

The role of a consciousness-raising task in a focused-task sequence

O papel de uma tarefa de conscientização gramatical em uma sequência de tarefas focadas

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Abstract: This paper analyzes the role of explicit information on the learning of subject and object wh-questions in a sequence of tasks. Two sequences of focused tasks (ELLIS, 2003) were designed to incorporate flooded and enhanced subject and object wh-questions in the input. The activities were the same, except for a consciousness-raising task (C-RT) in one of the sequences, which was devised to promote learners' explicit knowledge of the target structures. Two groups of EFL high school students participated in the study. The data were collected through a pre- and a post-test that required the production and the recognition of the structures. The groups' performance was compared, and the results showed that the focused-task sequence containing the C-RT was not promising, possibly due to learners' internal factors which may play down the role of explicit knowledge in the foreign language learning process.

Keywords: Explicit learning; Consciousness-raising task; Focused tasks; Wh-questions

Resumo: Este artigo analisa o papel da informação explícita na aprendizagem de wh-questions com função de sujeito e objeto em uma sequência de tarefas. Duas sequências de tarefas focadas (ELLIS, 2003) foram elaboradas para conter insumo encharcado e destacado de wh-questions na função de sujeito e objeto. As atividades foram as mesmas, exceto pela tarefa de conscientização gramatical (TCG) em uma das sequências, que foi planejada para promover o conhecimento explícito dos alunos sobre as estruturas-alvo. Duas turmas de estudantes de ensino médio, estudando inglês como língua estrangeira, participaram do estudo. Os dados foram coletados por meio de um pré- e um pós-teste que solicitaram a produção e o reconhecimento das estruturas. O desempenho dos grupos foi comparado e os resultados mostraram que a sequência de tarefas contendo a TCG não foi promissora, possivelmente devido aos fatores internos dos aprendizes, que podem reduzir a importância do conhecimento explícito no processo de aprendizagem de língua estrangeira.

Palavras-chave: Aprendizagem explícita; Tarefa de conscientização gramatical; Tarefas focadas; Wh-questions



1 Introduction

Many researchers have defended some instructional focus in meaning-oriented approaches due to the learners' limited attentional capacity to process opaque forms in the input (ELLIS, 2019; SKEHAN, 1998, among others). This means that being exposed to language use may not suffice to promote learning of complex syntactic structures as object wh-questions, for instance, which require insertion and movement operations for their production.

For complex structures, some authors claim for an explicit focus on form (GASS; SVETICS; LEMELIN, 2003; HULSTIJN; GRAAFF, 1994), while others argue that an implicit focus would suffice in getting learners to notice them (LEUNG; WILLIAMS, 2011; REINDERS; ELLIS, 2009). Based on some meta-analysis studies about L2 instruction (NORRIS; ORTEGA, 2000; SPADA; TOMITA, 2010), explicit types of instruction are more effective than implicit types for both simple and complex features, which could make consciousness-raising tasks (C-RTs) a better option in language teaching than tasks that do not require language awareness.

The aim of this study is to analyse how effective a C-RT can be to the learning of subject and object wh-questions in comparison with an implicit type of instruction (input flooding together with input enhancement). Two similar sequences of focused-tasks were designed. One of them aimed to promote explicit learning with the inclusion of a C-RT, while the other encouraged implicit learning of the target structures.

The findings of this study are intended to contribute to the theoretical discussions about the level of awareness that is necessary for foreign language students to learn simple and complex structures in English, considering the degree to which a teaching strategy interrupts the flow of communication (i.e., "degree of obtrusiveness" – DOUGHTY; WILLIAMS, 1998, p. 258). In the present study, a C-RT represents a more obtrusive strategy in relation to input flooding and enhancement together. This issue has implications for teaching English as a foreign language (EFL) in relating the effect of explicit / implicit strategies on learning.

This paper starts with the notion of focused tasks and how the input can be manipulated to give salience to a particular form. The method is then described. After that, the data are presented and discussed, leading up to the conclusions.

