Teaching Grammar through Inductive Approach and Competence of Prospective Teachers

Sahibzada Shamim-ur-Rasul*
Mushtaq Ahmad**
Misbah Iqbal***

Abstract

In Pakistan, traditional grammar teaching is not fruitful as students are not performing better. It was needed to find new grammar teaching method. So, the study aimed to see the effect of inductive grammar teaching approach on the teaching competence of prospective teachers. The study was quasi experimental by design. The major hypothesis of the study was the difference of observed grammar teaching competence of the prospective teachers taught grammar through inductive teaching approach and traditional teaching is not significant. Two sections of trainee teachers were conveniently selected and randomly labeled as treatment and control groups. Inductive grammar teaching approach was applied in the treatment group and traditional method was applied to control group. After the treatment, prospective teachers were sent for teaching practice in schools where they were observed in actual classroom teaching through an observation schedule. Major conclusion was that the prospective teachers trained for applying inductive grammar teaching approach performed better than the prospective teachers trained for traditional teaching.

Keywords: Prospective teachers, inductive approach, grammar teaching competence, traditional grammar teaching

Introduction

Effective pedagogy plays a pivotal role in English language learning. Teaching of English has been in transition since the early times. Form traditional Grammar Translation Method (GTM) to recent Task Based Approach, English Language Teaching (ELT) has emerged to be a field of study in which a lot of work has been and still needs to be done (Kaharuddin, 2018). Role of grammar in English language teaching and learning has always been a matter of debate since the revolt of the advocates of direct method against the traditional GTM. With the paradigm shift towards communicative language learning in 1970s,
grammar was altogether eclipsed under functional aspect of language (Kibbe, 2017). Later, it was realized that grammar could not totally be negated especially in second language learning (Wang, 2010).

In today’s world of rapid communication dominated by internet and computer, the importance of English communication through appropriate use of grammar is significant. Grammar is an essential part of language teaching and communication (Shashirekha, 2014; Glaser, 2013; Cho, 2012; Hurst, 2010). Where there is second language teaching, there is grammar (Zamani & Mohammadi, 2014). The issue is how grammar is taught in classrooms. Research reveals that in majority of the situations around the world, grammar is taught through traditional deductive method in second language class. The situation in Pakistan, where English is taught as a second language, is not different. It is apparent that a vast majority of the graduates are not able to write or speak even a single sentence in English in their own expression with correct grammar (Kalsoom & Akhtar, 2013). English teachers and their methodology of teaching grammar seem to be directly responsible for this flaw (Chalipa, 2013).

**Literature Review**

According to Haratyan, (2011) and Bloor & Bloor, (2013) Michael Halliday’s theory of systemic functional grammar revolutionized the concept of the usability of grammar in 1980s. Halliday put forward the application of grammar in communicating the meaning in natural situations. Highlighting the process of meanings which were built up through choice of words and other grammatical means became the focus of grammar. Systemic functional grammar aims to infer syntactic structures from the functions which a language is expected to perform (Eggins, 2004).

For English Grammar teaching, two approaches are in trend. One is deductive approach which is considered to be traditional and the other is inductive approach of grammar teaching (Mallia, 2014; Proshyanta, 2011). Deductive approach of English grammar teaching, which is mostly concerned with memorization of rules and drills, has been proved to be unproductive and uninteresting, because grammar of a language is acquired through abstraction of a set of grammatical rules from language data rather than mere reproduction (Chomsky, 2012). On the other hand, students are presented with new grammatical structures in inductive approach. These structures are taken from real life context (Henry, Evelyn
Teaching Grammar through Inductive Approach …

Students extract grammar rules through examples and it is more student oriented and activity based which leads to communicative application of grammar (Ahmed, 2013). Inductive Approach is a bottom up approach by essence which emphasizes on the discovery of grammar rules by the students themselves from daily routine and common text. Deductive approach stands as opposite of inductive approach. By essence, it is a top down approach (Mallia, 2014; Nagaratnam & Al-Mekhlafi, 2012). According to this approach, the rules are to be explained by the teacher. For teaching the learners to use correct grammar in communication, it is vital to train the teachers accordingly. For the said purpose, method of teaching becomes significant especially when it comes across teacher training.

