Effects of Classroom Labelling Strategy on Pupils' Spelling Skill in Lower Primary Schools in Ife East Local Government Area, Osun State

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Abstract
This study examined the effects of classroom labeling strategy on pupils' spelling skills in lower primary school, taking Ife East Local Government Area, Osun State, Nigeria as the case study. It determined the effects of classroom labelling strategy (CLS) on pupils' spelling skill and also considered the interactive effect of gender on the pupils' spelling performance. The study carried out its findings using two public primary schools. The design for the study was a pretest, posttest quasi-experimental. The sample comprised 50 pupils in the public schools in the study area. The data collected was analysed using descriptive statistics and analysis of covariance (ANCOVA).The results of this study revealed that there was significant effects of CLS on the pupils' spelling skill as well as on gender considering the variety in their scores obtained from the respondents.

Keywords: Classroom Labeling Strategy, Pupils, Spelling Skills, Lower Primary Schools

1. Introduction

Spelling is a complex written language skill that draws upon a number of language abilitiesand knowledge. Phonological skills appear to be critical, in addition to orthographic knowledge, memory for word images (mental orthographic images), awareness of morphological structures and semantic relationships (i.e. knowledge of word parts and related words), as well as knowledge of spelling rules (Keuning & Verhoeven, 2008). Spelling has traditionally been viewed as an integral part of the reading process as suggested by moderate to high correlations between scores on reading and spelling tests (Frith, 1980). Whilst reading and spelling skills do interrelate, research findings suggest that there may be separate mechanisms for each activity and that spelling involves two processing systems – phonological and lexical (Brown, 1990). Moreover, researchers contend thatthe mastery of spelling presents a greater challenge for learners than learning to read (Holmes & Carruthers, 1998). According to Westwood (1999), spelling differs from reading in that it requires accurate retrieval and reproduction of sequences of letters which cannot be guessed from the text (textual cues) or from sentence construction (syntactical cues).

Spelling has been a frequent topic in educational research throughout the last decade. A large body of empirical data related to spelling instruction in regular education exists; however, little attention has been paid to investigating the effectiveness of these programs when being used in the classrooms of students with learning and behavior problems (Vaughn, Schumm, & Gordon, 1992). Spelling is a highly complex process and is often characterized as an area of difficulty for students with learning disabilities (LD) (Carpenter & Miller, 1982; Kirk & Elkins, 1975). Within the subject of spelling, there are ongoing debates about: (a) the role teachers play in teaching spelling, (b) the critical features of their teaching, and (c) the effectiveness of the instruction or technique they use. Spelling difficulties can be detrimental to the psyche of the learners. Classroom labeling is a strategy that involves writing of words in labels for individual pupil to see at a closer range, how they are written, their spelling and their pronunciation. The meaning of each word is explained before pasting the words on a flannel graph or on a board within and sometimes on the notice board within and outside the classroom. Most pupils in the lower primary schools in Osun State have been reported in literature to have poor reading skill emanating from abysmal spelling skill of pupils, among other factors. It was also traced to inappropriate methods that teachers at this level were using. Hence, the utilisation of classroom labelling strategy to enhancing the spelling skill of the pupils at the lower primary schools in Ife central local government area.

1.1 Purpose of Study

The purpose of this study is to improve the spelling skill of lower primary school pupils. The specific objectives are to:-

i. examine the effects of CLS on the pupils' spelling skill in Ife East Local Government Area;

ii. determine the effect of CLS on the performance of spelling skill based on sex in the study area; and

1.2 Hypotheses

This study made use of three hypotheses as follows:-
(i) H_0: There is no significant effect of CLS on the pupils' spelling skills in the lower primary school in Ife East Local Government area.
(ii) H_0: There is no significant interaction effect of CLS on the pupils' spelling skill in the study area based on gender.

