

EXPLICIT AND DIFFERENTIATED PHONICS INSTRUCTION ON PUPILS' LITERACY SKILLS IN GAMBIAN LOWER BASIC SCHOOLS

Comment [GM1]: rephrase

Abstract

Instructional procedures in literacy skills in Gambian classrooms often adopt the conventional direct approach which includes spelling-reading-dictation without due attention to the sound/letter connection. Although literacy skills in English remain the fundamental proof of formal education in the Gambia, proficiency in reading and writing skills is very low among most pupils in the lower basic schools. Phonics instruction reinforces the letter-sound relationship and improves literacy skills and spelling. Although phonics instruction has been found to be effective for teaching literacy skills to EFL students, there has not been much research on phonics instruction in Gambian classrooms. This study investigated the effects of explicit and differentiated phonics instructional strategies on achievement in literacy skills. The moderating effect of parental involvement was equally examined. The study adopted a pretest-posttest, control group quasi-experimental design using 164 pupils from four randomly selected schools, and treatment lasted six weeks. The result showed a significant main effect of treatment on pupils' achievement in writing ($F_{(2, 125)} = 65.485$) and reading ($F_{(2, 125)} = 26.67$). Participants in explicit phonics instruction obtained the highest achievement score ($x = 28.4$), differentiated phonics instruction ($x = 16.3$), and control ($x = 13.03$). Parental involvement had no significant main effect on pupils' achievement in literacy skills. The two-way interaction effect was not significant. Therefore, language teachers should adopt these strategies to improve the quality of instruction and proficiency in literacy skills in Gambian lower basic schools.

Comment [GM2]: Capitalisation: The Gambia

Comment [GM3]: What are these?

Comment [GM4]: Conjunction

Comment [GM5]: Conjunction

Comment [GM6]: Conjunction

Keywords: Literacy Skills, Phonics instruction, Achievement, Parental Involvement, English Language.

Introduction

Literacy skills ascribe social prestige and determine the socio-economic status of individuals in terms of earnings, advancement in careers, and employment opportunities. Literacy broadens the mind, develops intellectual horizons, and equips individuals with the requisite functional skills to interact, socialize, transact businesses, and operate sophisticated machines. Literacy is an essential skill for all humans irrespective of gender, race, or financial status because it plays a very important role both in human capital and national development. Okebukola and Jimoh (2010) argue that illiteracy diminishes an individual's capability to make meaningful contributions to national development because literacy is the reflection of an individual's identity and socio-economic standing. Literacy primarily connotes the ability to read and write one or more languages. According to UNESCO's Education for All (EFA) Global Monitoring Report (2006:27), literacy skills are deemed essential and beneficial in contemporary knowledge-driven societies and economies. Global

Comment [GM7]: Use a reference word to avoid repetition here as well as the other uses of 'literacy' in the paragraph, as well as the next.

trends in literacy show a nexus between illiteracy and poverty, and high illiteracy rates in most developing countries, especially within the rural communities.

According to Ofulue (2011), literacy plays a critical role in national development, and it is an index for human capital development. Literacy is taught from basic education, and it forms the basis for other levels of education. This is perhaps why Universal Basic Education is an integral aspect of the Sustainable Development Goals (SDGs). There cannot be any meaningful advancement in the areas of science and technology without literacy and this is the reason for increasing calls to improve budgetary provisions in curriculum innovation and critical investment in basic education. In Gambia, almost 50% of the population (15 years and above) is not literate (The Gambia -Literacy Rate, n.d.). Literacy skills are often acquired consciously through language learning or formal education. Therefore, attempts to improve the literacy rate have been targeted at using education as a tool for mass literacy in the country through Universal Basic Education (UBE).

In line with the United Nations Charter on Sustainable Development Goals (SDGs), Grades 1 to 9 have been recognized as universal and the most crucial aspect of the Gambian educational system and supported by the government (MoBSE, 2016). The Gambian Basic Education curriculum was designed to facilitate the mastery of literacy and numeracy skills which are the panacea to mass illiteracy and poverty. Literacy skills are taught in the Gambian basic school system, especially from grades 1-6 which serves as the foundation for the upper basic school. Basic education in the Gambia is universal and highly supported by the government to inculcate literacy and numeracy skills that students can build upon in senior secondary school and tertiary education.

Despite the importance of literacy skills, it is disturbing that the literacy rate in the Gambia remains very low. Factors such as poor infrastructure in schools, gender imbalance in education, rising poverty rates, and poor instructional practices have been attributed to the low literacy rate in the Gambia (Olagbaju & Ayedun, 2021). The process of instruction in literacy skills in most Gambian schools is poor, monotonous, and very predictable. During the process of instruction, teachers often limit the students to spelling, dictation, and rote learning. Pupils are exposed to the spellings and pronunciation of new sets of words through rote learning and they are evaluated through dictation drills or spelling tests at the end of each week. As popular as this classroom practice is, it is a teacher-centered strategy that provides little or no opportunity for classroom interaction and students' participation in the construction of their learning experience. Most pupils

Comment [GM8]: Use of commas and 'and'

Comment [GM9]: Rephrase

Comment [GM10]: Be consistent with spacing between paragraphs

Comment [GM11]: Rephrase

tend to see the acquisition of literacy skills as a monotonous process that is task-based and teacher-directed. The implication of this is that the teaching of literacy skills in Gambian schools is uninspiring and pupils' achievement in reading and writing tasks is generally poor.

