



Exploration the effect of Four steps strategy on the enhancement of the spatial vocabulary in the subject of English grade III of male students in KPK Pakistan

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Abstract: This study was experimental in nature. In the context of English grade III for male students in KPK, Pakistan, this study investigated the impact of a four-step strategy on the enhancement of spatial vocabulary.. This study's sample included ten male students of the grade III. The other objectives of this research included (i) to investigate how a four-stage strategy effects the enhancement of spatial vocabulary in the first control group of students, (ii) to evaluate the effectiveness of a four-stage strategy for enhancing students' spatial vocabulary in experimental group students, (iii) to evaluate the effect of a four-stage strategy in improving students' spatial vocabulary in the English language arts class control and experimental groups students. This study was conducted at APS (Iqra) Risalpur Cantt Nowshera. 10 male students of the grade III were selected as the sample of study by applying purposive technique of sampling. The duration of the study was four weeks. Pre-test and the post-test was used for collection of data. The collected data was converted into tables. Then t-test was used to analyze the data. The major conclusion of the research indicated that four step strategies imparted significantly to increase spatial vocabulary of male students of grade III in the subject of English. Comparatively the performance of experimental group was much better than control group. For recommendations it is suggested that male students in subject of the English may taught by the four step strategy to increase the spatial vocabulary in the subject of English.

Key words: Spatial vocabulary, Four step strategy, English grade III, Teaching methods

1. Introduction

In present situation, it has been proved that the countries in which English were spoken, these countries performed successfully in every field of life. Due to this the inhabitants, educational departments and government of these countries took keen interest to give importance to English language Likewise in Pakistan it was perceived that English language be given due significance in the prevailing situation. In Pakistan English is considered the language of upper class of society as well as the language for teaching education. This language opened the gate of knowledge related to science equipments, technical subjects, computer, national and international medium of statement (Din & Ghani, 2019).

According to Ghani (2003), English is proving a route for development and prosperity of Pakistan. The universities are educating the students for getting reasonable employment with the help of English language. English as a secondary language in Pakistan effected education as well as economic prosperity. English is performing prominent

role to develop industry, economy and commerce. This language necessitates to learn it due to its role of lingual Franca. The role of language is so powerful role of that it will be learnt worldwide. Resultantly those who speak well English, will be able to get employment (Warsi, 2004). Drill methods focus to learn English after developing habit to speak it. Repetition of speaking develops deep roots to understand it at high level. The practice of substituting one word can be practiced to use this word in a phrase to other phrase (Larsen-Freeman, 2000). Siddiqui (2014) mentions that knowledge about English tenses is very important to communicate verbally or in writing. Anyone can increase his/her communication skills with the help of tenses. Both for teaching and learning knowing tenses is compulsory to learn English. In this respect a teacher or learner can practice different techniques. Among these drill is one of them. Four phases make up this method: modelling, directions, yes/no questions, and pronouncing the words.

1.1 Modelling

For the introduction of space and location concepts it is considered the first step. In this regard the teacher makes use of the things available in the class for comprehension of the concept. According to Julie (2006) drill method is being practiced to teach foreign language. In audio lingual method of learning language we focused on practice orally through drill method of structure of various sentences Richards and Schmidt (2013) opined that drill method was used to learn language by strengthening the structures of sentences. It was also learnt through pronunciation with the help of repetition and practice. Ask Following the teacher's directions, students must place the toy "on" the desk, book, etc. Although kids may not be able to recurrence words at this point, their comprehension of the idea is being noted. After the students have mastered following directions, the instructor may go on to asking them yes/no questions. Instead of repeating the term itself, the instructor checks their comprehension by examining students questions such, "Is toy on the table?" But isn't it a possibility? Now that the instructor has seen how well the kids did in the first three phases, she may go on to the last step, which is to have them pronounce the words. At this point, students are simply asked to repeat the word out once.

