THE EFFECTS OF DEDUCTIVE AND INDUCTIVE APPROACHES OF TEACHING ON JORDANIAN UNIVERSITY STUDENTS' USE OF THE ACTIVE AND PASSIVE VOICE IN ENGLISH.


1. Related Literature

This empirical study presented the description of two teaching methods called "deductive" and "inductive" approaches. The first involved providing a group of participants with rules and then examples directly and separately, but the second approach involves providing another group of participants with examples or content without offering explicit grammar rules, and so the students should induce such rules by themselves. This study investigated the effects of each approach and the interaction between "the type of teaching approach" and "the use of the active and passive voice sentences" in English as a foreign language (EFL). Ninety-three freshman and junior university students participated in this study. They were chosen randomly from three classes in two universities in Jordan. The method of the study included a pretest, two lessons for each group in the three classes and a posttest. The results of the study reveal a significant statistical result at the level of 0.05 between the two approaches for the deductive group. But there is no significant difference between classes for the same type of approach. There is also no significant effect for the interaction between approach and class.

1.1 The Importance of Teaching Grammar

English is today the world's most widely used language. The desire to learn it is at the present is so immense. The future of English as an international language has always been said to rest on the practicability of teaching the language. For more than 2000 years of debate regarding whether grammar should be a primary focus of language instruction or should be eliminated entirely, or should be subordinated to meaning-focused use of the target language is continuing in the tradition. But once again, the need for grammar instruction is attracting the attention of researchers and teachers of second language acquisition. A debate was theoretically represented by Krashen's (1981) distinction between conscious learning and unconscious acquisition of language. The claim was that language
should be acquired through natural exposure, not learned through formal instruction (Ellis, 2002; Skehan, 1998). Despite such research findings, Nassaji and Fotos (2004) indicate that current research in second language learning, however, has led to a reconsideration of the role of grammar in second language classroom. The research suggests that some types of focus on grammatical forms was necessary if learners were to develop high levels of accuracy in the target language.

Most second language investigators agree that noticing or awareness of target structures and forms plays an essential role in second language learning was necessary if learners were to develop high levels of accuracy in the target language (Doughty, 2001; Ellis, 2002). Briefly, the reconsideration of grammar teaching in second language classroom, according to many researchers and investigators, is evidence for the positive effects of grammar instruction as their empirical and classroom based studies.

1.2 The Deductive Approach of Teaching

The deductive approach of teaching English grammar refers to the style of teaching students by introducing the grammatical rules first, and then applying them by the students. This means that a teacher works from the more general to the more specific in a deductive approach called informally a "top down" approach. Decoo (1996) understands education as a process that goes from the general to the specific.

Whereas Mountone (2004) states that the deductive methods seem to work best if you want students to be able to quickly and accurately solve problems like those worked out in class or in the work, Younie (1974) believes that the deductive approach is more predictable because the teacher selects the information and the sequence of presentation.

Shaffer (1989) criticizes the deductive approach clarifying that the problem many students have applying these various rules indicates that they may not fully understand the concepts involved and that the deductive approach tends to emphasize grammar at the expense of meaning and to promote passive rather than active participation of the students. But Goner et al (1978) state that the deductive approach can be effective with students of a higher level, who already know the basic structures of the language, or with students who are accustomed to a very traditional style of learning. Schrampfer and Spack (2005) introduce a
program where the presentation-practice-production-evaluation pattern adopted by the program is a feature of the deductive approach to the teaching grammar assuming that potential users will understand the rule governing the target grammar pattern.

1.3 The Inductive Approach of Teaching

The inductive approach refers to the style of introducing language context containing the target rules where students can induce such rules through the context and practical examples. In other words, the sequence in this approach goes from creating a situation and giving examples to the generalization where students should discover such generalization by themselves or with the teacher's help. Mautone (2004) says that with an inductive approach, teachers show their students a series of examples and non-examples, then guide them toward noticing a pattern and coming up with the generalization or concept rule.