Comment [GM12]: No source

In addition, studies have found that factors such as parental support (Geske & Ozola, 2008) and quality of ESL instruction (Caravolas, 2004) can enhance literacy skills. For example, Caravolas (2004) submitted that it is possible for ESL learners to not be able to transfer acquired literacy skills in their first language to the target language because of the differences in orthographies. Therefore, ESL instruction in literacy must be learner-centred and flexible to ameliorate the unwholesome interference of the mother tongue in the acquisition of literacy skills in ESL classrooms. Learner-centred instruction encourages students' participation, inclusion, interaction, and engagement in the classroom. Medwell, Wray, Poulson, and Fox (1998) recommended that instruction in literacy should be direct and practice-based with guided opportunities to put literacy skills into practice to emphasize the connection between language skills.

Conjunction
Comment [GM13]: Conjunction

Phonics instruction is a practice-based strategy with a hands-on learner-centred technique that can be used in the teaching of language skills. Ekpo (2008) posits that during phonics instruction, acoustic drills are important because hearing or perception of sounds is an important skill needed for writing. The strategy emphasizes the identification, articulation, and discernment of speech sounds through careful listening to indicate the position of each sound in any given word. Phonics instruction involves a learner-centred and systematic approach that emphasizes the connection between language skills in the teaching of literacy. Phonics instruction supports the teaching of the letter-sound connection at the morphological level for the purpose of reading and writing (Martin, 2011; Shanahan, 2018).

In practice, phonics instruction entails that pupils learn the relationship between a letter and sounds rather than the alphabet of the English language by developing the ability to perceive and distinguish the sounds in spoken words, reading, writing, and spelling. The instructional procedure must demonstrate the relationship between sounds and letters through the blending and segmenting of letters/sounds to develop literacy skills. Studies have described the dissimilarity between most English language letters and sounds as one of the challenges encountered by ESL pupils during instruction in literacy skills, especially when literacy in two or more languages is taught simultaneously within the school system (Jared & Szucs, 2002; Reyher, 2008). Adekola (2007) laments the continued use of inappropriate instructional strategies in basic schools by teachers with a

narrow repertoire of pedagogical skills and poor knowledge of methods or techniques for introducing and developing literacy.

Phonics instruction can be in-context and in-isolation (Martin, 2011), explicit, and differentiated (Martinez, 2011). According to Armbruster et al. (2000), explicit phonics instruction is the direct teaching of the connection between graphemes and phonemes. Phonics instruction has been reported to be effective at improving proficiency in literacy skills and reading comprehension among pupils in elementary school (Martin, 2011; Martinez, 2011). Other studies have investigated the influence of parental involvement on the development of literacy skills in young readers (Geske & Ozola, 2008). Parental involvement includes all the actions carried out by parents to support the pupils at school regarding the acquisition of literacy skills. Such actions could include support in carrying out assignments, provision of the recommended books or texts and other school materials, payment for extra study or private instruction (tutoring), feeding, and so on. Parental involvement reinforces learning by creating support for the learner and synergy between the school and the home.

Comment [GM14]: Avoid repetition

Similarly, Geske and Ozola (2008) and Nisbet (2019) found that parents' educational background, provision of extra study or lesson time at home, provision of study aids, books or library, and financial status of pupils' families can influence literacy skills, especially the reading skill. Also, Lara and Saracosti (2019) and Olagbaju and Babalola (2020) found that reading aloud to students either at home or school can contribute significantly to the acquisition of literacy skills and achievement in reading. However, unlike the other researchers that reported a significant effect of parental involvement on students' achievement, Alvaera, Bayan and Martinez (2009) found that only mothers' involvement as against the general motion of parental involvement can predict students' achievement.

Comment [GM15]: Expand on this

From the foregoing, it is evident that most of the studies on phonics instruction and achievement in literacy were conducted outside of Gambia using EFL students as participants. Also, the impact of parental involvement on the acquisition of literacy skills is inconclusive. In view of the dearth of research on the effect of phonics instruction on the performance of students in literacy skills in Gambian schools, this study examined the effect of Explicit and Differentiated Phonics Instruction on learning outcomes in literacy skills of ESL pupils in lower basic schools in the Gambia using parental involvement as a confounding variable.

