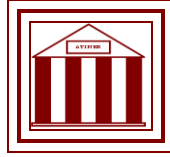


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**The Importance of Positive Evidence in
Universal Grammar-Second Language
Acquisition Studies**

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The Importance of Positive Evidence in Universal Grammar- Second Language Acquisition Studies

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Abstract

The Interpretability Hypothesis (Tsimplici et. al., 2003; Tsimplici and Dimitrakopoulou; 2007) claims that uninterpretable features which are not instantiated in L1 are unavailable for L2 acquisition. This hypothesis is supported (e.g. Hawkins and Hattori 2006; Al-Thubaiti, 2011) and opposed (e.g. Rothman et. al., 2010; Bond et. al. 2011) by many other studies. Some of such studies were carried out on the L2 learners who were exposed to natural input in the target language by living in a country where it is spoken as a mother tongue; yet some others were carried out just on the ones who acquired it in their home country. In this respect, being (not) exposed to natural input in L2 acquisition might have played some role in the results obtained in such studies.

The present study aimed to analyze the role of positive evidence in L2 acquisition process. The performances of the L2 learners who live in an English-speaking country on island constraints on wh-movement in English were compared with the ones who acquire this language in their home country. The data of the study were collected through a grammaticality judgment test, a wh-question formation test and a translation test. Along with a native control group (N:58), four learner groups were formed according to the place they live (USA or Turkey) and their level of proficiency in English (advance or intermediate) (N:46, N:38, N:20, N:30 respectively).

The results emphasized the importance of positive evidence in L2 acquisition process. According to the Kruskal-Wallis H Test and Mann-Whitney U Test results, the uninterpretable (uwh*) feature appeared to be available only for the highly proficient L2 learner of English who are exposed to natural input in this language. As the results of the study suggest, to assess the availability of UG in SLA precisely, such studies should be carried out on the participants who are exposed to natural input in the target language.

Keywords:

Corresponding Author:

Introduction

The availability of universal grammar in second language acquisition process is debated almost for four decades, and there have been different hypotheses claimed by various scholars on this issue. The recent account of partial access to UG approach is the Interpretability Hypothesis which was put forward by Tsimpli et.al. (2003), Hawkins and Hattori (2006) and Tsimpli and Dimitrakopoulou (2007). According to this hypothesis, uninterpretable syntactic features are unavailable for second language speakers after a critical period, but interpretable features are available for them lifelong. This hypothesis maintains that uninterpretable features are subject to critical period constraints and they are inaccessible to L2 learners. L1 parametric values associated with these features resist re-setting in L2 acquisition; on the other hand, interpretable features are accessible to the L2 learner, even if L2 differs from the native language.

This hypothesis is supported (e.g. Kong, 2005; Hawkins and Hattori 2006; Tsimpli and Mastropavlou, 2007; Al-Thubaiti, 2011) and opposed (e.g. Montrul et.al. 2006; Tanner, 2008; Rothman et. al., 2009; Rothman et. al., 2010; Bond et. al. 2011) by many other studies. The ones that oppose this hypothesis claim that all features, interpretable or uninterpretable, are available for L2 acquisition and the source of L2 variability & optionality should be sought for in other sources like mapping problems or internal and external interfaces between syntax and other language units.

Statement of the Problem

Some of the studies that favor the Interpretability Hypothesis focus on UG-SLA intercourse are carried out on the L2 learners who are exposed to natural input in the target language by living in an environment where this language is spoken as a mother tongue for a long time (e.g. Hawkins and Hattori, 2006, Tsimpli and Mastropavlou 2007); yet some others (e.g. Tsimpli and Dimitrakopoulou (2007); Kong (2005); Thubaiti (2007)) were carried out just on the ones who acquired it in their home country. In this respect, being (not) exposed to natural input in L2 acquisition might have played some role in the results obtained in such studies.

The participants of Tsimpli and Dimitrakopoulou (2007) were native speakers of Greek acquiring English as a foreign language. They were students at Aristotle University in Thessaloniki. The participants of Kong (2005) were 75 Chinese speakers learning L2 English in China. Al-Thubaiti had a similar case as well; only one of his adult participants had stayed in an English-speaking country. Carrying out studies on the participants who had never stayed in an English-speaking country might have influenced the results they obtained in their studies.

