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## EFFECT OF MIXED-SEX PLAY ON PUPILS' ATTITUDES TOWARDS SCHOOLING IN PUBLIC AND PRIVATE SCHOOLS IN OYO STATE, NIGERIA

**Sesan O. Mabekoje<sup>1</sup>**

<https://orcid.org/0000-0001-7348-3267>  
mabekoje.sesan@oouagoiwoye.edu.ng

**Folorunso A. Ajasa<sup>2</sup>**

<https://orcid.org/0000-0001-8459-9310>  
funsoajasa2006@yahoo.com

**Opeyemi Shoaga<sup>1</sup>**

<https://orcid.org/0000-0003-4406-3516>  
shoaga.opeyemi@oouagoiwoye.edu.ng

**Simideleola T. Rasheed<sup>1</sup>**

<https://orcid.org/0000-0001-6663-0054>  
rasheedsimideleola@oouagoiwoye.edu.ng

<sup>1</sup>Department of Educational Foundations and Counselling, Faculty of Education, Olabisi Onabanjo University, Ago-Iwoye, Nigeria

<sup>2</sup>Department of Primary Education, School of Early Childhood Care and Primary Education, Emmanuel Alayande University of Education, Oyo, Nigeria

**Corresponding author's address:** Department of Educational Foundations and Counselling, Faculty of Education, Olabisi Onabanjo University, Ago-Iwoye, Nigeria  
mabekoje.sesan@oouagoiwoye.edu.ng  
(+234) 805 521 4151

### Abstract

This study examined how mixed-sex play affected students' attitudes toward schooling in both private and state primary schools in Oyo State, Nigeria. Participants in a pre-test, post-test control group quasiexperimental research design with a 2x2 factorial matrix were randomly assigned to the experimental and control groups. For eight weeks, participants met for a weekly one-hour session. Using the Pupil Attitude Questionnaire, data were gathered. The significance level used to evaluate the results was .05. Utilizing Analysis of Covariance, data were examined. The study's findings showed a substantial treatment effect on pupils' attitudes toward schooling ( $F(1,149) = 340.567$ ;  $p < .05$ ), with students in the mixed-sex play group showing the greatest improvement. Additionally, it was discovered that treatment and school type had a two-way interaction impact ( $F(1,149) = 4.445$ ;  $p < .05$ ). No significant school type effect ( $F(1,149) = 2.093$ ;  $p > .05$ ) was observed. It was concluded that mixed-sex play has significant effect on attitudes towards schooling among primary school pupils and that same was influenced by school type. It was therefore recommended that while mixed-sex play could be used with gains in public schools, efforts should be made to see how it could be significantly deployed to the advantage of private school pupils.

**Key words:** Mixed-sex play, Attitudes to schooling, School type, Primary schools

## 1. Introduction

People's attitudes have generally been found to have an impact on how they interact with people, collaborate with them, contribute to their local surroundings, and carry out daily activities and obligations. People's attitudes always influence their success and contentment. However, in the context of education specifically, attitude is a fundamental tenet of teaching and learning since negative attitudes may discourage, hinder, and even impede learning, positive change, and progress.

Attitudes towards schooling has been decried by concerned stakeholders in education and has been given much research attention (Agure et al., 2019; Stark & Berlinschi, 2021). It must be noted that this phenomenon is a global issue. The definition of attitudes towards schooling includes how people behave, how they show their sentiments and judgments, and whether they are favorable or unfavorable toward schools and learning experiences (Audu et al., 2017; Imo & Dalo, 2020). The issue of attitudes towards schooling cuts across the major levels of education, from primary schools (Abdullah & Thinguri, 2017; Agure et al., 2019) to secondary schools (Audu et al., 2017; Okafor, 2021).

The attention given to attitudes towards schooling may not be unconnected with the negative influence of such variables like school enrolment, parental influence, teachers' support and classroom instructional strategies (Davadas & Lay, 2017). Standard predictors of attitudes toward schooling include parental educational attainment, perceived prejudice, poverty, and unemployment which has led to serious consequences like school interruptions; including class retention, absenteeism, missing some class, dropouts and absolute disregard for education.

While it has been discovered that earlier failure, rejection by teachers and peers, poor attendance, and a low level of participation in school are all risk factors for dropping out of school, additionally noting poor attendance, Erktin et al. (2009) even created a scale to measure elementary pupils' attitudes toward schooling. Conversely, it has been discovered that attitudes toward schooling have a favorable impact on academic achievement (Verešová & Malá, 2016). In effect, pupils with positive attitudes towards schooling would be expected to demonstrate high level of academic achievement. However, Kaur and Grewal (2021) could not find any relationship between attitudes towards schooling and academic achievement.