Comment [GM16]: Be consistent

Statement of the problem

The ability to speak and write in the English language remains proof of formal education in the Gambia. Literacy instruction in most Gambian ESL classrooms has adopted the conventional direct approach of teaching spelling-reading-dictation without showing the connection between graphemes and phonemes during instruction in literacy. The implication is that the pupils are not taught to recognize and leverage the relationship between the sounds and letters to build their literacy and spelling skills. Phonics instruction has been found to show the relationship between letters and sounds as well as improve ESL learners' literacy skills and spelling. Although several studies have found phonics instruction to be effective in teaching literacy skills to EFL students, these studies were not conducted in the Gambia. Similarly, parental involvement has a confounder in students' outcomes in language instruction, especially reading. However, research findings on the effect of parental involvement remain largely inconclusive. The study investigated the effect of explicit and differentiated phonics instruction on ESL pupils' performance in literacy skills and the extent to which parental involvement contributes to variations in literacy skills.

Comment [GM17]: Word form

Comment [GM18]: ?

Comment [GM19]: Conjunction

Hypotheses

Based on the stated problems, the following null hypotheses were tested at 0.05 level of significance

HO₁: Phonics instruction has no effect on achievement in (a) writing and (b) reading.

HO₂: Parental involvement has no effect on achievement in (a) writing and (b) reading.

HO₃: Phonics instruction and parental involvement have no interaction effect on achievement in (a) writing and (b) reading.

Skinner's Behaviourists Theory

Burrhus Frederic Skinner (1904–1990) argued that the human mind is simply more productive when studying observable behaviours rather than internal mental events. Skinner's book *Verbal Behaviour* (1957) addresses the process by which people develop language skills through learning and support by making Stimulus-Response (S-R) connections. The thrust of this theory is that it attaches all responses to associations between stimuli, actions, and responses that could explain virtually every aspect of human behaviour and interaction. Skinner (1957) applied operant conditioning to language learning by considering language learning as a form of behaviour development chain (Fodor, Bever, & Garrett, 1975). Skinner presented four general types of speech: echoic behaviour, mand, tact, inter-verbals, and autoclitic. Echoic behaviour is the primary form of verbal behaviour of language learners. Skinner's views on language learning were criticized by Noam Chomsky, but Skinner's

Comment [GM20]: Explain all the jargon, not just the first

Comment [GM21]: Source?

behaviourists' theory supports the use of phonics instruction in language learning because it stresses the importance of learning a language through verbalization or active use of the language during instruction.

Bottom-up/Top-down Explicit Phonics Instruction Approach and Students' Achievement

The teaching and acquisition of literacy skills in ESL classrooms have their own peculiar problems for both the teachers and students. This is because ESL students have acquired and attained a level of proficiency in their mother tongue before attempting to acquire the literacy skills of the target language. Dickinson and Tabors (2002) lament the effect of preschool interactions and experiences on the literacy development of children, letter knowledge, early reading and writing, and phonemic awareness. According to Jared and Szucs (2002), there are several problems associated with the teaching of literacy skills in ESL classrooms especially with regard to the development of spelling skills because the letter-sound relationship in the first language can interfere with the learning of spelling or pronunciation in the English language. Considering these problems, literacy should be properly taught in ESL classrooms using either the bottom-up or top-down approach.

Literacy skills are the two language skills that are acquired consciously and by nurture through the intervention of a teacher. Therefore, the teacher is at the heart of the teaching process as far as literacy is concerned. Reutzel and Cooter (2013) argue that instruction in literacy skills should be planned to use the bottom-up approach which emphasizes that the teaching/learning of literacy skills must progress from learning parts of language to understanding the whole text. The use of a bottom-up instructional approach begins with the teaching of language sub-skills, for example, the process of instruction begins with an introduction to letters and sounds and progresses to the pronunciation of whole words, and comprehension of texts. The bottom-up phonics instruction approach is direct, specific, and concentrates on one aspect per time. Reutzel and Cooter (2013) aver that the use of the bottom-up instructional approach in reading explains the process as decoding or decryption.

Comment [GM22]: Organisation/Rephrase

The bottom-up approach requires the teacher to lay emphasis on the letters, sounds, and decoding of the meaning of a text while the top-down approach emphasizes comprehension. Phonics instruction requires the teacher to focus on letters and sounds when teaching literacy skills. This provides a literacy-rich environment for their students and combines the four language skills. According to Armbruster, Lehr, and Osborn (2000), explicit phonics instructional procedure is the direct teaching

of the relationship between graphemes (letters/alphabets) and phonemes (sounds). The process of instruction must be systematic, linear and sequential from simple to complex. Craig (nd) refers to this as the bottom-up approach because it starts with the teaching of letters/sounds, and then proceeds to words unlike the top-down phonics instruction where the teachers/learners begin with whole words, and then focus on letters/sounds.

