



The Effects of Aural Input Enhancement on L2 Acquisition

Minyoung Cho

The University of Hawai'i at Mānoa

Hayo Reinders

Anaheim University

Input enhancement involves attempts to direct the learner's attention to specific linguistic forms in target language input (Sharwood Smith, 1993). One way to do this is by manipulating the input in order to attract learners' attention to the target feature, for example, by underlining or bolding it or by artificially increasing its frequency in the input (an input flood). A number of studies have investigated the effects of enriched input (e.g., Jourdenais, Ota, Stauffer, Boyson, & Doughty, 1995; Reinders & Ellis, 2009; Trahey & White, 1993; White, 1998). Although there is some evidence that enriched input can affect L2 acquisition of certain grammatical features, the results are not conclusive. Furthermore, previous studies have been limited to textual input enrichment. In this chapter we investigated the effects of aural input enhancement, a type of input enhancement that to the best of our knowledge has not been reported on before. Participants in the study were given an audiobook to listen to outside of class in which passive structures had been manipulated by 1) artificially increasing the volume slightly of the target items or by 2) slowing down the speed with which the target items were read out. A control group listened to the audiobooks in their original form. The repeated-measures ANOVA analysis showed no significant effect for the manipulated input on acquiring the target form. We discuss some possible reasons for this finding.

Introduction

There now exists a considerable body of research into the effects of different types of focus on form (FoF) or attempts to direct learners' attention to form in an otherwise meaning-oriented context (see Ellis, 2009, for an overview). A distinction can be made between more or less obtrusive types of FoF; an example of the former would be the use of consciousness-

1 raising (Fotos & Ellis, 1991) or input processing (VanPatten, 1996). Unobtrusive FoF includes
2 the use of positive input enhancement as attempts to manipulate the input and direct
3 the learner's attention to a specific linguistic form (Sharwood Smith, 1993). This can be
4 done, for example, by underlining or bolding the target form or by artificially increasing its
5 frequency in the input (an *input flood*). A number of studies have investigated the effects
6 of this so-called enriched input on different aspects of language learning (Jourdenais, Ota,
7 Stauffer, Boyson, & Doughty, 1995; Reinders & Ellis, 2009; Trahey & White, 1993; White,
8 1998). Although there is some evidence that enriched input can affect L2 acquisition of
9 certain grammatical features, the results are not conclusive. In addition, previous studies
10 have been limited to textual input enrichment, and no studies exist that we are aware of that
11 have investigated aural manipulation. In this chapter we report on the results of a study that
12 adopted aural input enhancement in an extensive listening activity. Participants in the study
13 listened to an audiobook that was artificially enhanced in order to attract their attention to
14 the target structure of the study.

15 Effects of input enhancement

16 Input enhancement

17 The proliferation of input enhancement research reflects the recognition of the crucial role
18 of attention in SLA. It is clear that learners do not make use of all the input that they are
19 exposed to, and it has been widely argued that attention is necessary for L2 learning (Leow,
20 1997, 1999, 2001; Robinson, 1995; Schmidt, 1990, 1993, 1994, 1995; Sharwood Smith, 1991,
21 1993; Tomlin & Villa, 1994) or at least that “There is no doubt that attended learning is far
22 superior, and for all practical purposes, attention is necessary for all aspects of L2 learning”
23 (Schmidt, 2001, p. 3). As attention can be externally manipulated (Schmidt, 1990), a
24 number of studies have investigated ways of drawing learners' attention to formal aspects of
25 the input in otherwise meaning-oriented activities, a technique referred to as *focus on form*.
26 The importance of external manipulation lies in the assumption that L2 learners, according
27 to VanPatten's (1996) input processing hypothesis, tend to prioritize meaning over form
28 in the input. Formal aspects of the input are only processed insofar as they are crucial for
29 understanding meaning and insofar as the learner has the cognitive resources available to
30 pay attention to them. Therefore, without intentional attention to linguistic form, it is less
31 likely that learners will attend to or use a particular linguistic form in the input for learning.
32 As a result, a range of external attention-drawing techniques have been proposed, including
33 explicit rule presentation, input flooding, and—the focus of this study—input enhancement.