1.2 Rational of the Study

Globally the system of education are taking interest to use innovative techniques for the teaching and learning. In this respects many countries have changed their teaching strategies in accordance with fast increase in knowledge and information. Every country examine its educational system thoroughly for developing and updating teaching techniques. For reducing the gap to develop latest teaching methods and strategies are required. The four-step approach is novel and widely regarded as an improved method of instruction. To illustrate concepts like "in," "on," "at," etc., she may use a toy, a book, or a pencil. A stuffed animal might be placed on the table by the instructor and simply stated as such. Next, once the students have a firm grasp of the material, go over it again and again. Then, when the instructor instructs them to place the toy on the desk, a book, etc., the children must adhere to her directions. Students are not yet asked to redo the assignment; rather, their level of comprehension is being evaluated. The class will move on to yes/no questions after the students have mastered following directions. Although students are not explicitly asked to repeat the term, the instructor checks their comprehension by asking questions. In first of the three steps, teacher observes students' performance. Now it is the final step to decide towards the question to ask the students for saying the words. At this point, students are simply asked to repeat the word out once. Objectives of the research were determining if and how a four-stage strategy improved the spatial enchantment vocabulary of ESL students from Khyber Pakhtunkhwa.

1.3 Statement of the Problem

One of the main goals of the teaching the spatial vocabulary is to help students recognize when a preposition is used correctly. Whether they're studying English or anything else, they should be able to pinpoint an object's exact location with ease. We can improve the learners' cognitive capacities by using these strategies. The purpose of this research was to determine the effect of a four step strategy on student spatial vocabulary.

2. Literature Review

According to the findings of Maratsa's (1973) research, once students have a firm grip of dimensional adjectives, they see these objectives as permanent identities. For example, they learn to refer to a vehicle as being huge, but they do not consider a car that is comparable to a city bus to be little. According to Susanto (2017) if we asked the question to categorize large and small to the students of three or four years. They might answers worst them two

years old kids, It depended upon the use of motivation for teaching. Susanto (2017) states that children who are in their third and fourth years of preschool begin to have some knowledge of the comparative nature of these phrases. However, it is possible that they will still make some blunders while they are speaking. Additionally, children aged three and four years old had different conceptions of what was tall and what was slim. It is possible that it is not the same. There is a possibility that the pupils who spoke Arabic would behave differently from the children who spoke other languages (Gathercole, 1982). Marchman, Fernald, and Hurtado (2010) investigated the learning of dimensional adjectives in bilingual preschoolers. The study aimed to determine the following: the number of dimensional adjectives that children could understand in both languages; whether children are taught an unfamiliar word before it is recognized in a combination of opposite dimensions; and the order in which children acquire dimensional words. The investigation looked at the children's fundamental vocabulary and their grasp of multidimensional adjectives in both English and Spanish. There was a significant correlation between children's total vocabulary size and their ability to grasp dimensional terms in both Spanish and English. In other words, children with larger overall vocabulary sizes knew more words from more dimensions. Also explored was the possibility that a person's native language influences their capacity to grasp dimensional words. Given that learning dimensional words is based on the same principles as learning another section of terminologies, the link between common and dimension words is predictable. However, it shows internal consistency, which is a crucial requirement for a new measure. According to the study's findings, there is no cross-language correlation between fundamental Spanish and English dimensional words, nor between fundamental Spanish and English dimensional words; furthermore, neither of these sets of words can predict the meaning of Spanish dimension words.

Ferrara, Hirsh-Pasek, Newcombe, Golinkoff, and Lam (2011) and Pruden et al. (2011) indicate that the major objective of this study was to establish whether or not there is a connection between children's knowledge of dimensional adjectives and their capacity to scale spatial relationships. This was the reason for doing this research. Even after taking into account characteristics such as the child's age and the overall level of ability in both Spanish and English, the retention rate remained the same. According to the results, the development of learners' spatial language has a significant role in the construction of basic spatial awareness, which contributes to the support of the notion. Whether or not dimensional descriptors correspond with spatial reasoning abilities was the subject of this research, which was the first of its type to explore the topic. In order to get an understanding of the relationship between spatial thinking and spatial language, it is necessary for future research to investigate the evolution of this link across time. In recent years, there has been a profusion of research that has brought attention to the function that spatial language plays in the cognitive development of children (Bowerman & Choi, 2003; Ferrara et al., 2011; Verdine et al., 2017). The major emphasis of these investigations was on the impact that different spatial language terms have on human cognition, specifically with regard to form, position, and height. As a result of their interrelated structure, which enables them to dive into topics pertaining to the study of language and cognition, researchers in the area of cognitive development have been interested in dimensional words for a very long time.

