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# WIDENING THE CIRCLE: DIFFERENTIATING INSTRUCTION THROUGH EXPLICIT AND IMPLICIT GRAMMAR TEACHING FOR INCLUSION PURPOSES

## Abstract

Language teaching methods have received a great attention over the years. Traditionally, in the method era, delivery of instruction often followed a "one size fits all" approach. By the end of the twentieth century and the beginning of the twenty-first century, there has been a growing realization that sticking to one method cannot be successful all the time with all the learners. Given that learners are not all of one kind, and in order to effect change, the post-method era is favoured. The method calls for differentiating instruction for an inclusive classroom, one which uses different methods for the provision of tailor-made teaching, based on understanding learners' individual differences i.e. doing what is fair for students by fitting teaching practices to learning preferences. Inclusive differentiated instruction requires giving students choices about how to learn and how to demonstrate their learning. In the light of the foregoing, the present study raises the following research question: Does the use of a differentiated type of instruction have a differential, or say an inclusive, effect on learners and their interlanguage in comparison with an either-or method of instruction – namely, explicit or implicit? This translates into the following working hypothesis: Learners under a differentiated instructional condition would outperform both explicitly and implicitly instructed groups in that it makes inclusion happen. Thirty (30) first-year university English language learners are divided into three groups: an explicitly instructed group (N=10), an implicitly instructed group (N=10), and a differentiated instructional group (N=10) as a sample for the present study. Parallel structures are selected as the target form. A Grammaticality Judgment Test (GJT) is used to measure accuracy of the target form; therefore, two similar but not identical tests are administered at two temporal times: a pre-test and a post-test. The results of the present study show that differentiated instruction has a differential and inclusive effect in language learning, in that learners in such a condition outperform those in the explicit condition as well as those in its implicit counterpart. Recommendations for both research and pedagogy are discussed.

**Key words:** differentiated/inclusive instruction, explicit grammar, implicit grammar.

## 1. Introduction

Learners' individual differences often do not lend themselves to a particular method of teaching. The alternative idea of special schools may neither be feasible nor easily affordable. It rather widens the gap of *diversity* and *exclusion*, when it should instead widen the circle for *equity* and *inclusion*.

This study addresses the issue of how to deal with learners of different abilities, needs, learning styles, preferences, and interests. It aspires to help teachers be fair with all the students, by fitting their teaching practice to learners' learning preference. It seeks to promote inclusive classrooms and at best eliminate or reduce exclusion and marginalization to a minimum.

What challenges the implementation of inclusive education, however, is the question of how to meet learners' diversity and dis/ability in a way that is effective. The present paper is, then, an attempt to suggest an answer by *differentiating instruction* and making it an

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effective teaching practice. This way, language in general and grammar in particular will be processed differently but optimally by the different learners in the same classroom. In point of fact, differentiated instruction is said to be very promising as a method for it addresses the issue of widening the educational circle by including all students in general education classes. The message is simple: if teachers are not inclusive in instruction, their teaching is exclusive in practice.

## 2. Literature Review

### *2.1. On the Method: Post-Method Era Continuum*

Language teaching has long been subject to change especially because of the dissatisfaction with existing methods. The rise and fall of several teaching methods gave birth to a plethora of methods in the *method era* (Kumaravadivelu, 2006). Because of the limitations of the concept of method, another era of language teaching came to existence which is the *post-method era*, where use is made of no particular method, and whose concern is to suit all types of learners in the same classroom, however different they are.

Traditionally, the focus is put on *forms* or linguistic skills, and it is believed that after these are deeply rooted, communicative skills will soon follow. Over the years, the reverse situation took place in reaction (Long, 1991; Kumaravadivelu, *ibid*.): There is a misconception among many teachers who focus on *meaning* that grammar should not be taught and that this will look after itself when communication practice is guaranteed. It seems that in this method era the swinging of the pendulum did not stop shifting from one extreme position to another, making it difficult to hit on the reality of what language actually is.

Let it be stressed that the ultimate aim of foreign or second language teaching is to produce functionally competent performers who are not at a disadvantage, or short, of grammatical equipments. Be that as it may, undue *focus on meaning* or communicative skills at the cost of *forms* or grammatical accuracy results in learners who stop developing at a grammatically inaccurate level of proficiency – hence, the justification for grammar teaching.

It is noteworthy that the post-method era seeks to overcome the limitations of the concept of method, and secure *variety* and *flexibility*, or say the pedagogic parameter of *particularity* being a defining characteristic for its success (Kumaravadivelu, *ibid*.). It aims to better the teaching/learning process and make it more effective and more appropriate (ibid).

Since the classroom contains a number of students with different dis/abilities, needs, learning styles, and interests, teachers cannot limit themselves to using just one method, for a single method cannot fit all the learners' profiles. For that reason, the focus of language teaching is no longer on using a particular method. Focus is on helping students learn the language successfully as a result of being exposed to new ways of teaching in which the teacher differentiates his instructional strategies in order to suit all the learners. This is what is referred to as language teaching in the post-method era (ibid).

