed by the Nigerian Educational Research and Development Council (NERDC) and sponsored by United Nations Children's Fund (UNICEF), many children are still entering primary school lacking readiness for formal learning. The reason is simple. The One-year Pre-Primary School Education curriculum makes three assumptions namely: that the curriculum and the teacher's guide makes caregivers understand the meaning of preschoolers readiness and transition; that the curriculum, without a training guide, will automatically make caregivers appreciate the significance of readiness for the educational needs of preschoolers; and that the pilot studies carried out in some strategic areas of the federation before its publication suffices to make its implementation and enforcement automatic in all states of the federation in both public and private schools.

The One-year Pre-Primary School Education curriculum is rich in content but without a corresponding training program to help the end users who are the caregivers and consequently the preschoolers, in both public and private schools, it will only end up like other curricula efforts made in the past by the Ministry of Education. Many private schools have a variety of curricular options ranging from Montessori, Reggio Emilia, High Scope, Hybrid Curriculum (a combination of different kinds of curricula) to mention but a few and most of these are run by expensive schools whose proprietors operate their schools for profit hence cannot be affordable by the low and medium income earners. The caregivers' training program has indicated that school type has little influence on preschoolers' readiness for transition from kindergarten to primary one. This implies that in both public and private schools caregivers can have the requisite knowledge and appreciation of the significance of readiness for transition to primary school.

Recommendations

Based on the findings of this study, the following recommendations are made:

- Educational Planners like the Nigerian Educational Research and Development Council (NERDC) need to review the One-Year Pre-Primary School Education Curriculum to see that there is a training manual to help teachers in the Pre-Primary school delve deeper into the full implications of readiness and transition to school.
- Educational Monitors like UBEC, SUBEB, LEA should monitor and evaluate the strict adherence to the implementation of the One-Year Pre-Primary School Education curriculum and ensure that there is period in-service training to help teachers keep abreast with global best practices in childhood education.
- School heads of public schools and proprietors of private schools should to be given regular workshops and seminars to ensure that they understand the challenges that young children undergo when they are not ready for primary education. They should be helped to create the kind of enabling school environment that would facilitate a seamless transition for preschoolers by providing enough play materials and instructional materials that will ensure their cognitive readiness.
- Caregivers and teachers of preschool children should be given regular in-service trainings, workshops and seminars to help them understand the developmental stages of preschoolers and consequently adjust their expectations of children. This will ensure that these educators will be well prepared with patience and understanding to engage the kindergartners in transition practices, which will guarantee their readiness for formal learning in primary school.
- Advocacy will also ensure that regular awareness creation to parents, schools, communities, civil society and government is fostered. This awareness creation on the need to prepare preschoolers adequately before they begin formal school will better our chances of having children who enjoy a good head start, which will in turn guarantee future academic achievements that will later translate to greater work force development to meet our social and economic needs as a nation.

Conflicts of interest

There are no conflicts of interest.

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