2 Focused tasks

Focused tasks are communicative activities in their essence, because they derive from the general notion of task, which implies language use in a situated and purposeful context to achieve a communicative outcome (ELLIS; SHINTANI, 2014; SKEHAN, 1998; XAVIER, 2016). Their purpose is to attract or direct learners' attention to one or more specific structures in the input.

Ellis (2003) defines focused tasks and unfocused tasks according to the presence or absence of input manipulation, respectively. In focused tasks, the input is manipulated by the teacher to make students notice and process a particular structure in the context of language use when they are engaged in comprehension and/or production. Unfocused tasks do not require input manipulation since they are designed 'to elicit general samples of learner language' (ELLIS, 2003, p. 141). In this sense, such tasks are not intended to attract learners' attention to a particular form, but to any form, in order to promote incidental learning.

Focused tasks can elicit varying levels of learner attention depending on the teacher's strategy for input manipulation. Implicit strategies generally require surface level learner attention, as in tasks with input flooding, input enhancement, or a key element to be attended to for successful task completion. Explicit strategies, on the other hand, may consist of linguistic data analysis, as C-RT and synthesis-oriented activities (TARVIN; AL-ARISHI, 1991). They require a deeper level of attention to a particular form.

In the present study focused tasks were designed to operationalize the communicative use of subject and object wh-questions in a task sequence. Three strategies were used to manipulate the input: flooding, enhancement, and language awareness.

2.1 Input flooding

A task with input flooding requires a high number of exemplars of a given structure for the students to notice it while maintaining a focus on communication. Some studies have shown positive effects of input flooding on learners' performance, either as an isolated

strategy or combined with other strategies (HERNÁNDEZ, 2011; RASHTCHI; YOUSEFI, 2017).

Hernández (2011), for instance, examined the performance of three groups under three different conditions to assess the use of discourse markers in Spanish. The groups were: explicit instruction combined with input flooding group (EI+IF), input flooding alone group (IF), and control group (CG). The participants consisted of ninety-one English-speaking adults studying Spanish as a foreign language. The data were collected using a picture-description task that was administered one week prior to instruction (pre-test), one day after instruction (immediate post-test), and one month after instruction (delayed post-test). The results showed that both experimental groups (EI + IF and IF) were successful in the use of discourse markers in both post-tests. However, the EI + IF group was not superior to IF alone. The author concluded that “a rich IF combined with communicative practice and feedback is sufficient to foster acquisition of discourse markers” (HERNÁNDEZ, 2011, p. 177).

In Rashtchi and Yousefi’s study (2017), input flooding was used as an isolated strategy. The authors compared input flooding in reading and listening to examine its effects on accuracy and complexity. Sixty-six Iranian EFL learners were divided into three groups: reading input flooding group; listening input flooding group, and the control group who carried out activities with no association with input flooding. The data were collected utilizing pre and post monologues. The results indicated that the reading input flooding group outperformed the other groups in both measures (accuracy and complexity). The authors concluded that although the reading group had a better performance, the integration of reading and listening input flooding texts may maximize learning opportunities.

2.2 Input enhancement

Enhancement was the second strategy used in this study to manipulate the input in the task sequences. Similarly to input flooding, input enhancement is used to attract learners' attention to a particular structure, and this can be done by highlighting it in bold/italic or in a different text color or simply using typographical resources (in written texts), or rising intonation (in spoken texts). According to Sharwood Smith (1991, p. 120), who

introduced the term, “whether the enhanced input will ultimately trigger the relevant mental grammatical representation is, of course, an empirical question”.

In a research review with 21 studies involving Sharwood Smith's framework of input enhancement, Han, Park and Combs (2008) concluded that there is no consensus about the effectiveness of this attention-getting strategy in learning gains. However, the reviewers explain that this lack of consensus is due to the different methodological approaches used in these studies, which prevents any comparison of their results.