Some scholars such as Ausubel (1963) and Carroll (1964) indicated that the inductive approach was too difficult for weaker or slower students, and that only brighter students were capable of discovering the underlying patterns of a structure, but the results of Shaffer's research (1989) indicate that weaker students do benefit from an inductive approach.

Among several studies supporting the idea that the inductive approach has proved its success in achieving students' retention or memory and deep understanding, Younie's (1974) states that students tend to remember when learning occurs inductively. Some teachers support such ideas and believe that engaging with the meaning of forms and words through an inductive approach leads to better understanding and retention. Bluedorn (1989), and Shaffer (1989) view that it has been very successful in teaching adults conversational ability with modern foreign languages, but not with classical languages. No doubt, we agree with those researchers and teachers who focus on the importance of students involvement which may come through the inductive approach of teaching. We also share them the idea that students should depend upon their mental ability and prior information as this approach may sometimes represent a kind of challenge for learners.

1.4 Comparison: the Deductive and Inductive Approaches
Teacher’s approaches of teaching English grammar play an important role in classrooms where students should understand what they are taught and how to use it correctly. Here, we are interested in the deductive and inductive approaches. This interest leads us to review some previous studies which compared between the two of them, or focused on their advantages and disadvantages. In comparing between the two approaches, one of the differences is that a deductive approach is most close with the grammar-translation method of teaching languages, while an inductive approach is considered close to audio-lingualism, where meaning and grammar induced from practice with examples in situations and substitution tables (Gollin, 1998). According to Shaffer (1989) an inductive approach was formerly always equated with the audio-lingual method of the sixties, defined as habit-formation unless the teacher gave the students at the end of the lesson the appropriate rule.

The second main difference between these two approaches is regarding the steps or procedures of each one. Whereas the deductive approach begins with the step of introducing rules or principles, the inductive approach begins with language context involving application of such rules. In the deductive sequence, ideas proceed from generalizations, principles, rules, laws, propositions, or theories to specific applications. The deductive sequence involves presenting generalization and then seeking or providing examples as Younie (1974) states.

The third difference is related to what is explicit and implicit of knowledge or grammar through the teaching-learning process. Donate and Adair-Hauck (1992) relate between deductive approach and explicit explanations by the teacher, and also between modalities of inductive approaches and implicit learning by the student. In a comparison of explicit and implicit teaching strategies, Chaudron (1988) points at the large number of product-studies that have investigated the effects of explicit versus implicit grammar instruction on achievement calling the implicit approach "pattern practice or inductive". In a follow-up study, however, Scott (1990) defines the explicit strategy as the "deliberate study of a grammar rule, either by deductive analysis or inductive analogy."

Littlewood's (1975) viewpoint is that the approach that makes the grammar explicit is one of these two ways: 1) when the rule is regarded as a summary of behavior, which comes after
presenting a piece of language, and may be after practicing it for a time. 2) when "command of the rule through explanation is regarded as the starting-point for language use", but "it does not exclude using inductive classroom techniques", which means that the grammar explicit can come through the two approaches.

Age is the fourth difference or controversial issue discussed by scholars. Rivers (1975) finds the use of the deductive approach most useful for mature, well-motivated student, or for adult student in intensive courses, and finds the inductive approach more appropriate for young language learners. In fact, we don't know the exact ages suggested by Rivers who recommends using age as a factor of choice between the two approaches. But Time is the fifth difference which distinguishes between the two approaches. Younie (1974) hypothesizes that the deductive approach is faster and can be an efficient way to teach large numbers of facts and concretes. We agree with Younie that "the deductive approach sticks directly to the point, and so it saves time." In other words, explaining the offered rules or generalizations takes less time than leaving them to be elicited by the learners themselves. Therefore, the learners have more time for practice or application.

