An Experimental Study of Moroccan EFL University Students’ Written Errors: The Case of English Noun Phrase Structures

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Abstract: This Experimental study investigates the written noun phrase structure errors made by Moroccan EFL University students. The focus of the study is also on determining the types of students’ written errors regarding their formed noun phrases and suggesting a tested alternative teaching method as the treatment which the experimental group has to receive. To do so, 80 semester two students at IbnTofail University have randomly been divided into two groups: the experimental and control groups. The two groups’ errors have been analyzed on the basis of three discovered types of errors: omission errors, addition errors and mis-ordering errors. The difference between the experimental and control groups’ pretest and posttest errors has been confirmed by qualitative and quantitative measurement including the application of the t-test. The qualitative and quantitative analysis of the results has demonstrated the effectiveness of the adopted treatment, the inductive teaching method.

I. INTRODUCTION

Errors analysis and classification occurs on the basis of a set of categories which may differ among language researchers. For instance, Corder (1981)[1] suggests a ‘surface strategy taxonomy’ which he describes as “a superficial of error classification used as a starting point for systematic analysis” (p. 36). The strategy is composed of a number of categories that are used to describe learners’ errors. On the basis of these categories, learners’ errors are classified into different types. According to the ‘surface strategy taxonomy’, learners’ errors can be classified into four types.

The first type is known as omission errors. They characterize those structures where some required elements are omitted. The second type of error is called addition errors. These errors occur when unnecessary elements are added in some structures. The third type of errors concerns the selection of an incorrect element that causes mis-formation. The last type of errors is known as mis-ordering errors. They characterize those structures whose elements do not follow the ordering system of structures (Corder, 1973, p. 277)[2]. Omission errors may refer to the absence of an item that must appear in a well-formed structure. All the words of an utterance are liable to omission; however, some of the words can be more omitted than the other (Dulay, Burt &Krashen, 1982, p. 54)[3]. Learners’ formed structures are supposed to consist of words that make them complete, otherwise, these structures can be characterized as erroneous. Words that are mostly exposed to omission are not often the main elements of the structure. That is, nouns, verbs, and adjective are less liable to omission than the inflections, articles, and modal auxiliaries (Krashen, 1982, p. 55). Differences between languages may cause problems of omission. Consider the following example: "My sisters very pretty." (Ellis &Barkhuizen, 2005, p. 61)[4] where the verb be is omitted.

Unlike omission errors, addition errors may be described as the inclusion of words that affect the order and meaning of a structure. Learners’ formed structures can be considered as erroneous when they involve unnecessary words (Krashen et all, 1982, p.156). In other words, learners’ written sentences or phrases often contain additional words that are not accepted within the structure of the language they are using. Addition errors may occur due to learners’ ignorance of the language rules. That is, Learners’ addition of words in their formed structures demonstrates that they have not mastered yet the rules of the language they are using. Consider the following example: "He didn’t to come (Ellis &Barkhuizen, 2005), where the word to of the infinitive is added.

Misformation errors concern those patterns or expressions that are misformed. This phenomenon occurs when learners use wrong structure or words in their formation of sentences and phrases (Krashen et all, 1982, pp.158-161). In other words, learners often select erroneous forms and use them in their structure though they do not suit the structure of the language they learn. Consider the following example: "Me don’t like. (Ellis &Barkhuizen, 2005, p. 6), where the object pronoun me is used in the place of the subject pronoun I."
Misordering errors occur when learners’ structures are not formed correctly. They refer to the misordered groups of words. That is to say, misordering errors characterize those structures or patterns whose words are do not take the positions which they are required to occupy. Therefore, the incorrect placement of a morpheme of group of morphemes in an utterance is considered as a misordering error (Krashen et al, 1982, p.162). Consider the following example: "She fights all the time her brother. (Ellis & Barkhuizen, 2005, p. 6), where the AVP all the time precedes the object NP her brother.