In the study that Levine et al. (1999) carried out, they examined 280 children who were between the ages of four and six years and six months. To research the gender disparities that present themselves in the academic performance of students of various ages, we separated the children into six groups according to their ages. This allowed us to examine the relationships between gender and academic performance. A group that has a length that spans from four years to four years and a half months, for example, would have a duration of six months. It seems that there is a significant influence mostly based on age taking place considering the two age groups that are the youngest (for example, those who are four years old) had much lower aggregate values than the other four age groups. They had significantly lower values. In addition, the third group, which consisted of individuals who were in the middle of their age range, achieved higher scores than the two groups that were the youngest. However, to everyone's surprise, they fared worse when compared to the groups that were older. Each of the three other categories of age that were judged to be the oldest were relatively comparable to one another in terms of their characteristics. This gender superiority remained persistent across all of the principal age groups whenever the researchers stimulated the gender gap. The researchers found that men had a clear advantage at the age of four years and six months, and this gender superiority remained stable throughout the whole investigation. According to the results of this study, measuring has the potential to definitively detect gains in children's ability to rotate rationally and transition between different situations. The study, on the other hand, did not provide any precise information on the factors that could have contributed to the difference in individual performance. There are a broad variety of potential explanations for the significant discrepancies in the academic performance of students; nevertheless, the psychological features of the child may be one of the most significant explanations for these

variances. The dimensional perceptions of a kid have already moved to such a degree by the time they are three or four years old that they are able to draw conclusions that seem to be illogical despite the fact that they have not yet reached this age (Levine et al., 1999).

3. Research Methodology

3.1 Population

This study's population consisted of all Grade-III students enrolled in English language programs at schools located in Khyber Pakhtunkhwa Province.

3.2 Sample

The research was conducted at APS (Iqra) Risalpur Cantt Nowshehra. Ten boys students of grade III constituted as sample (subject) of the study. The sample selection was based on purposive sampling technique. At the beginning of academic years all the grade III students were sample of study. Ten boys students of Grade-III who were studying at APS (Iqra) Risalpur Cantt Nowshera were selected through purposive sampling technique.

3.3 Research Design

We compared the scores from the first two cycles (weeks) of this quasi-experimental study, which used a single-group, four-cycle pretest-posttest design. In this research, randomized groups, pre-test post-test design was selected. This design is also called single group four cycle pre-test design. The comparison of the first two cycle (weeks) was made.

3.4 Tools of the study

Two tests (pre-test and post-test) were devised for the sample students. Each test had six items. These items were related to blanks filling and to match the column. The researcher herself developed the tests under the guidance of her supervisor. Then both the tests were delivered to that students during four weeks. Items, procedures, or processes that demand action from the examinee made up the tests.

3.5 Treatment

For teaching the students of both experimental and control groups lesson plans were prepared after selecting lessons from the textbook. The learning objectives were same for both the groups. Lecture method was used to teach control group while for teaching experimental group four step strategy was used for spatial learning vocabulary. Following steps were adopted for treatment to experimental group.

3.6 Modelling or Labelling

To help the students understand what "up" means, the teacher used flashcards and illustrations. After presenting students with images, the teacher would repeatedly explain the object's location to help them understand it. Images showed a monkey making its way "up" a tree, a ladder, and even a mountain. By introducing the students to prepositions via these items and activities, the teacher effectively introduced them to the concept. To avoid introducing a novel concept like "down" here, she used extreme caution. As an alternative to stating, "Monkey is climbing down the tree," the teacher said, "it is not going up ladder." This meant that students only needed to understand one word when the teacher was giving them guidance. With the concept of "up" well explained and reiterated, Continuing with the activity, the instructor next had the class follow the rules by either climbing into the chair or putting the toy monkey on the ladder. As a first step in helping the students understand the idea, the teacher was able to teach them by giving them commands.

