

The Effect of Consciousness-Raising Treatment on EFL Learners' Acquisition of Grammatical Intonation: A Case Study of First-Year Students at the Department of English, University of Algiers 2

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Abstract: Acquiring grammatical intonation, which involves the connection between grammatical structures and intonation patterns, constitutes a crucial prerequisite for correct speech production and perception. Some learners of English as a Foreign Language (EFL) lack awareness of grammatical intonation patterns, leading to erroneous transmission and interpretation of oral messages. The present study investigates the effect of consciousness-raising treatment, combining both theoretical instruction and activities, on first-year Algerian EFL university students' acquisition of grammatical intonation by conducting a quasi-experiment. Data was collected utilising pre- and post-tests and analysed using the independent samples t-test. The post-test results reveal that the experimental group outperformed the control group, whose acquisition of grammatical intonation has improved. The study findings highlight the effective role of consciousness-raising treatment in promoting learners' acquisition of grammatical intonation patterns and raising their awareness of the importance of acquiring these patterns in preserving speech intelligibility and maintaining the flow of oral communication.

Keywords: Acquisition; consciousness-raising; grammatical intonation; EFL learners.

ملخص: يشكل اكتساب أنماط التنغيم النحوي الرابط بين أنماط التنغيم والبنى النحوية متطلباً محورياً لتحقيق الدقة في إنتاج الكلام وإدراكه السمعي. يفتقر بعض متعلمي اللغة الإنجليزية كلغة أجنبية إلى الوعي للأنماط النغمية النحوية، مؤدياً بذلك إلى إنتاج صوتي غير دقيق أثناء التكلم ومؤثراً على إرسال الرسائل الشفهية وفهمها السليم. تقوم الدراسة الحالية بالبحث حول تأثير المعالجة القائمة على تنمية الوعي الداجمة بين الشرح النظري والأنشطة التطبيقية على اكتساب طلبة السنة الأولى الجزائريين بالأنماط النغمية النحوية وذلك بإجراء شبه تجربة. تم جمع المعطيات باستعمال الاختبارين القبلي والبعدي. كما تضمن تحليل المعطيات استخدام اختبار "ت" للعينات المستقلة. تبين نتائج الاختبار البعدي أن اكتساب المجموعة التجريبية للتنغيم النحوي قد تقدم مقارنة بالمجموعة الضابطة. تثني نتائج الدراسة بدور المعالجة القائمة على تنمية الوعي في تطوير اكتساب الطلبة لأنماط التنغيم

النحوي ورفع وعيهم حول أهمية اكتساب هذه الأنماط في المحافظة على قابلية الكلام وبقاء تدفق التواصل الشفهي.

كلمات مفتاحية: اكتساب، معالجة قائمة على تنمية الوعي، الأنماط النغمية النحوية، متعلمو اللغة الانجليزية كلغة أجنبية

1. INTRODUCTION

Pronunciation teaching goals have changed with the shift towards communicative language teaching. More emphasis is put on teaching the aspects that preserve and strengthen communication, particularly intonation. The latter, defined as the speech melody, plays an important role in facilitating the transmission of the oral message speakers try to convey beyond their words (Roach, 1991). Among its functions is grammatical intonation, which operates as the grammatical system in the spoken language. Its role lies in transmitting the grammar that speakers tend to produce in their speech, and helps correctly perceive the intended message. On this basis, EFL learners need to acquire the grammatical intonation patterns and raise their awareness of their importance in communication.

Though this shift in pronunciation teaching, some Algerian EFL learners seem to lack awareness of the patterns of grammatical intonation and lack the ability to produce and perceive these patterns correctly. These learners are not aware of the significant effect grammatical intonation acquisition has on attaining correct speech production, which in turn helps preserve intelligibility for successful communication.

The present study aims to investigate the effect of consciousness-raising treatment, combining intonation theoretical instruction and activities, on EFL learners' acquisition of grammatical intonation patterns to attempt to respond to the following research question:

Does consciousness-raising treatment affect EFL learners' acquisition of grammatical intonation?

The study aims, further, to accept or reject the following research hypotheses;

H1: Consciousness-raising treatment affects EFL learners' acquisition of grammatical intonation.

H0: Consciousness-raising treatment does not affect EFL learners' acquisition of grammatical intonation.