Despite the fact that Moroccan EFL university students have been introduced to English in their middle schools as well as secondary schools, they are still having language problems when they write. As a matter of fact, they often fail to form correct phrase structures when they write in English. Previously conducted studies (e.g. Trimasse, 2016; Zhiri, 2014; Bouziane & Harrizi, 2014; Meziani, 1984; Fati, 2013) have explored this area. The study of students’ grammatical problems should not be confined to their definition and explanation, but a practical solution is needed to help reduce the making of these errors.

Therefore, the present study targets English noun phrase errors made in writing. It investigates English noun phrase structure errors made by two university students at Ibn Tofail University, Morocco. More specifically, it measures two independent groups’ writing proficiency of the English noun phrase, determining the types of their errors. The study adopts the inductive teaching method as a treatment to measure its effectiveness in decreasing the written phrase structure errors made by Moroccan EFL university students. To achieve this purpose, a sample of 80 semester two university students from Ibn Tofail University was randomly selected and randomly assigned to the experimental and control groups. Statistical analyses, including the paired post-tests, were used to measure the change in the experimental group’s writing of the English phrases. After describing and analyzing the data, which was collected mainly from participants’ written paragraphs, conclusions and generalizations were finally drawn based on the qualitative and quantitative results.

Research hypotheses

Research hypotheses are tentative answers to the research questions. As this study is based on quantitative and qualitative data, research hypotheses are stated accordingly to answer the aforementioned research questions. First, the hypotheses that target the qualitative data are as follows:
1. When Moroccan EFL university students write in English, they make errors in the structure of noun phrases.
2. The students’ written noun phrases may involve omission, addition, and mis-ordering errors.

Second, for quantitative data, we have formulated a null hypothesis as follows:
4. There is no statistically significant difference between the experimental and control groups’ written errors in forming English noun phrases. Therefore, there is no significant effect of the inductive teaching method on decreasing the experimental group’s errors.

Research questions

This study addresses the following research questions to explore frequent errors in writing English noun phrases. Some of the questions target quantitative data while others are formed to obtain qualitative data.
1. Do Moroccan EFL university students make errors when writing noun phrases?
2. What are the types of errors do Moroccan EFL University students make in their written noun phrases?
3. Is there any significant statistical difference between the experimental and control groups’ scores of errors? If so, does the inductive teaching method, as an adopted treatment, effectively reduce the experimental group’s errors in forming noun phrases?

Data collection instruments

The data for the study comes from two tests: a pretest and a posttest. In the pretest, both the experimental and control groups were given 20 scrambled noun phrases to unscramble them correctly and 20 incorrect noun phrases to correct them. After the experimental group has been taught noun phrase structures inductively, the two groups have also been asked to write short paragraphs in order to study their formed noun phrases naturally.

Reasons for adopting the inductive teaching method

Since there is no best teaching method to be completely used for the teaching of different language situations (Hammerly, 1975), it is often assumed that teaching deductively or inductively may or may not be workable. That is, the selection of one of these approaches should not occur randomly, but it should be determined and based on the objectives that are mainly set by teachers. There are activities that could be successfully taught deductively, but there are also some other lessons that could not be successfully taught unless the inductive teaching method is used (Hammerly, 1975, p.17). In the same line of thought, Brown (2007) points out that “both inductively and deductively oriented teaching methods can be effective,

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depending on the goals and contexts of a particular language teaching situation” (p. 105). Therefore, the use of the deductive or the inductive method requires studying the objectives and the contexts of the language lessons in order to select the most suitable method for the teaching of those lessons.

However, the inductive teaching method has proved to have a life-long effect. The students who have been taught inductively become more prepared for future learning situations (Kwakernaak, p. 344). That is, they will be able to apply the structures in real-life speaking or writing situations. Moreover, when students are engaged in the presentation of grammatical points and try different meaningful contexts, they become active participants rather than passive recipients (Schaffer, 1989, 401). Therefore, the selection of the inductive teaching approach, as an alternative model of teaching, is mainly due to the fact that it encourages students’ involvement in the presentation of the lessons. When students take part in the process of teaching and learning, they develop observational skills, thinking skills as well as conclusion-drawing abilities (Haury, 1993; McReary, Golde & Koeske, 2006; Smith, 1996).