Craig concludes that the whole-language approach has been disastrous because whole-language teachers rely heavily on the use of analytic phonics, not the synthetic or systematic instructional procedure. This is because the whole language (top-down) approach focuses on sentence or word meaning with little or no little attention to the separate letters because they are considered as not meaningful. Medwell, Wray, Poulson, and Fox (1998) identified the characteristics of effective teachers of literacy to include the knowledge of the subject and the pedagogical principles. Effective teachers of literacy need to be conversant with the steps involved in the use of these two instructional approaches.

Studies have investigated the effect of both top-down and bottom-up explicit phonics instruction on students' achievement in literacy skills. The National Institute of Child Health and Human Development (2000) investigated the effects of explicit phonics instruction on the achievement of native and non-native speakers of English in literacy skills and reported that the instruction had a significant effect on the native speakers' achievement in reading and writing than non-explicit phonics instruction. Similarly, Martinez (2011) found that explicit phonics instruction significantly improved EFL children's reading comprehension. The findings of the study revealed that explicit phonics instruction improved EFL students' comprehension, pronunciation, and understanding of what was being read. In another study, Martin (2011) reported that beginning readers were able to recall specific the connection between letters and sounds when exposed to phonics instruction. The impact of phonics instruction on ESL students' achievement in literacy skills has not enjoyed much research attention.

Parental Involvement and ESL Pupils' Achievement in Reading and Writing

Parental involvement is any action on the part of the student's parents or guardian to support him or her academically. Such activities include regular attendance at parents' meetings, follow-up visits with teachers and the school management, and provision of books and other learning materials for

Comment [GM23]: Conjunction

Comment [GM24]: Missing word for comparison

Comment [GM25]: Delete

Comment [GM26]: Grammar

Comment [GM27]: No coherence or cohesion

the students. Parental involvement in education is the active and consistent participation of parents or guardians in the creation of an enabling atmosphere that reinforces learning for the child both at home and in school. Studies (Stahl, 2004; Oduolowu & Lawani, 2005; Garbacz, Herman, Thompson, & Reinke, 2017; Lara & Saracostti, 2019) submitted that parents' intervention is essential in their children's schoolwork because they can pass on critical information to staff about their children's interests at home.

Comment [GM28]: Source?

Also, Hara and Burke (2001) examined the effect of parental involvement on inner-city elementary schools and concluded that the implementation of parent involvement programs in schools led to gains in the reading fluency and vocabulary of students. However, Huttenlocher et al. (1991) submitted that the gap in the acquisition and development of literacy and language skills among young readers is greatly determined by how much mothers talked to their children. Similarly, Alvaera et al., (2009) found that the mother's involvement rather than parental involvement contributed to academic outcomes.

Comment [GM29]: Do all of these refer to the passing on of critical information? // Also the section needs re-organising.

Methodology

Comment [GM30]: Spacing

Research Design

The study adopted the pretest, posttest, control group, quasi-experimental research design using two experimental groups, and a control group. The study used three sets of variables namely:

Comment [GM31]: Organisation

Independent Variable: It was manipulated at three levels namely: (I) Explicit Phonics Instruction, (ii) Differentiated Phonics Instruction, and (iii) Conventional strategy.

Comment [GM32]: Word form

Moderator Variables: The moderator variable was Parental Involvement at three levels: (i) High, (ii) Average, and (iii) Low.

Dependent Variables: The dependent variable was ESL pupils' achievement in (i) reading and (ii) writing.

Comment [GM33]: More detail required

Selection of Participants and Content

Participants were 164 ESL pupils in Grades 4 and 5 from selected three primary schools in the Gambian Educational Region 1. A school was randomly selected for the two experimental groups and the control group. Intact classes were used to prevent the disruption of the school programme. The topics taught in the three groups covered reading and writing which are aspects of literacy.

Comment [GM34]: ?

Comment [GM35]: ?

Comment [GM36]: Why 1.?

Comment [GM37]: Only one?

Comment [GM38]: Elaborate

Comment [GM39]: ?

Instruments

Literacy Skills Achievement Test (LSAT)

The instrument was self-designed to assess pupils' level of proficiency in literacy skills. LSAT is a 20-item instrument divided into three sections. Section A covered the demographic information of the participants, section B was on reading and section C covered writing. The instrument was designed to test the literacy skills of reading and writing. Section B tested the reading skill and pupils were asked to read a 10-sentence essay. Section C tested the pupils' writing skills by requesting that they write a 10-sentence composition. The instrument was validated by trial testing the instrument on a separate group of thirty (30) pupils who were part of the sample to be used for the study.

Comment [GM40]: 1. Unclear which section does what 2. Inconsistent tense use

3.5.2 Parental Involvement in Literacy Skills Acquisition Questionnaire (PILSAQ).

This instrument was adapted from Oduolowu and Lawani (2005). The instrument was originally in two separate questionnaires with 11 and 10 items respectively but for the purpose of this study, the researcher adapted the two questionnaires into a 15-item single questionnaire to investigate the level of parental involvement in the process of the pupils' literacy acquisition. All the items were positively stated, and the instrument was also adapted from three-tier scoring parameters of *Always*, *Sometimes*, and *Never* to a binary format of *True or False* because of the ages of the pupils. With the help of their teachers who served as research assistants, respondents were asked to choose one. For reliability, the Cronbach alpha value obtained for the instrument was 0.79. The process of data collection lasted for a period of six weeks.