2. Literature Review

Spelling is an important and ubiquitous part of every elementary student's formal curriculum and has been since school began (Heron, Okyere, & Miller, 1991; Scott, 2000). Learning to spell is important because it predicts the amount and quality of written composition in elementary students. Students who are effective spellers are more likely to be effective writers (e.g., Okyere, Heron, & Goddard, 1997; Scott, 2000). By contrast, students who spell poorly are more likely to forget their formulated writing ideas, and limit their writing by avoiding words they cannot spell (Alber&Walshe, 2004). In addition, poor spellers are often labeled uneducated or careless (Okyere, Heron, & Goddard, 1997; Scott, 2000.), and their problems with spelling often persist into later years and have lasting effects on their writing skills. This is especially true of children with learning disabilities who are far more likely to be poor spellers than their typically developing peers (Graham, 2000).

Despite its importance, spelling has received less attention in recent years and is often noted as a subject commanding only modest concerns in the elementary curriculum (Dagdag, McLaughlin, & Weber, 2002; Heron, Okyere, & Miller, 2007). This is perhaps due to the emergence of state-testing mandated by the No Child Left Behind Act, which focuses primarily on reading, math, writing, science, and social studies and not directly on spelling.

Several researchers have noted that elementary teachers do not have sufficient knowledge about effective spelling instruction (e.g., Schermerhorn& McLaughlin, 1997) and, consequently, may be incorporating teaching strategies that are effective only for some students. Further, spelling is consistently rated by teachers and students as one of the least preferred subject areas in the curriculum (Nies&Belfiore, 2006).

Bryant, Drabin, and Gettinger (1981) compared the effects of varying the number of words taught at one time on the spelling acquisition of 64 5th graders with disabilities. All groups learned the same number of words by the end of the week period; however, students committed many more errors when presented with more words to practice and there was more response variability in the more-words group. In a similar line of research, Cuvo et al. (1995) conducted a parametric study also examining, among other variables, the amount of practice on spelling acquisition and maintenance in four students with disabilities. The results showed minimal differences between the effects of small, moderate, and large amounts of practice on acquisition and maintenance. The data from these two studies may seem counterintuitive, but they suggest that the number of words to be practiced at one time and the amount of rehearsals are not significant variables in learning spelling words.

Houten and Houten (2014) and Mann, Bushell, and Morris (2010) examined the effects of breaking down words into smaller units on spelling acquisition. In the former study, Van Houten and Van Houten compared the effects of presenting words as a whole and words broken

down into syllables in 5 elementary students. Results indicated that students learned words faster when the words were broken down into units. Mann, Bushell, and Morris also examined a method to "break-down" words by having students sound out words and write what they say. The sounding-out strategy increased spelling performance compared to no-sounding out for all five elementary students. These studies suggest that breaking down words into smaller units improves spelling acquisition; however, the effects on maintenance and generalization to a writing context were not tested.

Interspersal and high-probability (high-p) sequencing are procedures that have been effective in teaching new skills to children (Cates, et al., 2003). Interspersal techniques alter the academic lesson by adding mastered tasks among tasks that students are learning. High-p sequencing is a procedure in which researchers present several tasks that are likely to be completed accurately first and then present a task that is less likely to be completed accurately. Neef, Iwata, and Page (2008) compared the effects of interspersing known items during spelling instruction and a high-density reinforcement condition to a control condition functionally similar to a traditional procedure in 3 students with disabilities. Interspersal training was the most effective in improving acquisition and maintenance in all 3 students.

Koegel and Koegel (2006) also showed evidence that interspersal training is superior to a more traditional approach. They compared the effects of interspersal training to a traditional baseline on academic skill acquisition in an 8 yr. old stroke victim. Interspersal training dramatically improved spelling acquisition relative to baseline performance.

In contrast, Cates et al. (2003) compared the effects of high-p sequencing and an intersperse procedure with traditional drill and practice on spelling acquisition in 5 typically developing 2nd graders. Results showed little difference between conditions with respect to number of words mastered; however, students required more time to learn the words in the high-p sequencing conditions than any other condition, and all but one student mastered target words fastest in the traditional drill and practice condition. This is the only known study to show a traditional procedure to be more effective than a specialized approach. It is possible that because these students were typically developing, a traditional approach was sufficient to improve spelling. Another possibility is that the words used in this study were all 3 letter consonant-vowel-consonant (CVC) words, relatively easy words to learn for many children. The undifferentiated results may have been partially a function of a ceiling effect. Perhaps the words used were not challenging enough to detect a difference between practice conditions.