In our experiment, three teaching stages have been followed while applying the inductive teaching method: the presentation stage, the practice stage and the production stage. During the presentation stage, the students were provided with a number of visual aids (pictures and videos) and were asked to describe them orally, following the teacher’s questions and prompts. Concerning the practice stage, the students were asked to write down all the descriptions by having a look at the pictures and videos for the second time. After that, they were asked to compare their answers in pairs and then in groups. Finally, they were engaged in whole class correction. In terms of the third stage, the students were provided with a variety of activities that encourages students’ use of the English noun phrase. When the students were done, they were asked to compare and correct their answers in pairs and then in groups. Finally, the students were engaged in whole class correction.

**Qualitative comparison of the two groups’ pretest results**

The results of the pretest show that both the control and experimental groups are almost the same regarding the errors they made in the structure of their written phrases. Concerning the NP structure errors, both the experimental and control groups made 493 errors. Of this number, the control group made 246 errors, while the experimental group made 247 errors. On the basis of these frequencies in table 1 below, it is apparent there is no difference between the control and experimental groups regarding the difficulties they had in forming English noun phrases. Therefore, these results will allow us to associate the difference (if any) between the two groups in the posttest to the effectiveness of the adopted treatment.

<table>
<thead>
<tr>
<th>Types of errors</th>
<th>Frequency of errors (Control group)</th>
<th>Frequency of errors (Experimental group)</th>
<th>Total of errors</th>
</tr>
</thead>
<tbody>
<tr>
<td>Omission</td>
<td>87</td>
<td>84</td>
<td>171</td>
</tr>
<tr>
<td>Addition</td>
<td>91</td>
<td>89</td>
<td>180</td>
</tr>
<tr>
<td>Mis-ordering</td>
<td>68</td>
<td>74</td>
<td>142</td>
</tr>
<tr>
<td><strong>Total</strong></td>
<td><strong>493</strong></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

Table 1: Comparison of the two groups’ pretest results

**Quantitative analysis of the pre-test’s NP results**

The independent samples t-test was used to measure the similarities and differences between the two groups: the experimental and control groups. That is, the test aimed to show whether there is a statistically significant difference between the two independent groups in their writing of the English noun phrases. On the basis of the results in table 2 below, the experimental and control groups ‘scores are almost the same. In other words, almost all the scores are scattered around the mean. That is, the scores in one group do not vary too much more than the scores in the other group. The means of the two groups in table 2 below show clearly this approximate similarity between the two groups. The mean of the control group is 3.2 and the mean of the experimental group is 3.5. The slight difference in means is not statistically significant. This apparently means that the two groups are similar and face the same difficulty in writing correct English NPs.

| Group Statistics                                                                 |
|--------------------------------------------------------------------------------|--------------------------------|----------------|----------------|
| Group                           | N   | Mean       | Std. Deviation | Std. Error Mean |
| Nounphrase pre                   | 40  | 3,2000     | 1,04268        | 1,6486         |
| Experimental group               | 40  | 3,5000     | 1,19829        | 1,8947         |

Table 2: T-test results of group mean differences in writing English noun phrases
The output presented in table 3 below, the sig. value is larger than the α level (.05), which is a good result as it shows equal variances between the two groups’ scores (i.e. the scores of the two groups do not vary too much). We clearly notice that the sig. value (2-tailed) is larger than .05 Therefore, statistically, there is no significant difference between the two groups in the pretest although the means of the two groups are slightly different (see table 2), and any change that may occur in the posttest to the experimental group will be confidently interpreted by the effectiveness of the adopted treatment.