3.7 Asking Yes/No Questions

In the next phase, the teacher inquired the student simple questions such, "Is the monkey climbing the ladder?" or "Is the monkey not climbing the hill?" Teachers also gained insight on their students' conceptual clarity from this inquiry.

3.8 Saying the Word

After students had mastered a concept in one level of the strategy, they moved on to the next, where the instructor introduced a new phrase. Where was the monkey, the teacher questioned the students. Which meant they had to use

the word "up," which they had been practicing all along, to respond. With the use of lesson plans developed specifically for this group, the teacher lectured the control group's students.

3.9 Procedure to Collect Data

Teacher made post test (Q₂, Q₄, Q₆, Q₈) were delivered to both experimental and control group at the end of experimental to assess the achievement of the students. Similarly pre-test (Q₁, Q₄, Q₅, Q₇) were taken under like environmental circumstances.

3.10 Analysis of Data

After the collection of data from students it was tabulated. Finally the analysis of data was done by using the statistical test of pair t-test at 0.05 level of significance.

3.11 Finding and Interpretation of Data

The data was analyzed according to the objectives of the study and it was interpreted and findings were made.

4. Results and Discussion

The study used t-tests to analyze and interpret the data in light of the study's objectives.

H₀₂. There exists no significant effect of the 4 steps strategy on enhancement of the spatial vocabulary of male elementary school students.

Table 1: Experimental group

Group	N	Mean	SD	V	t-value	p-value
Pre-test (O ₁)	10	2.40	1.24	1.60	6.00	0.0002
Post-test (O ₂)	10	4.80	1.03	1.06		
* Significant		df = 9		Table value at 0.05 level= 2.262		

In the pre-test of the experimental group, the mean value for the 4-step strategy on spatial rade III vocabulary of male GED III students in the subject of English was 2.40, while the post-test value was 4.80. At the 0.05 level of significance, the computed t-values of 6.00 were higher than the table value of 2.262. In the post-test, it was shown that the four-step strategy had a significant impact on the enhancement of spatial vocabulary of GED III male students in the experimental group.

Table 2: Control group

Group	N	Mean	SD	V	t-value	p-value
Pre-test (O ₃)	10	4.48	0.78	0.62	0.81	0.430
Post-test (O ₄)	10	4.50	0.84	0.72		
NS = Non-Significant		df = 9		Table value at 0.05 level= 2.262		

In the pre-test of the control group, the mean value for the 4-step strategy on the spatial rade III students' English enhancement of spatial vocabulary was 4.48, and the post-test value was 4.50, according to Table 2. The calculated t-values 0.81 was smaller than table value 2.262 at significant level 0.05. After implementing the four-step technique, the post-test results showed that the control group's third-grade male students' spatial vocabulary had no statistically significant improvement.

Table 3: Control group

Group	N	Mean	SD	V	t-value	p-value
Pre-test (O ₅)	10	5.40	0.96	0.93	0.55	0.59 ^{NS}
Post-test (O ₆)	10	5.60	0.51	0.26		
NS = Non-Significant		df = 9		Table value at 0.05 level= 2.262		

In the pre-test of the control group, the mean value for the four-step strategy on spatial rade III vocabulary

enhancement of male GED III students in the topic of English was 5.40, and the post-test value was 5.60, according to Table 3. At the 0.05 level of significance, the computed t-value of 0.55 was less than the table value of 2.262. The results of the post-test indicated that the four-step technique had no statistically significant impact on the improvement of spatial vocabulary among the male students in the control group who were in third grade.