2. Theoretical Background

The current section provides some definitions and theories underlying the key variables of the study under investigation, namely: intonation, grammatical intonation and consciousness-raising activities

2.1 Intonation

Intonation is one of the aspects of language suprasegmental phonology. It is the speech melody resulting from the tones that speakers produce when communicating. These tones are the product of variations in voice pitch, which rise and fall. Intonation is, indeed, related to the pitch movement, which changes when speaking, producing different tones (Avery and Ehrlich, 1992; Todd, 1995). This means that when producing natural speech, a speaker's voice rises and falls, pronouncing distinct tones and

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expressing various discourse meanings. In this sense, Hewings (2004) has summarised intonation definitions, stating, "Intonation refers to the way the pitch of the voice falls or rises" (p.7). This highlights that intonation is related to the voice pitch, where changes in intonation are determined by changes in pitch movement.

Intonation was identified by Roach (1991) to have four main functions, namely, discourse, attitudinal, accentual, and grammatical. As stated earlier, this research focuses on grammatical intonation, which requires explaining its principles.

2.2 Grammatical Intonation: Definition and Functions

Grammatical intonation refers to the connection between grammatical structures and intonation patterns. This function of intonation is known for its significance in identifying speech grammar. Indeed, the tone used when speaking helps listeners understand and correctly interpret the speech grammar (Roach, 1991). To illustrate, grammatical intonation patterns enable listeners to distinguish between statements and questions and also distinguish the syntactic structures of a phrase from a clause and from a sentence. However, if intonation is pronounced in a way that does not reflect the grammar, then it will mislead listeners to incorrectly interpret the grammar used, which in turn will confuse them. This highlights the central role grammatical intonation plays in identifying the grammar of the speech and promoting its correct production and interpretation.

A further significant function of grammatical intonation lies in removing meaning ambiguity. The meaning of some sentences when written may be ambiguous; this ambiguity can be clarified by the correct pronunciation of the appropriate tone (Roach, 1991). For example, in some cases, speakers use an identical sentence structure for both a statement and a question, and listeners rely on grammatical intonation to infer the syntactic meaning of the sentence.

2.3 Importance of Intonation Patterns Acquisition

Intonation plays a vital role in effective communication by conveying the speech's meaning and promoting the comprehension of the speaker's intended message. It further contributes to the expression of speakers' emotions, attitudes and state of mind, permitting listeners to understand their intentions, as stated by Kelly (2000), "Speech meaning is determined by intonation, the same for speakers' attitudes and emotions". This emphasises the role of intonation in making speakers' messages, attitudes, and emotions transparent to listeners. For example, producing the same phrase or sentence with different tones reflects speakers' different attitudes. In this sense, some researchers stress the contribution of intonation to express speakers' attitudes, noting that it can demonstrate when the speaker is angry, sad, or happy (Hewings, 2004; O'Connor, 1970; Wells, 2006).

While intonation conveys the meaning of speech and speakers' states of mind, grammatical intonation indicates the speech grammar and

expresses some specific grammatical constructions. Particularly, it distinguishes the different sentence types by highlighting the structure of information, through which listeners can distinguish a statement from a question, from a command, and from a list of words.

Due to its importance in clarifying the speech structure and conveying its meaning, learners need to acquire grammatical intonation patterns, as it raises their awareness of the way native speakers produce it, permitting them to understand speakers and be easily understood when speaking. On this basis, Kelly (2000) stresses the importance of raising EFL learners' awareness by integrating intonation teaching in language classrooms and using specific activities, such as consciousness-raising activities.

2.4 Consciousness-Raising Activities

Consciousness-raising activities are characterised by implementing tasks and techniques that focus on specific language forms. They provide learners with guidelines and activities which encourage them to think about a specific language item and draw their own conclusions about how the language works (Willis and Willis, 1996). To make the consciousness-raising activities successful, it is necessary to focus on a specific language aspect to which learners should be exposed. After the necessary exposure to the language form, learners need to move to the practice stage by completing written and oral tasks.