### Independent Samples Test

<table>
<thead>
<tr>
<th></th>
<th>Levene's Test for Equality of Variances</th>
<th>t-test for Equality of Means</th>
<th>95% Confidence Interval of the Difference</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>F</td>
<td>Sig.</td>
<td>T</td>
</tr>
<tr>
<td>Noun phrase pretest</td>
<td>Equal variances assumed</td>
<td>1,244</td>
<td>.268</td>
</tr>
<tr>
<td></td>
<td>Equal variances not assumed</td>
<td>-1,194</td>
<td>76,538</td>
</tr>
</tbody>
</table>

**Table 3:** T-test results of group differences in writing English noun phrases

The quantitative analysis of the pre-test data has shown that the two groups are of the same level and they share the same problems. That is, the scores of the experimental group do not vary too much more than the scores in the control group. Therefore, this finding will allow us to associate the difference (if any) between the two groups in the posttest to the effectiveness of the adopted treatment.

### The analysis of the post-test results

The analysis of the post-test results shows that both the experimental and control groups made omission, addition and misordering errors in their written noun phrases. However, the findings display a significant difference between the two groups regarding the number of errors made in each type of the NP structure errors. The difference is clearly apparent in table 4 below.

<table>
<thead>
<tr>
<th>Types of errors</th>
<th>Examples of the common errors</th>
<th>Control group</th>
<th>Experimental group</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
<td>Frequency</td>
<td>Percentage</td>
</tr>
<tr>
<td>Omission</td>
<td>It is good language</td>
<td>97</td>
<td>75.19%</td>
</tr>
<tr>
<td>Addition</td>
<td>The language of the English</td>
<td>81</td>
<td>65.32%</td>
</tr>
<tr>
<td>Misordering</td>
<td>Very teachers good helps me</td>
<td>64</td>
<td>26.45%</td>
</tr>
</tbody>
</table>

**Table 4:** The experimental and control groups’ frequencies of the types of NP structure errors.

In terms of the omission related errors, the control group made a total number of 97 errors (75.19%). On the other hand, the experimental group found less difficulty in writing English noun phrases. That is, the frequency of the omission errors made by the experimental group is only 32 (24, 80%). The table also provides an example of the omission errors made by the subjects. That is, the NP good language should be preceded by an indefinite article (a) as a pre-modifier.

The results of the errors of addition in table 4 above show that the two groups are dissimilar. That is to say, the subjects of the control group exceeded those of the experimental group regarding the number of addition errors. The frequency of errors made by the experimental group is 43 (34.67%) while the frequency of errors made by the control group is 81 (65.32%). This finding shows that the subjects of the control group were less successful in avoiding addition errors in their written noun phrases. As an illustration of the subjects’ errors, the table provides the following example: The language of the English where the noun English should not be preceded by the definite article (the). It is an unnecessary element for the phrase.
As for the mis-ordering errors, the qualitative results show that the subjects of the experimental group were more successful in writing correct noun phrases. That is, the frequency of misordering errors made by the experimental group is very less in comparison to the number of errors made by the control group. The subjects of this latter 64 (69.56%) errors, while the subjects of the experimental group made 28 (30.43%) errors. In table 4 above, an example of the subjects’ errors is given: Very teachers good helps me. The constituents of the NP very teachers good are not well ordered. The adjective good should precede the noun teachers and follow the adverb very.

The qualitative results given in table 4 above display that the subjects of the two groups made errors of omission, errors of addition and mis-ordering errors in their writing of the English noun phrases. The total number of the made errors is 345. Of this number, omission errors constitute the higher frequency (129) followed by addition errors which make out (124) errors and then misordering errors which have the smallest frequency (92). Besides, the findings showed in table 4 above demonstrate that the experimental group made less number of errors in comparison to the control group. That is, the total number of errors made by the experimental group is 103 while the total frequency of errors made by the control group is 242.