### *2.2. Explicit vs. Implicit Grammar Teaching*

The one-size-fits-all method of grammar teaching seems not very promising for the simple reason that it does not address the learning preferences of *all* the learners. For example, *explicit* grammar teaching is one method that puts more emphasis on form rather than meaning. It provides language learners with rules that they are required to use accurately. An example method through which grammar is taught explicitly is the Grammar-Translation Method. Actually, learners focus on memorizing the rules and become consciously aware of certain forms of grammar. Explicit grammar teaching presents grammar either deductively or inductively. This means that grammar rules are presented first or discovered at the end of instruction (cf. Ellis, 1998). Such type of instruction is important for learners since it attempts to raise their consciousness. This is very much in keeping with Schmidt (1990, 2001) who holds that explicit teaching and consciousness-raising are conducive to noticing, which is the necessary and sufficient condition for learning to take place. Notwithstanding its importance,

it seems that not all learners support such a teaching practice and may, therefore, feel marginalized or excluded from the instruction.

Unlike its explicit counterpart, *implicit* grammar teaching presents grammar in such a way that the focus is primarily on meaning, and there is no attempt on the part of the teacher to develop explicit or conscious understanding of the underlying forms (Ellis, 2009). Put otherwise, learners are provided with communicative tasks through which they are expected to internalize the underlying grammatical structures without being consciously aware. As a good case in point, the Communicative Approach is typical of such practice. Implicit grammar instruction promotes in learners communicative skills through meaning negotiation. As such, where the former type of instruction tends to promote accuracy, its antithesis is rather intended to develop fluency. Still, both do not seem to satisfy separately the cognitive needs of all proportions of language learners (Kumaravadivelu, *ibid*).

As a matter of fact, students are not all of a kind; they bring with them to the classroom different profiles. Such *diversity* makes grouping them by such factors as readiness or ability a difficult practice (Gartin et al., 2002), let alone using one instructional method or another. Clearly, using a particular teaching method *excludes* some learners for the benefit of others; likewise, it *includes* some at the cost of others. Educationalists' concern is to find out a way of dealing with the issue of diversity in the classroom and to minimize all forms of exclusion. According to Gartin et al. (ibid), two developments in education happen to address this issue: one is the philosophy of *inclusion*, the other is *differentiated instruction*.

### *2.3. Inclusive Education*

According to Ainscow (2005), inclusion is the major challenge facing education nowadays all over the world. In effect, most educationalists are supportive of the concept of *inclusive education*, but they could not come to a consensus on a definition of inclusion that is indicative of the way it should be applied in practice (e.g., Ainscow et al., 2006; McLeskey & Waldron, 2011; McLeskey et al., 2014). According to Osborne (2002: 301), "*Inclusion is a philosophy whereby students with disabilities are educated in general education classrooms alongside their peers without disabilities*." Gartin et al. (2002) and Shea and Bauer (1997) view the concept as holding that all students, regardless of *difference* or *ability*, are an integral part of the general education system, that instruction should meet the needs of all students.

It seems from the aforementioned that mention is made of *disabilities* but also of *differences* and *abilities* when it comes to inclusive education, no matter what the difference is. Stated another way, even though the issue of inclusive education is originated in disability territory, it is increasingly concerned as much with the disabled as with the non-disabled, without sidestepping learners with special educational needs i.e. there is a growing realization that inclusion should not be exclusive and that it should rather provide quality instruction to *all* learners so that they have access to the general education classroom and curriculum and therefore achieve optimal outcomes (UNESCO, 2017).

To cut the definition short, then, inclusive education refers to including all learners by ensuring that each individual has an equal but personalized opportunity for learning; it aims at supporting educators to address the full range of learners' needs so as to overcome barriers to learning, inclusion, and equity – which are basic foundations for quality instruction and learning – within the system to help all learners exploit their potential to the fullest (Dreyer, 2016; UNESCO, 2017). The central message, according to UNESCO (*ibid.*p. 12), is simple: "*every learner matters and matters equally*." This is, then, a call to address all forms of marginalization and exclusion from educational opportunities and to reduce them to a minimum. Besides, to make the success of inclusive practices happen, we need to address a number of variables, namely teachers' knowledge and use of the most *effective* curricula and teaching methods (Janney & Snell, 2013). In effect, inclusive educational models are said to be interchangeable with effective teaching practices, and so is differentiated instruction.

### *2.4. On the Route to Inclusion: Differentiated Instruction*

If the truth be told, the *traditional* approach to language teaching is becoming obsolete given the increasing numbers of learners with different dis/abilities, educational needs and learning styles (Dreyer, 2016). Traditionally, that is, delivery of instruction often followed a "*one size fits all*" approach (e.g., teaching grammar either implicitly or explicitly). This is a sure way to *exclude* an important proportion of learners instead of *including* 'all' of them.