Integrating the consciousness-raising activities in language classrooms provides learners with the data to illustrate the targeted feature (Ellis, 1993, as cited in Willis and Willis, 1996). In other words, during the acquisition process, the teacher's role is to bring learners illustrations concerning the intended language aspect to facilitate its acquisition. After the necessary illustrations are presented, the learners' role is to notice the language aspect and generate hypotheses (Ellis, 1993, as cited in Willis and Willis, 1996).

In brief, consciousness-raising activities are the tasks and techniques implemented to focus on specific language forms. These activities are accompanied by illustrations provided by the teacher and followed by the practice phase of these forms. These illustrations help learners notice the language aspect and draw their own conclusions and hypotheses leading to the aspect acquisition.

2.5 Grammatical Intonation Acquisition through Consciousness-Raising Treatment

Grammatical intonation is a universal aspect; however, not all languages share the same grammatical intonation patterns, as is the case with English intonation. The latter has its unique system, making its acquisition a prerequisite for correctly perceiving and producing speech. On this basis, research has stressed the necessity to integrate some related tasks to raise EFL learners' awareness of grammatical intonation patterns (Kelly, 2000; Kenworthy, 1987). As stated previously, consciousness-raising activities are efficient in improving learners' awareness and acquisition of

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any specific language aspect. Implementing such principles to promote learners' awareness and acquisition of grammatical intonation patterns implies starting with presenting the theoretical instruction of the various patterns, preceded by providing learners with illustrations of each pattern, and closing with practising these patterns, where oral and listening tasks are worth administering.

3. Methodology

The present study aims to examine the effect of consciousness-raising treatment on EFL learners' acquisition of grammatical intonation. To achieve this aim, a quasi-experiment was conducted with two groups: an experimental and a control group, at the University of Algiers 2 Abou El Kacem Saadallah, Department of English. The quasi-experiment took place during the first semester of the academic year 2023/2024. The study procedures followed a sequence of steps which started with a pre-test, followed by a treatment and concluded with a post-test.

The intervention was conducted over a period of two and a half months, from the beginning of October to the middle of December. The participants of the experimental group attended an average of two sessions per week, each lasting 90 minutes.

The treatment was conducted in two phases; the first consisted of a theoretical instruction of grammatical intonation patterns, which were adapted from O'Connor (1970), Roach (1991) and Wells (2006). These patterns focused on the use of intonation with different sentence structures, namely, statements, commands, lists of items, wh-word questions, yes-no questions and tag questions. The treatment was followed by the practice phase, where multiple activities were administered.

3.1 Participants

Forty-six (46) first-year EFL students from the Department of English, University of Algiers 2, Abou El Kacem Saadallah, participated in the study. The sample comprises two groups: an experimental and a control group; each group consists of twenty-three (23) students. The groups were selected through non-probability convenience sampling, as they already existed before the study.

3.2 Methods of Data Collection

The study used tests as a research tool to collect data, evaluating the participants' acquisition of grammatical intonation. The pre-test consists of different items that are identical to those used in the post-test. The items comprise (18) sentences with different syntactic structures to which the participants were asked to mark the appropriate tone, followed by a justification of the chosen tone. The sentences included in the test were developed by adapting sentences from O'Connor (1970), Roach (1991) and Wells (2006). The test was scored on a 20-point scale; the scores ranged from 0 to 20 points.

3.3 Method of Data Analysis

The analysis of the test scores of the two groups and the comparison of the pre and post-test scores of the same group requires the use of the independent samples *t*-test (Dörnyei, 2007). This type of the *t*-test compares whether the mean scores of the experimental group significantly differ from those of the control group after completing the treatment.

To test the effect of the independent variable, consciousness-raising treatment, on the dependent variable, grammatical intonation acquisition, and to seek any significant difference between the mean scores of the experimental group and the control group, the following *t*-test formula is used: $t = \frac{x_e - x_c}{s(x_e - x_c)}$ $t = \frac{\text{difference between 2 sample means}}{\text{standard error of difference between means}}$

To calculate the standard error of the difference between means for equal sample size, the following formula is used: $s(x_e - x_c) = \sqrt{\frac{sde^2}{ne} + \frac{sdc^2}{nc}}$

This means that the *t* is: $t = \frac{x_e - x_c}{\sqrt{\frac{sde^2}{ne} + \frac{sdc^2}{nc}}}$

The results obtained from the *t*-test formula of calculation will be used to reject or accept the null hypothesis (*H*₀) of the study. The observed value of *t* (*t*) will be compared to the critical *t*-value, which is necessary to reject the null hypothesis. The latter is achieved by looking for the value that correlates with the appropriate degrees of freedom (*df*) (Hatche and Lazaraton 1991).

