



## ICT BASED INTERVENTION FOR ADDRESSING SPELLING ERRORS: AN ACTION RESEARCH STUDY

Swarna Chandrika Mahapatra<sup>1</sup> & Shakti Prasad Mishra<sup>2</sup>, Ph. D.

<sup>1</sup>PhD student, RIE, BBSR

<sup>2</sup>Department of Education, RIE, BBSR

### Abstract

*This study examined the effectiveness of ICT (Information and Communication Technologies) based intervention on spelling errors of class 5 students in an English medium school. The objectives of the study were to: (i) identify and categorize the common spelling errors made by the students; (ii) develop and implement ICT based activities for addressing those spelling errors; (iii) evaluate the efficacy of the ICT based intervention. Methodology on action research study was followed in this study. The investigator used class 5 (number of students 40) as the sample for this study. Descriptive statistics, pre-intervention test results, and post-intervention test results based on class 5 textbooks were used as data. This study highlighted the importance of action research and ICT based intervention in addressing the spelling error problem. The findings revealed that interventions contributed to minimizing spelling errors among the students. It is therefore recommended that teachers should undertake the theory-driven action research to solve problems and improve the quality of education in general and use appropriate ICT based interventions to address class 5 students' spelling errors in particular.*

**Keywords:** ICT, spelling errors, Action Research



*Scholarly Research Journal's* is licensed Based on a work at [www.srjis.com](http://www.srjis.com)

## INTRODUCTION

Writing is a method of representing language in visual or tactile form addressed in all domains of everyday life. To convey meaning through writing, someone must be able to spell words accurately. The varieties of spelling researches, reported so far, provides teachers with a theoretical framework for effectively teaching children how to spell. Within a modern educational context though, the use of technology is suggested to have beneficial effects on learning. This claim is supported by a growing body of research evidence that the application of Information and Communication Technology (ICT) motivates pupils, improves their performance and raises educational standards (Torgerson&Elbourne, 2002). The term “technological literacy” is used to describe this trend and is defined as the ability to incorporate computers for improving learning, productivity and performance (Breuch, 2002; Bybee, 2003). The notion of literacy has changed. Nowadays, literate is someone who can exploit technology and use it for increasing his academic performance (Smolin& Lawless,

2003). As they mention "... technology can also help students organize and synthesize information in different ways, facilitating their ability to construct and refine their knowledge" (Smolin & Lawless, 2003, p. 572). The computer is an increasingly used learning tool within all levels of formal education (Dickhäuser & Stiensmeier-Pelster, 2002). As Kerawalla and Crook (2002) argue, computers can extend students' learning opportunities, not to mention the increased preference that students display toward a computer-based instruction (Steele et al., 2002; Saunders & Klemming, 2003) over conventional teaching. Torgerson and Elbourne (2002, p. 140) mention that "... an ICT intervention may be preferable if it is seen as more enjoyable for the participants", adding that the implementation of ICT to teaching spelling was found to be effective on students' performance. Spelling is a more difficult skill to master than reading (Bosman & Van Orden, 1997), and students who appear to read relatively adequately may still be atrocious spellers, whereas the opposite is rarely seen (e.g., Frith, 1980). According to McAteer (2013), action research has the following characteristics: it is theoretically and methodologically robust, it serves as an authentic representation of learning and changing, it can initiate changes in instructional strategies, and finally, it has practical utility.

## **LITERATURE REVIEW**

Khansir (2012a) argues that there is a mutual influence between the alphabetic writing system and the phonological system of a language. Carter and Nunan (2001) say that in language learning, pronunciation is used as the production and perception of the significant sounds of a particular language to achieve meaning in the contexts of language use. Kenworthy (1990) says that the spelling system is considered in two different situations: the situation of the reader and that of the writer. Since the teacher is a crucial part of the whole teaching learning process, they also affect students' spelling practices. Shuja (1996) indicates that for an English teacher is necessary to have adequate knowledge of phonetics to be able to hear mistakes in the students "pronunciation, to cover their faults precisely in terms of articulatory positions and movements and then to devise some useful remedial exercises when just imitation does not show desirable results. Kurt Lewin first introduced the term "action research" in 1947 while conducting researches, sociological in nature, directed to bring changes in social programs (McKernan, 1991). Action research specifically refers to a disciplined inquiry done by a teacher with the intent that the research will inform and change his or her practices in the future. This research is carried out within the context of the