Challenges to inclusive, diverse classrooms can be overcome through the use of *differentiated instruction* (Gartin et al., 2002; Tomlinson, 2001; Tomlinson and Imbeau, 2010), which is likely to enable us to move from exclusion to inclusion; in point of fact, differentiation is doomed necessary since included in general education classrooms are students with varying interests and learning profiles alongside those with severe learning and behavioural disabilities, all of whom seek appropriate instruction. In contrast totraditional instruction, differentiation provides *tailor-made* instruction. It is *individually* student-centered, with a focus on appropriate instructional and assessment tasks that are *fair*, *flexible*, and *engage* all students in the classroom in appropriate ways. Of note, where inclusive education is seen as a philosophy (Gartin et al., *ibid.*), differentiated instruction is rather viewed as a teaching methodology.

*Differentiated instruction* takes its philosophy from the root of its name: *different*. Differentiation stems from beliefs about differences among learners, *how* they *learn*, learning *preferences*, and individual *interests* (O'Briem & Guiney, 2001; Corely, 2005; Anderson, 2007). It means doing what is *fair* for students. Differentiation is a dimension of all pedagogy concerned with handling learners' diversity in order to make equity happen. It is a type of instruction teachers must develop to meet heterogeneous classrooms.

In light of the foregoing, one cannot fail to have noticed that differentiating instruction requires giving students *choices* about *how to learn* and *how to demonstrate their learning*. It means providing *multiple learning pathways* so that different students experience equally appropriate ways to learn. This requires the differentiation of the regular curriculum, together with creating different avenues based on background knowledge, learning styles, time for processing, and where learners are ready in terms of Bloom's Taxonomy (Remembering, Understanding, Applying, Analyzing, Synthesizing, Evaluating). The planning is time-consuming, but differentiated instruction is widely considered best practice (Tomlinson, 1999) as it seeks to meet the needs of *all* students. To understand how our students learn and what they know, pre-assessment and ongoing assessment, are essential.

Tomlinson (1995, 1999, 2001), Tomlinson and Strickland (2005), and Tomlinson and Imbeau (2010) note that teachers usually differentiate their teaching by modifying one or more of the following: the *content* (what is taught), the *process* (how it is taught), and the *product* (how students demonstrate what they learnt), based on students' readiness, interest, and learning profile (Corely, 2005). Readiness refers to what the students know, understand, and can do in a specific learning situation. Interest is about the curiosity, passion and desire of the learners to learn something. Learning profile stands for the students' way of learning, which differs in terms of preferences, needs, levels, interests, and the like.

Having choice helps boost student engagement in the task. *Differentiating content* becomes a reality by using, for example, materials at varying readability levels and interests, audio and video recordings, highlighted vocabulary and grammar items. *Differentiating* the *process* takes place by using leveled or tiered activities, varying the teaching tools to allow for auditory/visual/kinesthetic learning, re-wording, and varying pacing to allow for student processing, allowing for working alone, in partners, triads, whole group, small group, while alternating between cooperative and competitive learning. Insofar as *differentiating* the *product* is concerned, it is meant that instruction makes room for tiered product choices i.e. providing options that touch upon all multiple intelligences, preference, time allotment, level of difficulty, multi-modal assessing.

## 3. Methodology

### *3.1. Context*

The present study set out to investigate whether *differentiating instruction* and giving students choices about how to learn has an *inclusive* effect on the learning of *parallel grammatical structures*. Parallelism was selected because after 20 years or so of teaching written expression, it seems that the best of students suffers still from this structural problem.

In light of the foregoing, and in order for us to determine the role of different types of grammar instruction, the present study raises the following research question: Does the use of a *differentiated* type of instruction have a differential, or say an inclusive, effect on learners and their interlanguage in the learning of English parallel structures in comparison with an either-or method of instruction – namely, *explicit* or *implicit*?

This research question translates into the following working hypothesis: Learners under a *differentiated* instructional condition would outperform both *explicitly* and *implicitly* instructed groups in the learning of targeted structures in that it makes *inclusion* happen. The *null hypothesis* would be that *differentiated instruction* does not make a difference between the three groups.

### *3.2. Participants*

The subject sample of this study consisted of 30 first year university English language learners from the University Centre of Mila; an intact class, that is, was selected, then divided into three equal experimental groups: an *explicitly instructed* group (N=10), an *implicitly instructed* group (N=10), and a *differentiated instructional* group (N=10). Of note, all the participants were present in all temporal phases of the experiment. There was no control group for there was no attempt on the part of the researcher to compare instructed conditions with uninstructed conditions whose subjects are left without receiving additional input specifically focused on target forms. The aim was simply to see how different types of grammar instruction compare.