Comment [GM41]: Avoid repetition

Comment [GM42]: Punctuation

Comment [GM43]: Why?

Findings of the Study

The data collected were analyzed using descriptive statistics of mean and standard deviation as well as inferential statistics of Analysis of Covariance (ANCOVA) using the pretest scores as covariates. In addition, Estimated Marginal Mean (EMM) was computed to show how the groups performed while Bonferroni Post-hoc Analysis showed the sources of significant difference between the groups. All the hypotheses were tested at 0.05 level of significance.

HO_{1a}: There is no significant main effect of treatment on ESL pupils' achievement writing

Table 1a: ANCOVA of Pupils' Achievement in Writing by Treatment and Parental Involvement

Source	Type III Sum of Squares	Df	Mean Square	F	Sig.	Partial Eta Squared
Corrected Model	6124.319 ^a	6	1020.720	28.993	.000	.582
Intercept	4402.661	1	4402.661	125.055	.000	.500
Pre_writing	.322	1	.322	.009	.924	.000
Treatment	4610.903	2	2305.452	65.485	.000	.512
Parental Involvement	10.808	1	10.808	.307	.581	.002
Treatment * Parental Involvement	49.521	2	24.761	.703	.497	.011
Error	4400.742	125	35.206			
Total	59632.000	132				
Corrected Total	10525.061	131				

a. R Squared = .582 (Adjusted R Squared = .562)

Table 1a shows that treatment had a significant main effect on pupils' achievement in writing ($F_{(2, 125)} = 65.485$; $p = .000 < .05$; Partial eta squared = .512). Therefore, the null hypothesis 1a is hereby rejected. This result also shows that treatment had 51.2% effect size since the Partial eta squared = .512. This implies that there is a significant difference in the pupils' achievement in writing based on the treatment applied. To determine the magnitude of pupils' achievement across the treatment groups, an estimated marginal means was computed and reported in Table 2a:

Table 2a: Estimated Marginal Means of Pupils' Achievement in Writing by Treatment

treatment	Mean	Std. Error	95% Confidence Interval	
			Lower Bound	Upper Bound
Explicit Phonics	28.378 ^a	.991	26.416	30.339
Differentiated Phonics	16.330 ^a	1.062	14.229	18.431
Conventional Strategy	13.037 ^a	.956	11.145	14.928

a. Covariates appearing in the model are evaluated at the following values: Pre_writing = 17.9545.

Table 2a shows that the pupils in the Explicit Phonics group had the highest mean score (28.4), followed by the pupils in the Differentiated Phonics group (16.3) while the pupils in the conventional group had the least mean score (13.03). This implies that pupils in the explicit phonics group had an improvement achievement compared to their counterparts in both the differentiated group and the conventional group.

Comment [GM44]: Capitalisation

Comment [GM45]: ?

Table 3a: Bonferroni Post-hoc Analysis of Pupils' Achievement in Writing by Treatment

(I) treatment	(J) treatment	Mean Difference (I-J)	Std. Error	Sig. ^b	95% Confidence Interval for Difference ^b	
					Lower Bound	Upper Bound
					Explicit Phonics	Differentiated Phonics
	Conventional Strategy	15.341*	1.394	.000	11.957	18.725
Differentiated Phonics	Explicit Phonics	-12.048*	1.460	.000	-15.591	-8.505
	Conventional Strategy	3.293	1.425	.067	-.164	6.750
Conventional Strategy	Explicit Phonics	-15.341*	1.394	.000	-18.725	-11.957
	Differentiated Phonics	-3.293	1.425	.067	-6.750	.164

Comment [GM46]: Capitalisation

Comment [GM47]: Capitalisation

Table 3a shows that there is a significant difference between the writing achievement of pupils in the Explicit phonics group and the differentiated phonics group (MD = 12.048; $p=.000<.05$). There is a significant difference between the writing achievement of pupils in the Explicit phonics group and the conventional group (MD = 15.341; $p=.000<.05$).

Comment [GM48]: Conjunction

Comment [GM49]: Capitalization

HO_{2a}: There is no significant main effect of parental involvement on ESL pupils' achievement in writing

Table 1a shows that parental involvement had no significant main effect on pupils' achievement in writing ($F_{(1; 125)} = .307$; $p=.581>.05$; Partial eta squared = .002). Therefore, the null hypothesis 1a is hereby not rejected. This implies that there is no significant difference in the pupils' writing achievement based on the parental involvement.