The sixth different factor between the deductive and the inductive approaches is student involvement. It is available when teaching inductively but passive rather active when teaching deductively (Shaffer 1989). This conclusion is also given by other researchers or teachers who see that in the deductive approach the teacher explanation in a classroom often minimizes student involvement and interaction. But in the inductive approach students are more actively involved in the learning process, rather than simply passive recipients.

The seventh difference or controversial factor is related to the terms "easy" or simple and "difficult" or complex. The similarity and dissimilarity between the rules in the first language and the rules in the foreign language should be taken into consideration. Traditionally, deductive approach is used to teach grammar because it is easy to control, and efficient, but it becomes boring when used repeatedly. Inductive approach, on the other hand, is rather demanding and rewarding, but it needs more time and more effort to control. Fischer (1979) comes to the criteria that if the foreign language grammar rule is simpler than the native language rule, then an inductive approach is the most appropriate; if the foreign
language of equal or greater complexity than the native language rule, a deductive approach is to be preferred.

2. Methodology

It is noticed that teachers of English as a foreign language (EFL) often tend to use a deductive approach in teaching parts of speech or grammatical structures, that is, by presenting rules before giving examples. But those who want their students to be creative through their deep thinking tend to use an inductive approach, that is, by presenting examples and asking the students to induce rules by themselves. We, as teachers of EFL as well as researchers, tend to use both approaches eclectically according to content or goals or situation.

2.1 Questions of the Study

This empirical study focuses on the effects of the deductive and inductive approaches of teaching the passive and the active voice for university students as learners of EFL. The deductive approach is based on providing the learners with rules and explanation with examples. But the inductive approach is based on giving examples without providing the learners with rules where they should induce such rules by themselves. The questions of this study are as follows:

A. Is there a significant difference between the results of the students taught the active and the passive voice by the deductive approach and those taught by the inductive approach?

B. Is there a significant difference between the results of the classes taught the active and the passive voice by the deductive approach?

C. Is there a significant difference between the results of the classes taught the active and the passive voice by the inductive approach?

2.2 Participants

This study was conducted in two universities in Jordan: Al-Balqa' Applied University and Jerash Private University. Three classes (sections) of students shared in the study. Two
classes from Amman Faculty of Engineering Technology in the first university and one class from the Faculty of Arts (English Department) in the second university. The first class consists of freshman students studying English skills 99 (Elementary English Course); the second class consists of junior students studying English skills 102 (Intermediate English course); and the third class consists of freshman students studying English skills 101 (Pre-intermediate English course). All the students of the three classes studied the active and the passive voice during the secondary stage when they were secondary students.

The students of each class were divided randomly into two groups: one group was taught the passive and the active voice by "deductive approach" and the other group by "inductive approach", so we call them "deductive group" and "inductive group". Those who were taught deductively were exposed to specific grammatical rules where they paid conscious attention to language so as to understand such rules. But those who were taught inductively were given examples without being exposed to such rules. Instead, they were left to induce the rules by themselves.

All together, ninety-three students from the three classes in the two Jordanian universities participated. The three classes were divided randomly into six groups. The age of the students ranged from eighteen to twenty. Two teachers who are the researchers of this study participated in the study. It should be noticed that two students didn't perform the post test, and so they were not involved in the results.

2.3 Testing

A pre-test was used as a means of feasible evaluation. The participants completed the pretest a few days before being taught two lessons about the active and the passive voice. One group was taught deductively, and the other group inductively. A posttest was completed by the participants about one week after the instructional lessons. All the pretest and posttest exams completed by the three classes took place during timetabled university lecture hours. The version used as a pretest or as a posttest consisted of two main questions: the first was a multiple-choice question where the participants answered twenty items by circling a, b, c or d that represents the best answer (distracter) and the second consisted of twenty items and was about changing the active voice sentences into the
passive voice wherever possible. The full mark for the first question was 40 marks whereas it was 60 marks for the second question.