### *3.3. Procedure*

#### *3.3.1. Instruction*

Instruction took place away from the regular class hours, with three sessions, seventy-five minutes each, over a period of time equaling three sequential weeks, and it was given by the researcher who was at the same time their teacher.

A week after the pre-test (see below), subjects in the three groups received their experimental treatment. At this very stage, a terminological note might well be warranted. The terms *explicit instruction* and *implicit instruction* refer to two instructional approaches where focus on, or attention to, grammar form is made either overtly or covertly. *Explicit instruction* takes place when there is explanation of rules or when learners are prompted to infer rules; in sharp contrast, when no reference is made to rules, *implicit instruction* manifests (Norris and Ortega, 2000). As a good case in point, the technique of *input enhancement* through which targeted forms are highlighted by way of textual enhancement goes under the umbrella of implicit instruction; contrariwise, traditional teacher-fronted rule explanation is exemplary of explicit instruction. Using both practices in the same lesson, on the assumption that learners may exhibit different learning needs and preferences, make one *differentiated* in instruction.

The first experimental group received focused input through *explicit instruction* which consisted of formal instruction and meta-linguistic information on the target linguistic structures. As such, focus was essentially on form and there was an apparent effort on the part of the instructor to develop awareness of the target forms. This way, positive evidence was made salient, and explicit negative evidence was provided.

The second instructional group received *implicit instruction* which focused primarily on communication, and where form was merely a vehicle for meaning. This way, there was no particular discussion of the forms used to negotiate meaning.

In the *differentiated instructional* group, the instructor alternated between both implicit and explicit types of instruction. The lessons, that is, made use of both input enhancement and formal instruction together with the provision of both implicit and explicit feedback. This instructional condition was meant to direct the subjects to process input along with its concomitant target structures for meaning and form at the same time so as to meet both types of learning preferences i.e. to *include* all learners.

In effect, in order to provide a certain balance between the three conditions, the same reading texts were used. They were centred around the same two themes (*choosing a career*, and *diet and exercise* – taken from Folse et al., 2008: 248-249, 251) to ensure that the subjects processed the same input with no privilege in favour of one treatment group or another. Besides, the three instruction types followed the spirit of the PPP model (the presentation, practice, and production stages). The only difference was in the focus or type of the instruction and concomitant activities utilized.

To elaborate further, the *explicit* condition received focused input rich in parallel forms. The subjects were first presented with an overview of parallelism along with examples through formal instruction, followed with practice activities. Then, in subsequent sessions, they received a reading on two themes with comprehension questions: They were required to answer the questions such that they used the forms under focus. The concomitant training activities – in this condition and in the remainder of the conditions – included sentence completion, sentence correction, and gap-filling.

In the *implicitly* instructed condition, there was no formal instruction provided. The reading texts were followed with comprehension questions whose aim was negotiation of meaning and communication of ideas; it was ultimately hoped to find out whether the parallel forms inherent abundantly in the passages could be processed as intake by the subjects. The participants were, then, guided through a number of unfocused activities related mostly to the same theme under study. Here also, they were required to speak out their minds and negotiate meaning with no due or direct attention attributed to the forms present therein. As for feedback, it was provided by the instructor implicitly, only when necessary and in case of a communication breakdown, mainly in the form of recasts with no attempt on his part to draw attention to the rules underlying the erroneous forms.

As for the third condition, it was a combination of both explicit and implicit instruction i.e. a *differentiated* type of treatment: *explicitly*, room was secured for the provision of formal instruction in the start of the instruction, and *implicitly*, target forms were *enhanced* typographically, through the reading texts, by way of underlining to draw learners' attention to both meaning and form at the same time. Stated differently, the tasks were partly an attempt on the part of the researcher to focus the participants' attention on the use of parallelism in English, but this was coupled with negotiation of meaning. Grammar instruction and meaning-based interaction merged through grammar consciousness-raising tasks. The researcher hoped that participants would develop knowledge and awareness of the target formal features for further communicative use. Feedback was used explicitly (by restating the rule, for example), specially in beginning stages of the instruction, but in later stages the implicit type was also made use of in the form of recasts and clarification requests, notably.

*3.3.2. Instruments*

All administered tests consisted of an *untimed Grammaticality Judgment Test*. These were two similar but not identical tests which made up the pre-test and the post-test.

The development of L2 grammatical parallel structures was measured by means of an *untimed paper-and-pencil Grammaticality Judgment* Test (GJT), targeting explicit knowledge of the structures under study. As a matter of fact, GJTs require the learner to indicate whether a particular item is grammatically correct or incorrect. The test-takers were given a number of sentences containing correct and incorrect realizations of the target structure, and were instructed to identify which was which. Seven sentence items were correct and seven incorrect, giving a total of fourteen sentences. The respondents did not complete the tests under time constraints.