Table 4: Experimental group

Group	N	Mean	SD	V	t-value	p-value
Pre-test (O ₇)	10	3.60	2.06	4.26	2.35	0.040*
Post-test (O ₈)	10	5.10	0.56	0.32		

* Significant

df = 9

Table value = 2.262

Table 4 shows that the average value for the 4-step strategy on spatial grade III enhancement of spatial vocabulary of male GED III students taking an English course before the trial was 3.60 and 5.10 after the experiment. At the 0.05 level of significance, the computed t-value of 2.35 was higher than the table value of 2.262. The results of the post-test demonstrated that the four-step technique significantly improved the spatial vocabulary of the male students in the experimental group who were in third grade.

The difference between O₁ (Pre-test) and O₂ (Post-test) as well as O₇ (Pre-test) and O₈ (Post-test) of the Experimental group is much larger and significant at significance level (0.05) than the difference between O₃ (Pre-test) and O₄ (Post-test) as well as O₅ (Pre-test) and O₆ (Post-test) of the Control group, which was not significant at significance level (0.05). The enhancement of the spatial vocabulary strategy of male elementary school students is significantly impacted by the four-step process. At the very significant 0.05 level, the computed t-value of 2.35 outstripped the table value of 2.262. In the post-test, it was shown that the four-step strategy had a significant impact on the enhancement of spatial vocabulary of GED III male students in the experimental group.

4.2 Discussion

The present research was conducted to find the effect of 4 step strategy to increased enhancement of spatial vocabulary in English of Grade III at primary level. "To find the effect of 4 steps strategy on the enhancement of spatial vocabulary of students" was one of the study objectives. Students enrolled in third grade at APS in the KP Province made up the study sample. In the sample these were ten boys students selected from population of students of this class. The sample was purposive in the nature. The study revealed that four step teaching strategy increased the enhancement of spatial vocabulary of the students.

5. Conclusion

There was a significant effect of 4 step strategy (in first cycle) on the enhancement of spatial ability of male experimental group student. The spatial ability of experimental group was much better in post-test (O₂) than pre-test (O₃). The spatial vocabulary of control group in 3rd cycle in post-test (O₄) was slightly better than pre-test (O₃). The effect of 4 step (in 3rd cycle) strategy on the enhancement of spatial vocabulary had significant effect on male grade III students of control group in the subject of English. The spatial vocabulary had enhanced in post-test (O₆) as compared to pre-test (O₅).

The effect of 4 steps strategy in 4th cycle on the enhancement of spatial vocabulary of male grade III students in the subject of English in post-test (O₈) and pre-test O₇ had significant effect. The spatial ability of experimental group was much better than the control group in 4th cycle. There was an increasing trend in spatial ability of the student right from 1st to 4th cycle due to the effect of four step strategy. As compared to control group, the spatial ability of students grade III of experimental group in the subject of English had increased much better than control group.

5.1 Recommendations

- The present study revealed that there was a significant effect of 4 steps strategy on the enhancement of spatial vocabulary of the students at primary school students as compared to the students taught through traditional method. It is therefore, recommended that all the students at primary level be taught through 4 steps strategy to enhancement of spatial vocabulary of the students. The present study was conducted to enhancement of spatial

vocabulary in the subject of English. The strategy used in this study may be extended to other languages like Urdu, Pushto, Punjabi etc. to enhance the spatial vocabulary of the students.

- The full usage of the four stages strategy requires training as well as a modification of the curriculum. As a result, it is suggested that training for both in-service and pre-service teachers about the 4 steps strategy be incorporated as a mandatory component of their curriculum. One of the requirements for becoming a teacher is to complete a practicum in a variety of languages. It will be possible for the instructors to teach in accordance with the four-step strategy in this manner. The kids' spatial abilities will therefore improve as a consequence of this.
- In order to ensure that the four-step strategy is really implemented, it is necessary to revise the textbooks that teaching languages. For the purpose of improving the students' spatial ability, it is recommended that material and exercises be included in each chapter of the textbooks, with the four-step strategy under consideration.
- The sample of present study was 10. Further studies may be conducted on the sample more than 10 to explore further confirmation or rejection of this study.

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