*Copyright © 2020, Scholarly Research Journal for Humanity Science & English Language*

teacher's environment—that is, with the students and at the school in which the teacher works—on questions that deal with educational matters at hand. (Ferrance, 2000, p.1)

## **RATIONALE**

It is being observed in almost all schools and in every class that students commit spelling errors, the extent of which might vary. Although teachers are concerned, sometimes they do not know exactly how to address this issue. Keeping up motivation and interest is an important prerequisite for any subject students need to acquire, particularly with respect to spelling, because it is one of the least popular topics in primary school; even school teachers rate it as one of their least favoured subjects (Graham, 1983). If we can strengthen the motivation for young spellers to work on spelling half the battle may be won in case of students, lack of discipline and improper study habits and insincerity leads to spelling errors. Bose (2005) argues that one of the important errors in the learning of the English language is spelling errors. He believes that most of the language learners make errors in spelling due to wrong learning of the spelling of words and lack of practice in spelling. Keeping in mind all these above aspects the present study was undertaken to meet and solve problems in school education.

## **OBJECTIVES**

The objectives of the study were-

- a) To identify and categorize the common spelling errors usually made by class five.
- b) To develop and implement techniques to address regarding spelling errors in the classroom and to investigate their impact.
- c) To enable students to develop their vocabulary skills through English reading and writing.

## **DELIMITATION OF THE STUDY**

The study was confined to students of class 5. The study is limited to classwork, homework, and school textbooks.

## **HYPOTHESIS**

ICT based intervention will help in addressing issues related to spelling errors to a great extent if students are made to practice writing of spellings followed by teacher's feedback.

## **ACTION PLAN**

The action research was taken up obtaining necessary permission from the principal of the school.

## METHODOLOGY

The researcher identified the spelling errors of the students in the class. Surveying classwork, homework and textbook helped in identifying those errors and the students committing them. A spelling test was taken as the pretest for the study and ICT based activities were planned for a period of four weeks for the improvement of students. The major measures were as follows:

- i. Maintaining an individual list of error words
- ii. Corrective way word study
- iii. Motivating and developing confidence through measures. (quiz and word game)
- iv. Practice and spelling test

The following diagram gives an overarching idea of how I designed and carried out the whole action research project.



As the diagram shows and as stated above, I started it with planning the action to be taken after administering the pre-test that helped in identifying the spelling error. The action itself consisted of providing ICT based intervention, which is described later. It was observed that those students were not only motivated to learn but also improved in their spellings every week.

At the end, post-test was conducted to see the end result and the results revealed that students did not commit any spelling errors. The comparison of results of the pretest and post-test revealed that the student's spelling errors were minimized; This analysis helped me to reflect upon the efficacy of the intervention and how it can be used in other subjects too. This reflection further led to the writing of implication part of this paper.

## SAMPLE

The class for the research was class 5 and the class size was 40.

## PRE- INTERVENTION TEST

Spelling test is the most effective means for identification of spelling difficulties of individual students. It involves listening and writing skill. To determine the present status of the students in spelling and to discover the amount of deficiency, a spelling test was conducted as a pre-test 25 random word was taken from chapter one and two of English textbook of class 5 and

were dictated randomly without any repetition. From the test, spelling errors were identified. The performance of the students was evaluated. The scores of the students were classified into- below average, average and above average.

Marks secured	% of marks	GROUP	No. of students	% of students
21-25	81% - 100%	Above average	4	10%
11- 20	40%- 80%	Average	23	57.5%
0-10	Below 40%	Below average	13	32.5%

The students below average were taken up as the subjects of the study. They were 13 in number.