A final manipulation occurring during spelling practice that has received attention in the literature is the application of a constant time delay (CTD) to improve spelling performance. Typically in these studies, the experimenter delivers a prompt immediately following antecedent stimulus, which in this case, is a model of the correct spelling of the word (i.e., the experimenter dictates the spelling word and immediately holds up a card with the correctly spelled word for the student to copy). In subsequent sessions, prompts are delivered 5 s following the target word or immediately following an error. The desired effect is that control will transfer from the prompt to the target word, so that it will come to function as a discriminative stimulus evoking the correct spelling response. In a single-case study, Stevens and Schuster (2007) investigated the effects of CTD on spelling acquisition, generalization, and maintenance in a 6th grade boy with a

learning disability in a multiple baseline design across word sets. Using the procedure described above, spelling acquisition increased when and only when the CTD procedure was implemented. Further, the effects generalized across settings and tasks and maintained at high levels over a 2-week period.

Stevens, Blackhurst, and Slaton (2013) extended these findings by including more participants and combining the CTD procedure with computer-assisted instruction. They used the same general procedure except that the experimenters designed a computer program to dictate words and deliver prompts and feedback. This procedure improved spelling for 4 of 5 students and the effects generalized to a written test and maintained on a two-week maintenance probe.

In more recent studies, Cates et al. (2007) and Coleman-Martin and Heller (2004)further examined the effects of CTD in students with disabilities. Consistent with other studies, Coleman-Martin and Heller demonstrated that CTD improved spelling in three children with physical disabilities. Cates extended the literature by comparing CTD to cover, copy, and compare (CCC), another commonly used spelling strategy for children with disabilities, in three typically developing 3rd grade boys. When using the CCC procedure, students first copy the model spelling word, then cover the word and write it from memory, and finally compare their written word with the model. CCC slightly improved spelling acquisition compared to CTD in all students, although it took more instructional time. The effects of the two strategies on maintenance and generalization were not as robust. Both CTD and CCC promoted maintenance over time and generalization to reading; however, CTD was slightly more effective than CCC for two students with respect to maintenance and for one student with respect to generalization. The authors concluded that because CCC took more time and only slightly improved spelling acquisition, either procedure could be used effectively.

In sum, the research from studies that examined only the effects of practice variables may inform educational practices in the following ways: amount of practice does not matter that much, breaking words down into smaller units may be beneficial to many learners, interspersing novel words with mastered words may facilitate acquisition, and using a constant time delay procedure will likely improve spelling in children with disabilities. Research investigating how antecedent variables can improve spelling is important, but is likely to be far more useful to teachers if the data from these studies can be evaluated concurrently with data from studies that address the consequences for spelling (i.e., errorcorrection).

In a study carried out by Okewole (2009), Class Labelling Strategy had significant effect on the pupils' reading comprehension and spelling skills. He used nursery school pupils in his study and found out the efficacy of Classroom Labelling Strategy in Ife Central Local Government Area of Osun State, Nigeria.Ibrahim (2010) explained the spelling errors in the writings of undergraduate Arabic students of English enrolled in the Department of English at the University of Jordan. Among the errors he noted were ones which resulted from silent letters, as the case in the word *government* (government). Also, some of the errors were caused by the differences between the Arabic and English sound systems. For example, the English language has two distinctive bilabial plosives /p/ and /b/, while Arabic only has the latter. This accounted for errors of substitution of /b/ for /p/ in words like *blaying*(playing), *bicture*(picture), and *Jaban*(Japan), and for spelling errors such as *hapit*(habit), *hoppy* (hobby), *clup*(club), *compination*(combination), and *distripution*(distribution). The difference between the two sound systems also accounted for spellingerrors such as *covernment*(government) since neither Literary

Arabic nor JordanianSpoken Arabic have the sound /g/. Furthermore, *coast* was written as *cost* because, as Ibrahim (2010) explained, the Arabic sound system only has /o/ while the English sound system has /ou/ and /au/.