Degrees of Freedom

Degrees of freedom (*df*) are linked to sample size and the number of estimated parameters. It is measured using the formula: $df = ne + nc - 2$

Alpha Decision Level

In the present investigation, the alpha decision level (α), also referred to as the significance level, is set at ($p < .05$). This level means that the statistical test is non-directional, two-tailed, indicating that there is no logical or theoretical reason to expect one of the means to be higher than the other (Brown, 1988). Establishing the alpha decision level at ($p < .05$) means that if the results are greater than 5 percent ($p > .05$), the correlation of data is attributed to chance alone and the rejection of the (*H*₀) would be an error, but if the correlation of data is lower than 5 percent ($p < .05$), it indicates that the results may be attributed to other factors rather than chance (Brown, 1988) which leads to reject the (*H*₀).

Strength of Association

Rejecting the null hypothesis requires measuring the strength of association (η^2) to prove the presence of the effect of the independent variable on the dependent variable (Hatche and Lazaraton, 199). Its formula is $\eta^2 = \frac{t^2}{t^2 + df}$

If the results reveal that the association between the variables is less

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than 10%, it will be difficult to attribute the effect of one variable to the other, leading to the conclusion that other factors affected the research results. But if the association is obtained to be 50% or more, then the results of the study will be explained by the experimental treatment (Hatche and Lazaraton, 1991).

4. Data Analysis and Interpretation

This section presents and describes the results of both the pre and post-tests. The test scores of both the experimental and control groups are presented in tables, followed by the statistical results with their description.

4.1 Results of the Pre-Test

Table 1. Comparison of Pre-Test Results of Control and Experimental Groups’ Acquisition of Grammatical Intonation

Experimental Group Pre-Test Results	Control Group Pre-Test Results
5.25	5.5
5.25	5.5
4.5	6
4.5	5.25
4.25	8.25
3.5	6.5
5.75	6.5
4.75	3.75
5.25	9
6.25	6.25
5	6.25
6.75	5.25
6	4.25
5.25	9.5
4.25	6
7.75	5.5
6.25	3.5
6.75	5
5.5	5.5
9.25	3
3.25	7.25
5.25	5
6.75	5

$$x_e = 5.53$$
$$x_c = 5.80$$
$$t = -0.41$$

<i>sde</i> = 1.84	critical <i>t</i> -value = 2.02
<i>sdc</i> = 2.55	-0.41 < 2.01
<i>ne</i> = 23	<i>p</i> = .68, <i>p</i> > .05
<i>nc</i> = 23	<i>t</i> (44) = -0.41, <i>p</i> = .68
<i>df</i> = 44	

The independent samples *t*-test results reveal that the experimental group's ($\bar{x}$ = 5.53, sd = 1.84) scores are neither high nor different from those of the control group ($\bar{x}$ = 5.80, sd = 2.55). The observed *t*-value (t = -0.41, df = 44) is lower than the critical *t*-value (t = 2.01), indicating that the statistical difference between the two groups' pre-acquisition of grammatical intonation was absent. Besides, the obtained *p*-value (.68) is much larger than (α = .05), indicating that a 68% probability of getting this result is by chance. The findings imply that the experimental and the control groups had practically the same acquisition level of grammatical intonation before the treatment took place.

4.2 Results of the Post-Test

Table 2. Comparison of Post-Test Results of Experimental and Control Groups' Acquisition of Grammatical Intonation

Experimental Group Post-Test Results	Control Group Post-Test Results
16.25	10
13.5	2.5
15.5	6.25
15.25	5.25
13.75	3
19	4
13.75	5
16	4.25
14	10
13.25	7.75
16	4.5
16.5	3
13.5	6.5
12.25	5
16.75	4
17.75	5.5
16.5	7
17.5	4
16.5	5.5
12	4.5