Previous research efforts have been directed towards the use of group counselling (Audu et al., 2017) as well as physical education and sports (Kundu, 2017), affective assessment (Givens, 2010) and students' perception of assessment (Xiao & Carless, 2013). However, not much attention has been placed on the use of mixed-sex play in the improvement of pupils' attitudes toward schooling. Kids have always enjoyed playing. A number of behavioural and motivational variables, such as free will, intrinsic motivation, positive affect, non-literality, and process orientation, can be used to characterize the abstract concept of play (Johnson et al., 2005). It is a cross-cultural activity that allows kids to discover who they are in their surroundings and test out their social skills while conversing with other kids and possibly adults.

Play comes in different types (Edwards et al., 2001). Among these are rough-and-tumble play, which is more common in boys than in girls, and symbolic play, which is when kids utilize playthings in a symbolic fashion, especially during the second and third years of life. Play here looks like aggression as in hitting, chasing, hushing, and name calling. The third type of play is the constructive or creative play which involves creating or constructing objects with either natural or synthetic materials. Finally, there is the games as play in which

rules and standard of performance are involved. Play may also be same-sex or mixed-sex. In same-sex play, only one sex is involved; either male or female. However, in mixed-sex play, both sexes are involved. Mixedsex play could come in diverse ways as mixed-sex dyads (von Steinkeller & Grosse, 2022; Piotrowski & Cameranesi, 2021) or mixed-sex groups (Fabes et al., 2003; Shoaga et al., 2019). The influence of mixed-sex play groups on the views of pupils toward schooling in primary schools in Oyo State, Nigeria, is the specific subject of this study.

Greater social dominance and prominence in mixed-sex interactions may result in more aggressive outbursts and demonstrations of toughness. Cross-sex popularity may therefore specifically contribute to children's gloomy affect and violent behaviour, even though it may not be as important as same-sex popularity. Boys prefer to socialize in groups, therefore excluding them from mixed-sex activities may limit their alternatives for enjoyment and company (Rose & Rudolph, 2006; Troop-Gordon & Ranney, 2014). Cross-sex popularity may therefore benefit boys largely by promoting engagement in cross-sex or mixedsex play and activities, but same-sex popularity may shield against melancholy affect for boys through a number of social and psychological accommodations (Troop-Gordon & Ranney, 2014).

Mixed-sex play groups more closely mimic the ancient environments where children formed and were socialized on a regular basis over the majority of the history of our species (Crittenden 2016; Gray 2015). Given that mixed-sex play occurs in about 30% of all contacts that children have with their peers, it is vital but understudied how teachers and students engage in mixed-sex groups and while playing with genderneutral activities in the classroom (Fabes, 1994). This study looked at how often teachers helped boys, girls, and mixed-sex groups with activities that were gender-neutral, gendered, or both. In the mixed-sex play groups that characterize child care, preschool-age boys are more assertive and aggressive than girls and tend to monopolize physical space and favored toys (Winer & Phillips, 2012). It is our opinion that if employed appropriately, mixed-sex play would have significant effect on pupils' attitude toward schooling.

The type of school, whether public or private will indicate the ethos and tone of the school. It directs the climate, rules, regulations, and operations which would in turn influence learning outcomes. School type has been found to affect physical activity participation (Sweeney & Gray, 2019), English language and mathematics proficiency among pupils (Nyatsikor et al., 2021). Children's unrestrained, phonemic, and semantic verbal fluency was also influenced by the type of school (Jacobsen et al., 2017) and social-emotional development (von Stumm & Plomin, 2021). According to Jacobsen et al. (2017), families from higher socioeconomic status and private schools provide more cognitive stimulation (semantic knowledge), which may account for the impact of school type on verbal fluency performance. However, von Stumm and Plomin (2021) looked at whether children's social-emotional development was aided by attending private, fee-paying schools as opposed to non-selective state schools. State and private school pupils did not differ in terms of wellbeing throughout adolescence, but over time, private school children reported more peer victimization and less behavioural issues than state pupils.

Invariably, any intervention programme could be influenced by school type. It is our view that the use of mixed-sex play would interact with school type in affecting pupils' attitudes towards schooling.