Some studies have combined input enhancement and input flooding to examine the effect of this combination on EFL learning. Arani and Yazdanimoghaddam (2016) analysed these strategies together and alone on the recognition and production of both adjective clauses and verb+preposition, and concluded that when combined they lead to a better performance. Similarly, Szudarski and Carter (2016) also showed positive effects for this combination. They investigated the acquisition of verb-noun and adjective-noun collocations by 41 Polish learners of English, who were assigned to two experimental groups and one control group. One of the experimental groups was exposed to input enhancement plus input flooding of the target structures (IEN), while the other group received input flooding only (IFO). The authors concluded that the IEN group outperformed both the IFO group and the control group in the tests.

2.3 Language awareness

The last strategy used in this study to manipulate the input was language awareness. According to Kumaravadivelu (1994, p. 37), “language awareness [LA] strategies emphasize understanding, general principles and operational experience”. For the author, empirical studies show that LA-based activities “can speed up the rate of learning” and “help learners sensitize themselves to aspects of the L2 which would otherwise pass unnoticed” (p. 37).

One example of LA-based activity is C-RT, which aims to (i) raise learners' consciousness about how a particular grammar feature behaves syntactically/semantically in a phrase, (ii) promote interaction in the target language about a grammatical structure, and (iii) generate explicit knowledge (ELLIS, 2003).

C-RT was first proposed by Fotos and Ellis (1991) as a grammatical activity with interactive nature, and named as a “problem-solving task”. For the authors, the C-RT requires that the learners “interact in the target language in order to consciously analyze data and arrive at the explicit representation of the target structure” (FOTOS; ELLIS, 1991, p. 609).

Several studies have shown positive results of C-RTs in language learning. One of them compared the effects of C-RT and input enrichment task (IET) on the learning of Spanish discourse markers (DE LA FUENTE, 2009). The results showed that the C-RT group outperformed the IET group in terms of immediate comprehension and retrieval of the discourse markers. The author concluded that the C-RT used in her study was more effective in focusing students’ attention to form, meaning and use, and in promoting explicit learning.

A similar study conducted by Amiriam and Sadeghi (2012) compared C-RT and traditional grammar teaching to evaluate C-RT effectiveness. Sixty high school Persian students of English were divided into two groups: the control group, who received grammar teaching based on practice and traditional approaches, and the experimental group, who was engaged in C-RTs. The students were asked to read sentences with samples of the target structures and induce the grammar rule by themselves and in groups. The results showed that the C-R activities were more effective than the traditional grammar approach.

3 The study

In the present study the C-RT was designed to develop the participants’ explicit knowledge of subject and object wh-questions and improve their production and recognition of both structures.

Wh-question formation in English demands complex syntactic relations (VALIAN; CASEY, 2003), especially when wh-pronouns are in the position of object, which requires the mobilization/insertion of an auxiliary verb in the phrase, notion of temporality and word order arrangement. Due to this, EFL Brazilian learners tend to have difficulties in formulating wh-questions correctly. In addition, object wh-questions in Portuguese do not require an auxiliary verb before the subject, which increases the

linguistic and cognitive demand on Brazilian students as learning wh-questions in English. Thus, some type of instruction might help them improve their performance.

Two research questions were defined in this study: (i) What is the students' performance in the production and recognition of subject and object wh-questions when they are submitted to a focused task sequence with and without a C-RT?; (ii) What is the effect of a C-RT on the production and recognition of these structures?

3.1 Participants

Two intact groups of high school EFL Brazilian students participated in this study. The first group was submitted to a sequence of seven tasks with flooded and enhanced subject and object wh-questions (control group – CG). The second group performed the first six tasks, except for the last one that consisted of a C-RT (experimental group - EG).

Both CG and EG had thirty-six enrolled students in each class. All of them performed the tasks that were proposed for their group, but not all of them had their data analysed because of the lack of return of their parents' consent form. Due to that, the CG participants consisted of twenty five students with an average age of 15,6 years¹, while the EG participants comprised twenty students with an average age of 15,4 years. Both groups studied in the same public school and they had two EFL classes a week of 45 minutes each.

Comparing the groups' experiences with EFL lessons outside the classroom, 48% of the CG claimed that they had attended the following levels in private language institutions: beginning (n. 4), pre-intermediate (n. 3), intermediate (n. 3), and advanced (n. 2). In the EG, 30% of the students stated that they had attended the following levels: beginning (n. 3), pre-intermediate (n. 1) and intermediate (n. 2).