Purpose of the Study

The present study is a part of the PhD dissertation that focus on the (un)availability of uninterpretable (uw^{h*}) feature in L2 acquisition. In other

words, the dissertation aims to examine the validity of the Interpretability Hypothesis by analyzing the performances of the Turkish L2 acquirers of English on the island constraints on wh-movement in English. In accordance with the problem stated above, the study also aims to analyze the possible role of the natural input in second language acquisition process. More specifically, the study aims to investigate if there are any differences between the performances of Turkish speakers who are exposed to natural input by living in a country where English is spoken as a mother tongue, with the ones who acquired this language completely in their home country.

Research Questions

The following research questions are investigated in the study:

- 1- Is there any significant difference in the performances of the L2 learners who are exposed to natural input in the target language by living in an English-speaking country for at least four years on island constraints on wh-movement compared with the ones who acquire this language only in their home country?
- 2- In the context of (not) being exposed to natural input in L2 acquisition process, is there any significant difference between the groups when the advance and intermediate groups are compared separately?
- 3- In the analysis of the group performances, what island structures appear to be more problematic for what groups?

Methodology

The study focused on the acquisition of the four island constraints: Wh-Island Constraint, Complex NP Constraint, Sentential Subject Constraint and Adjunct Island Constraint. Wh-in-situ languages and syntactic movement languages show different characteristics in island structures. In general, the ones that have syntactic movements are subject to island effects; however, such effects are not observed (or at least not so strictly observed) in wh-in-situ languages. As Judy et. al. (2008) state, ‘having or lacking an uninterpretable [*uwh**:] feature play a role in this process. The languages like English that have this uninterpretable feature obey the island constraints on wh-movement; on the other hand, wh-in situ languages like Turkish lack this uninterpretable feature and island constraints do not pertain to these languages’ (p.1). Hence the source and target languages that are focused on in the study show different characteristics in respect to island constraints on wh-movement.

Participants

Along with a native control group, four learner groups were formed according to the place they live (USA or Turkey) and their level of proficiency in English (advance or intermediate).

The Control Group

The control group consists of 58 participants (34 female, 24 male) who are all native speakers of English living in Gainesville, Florida- USA. These participants are the students at several departments in The University of Florida and their ages range from 18 to 24.

The Learner Groups

All learner group members are native speakers of Turkish who are acquiring English as a second language. These participants were distributed into four groups who fall into two categories according to the place they live.

Learner Groups who live in USA: The participants in these groups are native speakers of Turkish who are living in different parts of USA and who are acquiring English as a second language. There are 84 participants in these groups (51 female, 33 male) and their ages range from 20 to 68. These participants either attend to a university or work in several work fields in different parts of USA. They have been living in USA at least for four years. There are two groups in this category:

Learner Group 1: These participants scored better than 40 out of 50 questions of Michigan Placement Test. There are 46 participants in this group (26 female, 20 male).

Learner Group 2: The scores of these participants in the Michigan placement test are between 30 to 40. Hence, they can be considered as intermediate/ upper intermediate language users. There are 38 participants in this group (25 female, 13 male).

Learner Groups who live in Turkey: The L2 learners of English in these groups are native speakers of Turkish who live in Turkey and who have never lived in a foreign country. There are 50 participants in these groups (31 female, 19 male) and their ages range from 21 to 38. These participants are either university students in an undergraduate /graduate program or work as an academician in a university or as a teacher in a high school. There are two groups in this category:

Learner Group 3: As in Learner Group 1 , the participants who scored better than 40 out of 50 questions of the Michigan Placement test were placed in this group. There are 20 participants in this group (12 female, 8 male).

Learner Group 4: The participants who scored between 30 and 40 in the Michigan Proficiency Test were placed in this group. As in Learner Group 2, these participants can be considered as intermediate or upper intermediate language users. There are 30 participants in this subgroup (19 female, 11 male).

Data Collection Tool

In the study, the data were collected through some specifically designed tasks that aim to address the knowledge of the language users on island constraints on wh-movement in English. These tasks are (1) a grammaticality judgment task, (2) a wh-question formation task, and (3) a translation task.

Beside these tasks, Michigan Placement Test was given to the participants in the learner groups to determine their level of proficiency in the target language.

The Michigan Placement Test

The Michigan Placement test that was given to the participants in the learner groups consist of 50 questions; 30 of which test their knowledge on vocabulary, and 20 of which test their knowledge on grammar.

The Grammaticality Judgment Test

In the study, a grammaticality judgment test which contains 40 items was given to all participants in all groups. 20 of these test items were grammatically well-formed complex sentences that did not contain any island violations. The other 20 items in the test were the sentences that contain violation of either of the four target island constraint. The participants were required to judge the sentence in a -2,+2 scale (-2: totally grammaticality unacceptable, -1: grammatically unacceptable, 0: not sure, 1 grammatically acceptable, 2: totally grammatically acceptable).