To this end, we hypothesized that:

- i. Mixed-sex play will significantly affect pupils' attitudes towards schooling; ii. School type will significantly affect pupils' attitudes towards schooling; and iii. School type will interact with mixed-sex play to significantly affect pupils' attitudes towards schooling.

## 2. Method

### Participants

One hundred and fifty-four (154) pupils selected through a multistage process participated in the study. Out of the 33 Local Government Areas that Oyo State now has, two were chosen at random. The State is classified into three Senatorial districts, two of which were randomly selected. From each of the sampled Senatorial Districts, a Local Government Area was chosen. Two schools (one private and one public) were then randomly chosen from the sampled Local Government Areas. One intact class was selected for each school to participate in the study.

### 3. Research Design

This study used a 2 x 2 factorial matrix with a pre-test, post-test, control group, quasi-experimental research design and will be given as follows:

E: O1 X1 O2

C: O1 X2 O2

O1: shows the pre-test results for the experimental group E and the control group C, respectively.

O2: shows the post-test results for the experimental group E and the control group C, respectively.

X1: Treatment given to mixed-sex play

X2: Treatment given to conventional play style or method (control group)

In the study, there were two different approaches to treatment used. Which are:

(a) Mixed-sex play (MSP)

(b) Conventional play style (method) (CPS)

While the dependent variable was:

(a) Attitude to schooling

The moderating variables are:

(a) School type

**Table 1:**

*Cross tabulation of Distribution of Participants by Treatment Groups by School Type*

Treatment	School Type		Total
	Public	Private	
Mixed-Sex Play (MSP)	40	40	80
Control Group (Conventional Play Style)	40	34	74

Total	80	74	154
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### 3.1 Research Instrument

Attitudes towards schooling was assessed using an adaptation of Şeker's (2011) School Attitude Questionnaire developed to assess pupils' attitudes towards school. The 22-item six-factors instrument was considered to be suitable in dimensions for this study. However, eight additional items were included to make the total number of items to be thirty items. The factors and sample items are: teaching (4 items e.g. "I do not feel bored with the lessons."), school image (6 items e.g. "I feel lucky that I am a student of this school."), loneliness at school (5 items e.g. "I feel lonely in the classroom"), testing and feedback (4 items e.g. "Exams measure my real success"), reluctance (7 items e.g. "My family considers my going to school unnecessary"), and belongingness (4 items e.g. "I do not want to go to school").

In the original scale, responses were rated by the 5-point Likert scale ranging from 1 = I strongly agree to 5 = I strongly disagree. But for the purpose of this study and clarity sake, it was changed to 'Yes' or 'No' format since this was administered on primary one pupils which cannot be compared with elementary class five that the original items were initially used for. The reliability of the instrument was ascertained by trial testing it on forty (40) primary one pupils outside the study sample. The data generated were analysed for reliability and internal consistency using Cronbach Alpha formula. The Standardized Alpha value of 0.85 was obtained.

### Procedure

Phase One: Pre-treatment.

To get authorization to carry out the experiment in the chosen schools, researchers paid visits to those institutions. A letter of approval was provided to the parents of pupils through the teachers of certain classes. The administration of the pre- and post-tests, as well as the treatment regimens given to the participants, were all covered in the briefing. The Pupils' Attitude Questionnaire was given out as the pretreatment evaluation at the pre-test session.

Phase Two: Treatments.

The actual treatment lasted for six weeks. Participants were exposed to six play activities overall for each of the treatment packages. The control group was subjected to various play activities. Participants in the experimental and control groups were taken through the following weeks of activities. Experimental Group: Mixed-sex Play

Week 1.

Activity: Arranging beads using broom of 1 to 20.

Materials: Beads of 3 different primary colours with broom sticks.

Week 2.

Activity: Hide, Seek and Found (HSF)

Materials: Clean sand, water, handkerchiefs/napkin, liquid soap, plant seed of any kind or any materials, bowl.

Week 3.

Activity: Building construction with leg Materials: Sand, water, bowl, napkin and soap

Week 4.

Activities: Counting in child's language of immediate environment e.g. "Eni bi eni, eji bi eji....."  
Translated "One is one, two is two, three for calabash, four for mortal carrying ....."

Materials: Water and napkin

Week 5.

Activity: Ten white bottles standing on the wall

Materials: Labeled white plastic bottles, water, table or floor, soap and napkin

Week 6.