¹ The consent form, as well as the Research Project, were submitted to the Human Research Ethics Committee under the number CAEE 66557617.3.0000.0121, and they were approved according to the technical report number 2.621.555.

3.2 The sequences of tasks

Both task sequences had six tasks in common. The first three tasks aimed to attract students' attention to subject wh-questions while the other three focused on object wh-questions.

Task 1 consisted of a question-and-answer game covering the content of school subjects. A total of sixty questions were prepared for this game. They were followed by two alternatives, one correct and the other incorrect (e.g., Who created the character Emília, Machado de Assis or Monteiro Lobato?). The thirty-six students of each class² were divided into five groups and each member had to answer a question with the possibility of being repeated. In this task, both CG and EG received flooding of subject wh-questions for approximately 36 times considering the total number of students in the classroom.

Task 2 required that each student designed a Geography quiz based on fifteen questions, which had the wh-word and -phrase highlighted in bold and underlined, together with the main verb (e.g., **Who signed** Lei Áurea?; **Which ocean surrounds** Brazil?). The students had to identify the questions that were related to Geography, elaborate the alternatives (correct and incorrect), write the quiz instructions and provide the answer key.

In task 3, the students were asked to write two questions with two alternatives to be used in a game after the data collection. The questions received direct corrective feedback (Ellis, 2009) and they were returned to the students in the following class.

Task 4 was similar to task 1, but the question-and-answer game involved open-ended questions (e.g., What do Americans celebrate on February 14th?). A total of sixty questions were prepared for this game. In this task, both CG and EG received flooding of object wh-questions for approximately 36 times considering the total number of students in the classroom.

Task 5 required that the students individually marked two tests in order to complete a school form with the results of their corrections, including whether the testees would be approved. Each test comprised fifteen questions with wh-words and -phrases

² As previously stated, thirty-six students from each group performed all the tasks as part of the curriculum content, but only twenty-five students from the CG and twenty students from the EG had their data analysed.

highlighted in bold and underlined, together with the auxiliary and main verb (e.g., **What did William Shakespeare write?**; **Which movement did Tarsila do Amaral participate in?**). In total, the students were exposed to thirty questions.

Similarly to task 3, task 6 required the formulation of two open-ended questions for a game after the data collection. They received direct corrective feedback and were returned to the students in the following class.

Task 7 was different in both groups. In the CG, both target structures were flooded and enhanced in the input. The students, individually, had to read sixteen questions to choose two questions they would like to be answered by a celebrity in an interview that would be published in a magazine, and to send the magazine's editor an email with the chosen questions. Half of the questions enhanced wh-words/-phrases in subject position and the other half enhanced wh-words/-phrases in object position. In the EG, task 7 was a C-RT carried out in pairs. The students were provided with two separate blocks of questions to be analysed: block 1 with subject wh-questions and block 2 with object wh-questions. The target structures were enhanced in bold and underlined. Based on the questions in each block, the students had to complete a text to arrive at the representation of the rule and then explain the difference between Type 1 and Type 2 questions using their own words. The first part of the task was corrected with the participation of the whole class.

3.3 Data elicitation

The data were collected utilizing a pre- and post-test design, both consisting of the same questions for comparison purposes. The aim of the pre-test was to assess students' previous knowledge of the target structures. The test was divided into two parts: translation and recognition. For the translation part, ten questions were provided in Portuguese to be translated into English from given words. However, not all words should be used. Five questions had wh-words/-phrases in subject position and five in object position. The recognition part consisted of a multiple choice activity with six questions, three with wh-words/-phrases in subject position and three in object position.

3.4 Data analysis procedures

The data were analysed based on the correct word order used in the formulation of the wh-questions. Constructions with incorrect verb tense use (e.g., What writer write* Dom Quixote?), incorrect noun phrase order (e.g., What writer Spanish* wrote Dom Quixote?), incorrect use of auxiliary verb (e.g., What does* the snakes eat?), and the presence of morphological errors (ex.: *What animals eats* a frog?*) were ignored since they did not compromise the correct word order of subject and object wh-questions.