The Wh- Question Formation Task

The Wh-Question formation Task contained 25 items. In 20 of these test items, the participants were directed to set up sentences that contain island violations. That is to say, they were directed to produce sentences which violate the target island structures. In each of these test items, short dialogues which take place between two people were given. After reading the dialogue, the participants were asked to form a wh-question about the dialogue and the replies for the questions they would form were given underneath. In other words, the participants were asked to form a wh-question which could be a valid question for the reply below it. Yet, they were not allowed to use any wh-word to form the question. They had to use the wh-word that is provided for each question.

The Translation Task

The third task that was given to the participants was The Translation Task. Since the control group members cannot speak any Turkish, this task could only be given to the participants in the learner groups. Hence, the results for this task could only be compared among the learner groups. In this task, the participants were asked to translate 20 Turkish sentences into English. All of the Turkish sentences were grammatical in this language, yet their exact syntactic translations contained island violations. In other words, while Turkish sentences did not violate the island structures, the syntactic equivalences of these sentences in English contained island violations.

Data Collection Process

The tests were given to the participants in online form with the use of “Surveygizmo” Survey Preparation Program. The participants were required to provide certain information before starting to do the tests. Their age, their field

of study at the university and their mother tongue, their length of stay in an English speaking country were the questions that were asked to the participants in the introductory part of the survey. At the end of the tests, the participants were also given an option to write an e-mail address if they wished to get feedback on their performance.

Analysis of the Data

The data gathered were first listed down in a Microsoft Excel Document and from there it was transferred and analyzed in SPSS 15 statistics program. For all tasks of the study and for all parts of all tasks, statistical tables that demonstrate the frequencies or the percentages of the correct and incorrect responses of the subjects to the items were prepared. The tables and graphics demonstrate the performances of the five groups for each part of the study.

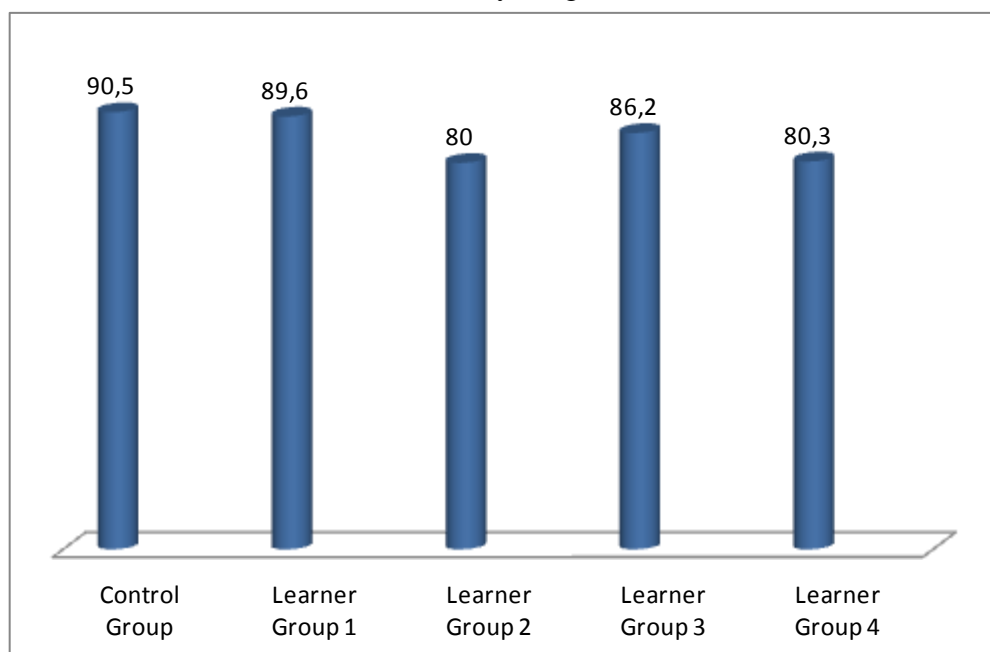
For the inferential analysis of the data, two non-parametric tests were applied with the use of the SPSS 15 statistics program: Kruskal-Wallis H Test and Mann-Whitney U Test. Kruskal-Wallis H Test shows if there are any significant differences among the groups that take part in the study. Yet, it does not indicate the significance differences between group pairs. It just shows if there is any difference between the five groups or not. For this reason, The Mann-Whitney U Test was also applied in order to be able to compare the target groups in pairs. The alpha level was taken as 0,05.