During 20th century, intellectual differences on how to teach grammar to the students of foreign and second language became all the more vital among the experts and philosophers (Wang, 2010). The vibrancy in the debate gave way to the experimentation of several methods related to grammar teaching (Kaharuddin, 2018). Direct method (DM) almost ignored the value of grammar in teaching foreign or second language as complete emphasis was focused on the practical application of the language (Richards & Rodgers, 2010). As it was reaction to the monotony of GTM, teaching of grammar was almost eliminated from the teaching process (Larsen-Freeman & Anderson, 2011).

The learners of second language can acquire language naturally in their own way without involving in a syllabus that is considered formal. In the mind of a learner, universal principles of grammar are naturally built in and need not to be learnt consciously (Nor & Rashid, 2018).

As far as the analysis of the language production and its grammar is concerned, the writers put forward three possibilities in relation with the syntax autonomy as Mackenzie (2005) citing Jackendoff has stated that there are three possible positions:

a. Relationship does not exist.
b. Grammar can be separated from the language production process, but latter can be permitted to consult the former;
c. Language production and grammar have no dissimilarity; grammar and the language production are part of the same process.

Third stance is adopted by the functionalists now a day which is the indicator of the fact that language system is not independent of the factors that are external (Haspelmath, 2006). Structure is not only the essential part of a discourse; it also gives it a proper shape (Maftoon & Shakouri,
Halliday and Matthiessen (2014) classify grammar as functional in the senses which are distinct in three senses; i. distinct in the explanation of the texts, ii. distinct in the explanation of the system, iii. distinct in the explanation of language structure and its elements.

Globally, English is mostly used as a medium of communication between different communities. It is also a medium of learning at all levels; from initial to advance research. As English is communication in its core, both in written and oral forms, it must be aligned with the functional aspect although it is a second language (Astuti, 2013). Though grammar is a basic component of language, but how to teach it is the issue is in English Language Teaching. The question is; is the grammar being taught to enable the learners to utilize English in daily life communication? In most of the cases, the answer is not affirmative (Astuti, 2013).

Teachers’ lack of grammatical knowledge has been brought forth by Brinton and Holten (2001). They assessed the role of grammar teaching in content based language instructions. One of the main reasons behind the failure of teachers in integrating grammar in content based instructional framework is lack of training (Alhababba, Pandian, & Mahfoodh, 2016; Hassan, 2013).

The question arises how to train the personnel who are likely to be teaching grammar to the school students in second language courses. The choice of methodology to teach English in the countries where English is learned and used as a foreign language is very critical for the teachers as well as the experts of language and curriculum design. Therefore, it is necessary to see what effects grammar teaching methodology makes on the teaching competence of prospective teachers when they will teach grammar in their future teaching assignments (Charernwitatthanasri, 2012; Cho, 2012; Henry, Evelyn & Terence, 2009; Lin, 2007).

Mallia (2014) examined perceptions of non-native adult learners on inductive and deductive approaches to grammar teaching. Written performance of two groups of students was assessed who were taught through inductive and deductive approach respectively. Deductive approach was more preferred by the students but inductive approach was effective in promoting grammar noticing and consciousness raising inductively while adopting the local contextualization. Badilla and Chacón (2013) discussed grammar teaching methodologies according to students’ views. The students viewed that teachers ought to see teaching strategies to implement grammar teaching through implementing communicative activities in the class. It was emphasized that instead of considering
traditional teaching and communicative activities as separate entities, they could be combined to make grammar teaching more attractive. In another study by Azizmohammadi & Barjesteh (2020) conducted on Iranian female and male students, female students performed significantly better than male students in grammar ability test.

**Objective and Hypotheses Framework**

Objective of the study was to find out the effect of inductive grammar teaching approach on teaching competence of the prospective teachers.

The study had the following hypotheses.