Why the untimed GJT? A number of considerations motivated its choice. One reason why may be the fact that it is designed to measure explicit knowledge. Explicit knowledge tests, by definition, call on one's explicit knowledge of a particular rule of grammar, prompt its use as a monitor, allow the test-taker some processing time, and focus attention on form. A second reason is that comprehension usually takes place before production and the GJT requires more passive grammar knowledge in comparison with other tests. One may conjecture a guess: Why not test oral proficiency? The answer is that instruction is believed to affect written, before oral, proficiency; oral language use, being more time-constrained, requires higher degrees of automatization (Bialystok, 1979, 1989).

The GJT was administered at two different temporal points all along the experiment: The first before the treatment (Test/Time 0), the second after the treatment (Test/Time 1). It may be worth our while to note that, so as to avoid the likelihood of subjects completing the post-tests while drawing on some memorized input, no test sentence bore any resemblance to the sentences included in the treatment condition.

The *pre-test*, delivered in written form, consisted of fourteen sentences, divided evenly between grammatical and ungrammatical and running hierarchically across different levels – the word, the phrase, and the clause levels, respectively. Test-takers were required to indicate in their own processing time whether each sentence was grammatical or ungrammatical by ticking where appropriate. The pre-test was meant to see if groups would reveal any statistically significant difference prior to instruction and to ensure that any possible comparative effects attributed to type of instruction would not be related to prior knowledge of any of the groups (see Appendix 1).

Regarding the *post-test*, it was administered a week after instruction took place to investigate whether type of instruction had different learning effects i.e. to inform the research question and test our hypothesis. It was similar to the pre-test but not identical. It also contained an untimed GJT with fourteen sentences, split evenly between grammatical and ungrammatical and running hierarchically across the same types of construction, but the test items were different. The subjects were given the same test direction as in the pre-test (see Appendix 2).

*3.3.3. Scoring the GJT*

The same scoring procedure was adopted in the pre-test and the post-test. Each test item was dichotomously responded to as grammatical or ungrammatical, and scored on a 0 to 1 point scale. The participants were awarded a score of 1 if they judged a sentence correctly, giving a maximum possible score of 14. Incorrect judgments were all scored 0 – all tests were worth at most fourteen points. There were no failures (e.g., abstaining, forgetting, missing), whatsoever, on the part of the respondents to respond to a test item (see Appendix 3).

*3.3.4. Analysis*

The effect of different types of instruction was evaluated, giving way to a three-level between-subjects variable adopted to define instruction (namely, *differentiated* instruction, *explicit* instruction and *implicit* instruction), and a two-level within-subjects variable (T0 and T1) which included the *pre-test* and the *post-test*. Raw scores were entered and calculated for further use in the statistical analyses using the Statistical Package for the Social Sciences (IBM SPSS) software (version 21). In order to answer the research question, and thus put our hypothesis to the test, we submitted the raw scores for the untimed GJT to an *Independent-Samples T-Test* (a between-subjects design).

**4. Results and Discussion**

First year university English language learners (*N* = 30) took the *untimed GJT*. It was necessary to make sure that the compared groups have roughly the same point of linguistic departure, which is why the pre-test was conducted. First, an *Independent-Samples T-Test* was conducted on the pre-test scores revealing no statistically significant difference prior to instruction between subjects in the *Differentiated* condition (M = 6.60, SD = 1.506) and those in the *Explicit* condition (M = 6.90, SD = 1.663), *t*(18) = -.423, *p* >.05 (see below Pre-Test 1, Tables 1a&b).

Second, running the *Independent-Samples T-Test* on the pre-test scores of the *Differentiated* instructional group and the *Implicit* group revealed no statistically significant difference prior to instruction between subjects in the former condition (M = 6.60, SD = 1.506) and those in the latter condition (M = 6.40, SD = 1.506), *t*(18) =.297, *p* >.05 (see Pre-Test 2, Tables 1a&b).

Third, the *Independent-Samples T-Test*, conducted on the pre-test scores of the *Explicitly* and the *Implicitly* instructed groups, revealed no statistically significant difference before instruction between subjects in the *Explicit* condition (M = 6.90, SD = 1.663) and those in the *Implicit* counterpart (M = 6.40, SD = 1.506), *t*(18) =.705, *p* >.05 (see Pre-Test 3, Tables 1a&b).

All in all, since the obtained *t*-values are less than the critical *t*-value (2.101) required for significance, and since the *p*-values are greater than.05 in all three comparisons, it can be concluded that there is no statistically significant difference between the means. Therefore, these results indicate that any comparative, or say differential, effects attributed to instruction will not be related to prior knowledge of any of the groups.