Comment [GM50]: Organisation, grammar

HO_{3a}: There is no significant interaction effect of treatment and parental involvement on ESL pupils' achievement in writing.

Table 1a shows that treatment and parental involvement had no significant interaction effect on pupils' achievement in writing ($F_{(2; 125)} = .703$; $p=.497>.05$; Partial eta squared = .011). Therefore, the null hypothesis 1a is not rejected. This implies that there is no significant difference in the pupils' writing achievement based on the interaction of treatment and parental involvement.

HO_{1b}: There is no significant main effect of treatment on ESL pupils' achievement in reading

Table 1b: ANCOVA Summary of Pupils' Achievement in Reading by Treatment and Parental Involvement

Source	Type III Sum of Squares	df	Mean Square	F	Sig.	Partial Eta Squared
Corrected Model	3517.031 ^a	6	586.172	12.678	.000	.378
Intercept	4602.578	1	4602.578	99.548	.000	.443
Pre_reading	.026	1	.026	.001	.981	.000
treatment	2466.339	2	1233.170	26.672	.000	.299
parental_involvement	20.172	1	20.172	.436	.510	.003
treatment * parental_involvement	200.120	2	100.060	2.164	.119	.033
Error	5779.355	125	46.235			
Total	67131.000	132				
Corrected Total	9296.386	131				

a. R Squared = .378 (Adjusted R Squared = .348)

Table 1b shows that treatment had significant main effect on pupils' achievement in reading ($F_{(2, 125)} = 26.67$; $p = .000 < .05$; Partial eta squared = .299). Therefore, the null hypothesis 1b is hereby rejected. This result also shows that treatment had 29.9% effect size since the Partial eta squared = .299. This implies that there is a significant difference in the pupils' achievement in reading based on the treatment applied. To determine the magnitude of pupils' achievement across the treatment groups, an estimated marginal means was computed and reported in Table 2b:

Comment [GM51]: Rephrase

Comment [GM52]: Conjunction

Comment [GM53]: Rephrase

Table 2b: Estimated Marginal Means of Pupils' Achievement in Reading by Treatment

Treatment	Mean	Std. Error	95% Confidence Interval	
			Lower Bound	Upper Bound
Explicit Phonics	27.622 ^a	1.163	25.321	29.923
Differentiated Phonics	18.501 ^a	1.217	16.093	20.910
Conventional Strategy	15.748 ^a	1.148	13.476	18.020

a. Covariates appearing in the model are evaluated at the following values: pre_reading = 16.8939.

Table 2b shows that the pupils in the Explicit Phonics group had the highest mean score (27.6), followed by the pupils in the Differentiated Phonics group (18.5) while the pupils in the conventional group had the least mean score (15.7). This implies that pupils in the explicit phonics group had an improvement in achievement in reading compared to their counterparts in both the differentiated group and the conventional group.

Comment [GM54]: Capitalization

Table 3b: Bonferroni Post-hoc Analysis of Pupils' Achievement in Reading by Treatment

(I) treatment	(J) treatment	Mean Difference (I-J)	Std. Error	Sig. ^b	95% Confidence Interval for Difference ^b	
					Lower Bound	Upper Bound
Explicit Phonics	Differentiated Phonics	9.121*	1.669	.000	5.070	13.172
	Conventional Strategy	11.874*	1.712	.000	7.720	16.028
Differentiated Phonics	Explicit Phonics	-9.121*	1.669	.000	-13.172	-5.070
	Conventional Strategy	2.753	1.687	.316	-1.340	6.847
Conventional Strategy	Explicit Phonics	-11.874*	1.712	.000	-16.028	-7.720
	Differentiated Phonics	-2.753	1.687	.316	-6.847	1.340

Table 3b shows that there is a significant difference between pupils' achievement in reading in the Explicit phonics group and the Differentiated phonics group (MD = 9.121; $p=.000<.05$). There is also a significant difference between the reading achievement of pupils in the Explicit phonics group and the Conventional group (MD = 11.874; $p=.000<.05$).

Comment [GM55]: Edit

Comment [GM56]: Lack of consistency re capitalisation

HO_{2b}: There is no significant main effect of parental involvement on ESL pupils' achievement in reading.

Table 1b shows that parental involvement had no significant main effect on pupils' achievement in reading ($F_{(1; 125)} = .436$; $p=.510>.05$; Partial eta squared = .003). Therefore, the null hypothesis 1a is hereby not rejected. This implies that there is no significant difference in the pupils' reading achievement based on parental involvement.

HO_{3b}: There is no significant interaction effect of treatment and parental involvement on ESL pupils' achievement in reading.

Table 1b shows that treatment and parental involvement had no significant interaction effect on pupils' achievement in reading ($F_{(2; 125)} = 2.164$; $p=.119>.05$; Partial eta squared = .033). Therefore,

the null hypothesis 1a is not rejected. This implies that there is no significant difference in the pupils' reading achievement based on the interaction of treatment and parental involvement.