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16.25	5.5
9	5.5
10	5

xe= 14.82

xc= 5.37

sde = 6.07

sdc = 3.71

ne = 23

nc = 23

df=44

t = 6.37

criticalt-value = 2.02

p = 6.37>2.01

p = .000001, p<.05

t (44) = 6.37, p= .000001

eta² = 0.53

Post-test results reveal that the experimental group ($x= 14.82$, $sd= 6.07$) scores significantly higher than the control group ($x= 5.37$, $sd= 6.07$). The comparison of the observed t -value ($t= 6.37$, $df= 44$) to the critical t -value ($t= 2.01$) shows that the t -value is much greater than the critical t -value. This means that the experimental group’s post-acquisition of grammatical intonation patterns is significantly different from that of the control group. Besides, the obtained p -value (.000001) is smaller than ($\alpha=. 05$), indicating that the probability of this difference occurring by chance is lower than 0.1%, while 95% of the significance is a result of other factors rather than chance. These results highlight, indeed, the significant effect of the consciousness-raising treatment on the experimental group’s acquisition of grammatical intonation, revealing the significant difference between the two groups’ post-acquisition of grammatical intonation. These results provide support for the alternative hypothesis (H1) and lead to rejecting the null hypothesis (H0). After rejecting the latter, the η^2 was computed and yielded the value of (.53), corresponding to (53%), indicating the significant effect of the consciousness-raising-treatment on the experimental group’s acquisition of grammatical intonation patterns.

5. Discussion

The findings have revealed positive effects of the consciousness-raising treatment in improving Algerian EFL learners’ acquisition of grammatical intonation. As stated earlier, the experimental and the control groups’ pre-test mean scores were approximately equivalent with no significant statistical difference. The pre-test results indicate that both groups had about the same low levels in grammatical intonation before the treatment and confirm that they belong to the same population. These prior findings explain that since English is a Foreign Language, the acquisition of grammatical intonation patterns cannot take place naturally. In this case, EFL learners need to be made aware of the patterns by integrating consciousness-raising activities in language classrooms, which align with

Ellis' (1993, as cited in Willis and Willis, 1996) and Kenworthy's (1987) statements on the necessity of implementing the consciousness-raising activities to help acquire EFL aspects.

The post-test results, on the other hand, reveal a significant difference between the experimental group and the control. The experimental group has improved in acquiring the grammatical intonation patterns, which is explained by the effects of the consciousness-raising treatment on learners' acquisition of grammatical intonation. The positive findings emphasise, indeed, the effective role of raising EFL learners' awareness of grammatical intonation patterns in fostering the acquisition process, confirming Ellis' (1993, as cited in Willis and Willis, 1996) theory on the importance of implementing the consciousness-raising activities in language classrooms for their pivotal role in enhancing the acquisition of language aspects.

It is worth reminding that the consciousness-treatment, to which the experimental group was exposed, consisted of two phases: theoretical and practical. During the first phase, the learners received a theoretical instruction explaining grammatical intonation patterns, whereas the second phase made learners actively practice the patterns under study. Adopting the consciousness-treatment procedures has been revealed to be effective in improving learners' acquisition of grammatical intonation, which aligns with Ellis' (1993, as cited in Willis and Willis, 1996) remarks, who emphasised the importance of starting the consciousness-raising with the theoretical instruction of language aspects, preceding it by making learners practice those aspects. As stated earlier, these treatment procedures enable learners to build their own knowledge and generate their own hypotheses, resulting in language aspects acquisition, which is the case of the present study procedures and findings.

6. Conclusion

The study has investigated the effect of consciousness-raising treatment on Algerian EFL learners' acquisition of grammatical intonation. The statistical analysis of the pre-treatment acquisition test results reveals that the two groups, experimental and control, had nearly identical levels of grammatical intonation acquisition. Whereas, the post-test results demonstrate that the experimental group significantly surpassed the control group. The significant difference between the groups and the improvement of the experimental group results are explained by the positive effects of the consciousness-raising treatment in fostering grammatical intonation acquisition. The obtained results are in accordance with previous research findings, emphasising the importance of consciousness-raising treatment implementation in contributing to the acquisition of language aspects, particularly grammatical intonation. Implementing the consciousness-raising treatment, combining theory and practice, is of great importance in improving grammatical intonation acquisition, for it promotes autonomous learning and allows learners to acquire the target aspect.

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