3. Result

Descriptive Statistics

The researchers have calculated the means and the standard deviations for the Deductive groups and the Inductive groups of the three classes as seen in Table 1 which shows that the standard deviations for the Deductive groups are higher than those for the Inductive groups. The table also shows that the means for the Deductive groups are higher than the means for the Inductive group.

Table 1 shows us differences among the three classes for each approach. The means for the deductive groups are higher than the means for the inductive groups. In fact the means are higher for all the classes of the deductive groups. The total standard deviation for all the deductive group is higher than that for the inductive groups.

The researchers conducted pre-test because it was not possible to get control through the randomized sample. A two-way ANCOVA for post-test scores was made as Table 2 shows.

Table 2 reveals a significant difference between the deductive and inductive groups in favor of deductive group. But the results, as we can see in the same table, show that there are no significant differences found between the results of the classes for any of the two approaches at 0.05 =

4. Conclusion and Discussion

The statistical results of this study showed that students in the deductive group made significant better gains than those in the inductive group on the use of the passive and the active voice. These results came to support Ausubel (1974) and Carrol (1964) whose idea is that since adults are endowed with a cognitive network enabling them to understand abstract concepts, teachers should speed up the language acquisition by giving the learners explicit rules in a deductive learning framework. Similar results were given by Erlam (2003)
revealing a significant advantage for the deductive instruction group. The study highlighted the difficulty of designing language measures that access implicit language knowledge.

The results which showed a greater effect for deductive than for inductive instruction made this study in contrast to ideas in papers for researchers such as Dulay and Burt (1973) and Krashen (1980) who believed that teachers could provide their students with comprehensive input without a need for explicit rules. We noticed that the deductive approach groups showed that they were able to apply the rules immediately after given written questions and their answers were approximately accurate whereas the inductive approach group needed more time to answer the questions during the lessons.

It may be argued that students are not involved enough when a deductive approach is used, but this is up to the teachers who can make their involvement more through discussing exercises with the class, giving them enough time to think deeply before choosing the most appropriate answer. This minimizes the role of the teacher which is well-known as the center of the class when the traditional deductive approach is used. The conclusion of the study makes us agree with the hypothesis saying that when teaching grammar for the sake of grammar, the deductive approach helps more than the inductive approach. We can also claim that writing all the rules on the board, giving the model answers of the exercises and discussing the differences and similarities with the class led to successful lesson taught deductively.

This study proposes both approaches can be used in the teaching-learning processes, but before teaching the active and passive voice, it seemed that the deductive approach was more appropriate because the nature of the content is based on the grammatical rules of the active and the passive voice. But in other cases, particularly, when the teaching-learning process of grammar is complex some improvements might be needed, such as introducing concepts using a combination of both deductive and inductive approaches and reviewing patterns so as to avoid an entirely linear presentation (Schrampfer and Spack, 2005). Regarding the problem that applying rules indicates that students may not in fact fully understand the concepts involved where the deductive approach tends to emphasize grammar at the expense of meaning and to promote passive rather than active participation (Shaffer), we were able to solve such a problem by asking the students questions related to
the meaning of active and passive sentences and why or when should we use one of them and not the other so as to keep the better meaning.

Among other reasons behind getting higher marks by the deductive group is that the deductive group were able to get more feedback when comparing their answers with the teachers model answers on one hand and with the given rules on the other hand. We agree with Bluedorn, (1998) that the deductive method is effective to the degree it is clear, comprehensive and digestible, and Rivers (1975), who finds the use of the deductive approach most useful for mature, well-moticated student, or for adult student in intensive courses.

Table 1 Means and Standard Deviations

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Table 2 Analysis of Covariance

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References


Mountone, P. (2004). How to Use Examples Effectively: Deductive vs. Inductive Approaches, University of California, Santa Barbara, Email: Shirly@id.ucsb.edu.


By Azmi Adel Mohammed, Ass. Prof. Jerash Private University Jordan and Hanna Abu Jaber, Al-Balqa' Applied University Jordan