Discussion of Findings

The findings showed that phonics instruction had a significant effect on ESL pupils' learning outcomes in reading and writing. The students in the Explicit Phonics group recorded the most improvement, then those in the Differentiated Phonics Instruction while the Control group had the least effect. The practical approach and teacher's support in Explicit phonics instruction aided pupils' learning through practice during instruction. Pupils were actively engaged, and they received in-class support. This finding of the study aligns with Dickson and Tabors (2002), and Shanahan (2018) that in-class activities reinforce students' learning. The findings also support Martnez (2011), Martin (2011), Solity (2018), and Reutzel & Cooter (2013) on the effectiveness of phonics instruction. However, the result contradicts the findings of Bowers (2020) that phonics instruction is not effective at teaching reading. The study found that the effect of parental involvement was not significant on ESL pupils' achievement in reading and writing. This result is supported by Garbacz et al. (2017) that family engagement, and not parental involvement, significantly affect students' achievement. However, the result does not align with Stahl (2004), Lara and Saracosti (2019), and Nisbet (2019) that parents' involvement improves students' performance in and out of school.

Conclusion and Recommendations

The concern of the study is to examine how phonics instruction can improve the acquisition of literacy skills in lower basic schools in the Gambia. The results showed that phonics instruction has great potential at improving performance and pupil's level of proficiency in literacy skills. Phonics instruction encouraged students to actively participate during lessons through pronunciation drills and emphasis on the letter/sound connections which led to higher achievement. Phonics instruction also enhanced better teacher-pupil interaction during lessons and developed greater confidence in the pupils. Based on the findings of this study, the following recommendations were made:

1. The use of explicit and differentiated phonics instructional strategies in the teaching of literacy skills should be encouraged in Gambian schools to facilitate learners' active participation or practice sessions during the teaching-learning process.
2. Language teachers and pre-service teachers in the basic school system in the Gambia should be trained on the use of phonics instruction and other strategies that can improve students' learning experience.

Comment [GM57]: Rephrase

Comment [GM58]: Rephrase

Comment [GM59]: Rephrase

Comment [GM60]: Re-arrange/rephrase due to the use of 'However' x2

Comment [GM61]: Tense

Comment [GM62]: Rephrase/reorganise

3. The teaching of literacy skills in Gambian classrooms should be deliberate and intentional through regular pronunciation drills and practice sessions.

Comment [GM63]: Rephrase

References

Comment [GM64]: Inconsistent referencing

Adekola, O.A. (2007). *Language, literacy and learning in primary schools: Implications for Teacher Development Programs in Nigeria*. World Bank Working Paper No. 96. African Development Series. The International Bank for Reconstruction and Development/The World Bank

Alvaera, A. B.; Bayan, M. S.; and Martinez, D. P. (2009). Teaching approach, perceived parental involvement and autonomy as predictors of achievement. *The International Journal of Research and Review*, Vol. 1 September, 2009.

Armbruster, B. B., Lehr, F., Osborn, J., National Inst. for Literacy, W. C., National Inst. of Child Health and Human Development (NIH), B. D. (NIH), Bethesda, MD., Office of Educational Research and Improvement (ED), W. C. (ED), Washington, DC., & Center for the Improvement of Early Reading Achievement, A. I. (2001). *Put reading first: The research building blocks for teaching children to read. Kindergarten through Grade 3*.

B.F. Skinner (1957). Behavioralism, & Language Behaviour. http://www3.niu.edu/acad/psych/Millis/History/2003/cogrev_skinner.htm

Comment [GM65]: Inconsistent referencing

Bowers, J.S. (2020). Reconsidering the evidencethat systematic phonics is more effective than alternative methods of reading instruction. *Educ Psycho Rev* 32, 681-705. <https://doi.org/10.1007/s10648-019-0951-y>

Comment [GM66]: spacing

Caravolas, M. (2004). Spelling development in alphabetic writing systems: A cross- linguistic perspective. *European Psychologist*,9(1), 3-14.

Craig (nd). Synthetic phonics or systematic phonics? RRF Newsletter 47. One-to-One Publications, 33 Newcomen Road, Dartmouth, Devon TQ6 9BN. http://www.rrf.org.uk/archive.php?n_ID=71&n_issueNumber=47

Dickinson, D.K. and Tabors, P.O. (2002). Fostering language and literacy in classrooms and homes. National Association for the Education of Young Children. www.naeyc.org/resources/journal

Ekpo C (2008). The use of Jolly Phonics Fast Track Reading Scheme in Government Primary School. *Press Release* 2008.

Fodor, J.A., Bever, T.G., and Garrett, M.F. (1975) *The Psychology of Language: An Introduction to Psycholinguistics and Generative Grammar*. New York: McGraw-Hill.