The pre- and post-test data were scored dichotomously: one point for a correct answer and zero point for an incorrect / no answer. The data received a percentual and statistical analysis with SPSS software. For the statistical analysis, the Mann-Whitney test was used for independent samples in order to compare the scores of correct answers in the two conditions, and the Wilcoxon signed rank test for paired samples to compare the scores in the pre- and post-tests for each group.

4 Results

In the pre-test, most students of the CG (59.2%, M=2,96) and EG (60%, M=3,00) demonstrated that they knew the correct word order of subject wh-questions. On the other hand, the vast majority of the students in both groups were not successful in formulating object wh-questions. Only 13.6% (M= 0,68) of the constructions were correct in the CG and 11% (M=0,55) in the EG. These results were expected considering the complex syntactic relations that object wh-questions require (PIENEMANN, 2011; SEIDL; HOLLICH; JUSCZYK, 2003) in comparison with subject wh-questions. Due to the approximate percentages between CG and EG in the pre-test for both subject and object wh-questions, it is possible to claim that both groups seemed to be at the same level of knowledge about wh-questions, which means that the gains that were observed in the post-test were attributed to the treatment.

In the post-test, the results showed that both CG and EG achieved a higher number of grammatically correct constructions for subject wh-questions (CG = 72.8%, M=3,64; EG = 73%, M=3,65) in relation to the pre-test. Likewise, in object wh-questions, the percentage of grammatically correct constructions also increased, but not so expressively.

Table 1 shows the results of the grammatically correct productions of wh-questions in both groups.

Table 1 - Results of the production test

	Subject wh-questions						Object wh-questions					
	Pre-test			Post-test			Pre-test			Post-test		
	%	Mean	SD*	%	Mean	SD	%	Mean	SD	%	Mean	SD
CG	59,2%	2,96	0,372	72,8%	3,64	0,310	13,6%	0,68	0,229	17,6%	0,88	0,291
EG	60%	3,00	0,391	73%	3,65	0,406	11%	0,55	0,235	13%	0,65	0,264

* SD – Standard Deviation

Source: Gesser, 2019

As to the recognition test, a few students were able to recognize the correct word order of both subject and object wh-questions in the pre-test. In the CG, only 38.6% (M=1,16) of the students were able to identify subject wh-questions, and 24% (M=0,72) object wh-questions. In the EG, a higher percentage of students managed to recognize subject wh-questions (45%, M=1,35) and object wh-questions (28.3%, M=0,85). Based on these results, both CG and EG were more successful in recognizing the simple structure (subject wh-questions) than the complex structure (object wh-questions).

In the post-test, the EG maintained in the same percentage for subject wh-questions (45%, M= 1,35), and there was a decrease in percentage for object wh-questions, as shown in Table 2. On the other hand, in the CG there was a considerable increase in the percentage of students who recognized subject wh-questions from the pre- to the post-test. However, the percentage of students who recognized object wh-questions maintained in 24% (M=0,72) from the pre- to the post-test. Table 2 shows the results of the recognition test in both groups.

Table 2 - Results of the recognition test

	Subject wh-questions						Object wh-questions					
	Pre-test			Post-test			Pre-test			Post-test		
	%	Mean	SD	%	Mean	SD	%	Mean	SD	%	Mean	SD
CG	38,6%	1,16	0,197	56%	1,68	0,222	24%	0,72	0,204	24%	0,72	0,204
EG	45%	1,35	0,233	45%	1,35	0,244	28,3%	0,85	0,150	26,6%	0,80	0,200

Source: Gesser, 2019

4.1 Discussion

Based on Table 1, both groups improved their performance in the production of subject and object wh-questions from the pre- to the post-test. This means that both task sequences (with and without C-RT) had a positive effect on the students' performance. In order to find out if the increase of correct answers was significant for both groups and for both linguistic structures, a statistical analysis was undertaken using the SPSS software. Based on the Mann-Whitney test, there was no significant difference ($P > 0.05$) in any of the conditions. In other words, the percentage increase in both subject and object wh-questions from the pre- to the post-test, in each group, was not statistically significant. The same applies to the results between the groups in the production of subject and object wh-questions. No significant difference in performance was found ($p > 0.05$). Although the CG has performed a little better in the production of object wh-questions considering the percentages and the mean presented in Table 1, the difference between the groups was not statistically significant.