In a more recent study, Abu-Rabia and Siegel (2015) investigated the reading, language, and memory skills of 56 bilingual Arabic children whose ages ranged between 9 and 14. The children were living in Canada and English was their main language of instruction while Arabic was the language spoken at home. Further, all of the children were learning to read and write in Arabic in a Heritage Language Program. The children were assessed in both their first and second languages. The results of this study demonstrated a significant relationship between the acquisition of word and pseudo-word reading, working memory, and syntactic awareness skills in Arabic and English.

Additionally, the Arabic speakers performed more poorly in all linguistic tasks, exceptfor the visual task. Furthermore, the Arabic children and the English monolingual children performed similarly on the reading, language, and memory tasks. Nevertheless, the Arabic children who had problems in reading in English performed better than the English monolingual children with reading disabilities in pseudo word reading and spelling tasks. The results of this study suggested a positive transfer from the regular nature of the Arabic orthography to the English orthography despite the different natures of the two systems (Abu-Rabia& Siegel, 2002).

In another study, Ryan and Meara (2010) investigated the spelling of Arabic speaking English language learners by using 100 frequent ten-letter English words. Each word appeared on a computer screen for approximately one second, followed by a blank screen for about two seconds. Later, the word reappeared spelled either correctly or in an altered form. The altered forms consisted of spelling errors in which one vowel was removed. The subjects were asked to say whether the presentations of the words wereidentical or not by pressing the YES and NO keys. The participants included ten Arabic speaking students enrolled in university, ten non-Arabic English learners whose English proficiency matched with the Arabic speakers, and ten adult native speakers of English who were teachers in university. The results of the study showed that the overall performance of the Arabic speakers was very poor. On the other hand, the native speakers performed very well and the non-Arabic speaking participants performed at intermediate levels. Furthermore, the reaction time data showed that the Arabic speakers were significantly slower than the other groups. The results of this study suggested that Arabic speakers have great difficulty in processing English words. Ryan and Mearaargued that vowels may be causing particular difficulty for Arabic speakers and suggested that Arabic speakers possibly use mental representations of English words that rely heavily on consonantal segments and ignore vowels.

3. Research Methodology

The research design used was pretest-posttest quasi-experimental. The population of the study comprised all the pupils in lower primary schools in Ife central local government area of Osun State. Two schools were used where one school was assigned to classroom labelling strategy (CLS) while the second school was assigned to conventional teaching method. One research instrument was used to test the spelling skill of the pupils. The instrument was validated by test expert. It was also subjected to a pilot study in a school outside the scope of the study to

ascertain its reliability. The reliability level of the instrument was derived using Pearson Correlation co-efficient of 74.3 which made the instrument reliable for the study.

3.1 Hypotheses Testing

3.1.1 Hypothesis One:

There is no significant effect of CLS on the pupils' spelling skills in the lower primary school in the study area. In order to test this hypothesis, data collected on lower primary school having being exposed to Class Labelling Strategy (CLS) on pupils' spelling skill which was determined bythe scores of the pupils.

TABLE 1

Descriptive analysis and analysis of covariance (ANCOVA) which were presented in table 1 and 2 respectively.

Class Labelling Strategy	**N**	**Mean**	**Std. Deviation**
Conventional	14	1.7857	.57893
Classroom Labelling	32	3.7188	.45680
Total	46	3.1304	1.02434

Table 1 showed that CLS has higher mean score of =3.72 than conventional method having mean score of 1.76. This implies CLS had better spelling skill performance on the lower primary school pupils in the study area than dictation.