Results

The data obtained in the study were statistically analyzed and assessed in accordance with the research questions. The results for the Grammaticality Judgment Task, Wh-Question Formation Task and the Translation Task are presented below.

Results for the Grammaticality Judgment Task

The Grammaticality Judgment Task results are displayed in Table 1 below.

Table 1. Results for the Grammaticality Judgment Task

The Kruskal-Wallis H test showed that there was a significant difference among the five groups ($H(4)=48.676$, $p=0.001$), with a mean rank of 101.43 for the Control Group, 94.54 for the Learner Group 1, 44.02 for the Learner Group 2, 70.80 for the Learner group 3, and 44.23 for the Learner Group 4. It means that the performances of the groups on the items in this part were not alike and they significantly differed.

The control group members and the participants in the first learner group performed rather similarly in the GJT. There is only a little difference between these two groups: 90,5 per cent and 89,6 percent respectively. According to the results of the Mann-Whitney U Test, there is no significant difference between these groups: ($U=649$, $p=0,450$). The percentage for the Learner Group 3 appears to be the closest one to these groups: 86,2 per cent; yet, the difference is still significant according to the Mann Whitney U Test: Control Group & Learner Group 3 ($U=318$, $p=0,003$); and Learner Group 1 & Learner Group 3: ($U=160$, $p=0,041$).

The performances of the lower proficiency groups were significantly worse than that of Control group as well: The Control group & Learner Group 2: ($U=202,5$, $p=0,001$); The Control group & Learner Group 4: ($U=226.5$, $p=0,001$). The success of the participants in Learner Group 2 and Learner Group 4 appeared to be rather similar, which is relatively lower than other groups. The Mann-Whitney U test results also showed that there is no significant difference between these groups: ($U=293$, $p=0,673$).

Results for the Wh-Question Formation Task

The results for the Wh-Question Formation Task are demonstrated in the table below.

Table 2. Results for the Wh-Question Formation Task

	Control Group	Learner Group 1	Learner Group 2	Learner Group 3	Learner Group 4
Number of Responses	1156	173	177	392	584
Island Violations	19	1	6	27	24
Percentage of Responses & Island Violations	1,64%	0,57%	3,38%	6,88%	4,10%

The Kruskal-Wallis H test showed that there was a significant difference among the groups ($H(4)=20.493$, $p=0.001$), with a mean rank of 53.84 for the Control Group, 47.33 for the Learner Group 1, 72.72 for the Learner Group 2, 85.93 for the Learner Group 3, and 69.30 for the Learner Group 4.

Since the number of the participants in the group varied, the number of island violations made by the groups is not sufficiently informative. In order to be able to make a correct comparison among the groups, the percentages of the island violations to the total responses given by the group members should be taken into account. In this respect, the most successful group in the wh-question formation task appeared to be the Learner Group 1: the Turkish people living in USA with a high proficiency in English. Only one island violation was observed in the responses of the participants in this group, which makes the 0,57 per cent of the total responses. The same percentage for the control group members is 1,67. The Mann-Whitney U test results showed that the difference between these two groups is not statistically significant: ($U=237$, $p=0,509$). It means that the participants in the first learner group became as successful as the native speakers of English. Though statistically not significant, they could even perform slightly better than the mother tongue speakers, which is an important finding of the study.

As for the other groups, they appear to be relatively less successful compared to these two groups according to the Kruskal Wallis U test results. Their performances are significantly worse than the native control group, as presented below:

The Control Group & Learner Group 2: ($U=178$, $p=0,041$).

The Control Group & Learner Group 3: ($U=288$, $p=0,001$).

The Control Group & Learner Group 4: ($U=661$, $p=0,019$).

Findings for the Translation Task

The Translation Task was only given to the participants in the learner groups since control group members cannot speak any Turkish. The obtained results are demonstrated in Table 3 below.

Table 3. *Results for the Translation Task*

	Learner Group 1	Learner Group 2	Learner Group 3	Learner Group 4
Number of Responses	192	121	305	572
Island Violations	2	4	18	30
Percentage of Responses & Island Violations	1,04%	3,30%	2.20%	5.24%

The distribution of the island violation types to the groups reveal that the target island constraints are not equally problematic for L2 learners. The great majority of the island violations were observed on the sentences that focus on Sentential Subject constraint. 39 of the total 54 island violations were Sentential Subject Violations and 35 of these violations were done by the participants in the third and fourth learner groups, the ones who learn English in their home country without being exposed to natural input in this language adequately. Specifically, the participants in Learner Group 4 performed remarkably poor on these test items. Compared to the participants in Learner Group 1, their performance is significantly worse according to the Mann-Whitney U Test: ($U=102$, $p=0,03$).