This data suggests that neither the explicit nor the implicit type of instruction used in this study provided significant learning gains in production, even for the simple structure for which experimental studies have advocated that explicit focus is better than the implicit one (DOUGHTY; WILLIAMS, 1998).

Regarding the results of the recognition test, shown in Table 2, the CG improved their performance from the pre- to the post-test (38,6% → 56%). A statistical analysis was made to measure this percentage increase, which indicated a significant difference ($T = 30.5$, $p < 0.05$), and higher score with moderate effect size ($r = 0.40$). This suggests that the implicit type of instruction was able to promote noticing of the structure, corroborating Arani and Yazdanimoghaddam's (2016), and Szudarski and Carter's (2016) findings. This beneficial effect was limited to the simple structure. On the other hand, the EG did not demonstrate improvement in the recognition of either subject wh-questions (45% → 45%) or object wh-questions (28,3% → 26,6%), which suggests that the C-RT designed for this study was not able to promote better results as we would expect.

The purpose of the C-RT was to raise students' awareness about the difference between the way subject and object wh-questions are formulated in English, aiming to

develop their explicit knowledge and foster changes in their interlanguage. Based on the rules that the students formulated, it is possible to suggest that most students appeared to understand the difference between type 1 and type 2 questions, as shown in their explanations in Table 3.

Table 3 - Rules formulated by the students (mistakes are preserved)

EG3 and EG16	“In type 1 the two sentences has who and what animal as subjects, that’s why they don’t need an auxiliary verb. In type 2, the two examples have an auxiliary verb that helps in their formulation, as did and does.”
EG5 and EG6	“The type 2 it has the auxiliary verb in thei formulation, that comes before the subject in his sentence. The type 1 do not use an auxiliary verb.”
EG7 ³	“In the type 1 the interrogative pronouns are in the position of subjects, and we do not use an auxiliary verb. The type 2 the interrogative pronouns are in the position of object, and we use the auxiliary verb.”
EG18	“In type 1 we don’t have auxiliary verb because “who” and “what” are in position of subject, and in type 2 we have auxiliary verbs because “what” are in position of objects.”

Source: Gesser, 2019

Although the explanations mention the use of an auxiliary verb for object wh-questions and its absence for subject wh-questions, only one dyad specified the position of the auxiliary verb in the sentence: “before the subject” (EG5 and EG6). As observed, the students’ rules were not stated in detail, and this could mean lack of familiarity with their active role in communicating about grammar and discovering the rule, as suggested by Fotos and Ellis (1991).

This study sides with authors who claim that C-RT promotes grammar knowledge (AMIRIAN; SADEGHI, 2012; DE LA FUENTE, 2009; FOTOS; ELLIS, 1991). This type of explicit instruction is supposed to create some level of understanding on the learners’ part; however, the impact of this knowledge on the participants’ performance in both production and recognition of subject/ object wh-questions was not superior in relation to the implicit type of instruction used here. Even though the EG seemed to have gained explicit knowledge, they were not able to use it effectively to produce and recognize the target structures accurately. This also suggests that verbalized knowledge does not imply necessarily thoroughly comprehension and learning. According to

³ The C-RT was required to be performed in pairs; however, some students insisted that they wanted to perform it individually.

Schmidt (2001, 2010), *understanding* is not a pre-requisite for learning. The first step in language building is *noticing*, which enables input to become intake⁴. In both task sequences, input flooding and enhancement were used to promote perceptual salience on the target structures and they seemed to promote noticing and learning; however the C-RT did not cause superior results.