H01: The difference of observed grammar teaching competence of the prospective teachers trained through inductive approach and prospective teachers taught grammar through traditional teaching is not significant.

H02: The difference of observed grammar teaching competence of male and female prospective teachers trained inductive approach is not significant.

H03: The difference of grammar teaching through inductive approach among Low, Average and High Achiever prospective teachers in their observed grammar teaching competence is not significant.

**Research Methodology**

The study was quasi-experimental by design. Population of the study consisted of the prospective teachers studying in the BS (Bachelor of Science) program in the University of Sargodha. The students enrolled in two sections of BS Education semester five (V) in Department of Education, University of Sargodha were taken as intact groups for the experiment as these prospective teachers were to go for teaching practice in schools during next (6th) semester. Out of these two, one group was randomly selected as treatment group of 30 prospective teachers including six (06) female and twenty-four (24) male teachers and other group was selected randomly as control group for the study including 15 prospective teachers including five (05) female teachers and ten (10) male teachers.

An observation schedule was developed to observe the grammar teaching competence after discussion with five peer researchers having M.A. English degree. The schedule was categorized into different specific
and generic competence of teaching. These competencies were starting of the lesson, selection of activities and teaching techniques, student teacher interaction, grammatical rules and examples, students’ response, communication. The prospective teachers’ teaching was observed according to the competences mentioned above on five-point scale (1 to 5). Observation schedule was also discussed with five experts with Ph. D Education qualification.

The steps of the treatment procedure are as follow:

1. The number of lessons prepared for the experiment was twenty-four. The lessons comprised four factors; noun, verb, adverb and adjective. As activity based learning was the basis of the treatment, the prospective teachers of the treatment group were advised to find out the definitions concerning the grammatical components being discussed in the class through the activities and group discussions. Authentic text was also assigned to the prospective teachers to analyze keeping in view the under discussion grammatical items.

2. Grammar was taught to the prospective teachers enrolled in treatment group through inductive grammar teaching approach for twelve weeks (one-hour period and 3 periods per week) while traditional teaching approach was applied for prospective teachers enrolled in control group.

3. After the treatment the prospective teachers enrolled in both the control and treatment groups were sent to various public secondary schools for teaching practice of 12 weeks (three months) in Sargodha city. As all the public schools of Sargodha city were of equal status with respect to demographics e.g. socio-economic status and schools administration and staff etc. so assuming assuming that school effect was equivalent.

4. For classroom observation, there were three observers from the peers participated in discussion for the development of observation schedule. Grammar teaching competence of low, average and high achievers prospective teachers of treatment group were observed. The status of low, average and high achievers were determined according to the criterion prescribed for the universities i.e., 50% to 57% (Low achievers), 58% to 69 % (Average achievers), and more than 70 % (high achievers).

5. During teaching practice of prospective teachers, observation of grammar teaching competence, two times per week, was also conducted for both the groups including male and female prospective teachers of treatment group according to time table of the school given
to the trainee teachers. The researcher as supervisor of the teaching practice ensured that the prospective teachers of experimental group teach the grammar through inductive approach as they were trained.

**Data Analysis and Findings**

First of all, overall performance of grammar teaching competence level of prospective teachers in control and treatment group was determined. Five competence levels were categorized for frequency distribution according to the scores on observation schedule during classroom observation. Observation scores assigned by three experts were averaged. The scores range was from 25 to 125. The levels were; 1- poor (score range from 25 to 45), 2- satisfactory (score range from 46 to 65), 3- average (score range from 66 to 85), 4- good (score range from 86 to 105) and 5- excellent (score range from 106 to 125). The frequency of the scores and percentage is presented in the table as under;

<table>
<thead>
<tr>
<th></th>
<th>Control Group</th>
<th>Treatment Group</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Frequency</td>
<td>Percent</td>
</tr>
<tr>
<td>Poor</td>
<td>11</td>
<td>73.3%</td>
</tr>
<tr>
<td>Satisfactory</td>
<td>3</td>
<td>20.0%</td>
</tr>
<tr>
<td>Average</td>
<td>1</td>
<td>6.7%</td>
</tr>
<tr>
<td>Good</td>
<td>0</td>
<td>00%</td>
</tr>
<tr>
<td>Excellent</td>
<td>0</td>
<td>00%</td>
</tr>
<tr>
<td>Total</td>
<td>15</td>
<td>100%</td>
</tr>
</tbody>
</table>