Activity: Cone Play

Materials: Improvised cones, clean sands, water, bowl, soap and napkin

Control Group: Conventional Play

Week 1.

Activity: Merry go round

Materials: School playground or school field

Week 2.

Activity: Climbing swings

Materials: School playground or school field

Week 3.

Activity: Dancing

Materials: School playground or school field

Week 4.

Activity: Different play activities of the pupils' choice

Materials: School playground or school field

Week 5.

Activity: Different play activities of the pupils' choice

Materials: School playground or school field

Week 6.

Activity: Different play activities of the pupils' choice

Materials: School playground or school field

Phase Three: Post treatments.

Post treatment administration of the Attitudes towards schooling was done. Participants were appreciated, debriefed, and applauded.

#### 4. Method of Data Analysis

In order to determine the mean and standard deviation of attitudes toward schooling, descriptive statistics were used. The three study-proposed hypotheses were analyzed using Analysis of Covariance (ANCOVA). The significance level for the results was set at 0.05.

#### 5. Results

##### Preliminary Analysis of the Data

**Table 2 displays descriptive statistics of the pre- and post-treatment attitudes toward schooling scores.**

**Table 2:**

Descriptive Statistics by Treatment and School Type of Participants' Attitudes Towards Schooling

Treatment Group	School Type	N	Pre-Treatment		Post-Treatment	
			Mean	Std. Dev.	Mean	Std. Dev.
Mixed-sex play	Public	40	12.675	5.488	24.350	2.392
	Private	40	14.775	4.423	24.025	2.713
	Total	80	13.725	5.064	24.188	2.546
Control	Public	40	17.475	6.555	17.175	6.226
	Private	34	18.882	6.745	18.382	6.387
	Total	74	18.122	6.635	17.730	6.286
Total	Public	80	15.075	6.474	20.763	5.916
	Private	74	16.662	5.939	21.432	5.512
	Total	154	15.838	6.253	21.084	5.717

The results in Table 2 revealed total mean attitudes towards schooling score of 21.084 with a standard deviation of 5.717. However, mean attitudes towards schooling score of 24.188 and a standard deviation of 2.546 were observed for participants in the mixed-sex play treatment group. For participants in the control group, a mean of 17.730 and a standard deviation of 6.286 were observed.



**Hypotheses Testing Hypothesis One**

Mixed-sex play will significantly affect pupils' attitudes towards schooling;

Table 3:

Tests of Between-Subjects Effects of Attitudes towards Schooling

Source	Type III Sum of Squares	df	Mean Square	F	Sig.
Corrected Model	3745.468 <sup>a</sup>	4	936.367	111.220	.000
Intercept	2045.872	1	2045.872	243.006	.000
Pre-test Attitudes towards Schooling	2113.445	1	2113.445	251.032	.000
Treatment	2867.244	1	2867.244	340.567	.000
School Type	17.625	1	17.625	2.093	.150
Treatment X School Type	37.422	1	37.422	4.445	.037
Error	1254.434	149	8.419		
Total	73461.000	154			
Corrected Total	4999.903	153			

a. R Squared = .749 (Adjusted R Squared = .742)

The results in Table 3 showed a considerable treatment impact ( $F(1,149) = 340.567$ ;  $p < .05$ ), no school type outcome ( $F(1,149) = 2.093$ ;  $p < .05$ ) and substantial treatment and school type interaction effect ( $F(1,149) = 2.093$ ;  $p < .05$ ) on participants' attitudes towards schooling. By implication, attitudes towards schooling of primary school pupils can be changed by Mixed-sex play method.

Table 4:

*Estimates of Attitudes towards Schooling by Treatment Groups* **Grand**

**Mean = 20.910<sup>a</sup>**

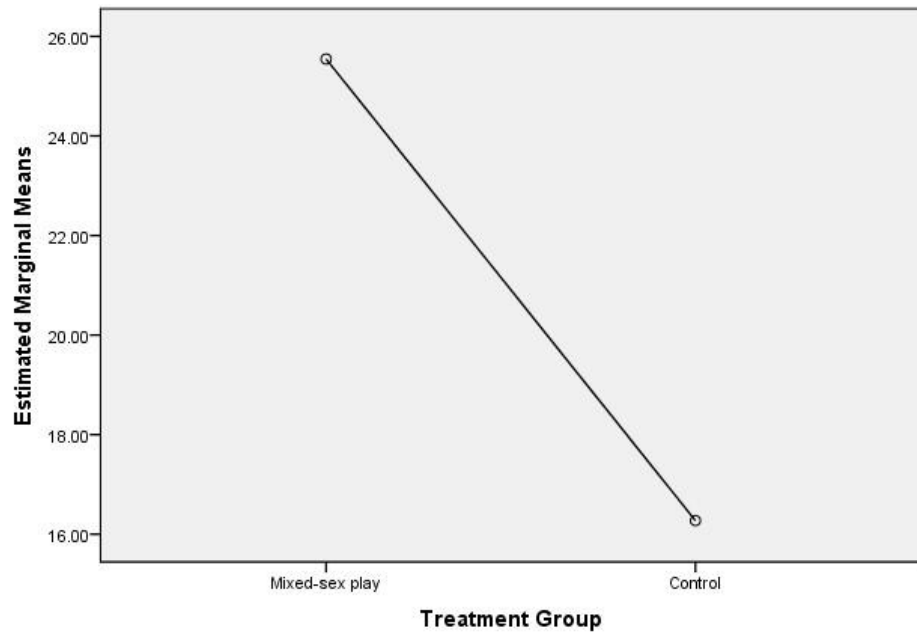
Treatment Group	Mean	Std. Error	95% Confidence Interval	
			Lower Bound	Upper Bound
Mixed-sex play	25.545 <sup>a</sup>	.336	24.882	26.208
Control	16.274 <sup>a</sup>	.351	15.579	16.968

a. The following values are used to evaluate covariates in the model: Attitudes toward schooling on the pretest were 15.8377.

Results in Table 4 revealed a mean score of 25.545 for participants' attitudes towards schooling under mixed-sex play as against 16.274 for participants in the control group. In Figure 1, the outcomes are represented graphically.



Figure 1: Treatment effect on participants' Attitudes towards Schooling



Covariates appearing in the model are evaluated at the following values: Pretest Attitudes toward Schooling = 15.8377

## Hypothesis Two

School type will significantly affect pupils' attitudes towards schooling.

**Table 5:**

Estimates of Attitudes towards Schooling by School Type

School Type	Mean	Std. Error	95% Confidence Interval	
			Lower Bound	Upper Bound
Public	21.253 <sup>a</sup>	.326	20.609	21.897
Private	20.567 <sup>a</sup>	.341	19.893	21.240

a. The following values are used to evaluate covariates in the model: Attitudes toward schooling on the pretest were 15.8377.

No significant connection between school type and attitudes toward schooling was seen in Table 3's findings ( $F(1,149) = 2.093$ ;  $p < .05$ ). Participants in public schools had a mean score of 21.253, according to the findings in Table 5 as against those in the private schools with 20.567.

### Hypothesis Three

School type will interact with mixed-sex play to significantly affect pupils' attitudes towards schooling.

**Table 6:**

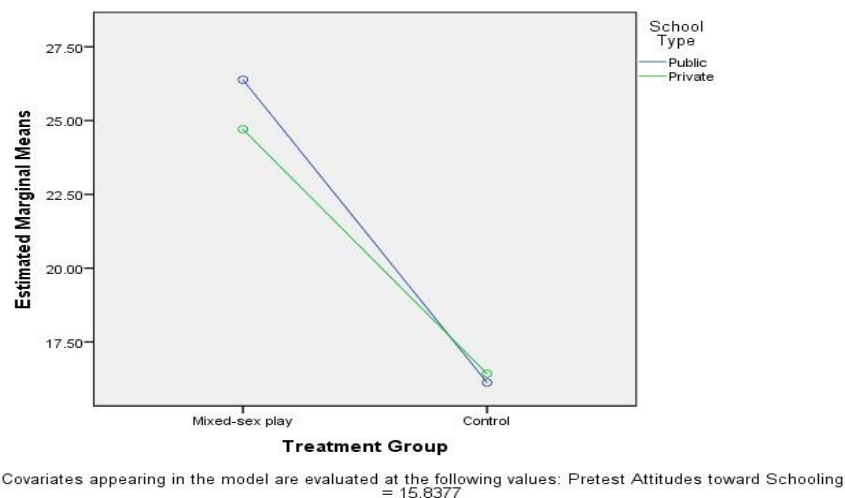
*Estimates of Treatment Group by School Type on Participants' Attitudes towards Schooling*

Treatment Group	School Type	Mean	Std. Error	95% Confidence Interval	
				Lower Bound	Upper Bound
Mixed-sex play	Public	26.383 <sup>a</sup>	.476	25.442	27.324
	Private	24.708 <sup>a</sup>	.461	23.798	25.619
Control	Public	16.123 <sup>a</sup>	.464	15.207	17.039
	Private	16.425 <sup>a</sup>	.513	15.412	17.438

a. The following values are used to evaluate covariates in the model: Attitudes toward schooling on the pretest were 15.8377.