Apparently, the C-RT exerted a minimum effect on the students' performance. Most errors found in the EG's constructions for the object wh-questions in the post-test consisted of the lack of an auxiliary verb, suggesting the influence of Portuguese in their syntactic formulations. It is also possible to claim that the C-RT seems to have exerted an inhibiting effect on a few students who formulated the complex structure correctly in the pre-test, but they came up to produce it incorrectly in the post-test, as shown in Table 4.

Table 4 - C-RT inhibiting effect on some EG's constructions

	Pre-test	Post-test
EG5	What did snakes eats?	What the snakes eat?
EG13	Who did Gutenberg invent.	The who Gutenberg invented.
EG14	What did Cain killed in the Bible?	Who killed the Lamech in the Bible.
EG20	Who did Cain killed in the Bible? What did Gutenberg invented?	Who Cain killed in the Bible. What Gutenberg invented?

Source: Gesser, 2019

The data also showed that most errors in the CG involved the lack of an auxiliary verb before the subject, which implies that this group also seemed to resort to the Portuguese word order to formulate the complex structure. This suggests that input flooding combined with input enhancement did not suffice to make the great majority of the CG (82.4%) to understand the difference between the way subject and object wh-questions are formulated in English. The same applies to the C-RT group that failed to promote this understanding by the great majority of the EG (87%) in the post-test.

As to the recognition of the target structures, the effect of the C-RT was also disappointing. Most errors concerning the object wh-questions consisted of the lack of an

⁴ "Intake is a subset of the detected input (comprehended or not), held in short-term memory, from which connections with long-term memory are potentially created or strengthened" (REINDERS, 2012, p. 28).

auxiliary verb before the subject (EG = 54,5%), which was also observed in the CG (CG = 71,9%).

Most errors found in the participants' production and recognition of object wh-questions seemed to result from negative transfer from Portuguese, since they displayed the same order of elements as in subject wh-questions, with no use of auxiliary verb. However, studies on L1 English acquisition of wh-questions have also shown that children fail to include an auxiliary verb before the subject (ROWLAND; PINE, 2000; SEIDL; HOLLICH; JUSCZYK, 2003; VALIAN; CASEY, 2003). Valian and Casey explain that "the lengthy time period required to learn wh-question formation is due to integrating and consolidating the different pieces of knowledge" (p. 119). This high demand of linguistic processing on the production and recognition of object wh-questions might also explain the reason why the majority of the participants of the present study did not use an auxiliary verb before the subject, particularly the EG that had produced explicit information about the target structures through a C-RT.

Valian and Casey state that auxiliaries appear to develop gradually with no obvious connection to the input. This view aligns with the Processability Theory (PIENEMANN, 1998, 2011, 2015), which claims that the acquisition of a structure implies going through a set of linguistic development procedures that are hierarchical. This hierarchy relies on psycholinguistic mechanisms, and on the assumption that "a learner can acquire only those linguistic forms and functions which he or she can process" (PIENEMANN, 2011, p. 27), regardless of the influences of external factors (explicit teaching or input flooding/enhancement of a structure, for instance). In this sense, learner internal factors rather than pedagogical factors might account for the ineffective role of the C-RT in the present study, and this transcends the type of instruction used.

For Pienemann (1998, 2015), explicit instruction is beneficial only if it focuses on structures from the learners' "next stage" of acquisition. In other words, the C-RT might be effective only if the students were able to easily process lower linguistic levels of the processability hierarchy for object wh-question formation. "If one building block of the hierarchy is missing, the top cannot be reached" (PIENEMANN, 2011, p. 35). The author has proposed a developmental sequence of procedures for English as a second language (ESL) question formation based on grammatical regularities among learners and across individuals in L2 development. Although this sequence is not directly related to how

object wh-questions are developmentally sequenced, many studies have shown that the lack of an auxiliary verb before the subject in object wh-question formation is a phenomenon that occurs in different contexts of English acquisition/learning.