Table 1 presents level wise frequency and percentage of scores in the overall grammar teaching competence of the prospective teachers from control and treatment group. 73.3% of the prospective teachers in control group fell in poor level and 20% were in average level while no prospective teacher acquired good or excellent scores. Whereas, 63.3% prospective teachers from treatment group fell in good and excellent level, 30% were in average level and only 6.7% were in satisfactory level. From treatment group, no prospective teacher fell in poor level of teaching competence.

For difference between grammar teaching competence of the prospective teachers of control and treatment groups, independent sample t-test was applied. Difference between grammar teaching competence of
male and female prospective teachers of treatment group was also determined by applying independent sample t-test. Difference in low, average and high achiever prospective teachers of treatment group was found by applying one-way analysis of variance (ANOVA).

Hypothesis wise detail of data analysis is stated as follows;

H01: The difference of observed grammar teaching competence of the prospective teachers trained through inductive approach and prospective teachers taught grammar through traditional teaching is not significant.

Table 2
Comparison of grammar teaching competence of the prospective teachers of control and treatment groups

<table>
<thead>
<tr>
<th>Groups</th>
<th>N</th>
<th>Mean</th>
<th>SD</th>
<th>T</th>
<th>Df</th>
<th>Sig. (p-value)</th>
<th>Effect size</th>
</tr>
</thead>
<tbody>
<tr>
<td>Control Group</td>
<td>15</td>
<td>48.53</td>
<td>13.416</td>
<td>8.99</td>
<td>43</td>
<td>.000</td>
<td>2.909</td>
</tr>
<tr>
<td>Treatment group</td>
<td>30</td>
<td>90.13</td>
<td>15.181</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

Table 2 depicts that the mean score difference was significant for the prospective teachers in control and treatment groups as apparent from t value=-8.99, df=43, and p-value=0.000. Hence the hypothesis stating; “The difference of observed grammar teaching competence of the prospective teachers trained through inductive approach and prospective teachers taught grammar through traditional teaching is not significant” was rejected. Greater mean score 90.13, shows that the prospective teachers of treatment group trained for inductive grammar teaching approach performed better grammar teaching competence than the prospective teachers of control group who were taught grammar through traditional method with mean 48.53. Effect size 2.909 suggests that the difference of performance is larger. It is evident from the analysis that the prospective teachers of treatment group performed better in teaching grammar by applying inductive grammar teaching approach (as ensured by supervision) than the prospective teachers who were included in control group who taught grammar through traditional teaching.

H02: The difference of observed grammar teaching competence of male and female prospective teachers trained grammar through inductive approach is not significant.
In Table 3, significant difference is not shown between the performance of male and female prospective teachers as reflected by \( t = -0.083, df = 28, \) and \( p = 0.935 \). Hence the hypothesis stating; “The difference of observed grammar teaching competence of male and female prospective teachers trained grammar through inductive approach is not significant” was accepted. Female and male prospective teachers of treatment groups were equivalent in the grammar teaching competence.

\( H_03: \) The difference of grammar teaching through inductive approach among Low, Average and High Achiever prospective teachers in their observed grammar teaching competence is not significant.

Table 4 depicts the results of one-way ANOVA applied to explore the grammar teaching competence on levels of achievement of prospective teachers as Low, Average High and Achievers within treatment group. Out of thirty, eight prospective teachers were high achievers, twelve were average achievers and ten prospective teachers were low achievers. The difference was statistically significant for all the three levels of achievement as shown by \( F = 24.219, \) and \( p = 0.000 \). Hence, the hypothesis “The difference of grammar teaching through inductive approach among Low, Average and High Achiever prospective teachers in their observed grammar teaching competence is not significant” was rejected. The effect size 0.642 calculated through eta squared indicated that the difference is medium.
applied to further find out the magnitude of the difference and the results, which are significant, are given below.