Findings in Table 3 showed a significant 2-way interaction between treatment and gender and its influence on pupils. ( $F(1,149) = 2.093$ ;  $p < .05$ ). Results in Table 6 revealed that attitude to schooling of participants in public schools who were engaged in the mixed-sex play were significantly higher than participants in private schools. In contrast, participants in the control group had more positive attitudes toward schooling in private than in public schools. The outcomes are represented visually in Figure 2.

Figure 2: Effect of Treatment and School Type on Participants' Attitudes Toward Schooling in a Two-Way Interaction



## 6. Discussion of Findings

This study examined the effect of mixed-sex play on pupils' attitudes toward learning. The hypothesis was that mixed sex play would have a significant effect on pupils' attitudes towards schooling and that there would be a main effect of school type (public and private) and that school type would interact with treatment to affect pupils' attitudes towards schooling.

As hypothesized, mixed-sex play significantly affected pupils' attitudes towards schooling thereby establishing its efficacy as a veritable approach to improving pupils' attitudes towards schooling. This finding is not surprising but rather revealing. Previous studies utilizing mixed-sex play have justified its effectiveness on such positive outcomes like academic achievement (Shoaga et al., 2019). In an experimental study, Shoaga et al. (2019) found a significant impact of mixed-sex play on low-achieving pupils in terms of academic performance.

However, attitudes towards schooling have been found to be positively related to, and even predicted academic achievement (Verešová & Malá, 2016). By implication, if pupils possess positive attitudes towards schooling, their academic performance is enhanced. Verešová and Malá (2016) came to the conclusion that attitudes toward learning and schooling can be characterized by beliefs, thoughts, and opinions about them, emotions and a relationship with learning and schooling based on feelings, and a propensity to act in ways that are consistent with both positive and negative experiences with learning and schooling. For the present study to ascertain the effect of mixed-sex play on pupils' attitudes towards schooling therefore is not only significant for improving on literature on the concept but also on its practical implications.

This study however did not find any significant effect of school type on pupils' attitudes towards schooling which by implications mean that attitudes of pupils towards schooling has nothing to do with the type of school they attend. This finding is amazing as previous studies have indicated that school type has impact on several outcomes. It has been noted that pupils in private schools have positive attitudes towards schooling. According to Fisher et al. (2013), pupils who attend more engaging private schools exhibit a more positive attitude than those who attend private (fee-paying) schools. By extension, it would have been expected that school type would impact on pupils' attitudes towards schooling as the environment provided by the two types of school varies. Although, Imo and Dalo (2020) as well as Okafor (2021) did not find any relationship between attitudes towards schooling and school type, implying that students in private schools and those in public schools have similar attitudes towards schooling. Therefore, the results of the current investigation confirm their conclusions.

It is also amazing that a two-way interaction effect of mixed-sex play and school type was revealed in this study. It was observed that pupils in public schools under mixed-sex play had significant higher score in attitudes towards schooling than those in the private schools. As amazing as this seems, it could be conceived that the results are possibly the novelty of mixed-sex play in the public schools as pupils are not readily exposed to such play type as compared to pupils in the private schools. It will be observed that at the pre-assessment test, pupils in public schools under the mixed-sex play group has lower attitudes towards schooling than those in the private schools under the same treatment (Table 1). This, in essence means pupils in the public schools had greater gains in the use of mixed-sex play than those in the private schools.

## 7. Conclusion

The results of this study led to the conclusion that mixed-sex play is a very effective tactic for changing how primary school pupils feel about going to school. However, the study could not find any school type effect on pupils' attitude to schooling. Unexpectedly, attitudes toward schooling among pupils treated with mixed-sex play in public schools were significantly higher than those in private schools, suggesting a twoway interaction impact of treatment and school type on pupils' attitudes towards schooling.

## 8. Recommendations

It was suggested that mixed-sex play be frequently included as a strategy in the enhancement of pupils' attitudes toward schooling based on the study's findings. Efforts should also be made to ensure appropriate implementation of mixed-sex play in private schools so that the gains can be achieved.

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