First, a reading test was taken to know the ability to pronounce the words correctly. Khansir (2012a) mentions that the English language has words which are sometimes spelt quite differently from the way they are pronounced. In other words, English spelling and English pronunciation are hostile and strangers to each other; hostile, because neither accepts without a quarrel the usage of the other; strangers because very often one does not recognize the other. Bose (2005) argues that one of the important errors in the learning of the English language is spelling errors. He believes that most of the language learners make errors in spelling due to wrong learning of the spelling of words and lack of practice in spelling. An action plan was taken up to improve the standards of those thirteen students who secured below 40% marks.

### **INTERVENTION - ICT BASED ACTIVITIES**

To improve and to minimize the spelling errors of the students, corrective measures were planned and adopted in the class. ICT based techniques were adopted. Every week two classes were taken to implement the planned activities considering the available resources and time to bring improvement in spelling.

<b>1st Week</b>	Period- 1	Maintaining an individual list of error words
	Period- 2	Spelling test
<b>2nd Week</b>	Period- 1	Quiz Competition
	Period- 2	Spelling test
<b>3rd Week</b>	Period- 1	Word Game
	Period- 2	Spelling test
<b>4th Week</b>	Period- 1	Practice the words correctly
	Period- 2	Spelling test

For the proper implementation of the plan ICT based activities were planned and the steps were taken up in the following way.

**1st week** -The students were asked to maintain their own list of spelling errors and those were given special attention and continuously practised them by listening through the audio track (audio track of how words are pronounced). Even images of those words were shown on the computer in form of flashcards. After repeated practise of those words spelling test was taken. After the first week, it was found that students were motivated to learn the spelling.

**2nd week** -To arouse interest among the students to learn, a quiz completion was organized. Students were instructed to come prepared with the error words and small prizes will be given for the winners. Quiz competition was conducted on spellings (those error words). The students were divided into two groups. They were asked to follow the following rules.

Each student will be asked to listen to a word (audio track) from chapter one and two of their English textbook. Then, they will be asked to spell it correctly, if they did it (correct spelling will be reflected on the screen) then marks will be awarded if not then no one will be from the team will spell rather the question will be passed to the other team (individually) and bonus points will be given for the correct answer. During the competition, the students were found to be actively participating in the competition.

The spelling test was taken in the next class to mark the improvement in the written form. It was found that there was a decrease in the number of spelling errors.

**3rd week** -In this week the students played a game on the computer. The game was specially designed for checking those spelling errors. For example- ‘fanciful’ – students would see words like – fancifull, facnful, fanscful, fanciful on screen. Each student would be asked to click on the correct spelling. If they do then he would gain points. The spelling test was taken in the next class to mark the improvement in the written form. It was found that there was a decrease in the number of spelling errors.

**4th week**-The students heard an audio track of the words then they were asked to write spelling on the paper. The spelling test was taken in the next class to mark the improvement in the written form. It was found that there was a decrease in the number of spelling errors.

**Performance Assessment after ICT based interventions**

% of marks	After week	1 <sup>st</sup>	% of marks 2 <sup>nd</sup> week	3 <sup>rd</sup> week	4 <sup>th</sup> week
Below 40%	9	6	3	-	-
41- 80%	5	4	5	-	-
81-100%	2	2	4	-	-

### **POST INTERVENTION TEST**

The post-test intervention was conducted after ICT intervention was over to see the end result. The test constituted the following questions.

1. Choose the correct words and fill in the blanks.
2. Correct the meaning and complete the word.
3. Complete the sentences using the correct word.

After evaluating the answer papers, it was found that there was a remarkable improvement in the performances of the students.

### **Findings and Implications**

It was found that ICT based interventions helped in minimizing spelling errors among the students. There was a marked improvement in the spellings and the activities undertaken using ICT helped the students to be engaged and take ownership of their learning because they participated in various activities that resulted in their learning versus just being a passive recipient of information. As one of the features of action research is to work on a particular issue and provide immediate action on it, these activities helped the students to rectify their errors during the intervention to learn better in an enthusiastic manner with immediate feedback. Inspecting the word one has just written and correcting it when necessary not only provides immediate feedback on the accuracy of spelling the word but is also an important step in the development of self-monitoring skills (cf., Reid&Harris,1993).