Table 5

<table>
<thead>
<tr>
<th>(I) Level</th>
<th>(J) Level</th>
<th>Mean Difference (I-J)</th>
<th>Std. Error</th>
<th>Sig.</th>
</tr>
</thead>
<tbody>
<tr>
<td>High</td>
<td>Average</td>
<td>11.833*</td>
<td>4.296</td>
<td>.027</td>
</tr>
<tr>
<td></td>
<td>Low</td>
<td>30.400*</td>
<td>4.465</td>
<td>.000</td>
</tr>
<tr>
<td>Average</td>
<td>Low</td>
<td>18.567*</td>
<td>4.030</td>
<td>.000</td>
</tr>
</tbody>
</table>

In Table 5, magnitude of difference in mean scores of high, average and low achievers is indicated through post-hoc comparisons. Mean differences 11.833 and 30.400 show that the performance of high achievers performed better in overall grammar teaching competence than the average and low achievers as p-value .027 and .000 is less than .05. Moreover, mean difference 18.567 shows that average achievers also performed better in overall grammar teaching competence than the low achievers as indicated by p value= 0.000<0.05.

**Conclusion & Discussion**

Findings of the study support the view that inductive approach is effective in training prospective teachers to teach grammar to the secondary school students. A similar study was carried out in Thailand by Charernwiwatthananasri (2012) which brought forth the results which were in line with this study that inductive approach for teaching grammar was instrumental in improving performance of prospective teachers in teaching grammar.

Yoon and Lee (2020) carried out an experimental study in Korea to investigate the effects of two approaches for teaching grammar in the development of grammar knowledge of EFL learners. The study was conducted on 88 students divided into two groups. Low level students performed better in deductive approach whereas no significant difference in performance was shown by the high achiever students in both the approaches. The difference in verbs was revealed to be the most significant in pre and post-tests.

They research conducted by Obeidat and Alomari (2020) is also in line with this study. They saw the impact of inductive and deductive approach on the undergraduate EFL learners in an experimental study carried out in
Teaching Grammar through Inductive Approach …  11

Jordan. The study attempted to see the effect of inductive and deductive approach on some grammatical issues from a prescribed book of grammar. Inductive approach was applied in the experimental group. The results of the study indicate the significant difference in the favour of inductive approach.

Results of the experimental study carried out by Benitez-Correa, Carmen, Paul, and Alba (2019) in Ecuador also support the result of this study. The study was conducted on the seventy public high school students to compare the effective and rapport of inductive and deductive approach. The study concluded that the inductive approach was more effective for grammar teaching in terms of instruction and rapport in EFL classroom.

After classroom observation, it was observed that majority of the prospective teachers of treatment group showed “good” level grammar teaching competences whereas in control group, majority showed “poor” level grammar teaching competences. It was also determined that the student teachers who were taught grammar by applying inductive grammar teaching approach were much better in grammar teaching competence as compared to the prospective teachers who were taught through traditional teaching.

As far as analysis within treatment group is concerned, male and female prospective teachers showed equivalent grammar teaching competence. For the performance of high, average and low achiever prospective teachers within treatment group, the performance of high achievers was better with large difference than average and low achiever prospective teachers in grammar teaching competence during classroom observation.

Recommendations

Following recommendations were made in the light of findings and conclusions;
1. Inductive approach, as compared to traditional deductive way of teaching, is more effective in teaching grammar. It is therefore recommended that curriculum developers of teacher education programs in universities may incorporate grammar teaching through inductive approach in teaching of English for training of pre-service teachers.
2. To ensure teaching of grammar through inductive approach, Directorate of Staff Development in Pakistan may design training courses for in-service English teachers to train them to use inductive grammar teaching approach.
References


Hurst, N. (2010). Making grammar make sense: nothing is impossible. *In Estudios de metodología de la lengua inglesa* (V) (pp. 73-78). Centro Buendía.