*Table 1a.*

*Group Statistics*

| Test Groups | | N | Mean | Std. Deviation | Std. Error Mean |
|---|---|---|---|---|---|
| **Pre-Test 1** | Diff. G. | 10 | 6. 60 | 1. 506 | . 476 |
| | Exp. G. | 10 | 6. 90 | 1. 663 | . 526 |
| **Pre-Test 2** | Diff. G. | 10 | 6. 60 | 1. 506 | . 476 |
| | Imp. G. | 10 | 6. 40 | 1. 506 | . 476 |
| **Pre-Test 3** | Exp. G. | 10 | 6. 90 | 1. 663 | . 526 |
| | Imp. G. | 10 | 6. 40 | 1. 506 | . 476 |

*Table 1b.*

*Independent-Samples T-Test for pre-test scores of the three dichotomous groups*

| | | Levene's Test for Equality of Variances | | t-test for Equality of Means | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|
| | | | | | | | | | 95% Confidence Interval of the Difference | |
| | | F | Sig. | T | Df | Sig. (2-tailed) | Mean Difference | Std. Error Difference | Lower | Upper |
| **Pre-Test 1** Diff. G. - Exp. G. | *Equal variances assumed* | . 784 | . 387 | -. 423 | 18 | . 677 | -. 300 | . 709 | -1. 791 | 1. 191 |
| | *Equal variances not assumed* | | | -. 423 | 17. 824 | . 677 | -. 300 | . 709 | -1. 792 | 1. 192 |
| **Pre-Test 2** Diff. G. - Imp. G. | *Equal variances assumed* | . 000 | 1. 000 | . 297 | 18 | . 770 | . 200 | . 673 | -1. 215 | 1. 615 |
| | *Equal variances not assumed* | | | . 297 | 18 | . 770 | . 200 | . 673 | -1. 215 | 1. 615 |
| **Pre-Test 3** Exp. G. - Imp. G. | *Equal variances assumed* | . 784 | . 387 | . 705 | 18 | . 490 | . 500 | . 709 | -. 991 | 1. 991 |
| | *Equal variances not assumed* | | | . 705 | 17. 824 | . 490 | . 500 | . 709 | -. 992 | 1. 992 |

In pursuit of our aims, and in order for us to answer the research question and, therefore, test our hypothesis, an *Independent-Samples T-Test* was conducted on the post-test scores of the *Differentiated* instructional group and the *Explicit* group showing a statistically significant difference due to type of instruction between the former training condition (M =

12.60, SD = 1.350) and the latter condition (M = 10.20, SD = 1.229), $t(18) = 4.157$, $p < .05$ (see below Post-Test 1, Tables 2a&b).

Second, conducting the *Independent-Samples T-Test* on the post-test scores revealed a statistically significant difference after instruction between subjects in the *Differentiated* condition (M = 12.60, SD = 1.350) and those in the *Implicit* condition (M = 7.80, SD = 1.317), $t(18) = 8.050$, $p < .05$ (see below Post-Test 2, Tables 2a&b).

Third, running the *Independent-Samples T-Test* on the post-test scores of the *Explicit* group and the *Implicit* group indicated a statistically significant difference due to instruction between subjects in the former condition (M = 10.20, SD = 1.229) and those in the latter condition (M = 7.80, SD = 1.317), $t(18) = 4.213$, $p < .05$ (see Post-Test 3, Tables 2a&b).

What does this mean? In Hinton (2004), and Miles and Banyard (2007), the critical value of *t* required for significance, at.05 level of significance, with 18 degrees of freedom, is 2.101. Since the *t* obtained in *comparison 1* (*t* = 4.157), *comparison 2* (*t* = 8.050), and *comparison 3* (*t* = 4.213), is higher than the required *t*, and since the obtained *p*-value (2-tailed) is.001,.000, and.001, respectively i.e. less than.05, the results are significant, suggesting that there is a significant difference between the means. Therefore, we reject the *null hypothesis* that *differentiated instruction* does not make a difference i.e. that there is no difference in the learning of parallel grammar structures between the three groups, in particular the *Differentiated* instructional condition. Put otherwise, this indicates that the null is incorrect, that there is a relationship between *Differentiated* instruction and the learning of parallel structures, that *differentiation* is *inclusive* in nature, and that the difference between the instructional treatments is not likely to be due to chance.