Studies with children whose L1 is not English have also shown that in early language acquisition there is a preference for subject wh-questions and that the subject/object asymmetry is found not only in production but also in comprehension (GUASTI; BRANCHINI; AROSIO, 2012). The same applies to studies on EFL children learning wh-questions, which have shown the absence of an auxiliary verb before the subject in object wh-questions (ZHANG, 2016), just like in the present study.

All these findings corroborate the idea that producing/recognizing object wh-questions in English can be a matter of “developmental readiness” (SPADA; LIGHTBOWN, 1999), because native and non-native English speaking children tend to follow the same error pattern for object wh-questions (i.e., the absence of an auxiliary verb before the subject). This pattern is a generalization of the same phenomenon, and it can be accounted for by the Processability Theory, which serves to predict stages of development within a hierarchy of grammatical processing procedures. Going through these stages involves learners’ internal mechanisms for their linguistic development, and this is not affected by any type of instruction.

Based on the results of this study, one can suggest that the participants were not “ready” to process the necessary grammatical procedures for the production and recognition of the complex structure (object wh-questions). In this sense, the C-RT was not able to cause a promising effect on the participants’ performance.

In sum, many studies corroborate the preference for subject wh-question constructions in language acquisition. This suggests that in this study the participants’ errors for object wh-questions may not be a result from negative transfer, but of developmental sequences. As Spada and Lightbown (1999) have pointed out, question forms have been identified as clearly developmental. Likewise, Hakansson (2013, p. 119) points out that “transfer from other languages cannot take precedence over the processability hierarchy. Morpho-syntactic structures are predicted to emerge in the same implicational order irrespective of the languages previously known by the learners.” Therefore, the errors found in the participants’ production and recognition of object wh-questions may be interpreted as developmental errors rather than interlingual errors. This

could explain why the participants were not able to benefit from either explicit (C-RT) or implicit instruction (input flooding and enhancement together) to improve their performance in the production/recognition of the complex structure.

5 Conclusion

Both focused task sequences were able to improve the students' performance in the production of subject and object wh-questions with no statistically significant difference between the groups. However, the CG outperformed the EG in the recognition of subject wh-questions with a statistically significant increase.

Although both groups have shown some improvement, their performance in the production and recognition of the complex structure was disappointing, because the great majority of the students in both groups followed the word order of subject wh-question constructions in the post-test. At first glance, this syntactic phenomenon can be interpreted as negative transfer from Portuguese, but it is also common in other contexts of language acquisition/learning (e.g., English as L1, English as L2, English as foreign language in countries other than Brazil), and can be accounted for by the Processability Theory that emphasizes the existence of developmental sequences in syntax and morphology for all languages. In this sense, the participants' errors can be interpreted as developmental errors.

Based on the results, it is possible to conclude that the explicit knowledge that was promoted by the C-RT did not help the participants to improve significantly their performance in the object wh-questions (and in the subject wh-questions). Thus, it did not have a promising effect in this study. This finding does not corroborate previous studies (NORRIS; ORTEGA, 2000; SPADA; TOMITA, 2010) that have demonstrated that explicit instruction is more effective than implicit instruction.

Although the C-RT has allowed the participants to elicit some level of explicit knowledge about how the target structures are formulated, contributing to raise their grammatical awareness, this knowledge was not able to help the EG participants to outperform the CG in the post-test. If we take the Processability Theory into account, the explicit instruction of a linguistic structure would be effective only if the students were able to process lower levels of the developmental hierarchy for the functioning of the

higher level. Therefore, “what is teachable at any moment is constrained by what is processable at that moment” (LONG, 2015, p. 323).

To conclude, this study used the Processability Theory to explain the nature of the errors the majority of the participants in both groups made for the complex structure, and the reason why the explicit instruction in the form of a C-RT did not manage to improve the participants’ production and recognition of object wh-questions. Therefore, the results suggest that explicit instruction is not always effective for the students’ linguistic development, and this can be related to processability constraints.

Contribution

Rosely Perez Xavier: Conceptualization, Data curation, Methodology, Resources, Supervision, Visualization, Writing – original draft; **Andressa Regiane Gesser:** Data curation, Formal analysis, Funding acquisition, Investigation, Project administration, resources, Visualization.

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