TABLE 2:

Analysis of Covariance (ANCOVA) of the effect of CLS on the pupils' spelling skills in the lower primary school in the study area

Source	**Type III Sum of Squares**	**Df**	**Mean Square**	**F**	**Sig.**	**Partial Eta Squared**
Corrected Model	36.391[a]	1	36.391	147.907	.000	.771
Intercept	295.087	1	295.087	1199.332	.000	.965
CLS	36.391	1	36.391	147.907	.000	.771
Error	10.826	44	.246			
Total	498.000	46				
Corrected Total	47.217	45				

a. R Squared = .771 (Adjusted R Squared = .766)

The results show (F=148.222, p<0.05). The differences between group means corrected for the covariance influence a statistically significant. The partial Eta Squared value indicates the effect size and should be compared with Cohen's guidelines (0.2 – small effect, 0.5 – moderate effect, 0.8 – large effect). It can be seen that for "CLS" the effect size is moderate (0.771). It reveals that the classroom labelling strategy explains 77.1% variance in the pupil's spelling skills. Therefore, the null hypothesis that states that there is no significant effect of CLS on the pupils' spelling skills in the lower primary schools in the study area is hereby rejected. The results indicate CLS has significant effect on the pupils' spelling skills.

3.1.2 Hypothesis Two:

There is no significant effect of CLS on the pupils' spelling skills in the lower primary school in the study area based on gender.

In order to test this hypothesis, data collected from lower primary school pupils having beentaught using Class Labelling Strategy (CLS) and gender of the pupils were subjected to descriptive analysis and analysis of covariance (ANCOVA) which were presented in Tables 1 and 2 respectively.

TABLE 3:
Descriptive analysis of the interaction effect of CLS and gender on the pupils' spelling skills in the lower primary school in the study area

Gender	N	Mean	Std. Deviation
Male	14	1.7857	.57893
Female	32	3.7188	.45680
Total	46	3.1304	1.02434

Table 3 showed the descriptive analysis of the effect of CLS on the pupils' spelling skills in the lower primary school in the study area. It can be observed that female pupils have higher mean score of (mean=3.72) than their male counterparts with the mean score of 1.76.

TABLE *4:*
Analysis of Covariance (ANCOVA) of the effect of CLS on thegender of the pupils in the lower primary school in the study area

Source	Type III Sum of Squares	Df	Mean Square	F	Sig.	Partial Eta Squared

Corrected Model	8.140[a]	1	8.140	148.222	.000	.763
Intercept	114.474	1	114.474	2084.375	.000	.978
CLS	8.140	1	8.140	148.222	.000	.763
Error	2.526	46	.055			
Total	144.000	48				
Corrected Total	10.667	47				

a. R Squared = .763 (Adjusted R Squared = .758)

The results show (F=148.222, p<0.05). The differences between group means corrected for the covariance influence a statistically significant. The partial Eta Squared value indicates the effect size and should be compared with Cohen's guidelines (0.2 – small effect, 0.5 – moderate effect, 0.8 – high effect). It can be seen that for "CLS" the effect size is moderate (0.763). It reveals that the class labelling strategy accounted for 76.3% variance in the pupil's spelling skills. Therefore, the null hypothesis that there is no significant interaction effect of CLS on the gender of the pupils' performance in spelling activities in the lower primary schools in the study area is hereby rejected. This, therefore, implies that CLS has significant effect on the sex of the pupils' spelling skill.

4. Discussion of findings

The above analyses reveal that the CLS has significant effect on the pupils' spelling skills which shows that the CLS has significant effect on the spelling skills of pupils in the lower primary schools. The result corroborates Okewole (2009)'s findings using CLS on nursery two pupils. The CLS was also found positively significant to improving the spelling skills of the children in the nursery level.

The study also revealed that CLS has significant effect on the sex of the pupils' spelling skill.The study established that majority of the respondents who scored high in the test conducted were female as evidenced in the result provided above. This finding negates the result of the study carried out by Foorman and Torgesen, (2001) in their study andOkewole (2009) when he used classroom labelling strategy on nursery two pupils' spelling skill. The study revealed that sex was not a predictor of pupils' performance when CLS was used.

4.1 Conclusion

The study concluded that classroom labelling strategy has the potential of improving the spelling skills of lower primary pupils in Ife Cental Local Government Area of Osun State, Nigeria

4.2 Recommendations

On the basis of the research findings and conclusions derived from this study, the following recommendations are presented as follows;

(i) That CLS be incorporated into the lower primary school curriculum.

(ii) The teachers handling the children be familiar with the procedures and principles of using the CLS.

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