Gambia Adult Literacy Rates (1960-2019). www.knoema.com

Garbacz, S.A, Herman, K.C., Thompson, A.M. and Reinke, W.M. (2017). Family engagement in education and intervention : Implementation and evaluation to maximize family, school and student' outcome. *J.sch Psychol* 62, 1-10. <https://doi.org/10.10.16/j.jsp.2017.04.002>

Geske, A. and Ozola, A. (2008). Factors influencing reading literacy at the primary school level. *Problems of Education in the 21st Century* Volume 6, 2008.

Hara, S. R. and Burke, D. J. (2001). Parental involvement: the key to improved students' achievement. www.adi.org/ournal/ss01/chapters/chapter16-Hara&Burke.pdf

Huttenlocher, P., Haight, W., Bryk, A., Seltzer, M., and Lyons, J. 1991. Early vocabulary growth: Relation to language input and gender. *Developmental Psychology*, 27: 236-248.

Jared, D., and Szucs, C. (2002). Phonological activation in bilinguals: Evidence from inter-lingual homograph naming. *Bilingualism: Language and Cognition*, 5(3), 225-239.

- Lara, L. and Saracosti, M. (2019). Effect of parental involvement on children's academic achievement in Chile. *Front Psychol* 27. <https://doi.org/10.3389/fpsyg.2019.01464> Retrieved online 12th April, 2021 from www.frontiersin.org
- Martin, C. (2011). In-context phonics instruction vs. In-isolation phonics instruction on development of early elementary students' literacy skills.
- Martínez, A.M. (2011). Explicit and differentiated phonics instruction as a tool to improve literacy skills for children learning English as a Foreign Language. *Gist Education and Learning Research Journal*. 11 (5): 25-49
- Medwell, J., Wray, D., Poulson, L. and Fox, R. (1998). Effective teachers of literacy. <http://www.leeds.ac.uk/educol/documents/000000829.htm>
- Ministry of Basic and Secondary Education (MoBSE), (2016). Education Sector Policy (2016–2030): Accessible, Equitable and Inclusive Quality Education for Sustainable Development.
- National Institute of Child Health and Human Development (2000). *Teaching children to read: An evidence-based assessment of the scientific research literature on reading and its implication for reading instruction*. Report of the National Reading Panel (NIH Publication No. 00-4754). Washington, DC: U.S. Government Printing Office.
- National Reading Panel Reports of the Sub-groups (2000). Teaching children to read: An evidence-based assessment of the scientific research literature on reading and its implications for reading instruction. www.nichd.nih.gov
- Nisbet, J. (2019). Parental involvement in education [+10 secrets for success]. www.prodigygame.com
- Oduolowu, E. and Lawani, L. A. (2005). Parents' involvement in children's schoolwork in English language: implications for building effective home-school partnership. In Dada, A., Abimbade, A and Kolawole, C.O.O. (Eds) *Issues in language, communication, and education*. Ibadan: Constellation Books.
- Ofulue, C. I. (2011). Literacy at a distance in multilingual contexts: issues and challenges. <http://www.irrodl.org/index.php/irrodl/article/view/981/1957>
- Okebukola, F.O. and Jimoh, J.A. (2010). Literacy for economic, socio and political development. *Ijagun Journal of Language and Literary Studies*, Vol. 1 No. 1. Tai Solarin University of Education, Ijagun, Ogun State.
- Olagbaju, O.O. and Ayedun, G.S. (2021). Face-to-face and remote instructional channels as predictors of undergraduates' interest and attitude to learning in Gambian Universities. *Turkish International Journal of Special Education and Guidance & Counseling (TIJSEG)*, 10(1): 10-20
- Olagbaju, O.O. and Babalola, R.O. (2020). Effects of Interactive Read-Aloud and Sustained Silent Reading Strategies on Achievement and Interest in Reading in Gambian Secondary Schools.
- Reutzel, D.R. and Cooter, R.B. (2013). Bottom-up theories of the reading process. Pearson Allyn Bacon Prentice Hall. <http://www.education.com/reference/article/bottom-up-theories-reading-process/>
- Reyhner, J. (2008). Phonics versus Whole Language. The Reading Wars. Northern Arizona University. http://jan.ucc.nau.edu/~jar/Reading_Wars.html
- Shanahan, T. (2018). Synthetic phonics or systematic phonics? What does research really say? www.readingrockets.org

Comment [GM67]: Couldn't find it

Solity, J. (2018). Commercial systematic synthetic phonics programmes: a possible cause of pupils' literacy difficulties. A poster presentation at the Society for the Scientific Study of Reading, Brighton.

Stahl, J.D. (2004). Parental involvement in education. www.jeffdstahl.com/workfiles/parentalinvolvement.pdf.

The Gambia - Literacy Rate (n.d.). <https://countryeconomy.com/demography/literacy-rate/gambia>

UNESCO (2006). *EFA global monitoring report 2006: Literacy for life*. Paris: UNESCO Publishing.

UNDER PEER REVIEW