Quantitative Analysis of the NP structure errors

As the results in table (4) demonstrate, the two groups are significantly different in the frequency number of omission, addition and mis-ordering errors of their written noun phrases. The control group’s total number of errors exceeds that of the experimental group. This difference can be explained by the fact that the experimental group’s errors have been reduced under the influence of the inductive teaching method.

The difference between the experimental group and the control group is also demonstrated statistically. The T-test’s results, presented in table (5) below, confirm the findings of the frequency data obtained in table (4) above. To explain, as can be seen from the statistical analysis, the sig. value (2 tailed) is less than the alpha level (.05), and so we can say there is a significant statistical difference between the two groups. That is, the experimental and control groups’ errors are not quantitatively equal. Accordingly, it can be concluded that the experimental group has achieved some progress in writing English NPs, which is most likely due to the effectiveness of the adopted treatment. Thus, as the sig. value is less than or equal to the alpha level (p<= .05), we should reject the null hypothesis which states there is no statistically significant difference between the experimental and control groups’ errors in writing English NPs.

<table>
<thead>
<tr>
<th>Noun phrase Post-test</th>
<th>Levene's Test for Equality of Variances</th>
<th>t-test for Equality of Means</th>
<th>95% Confidence Interval of the Difference</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>F</td>
<td>Sig.</td>
<td>T</td>
</tr>
<tr>
<td>Equal variances assumed</td>
<td>.186</td>
<td>.667</td>
<td>-16.225</td>
</tr>
<tr>
<td>Equal variances not assumed</td>
<td></td>
<td></td>
<td>-16.225</td>
</tr>
</tbody>
</table>

The effectiveness of the treatment

The most striking effectiveness of the approach is that it created a significant difference between the experimental group and the control group. When the two groups were pre-tested, the results of the test demonstrated that the groups had the same problems in writing English NPs. That is, the qualitative and the quantitative analyses of the results obtained from the experimental and control groups’ pre-test showed no significant difference between them.

However, with the use of the inductive model in teaching the English NP structures, an important difference was observed between the experimental group and the control group. The experimental group developed an ability of writing correct English phrases in the post-test. On the other hand, the subjects of the control group failed to avoid making errors in their written NPs.
The positive effect of the inductive model on the experimental group is made even more apparent qualitatively and quantitatively. The qualitative results displayed the effectiveness of the inductive model of teaching through the difference between the frequencies of errors of the two groups. For example, the total number of errors made by the experimental at the level of noun phrases is 54 while the control group’s total number of errors is 98. In the light of these findings that uncover the significant difference between the experimental group and the control group, we can conclude that the adopted alternative model of teaching English NP structures is of paramount effectiveness.

The effectiveness of the adopted model is also made apparent quantitatively. The quantitative results provided in tables 4 confirmed and supported the qualitative findings. That is, they demonstrated that there is a significant difference between the control group and the experimental group regarding their NP errors. In the analysis of the NP related errors, it is observed that the sig. value 2-tailed (.000) is less than the alpha level(.05). On the basis of these findings, we should reject the null hypothesis (there is no significant difference between the two groups’ scores of written errors in writing and forming English NPs and conclude that there is a significant statistical difference between the two groups’ errors in writing English NPs. This means, that the experimental group has achieved some proficiency in writing and forming correct English phrases, which is confidently attributed to the effectiveness of the adopted inductive teaching method.

II. CONCLUSION

The findings have indicated that the participants failed to form correct English noun phrase structures when they were asked to write; however, with the adoption of the inductive teaching approach and the contextualization of the structures, the majority of the experimental group’s participants managed to write correct noun phrases. These findings are in harmony with the assumption that foreign language learners develop their language proficiency better and faster when they are taught grammatical forms indirectly and implicitly (Krashen, 1982). That is, When learners are taught grammar in a context through exposing them to a variety of real-life activities, they will be able to deduce the used grammatical rules and use them appropriately in other contexts (Chomsky, 1959; Selinker, 1972; Ellis, 1985).

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