This study has several implications in light of the results described above. The findings of this action research have significance for teachers, professional developers, teacher preparation, and school administrators. Teachers should embrace action research as a means for their professional development and should undertake it in solving their day-to-day classroom problems and improve the quality of education. It is highly recommended that teachers should use various technological tools and ICT based activities in their classroom to make lessons more interesting and learning more sustainable. Nevertheless, teachers should try to take initiative to integrate ICT based activities in the classroom and form communities amongst themselves to share related resources. Professional developers should take care to design and disseminate workshops specially focused on ‘how,’ ‘what,’ and ‘where’ of ICT based activities. They should teach teachers how to conduct such activities, where to find such resources, and how to integrate them to various topics or subjects. Finally, school administrators should also understand the contribution of action research and the crucial role

it plays in improving students' learning. Principals should provide all the needed resources to the teachers and encourage them to conduct action researches in their classroom. For example, action research groups can be formed in school with teachers with different backgrounds so that they can inform each other about their practices and successful instructional strategies. Finally, it will be overall beneficial for the school as the corrective measures of such action researches could be used to solve similar problems in other areas.

## References

- Bosman, A. M. T., & de Groot, A. M. B. (1992). *Differential effectiveness of reading and non-reading tasks in learning to spell*. In F. Satow, & B. Gatherer (Eds.), *Literacy without frontiers* (pp. 279–289). Widnes, Cheshire, UK: United Kingdom Reading Association.
- Bosman & Van Orden, 1997), Perfetti, L. Rieben, & M. Fayol (Eds.), *Learning to spell: Research, theory, and practice across languages* (pp. 173-194). Hillsdale, NJ: Lawrence Erlbaum Associates.
- Breuch, L.A.K. (2002). *Thinking Critically about Technological Literacy: Developing a Framework to Guide Computer Pedagogy in Technical Communication*. *Technical Communication Quarterly*, 11, 267-88.
- Brown, A. S. (1988). *Encountering misspellings and spelling performance: Why wrong isn't right*. *Journal of Educational Psychology*, 80, 488–494.
- Bybee, R.W. (2003). *Fulfilling a Promise: Standards for Technological Literacy*. *The Technology Teacher*, 62, 23-6.
- Carter, R, and Nunan, D. (2001). *Teaching English to Speakers of Other Languages*. Great Britain: Cambridge University Press.
- Dickhäuser, O., &Stiensmeier-Pelster, J. (2002). *Gender differences in computer work: evidence for the model of achievement-related choices*. *Contemporary Educational Psychology*, 27, 486–496.
- Ferrance, E. (2000). *Action research*. Providence, RI: Brown University, Northeast and Islands Regional Educational Laboratory
- Graham, S. (1983). *Effective spelling instruction*. *The Elementary School Journal*, 83, 560–567.
- Kenworthy, J. (1990). *Longman Handbooks for Language Teachers: Teaching English Pronunciation*. London: Longman.
- Kerawalla, L., & Crook, C. (2002). *Children's computer use at home and school: context and continuity*. *British Educational Research Journal*, 28(6), 751-771.
- Khansir, A.A. (2012a). *English Spelling and Sound*. Germany: Lap Lambert Academic Publishing.
- Khansir, A.A., (2013). *Applied Linguistics and English Language Teaching*. *Middle-East Journal of Scientific Research*, 15, 1140-1146.
- McAteer, M (2013). *Action Research in Education*. London, Sage.
- McKernan, J. 1991. *Curriculum Action Research: A Handbook of Methods and Resources for the Reflective Practitioner*. New York: St. Martin's Press.
- Reid, R., & Harris, K. R. (1993). *Self-monitoring of attention versus self-monitoring of performance: Effects on attention and academic performance*. *Exceptional Children*, 60, 29–40.
- Smolin, L., & Lawless, K. A. (2003). *Becoming literate in the technological age: New responsibilities and tools for teachers*. *The Reading Teacher*, 56, 570-577.
- Shuja, A. (1996). *A course of spoken English*, New Delhi: APH Publishing.
- Torgerson, C.J., &Elbourne, D. (2002). *A systematic review and meta-analysis of the effectiveness of information and communication technology (ICT) on the teaching of spelling*. *Journal of Research in Reading*, 25, 129-143.