The results also show that all groups were rather successful in the Translation Task. The participants in Learner Group 4 made the worst performance in the study, yet the percentage of the island violations committed by them is only 5,24. That means that they could successfully translate the Turkish sentences into English without violating any island structure with 94,76 per cent success, which is in fact rather successful. The first learner group members had the best performance in the Translation Task. Only, 1,04 per cent of their responses contained island violations. The participants in the third and second learner groups followed them. Only 2.20 and 3.30 per cent of their responses contained island violations respectively. The Kruskal-Wallis H Test results showed that there was not any significant difference among the groups ($H(3)=5.518$, $p=0.138$), with a mean rank of 26.08 for the Learner Group 1, 30.72 for the Learner Group 2, 37.05 for the Learner group 3, and 39.50 for the Learner Group 4.

Discussion

The effects of exposure to natural input in the target language were clearly observed in the data. The highly proficient L2 learners of English who live in an English-speaking country became significantly more successful than the ones who acquire the target language in their home country. Compared with the native control group, the ones who are exposed to natural input were as successful as the mother tongue users and there were not any statistical difference between these two groups. On the other hand, the L2 learners of

English who acquire this language in a formal school environment were significantly less successful than control group members according to the Mann-Whitney U test results.

Interestingly, there was not any significant difference between the lower proficiency groups who live in USA and Turkey. In all tests of the study, L2 learners who are exposed to positive input in the target language performed slightly better than the ones who acquire the target language in their home country. However, the differences between these two groups were not statistically significant according to the non-parametric test results. These data suggest that in the earlier levels of L2 acquisition the effects of positive evidence might not be vividly observable. The mother tongue influence can be influential in this case as well. However, in order to be able to reach at native like performance in the target language, L2 learners should be exposed to natural input in English by living in an environment where this language is spoken as a mother tongue.

As a matter of fact, the present study would be supporting the Interpretability Hypothesis, if the data of the study were collected only from the participants who are acquiring English in their home country. Both in the Grammaticality Judgment Test and Wh-question Formation Task, the highly proficient Turkish L2 acquirers of English performed significantly worse than native control group. Since the Translation Task was not given to the control group members, no comparison could be made; yet it was observable that these Turkish participants were not very successful in this test, either. These results are all stands for the Interpretability Hypothesis. These Turkish L2 acquirers of English performed significantly worse than native speakers on the island constraints on wh-movement, which means that they could not reset the L2 parameter values in their acquisition process. Therefore, the results of the study would mean that the (uwh*) feature that exists in the target language but lacks in their mother tongue is no longer available for L2 acquisition.

However, the data obtained from the participants who have been living in USA at least for four years stood against the Interpretability Hypothesis firmly. In all tasks of the study, the participants who are exposed to natural input by living in an environment where English is spoken as a mother tongue performed as well as native speakers of this language. There were not any significant difference in the performances of these L2 acquirers and control group members. They could deal with island structures as well as the mother tongue users, which indicates that they have already acquired the necessary (uwh*) feature in the target language. In fact, the results of the present study fully support the Full transfer Full Access Hypothesis. The participants who are not fully proficient in the target language might lean on the parameter values of their mother tongue, yet when they become fully proficient in L2, they start to use the parameter values of the target language in full sense.

Regarded to the third research question, the participants showed divergent success on the tasks; hence it is not possible to specify an island type that is remarkably more difficult for them to cope with. Native speakers were relative less successful on adjunct island structures in the Grammaticality Judgment

Task, yet they made no errors on these island structures in Wh-Question Formation Task. In this task, they appeared to be less successful on the items which contain Wh-Island and Complex NP Island violations. Sentential Subject Constraint was observed to be more problematic for the L2 learners who acquire the target language in their home country in both the Wh-Question Formation task and the Translation Task. Yet, they performed remarkably worse than other learner groups in other island structures as well. For the L2 learners of English who live in USA, Complex NP Constraint appeared to be the most problematic island constraint.

Conclusion

The debates among the scholars which have got different claims on the availability of UG in second language acquisition exist for a few decades and it seems that they will not end in the near future. It appears that there will be scholars who favor one of these hypotheses. One thing for certain is that there is a need for further studies on different grammatical points between different language pairs. In such studies, the role of having or lacking positive evidence in the target language should not be ignored as well. As the present study suggests, being exposed to natural input in the target language has an importance role in determining the availability of universal grammar in L2 acquisition.

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