*Table 2a.*

*Group Statistics*

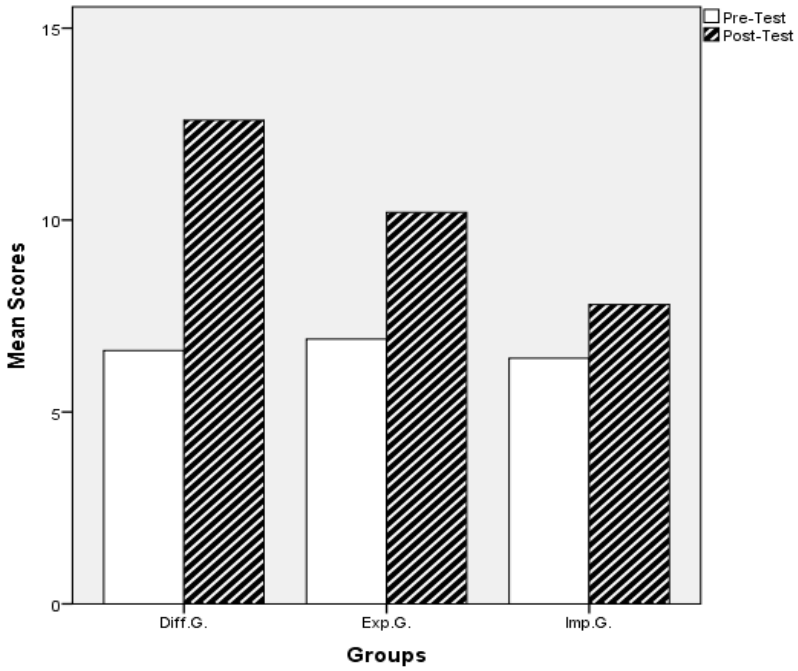
| Test Groups | | N | Mean | Std. Deviation | Std. Error Mean |
|---|---|---|---|---|---|
| **Post-Test 1** | Diff. G. | 10 | 12. 60 | 1. 350 | . 427 |
| | Exp. G. | 10 | 10. 20 | 1. 229 | . 389 |
| **Post-Test 2** | Diff. G. | 10 | 12. 60 | 1. 350 | . 427 |
| | Imp. G. | 10 | 7. 80 | 1. 317 | . 416 |
| **Post-Test 3** | Exp. G. | 10 | 10. 20 | 1. 229 | . 389 |
| | Imp. G. | 10 | 7. 80 | 1. 317 | . 416 |

*Table 2b.*

*Independent-Samples T-Test for post-test scores of the three dichotomous groups*

| | | Levene's Test for Equality of Variances | | t-test for Equality of Means | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|
| | | | | | | | | | 95% Confidence Interval of the Difference | |
| | | F | Sig. | T | Df | Sig. (2-tailed) | Mean Difference | Std. Error Difference | Lower | Upper |
| **Post-Test1** Diff. G. - Exp. G. | *Equal variances assumed* | . 019 | . 891 | 4. 157 | 18 | . 001 | 2. 400 | . 577 | 1. 187 | 3. 613 |
| | *Equal variances not assumed* | | | 4. 157 | 17. 845 | . 001 | 2. 400 | . 577 | 1. 186 | 3. 614 |
| **Post-Test2** Diff. G. - Imp. G. | *Equal variances assumed* | . 056 | . 816 | 8. 050 | 18 | . 000 | 4. 800 | . 596 | 3. 547 | 6. 053 |
| | *Equal variances not assumed* | | | 8. 050 | 17. 989 | . 000 | 4. 800 | . 596 | 3. 547 | 6. 053 |
| **Post-Test3** Exp. G. - Imp. G. | *Equal variances assumed* | . 017 | . 897 | 4. 213 | 18 | . 001 | 2. 400 | . 570 | 1. 203 | 3. 597 |
| | *Equal variances not assumed* | | | 4. 213 | 17. 916 | . 001 | 2. 400 | . 570 | 1. 203 | 3. 597 |

Below is a summary *bar chart* which is a good graphical display, or visual representation, of the data, as the height of each bar is proportional to the knowledge score mean of each group.




*Graph 1.*

*Bar Chart of global means for pre-test and post-test scores of the three groups*

## 5. Conclusion and Recommendations

The present paper has investigated the role of *differentiated instruction* in the promotion of *inclusive classrooms*. The results of the study are positive and very informative, but it remains to be determined in future research agendas whether grammar instruction constitutes a barrier to individuals with special needs and disabilities – knowing that teaching practices have contributed to the exclusion of those who do not fit the classroom *norm*. Our position is that the real handicap is not disability *per se* but the teacher's pedagogical practice and type of instruction that adds to the mentally or physically handicapped a further methodological handicap. When dealing with the blind, for instance, the teacher may invest in their auditory ability; as for the deaf, they may be addressed visually.

It is our contention that inclusive efforts cannot be effective if they are not met with changes in the way teachers teach so as to match the way students, with and without disabilities, learn. By considering varied learning needs, teachers can develop personalized instruction enabling all learners in the classroom to learn effectively. To do this, changes in the curriculum are very much in order, a curriculum by which the teacher sets different expectations for students based upon their readiness. This, in turn, calls for training teachers to respond to diversity, differentiation, and inclusion, let alone sensitizing them to reflect on their attitudes towards difference, disability.

To achieve full inclusion and address all forms of diversity and exclusion, it goes without saying, a student with special needs and disabilities should attend the same school with non-disabled peers, for we cannot reach 'education for all' without including individuals with disabilities. For so doing, work should be done to eliminate legal barriers, not to mention changes in thinking, starting from the school staff up to policy makers – a collaborative, on-going work which is central to inclusive practice.

To end on a positive note, diversity and disability should be viewed as an incentive to *innovate* the curriculum, pedagogy, and assessment i.e. the use of differentiation so as to move from exclusion to inclusion.

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## Appendices

### Appendix 1. The Pr-test

**Which of the following sentences is grammatically parallel and which is nonparallel? Tick as appropriate.**

***Single words:***

1.They waited four hours at the airport, reading and sleeping. **[Grammatical……. / Ungrammatical……. ]**

2.The doctor recommended plenty of food, sleep and exercising. **[Grammatical……. / Ungrammatical……. ]**

3.I am happier at my new job than I was at my old one. **[Grammatical……. / Ungrammatical……. ]**

4.For the first time in his life he had a job, a home, and family. **[Grammatical……. / Ungrammatical……. ]**

5.Syntax, morphology, and the area of phonology are the core areas of linguistics. **[Grammatical……. / Ungrammatical……. ]**

6.I was happy and my parents happy too. **[Grammatical……. / Ungrammatical……. ]**

7.Global warming affects humans, the environment, and is scary. **[Grammatical……. / Ungrammatical……. ]**

***Phrases:***

8. To chew carefully and eating slowly are necessary for good digestion. **[Grammatical……. / Ungrammatical……. ]**

9. To swim in a lake is more pleasant than swimming at the seashore. **[Grammatical……. / Ungrammatical……. ]**

10. The cat climbed over the fence, up the tree, and onto the roof of the house. **[Grammatical……. / Ungrammatical……. ]**

11.The judge told her to take the stand and tell the truth. **[Grammatical……. / Ungrammatical……. ]**

***<u>Clauses</u>:***

12.A father who spends time with his son and who thoughtfully answers his son's questions will be respected and loved. **[Grammatical……. / Ungrammatical……. ]**

13.He appreciated neither what she said nor how she said it. **[Grammatical……. / Ungrammatical……. ]**

14.She's asking not where he went but the time he went. **[Grammatical……. / Ungrammatical……. ]**

## Appendix 2. The Post-Test

**Which of the following sentences is grammatically parallel and which is nonparallel? Tick as appropriate.**

***Single words:***

1. He introduced aids to understanding such as paintings, recordings, pieces of sculpture, and guest lecturers. **[Grammatical……. / Ungrammatical……. ]**

2. He was not only kind but also knew when to help people. **[Grammatical……. / Ungrammatical……. ]**

3. Bill not only passed the test but also wrote the best paper in the class. **[Grammatical……. / Ungrammatical……. ]**

4. He was a waiter, a tour guide, and taught at school. **[Grammatical……. / Ungrammatical……. ]**

5. It's harder to do long divisions than dividing with a calculator. **[Grammatical……. / Ungrammatical……. ]**

6.The dentist did not let me eat or drink anything for at least an hour. **[Grammatical……. / Ungrammatical……. ]**

7.The ambassador spoke quietly and with force. **[Grammatical……. / Ungrammatical……. ]**

***Phrases:***

8. To support his family and to put himself through college, he worked seven hours a day. **[Grammatical……. / Ungrammatical……. ]**

9. I debated whether I should give the beggar money or to offer him food. **[Grammatical……. / Ungrammatical……. ]**

10. I hope to vacation either in Spain or in Ireland. **[Grammatical……. / Ungrammatical……. ]**

11. The instructor recommended several books for outside reading and that we should attend a play dealing with our subject. **[Grammatical……. / Ungrammatical……. ]**

***Clauses:***

12. If you write or if you telephone, wait for two weeks until I return from Singapore. **[Grammatical……. / Ungrammatical……. ]**

13. Unfortunately for all of us, what she says and she does are very often two different things! **[Grammatical……. / Ungrammatical……. ]**

14.My employer informed me that I would be sent to Hong Kong and I should make arrangements to leave in about two weeks. **[Grammatical……. / Ungrammatical……. ]**

**Appendix 3. The Scores**

| | T0 | | | | T1 | | |
|---|---|---|---|---|---|---|---|
| **N** | **Diff. G.** | **Exp. G.** | **Imp. G.** | **N** | **Diff. G.** | **Exp. G.** | **Imp. G.** |
| **1** | 6 | 9 | 8 | **1** | 12 | 12 | 7 |
| **2** | 6 | 6 | 4 | **2** | 11 | 9 | 8 |
| **3** | 5 | 5 | 6 | **3** | 13 | 9 | 10 |
| **4** | 8 | 6 | 6 | **4** | 14 | 9 | 8 |
| **5** | 7 | 9 | 8 | **5** | 14 | 11 | 6 |
| **6** | 4 | 5 | 7 | **6** | 14 | 10 | 7 |
| **7** | 6 | 6 | 4 | **7** | 12 | 11 | 8 |
| **8** | 8 | 9 | 7 | **8** | 13 | 9 | 7 |
| **9** | 7 | 8 | 8 | **9** | 10 | 12 | 10 |
| **10** | 9 | 6 | 6 | **10** | 13 | 10 | 7 |