34 Input enhancement involves the manipulation of input salience, with an attempt to direct
35 learners' attention to a specific linguistic form in the input (Sharwood Smith, 1991, 1993).
36 Salience refers to the ease with which learners can perceive given input. Salience of input
37 is determined by various learner-internal, structural, and external factors. For example,
38 learners' interlanguage development (Spada & Lightbown, 1999), inherent features in
39 linguistic structure such as communicative value (Dulay & Burt, 1978), and external
40 manipulation may alter the degree of salience of certain features in the input. Although the
41 sources of input salience vary, it is of course learners themselves who must further process
42 the input for learning (Schmidt, 1990). For this reason many studies of input enhancement
43 have investigated whether input enhancement is effective in drawing learners' attention to
44 form and its effect on subsequent acquisition of that form. Different external manipulations
45 have been incorporated to increase the salience of input, including manipulation of
46 frequency (input flood), visual salience (typographical or textual manipulation), and
47 corrective feedback in discourse (e.g., repetition or recast).
48
49
50
51
52

1 According to Sharwood Smith (1993), input enhancement can be categorized as either
2 positive or negative. Positive enhancement emphasises the correct form, such as through
3 input flood and input enhancement, whereas negative enhancement incorporates the
4 indication of errors in, for example, learners' production that can be enhanced by means
5 of explicit instruction and/or corrective feedback. Both enhancement types are intended
6 to trigger changes in input processing mechanisms of salient forms, but in this chapter we
7 are concerned only with positive input enhancement. Examples of positive enhancement
8 include manipulating textual or typographical aspects of the text (e.g., bolding, underlining,
9 italicising, or changing the font type or size), visual enhancement (e.g., pictures), and
10 technological enhancement (e.g., using a combination of keystrokes to type diacritics).

11 As discussed above, the use of external salience is susceptible to diverse learner-internal
12 and external factors, and these, together with a number of methodological problems, have
13 been speculated to explain some of the inconsistent results in input enhancement research
14 (Han, Park, & Combs, 2008; Lee & Huang, 2008). These include the length of exposure
15 to the target input (Leow, 1997), learners' prior knowledge of the language and the target
16 items (Jourdenais et al., 1995; Leow, Egi, Nuevo, & Tsai, 2003), the nature of the target form
17 (Wong, 2003), and its modality (Leow, 1993, 1995).

18 **Types of input enhancement**

19 Although a strict interpretation of input enhancement (Barcroft, 2003) accepts only a
20 considerable alteration of input (through a change of or addition to the original input),
21 a more liberal interpretation also includes other techniques such as technological
22 enhancement and visual enhancement.

23 Technological enhancement refers to the use of technology as a means to draw learners'
24 attention to the target object. Gascoigne's (2006) study, for example, involved participants
25 listening to L2 input and then transcribing the input either on a computer or on paper.
26 She hypothesized that the insertion of diacritics when typing on a computer, involving
27 the pressing of additional keys, would force learners to pay conscious attention to the
28 orthography. The results showed that keyboard transcription had a positive effect on recall
29 of the target items compared with pen-and-paper transcription.

30 Another form of input enhancement is visual enhancement, which involves the inclusion
31 of visual information (e.g., pictures) to highlight certain aspects of the text. Labrie's (2000)
32 study compared beginning L2 learners' acquisition of vocabulary by comparing a web-based
33 reading text enriched with images and sounds with a paper-based text without visual and
34 aural aids. Labrie found, perhaps not surprisingly, that the inclusion of visual and aural
35 information helped with vocabulary acquisition.

36 Finally, aural input enhancement involves the manipulation of listening materials, for
37 example, by increasing the volume of target items in the text or by including a short pause
38 before and/or after the target items. Although Gascoigne (2006) mentioned that an "*oral*
39 [*our emphasis*] equivalent of textual enhancement" could be achieved via stress, intonation,
40 or gestures (p. 149), we are unaware of previous studies investigating this type of input
41 enhancement. Compared to the number of studies on written input enhancement, this lack
42 is perhaps surprising, especially as aural enhancement may occur in natural or classroom
43 discourse as a form of corrective feedback or recast.

44 **Modality and aural enhancement**

45 It is generally acknowledged that modality has a significant effect on input processing (and
46 consequently on intake and acquisition). The separate streams hypothesis (Penny, 1980)

1 posits that visual and audio language input are separately and independently processed
2 without interference. L1 studies investigating differences between reading and listening
3 have shown that listening is more taxing than reading of the same input¹ (Anderson, 1980;
4 Danks, 1980; Rost, 1990), as learners do not have the same amount of control over the
5 aural input as they do over written input. When reading, learners can more easily recognise
6 different text elements, such as words, sentences, and paragraphs, and can re-read parts
7 of the text (Rost, 1990), whereas in listening, segmentation of word boundaries or even
8 boundaries between different word elements are not discrete, and learners need to rely on
9 prosodic and intonational cues in the input to understand sequences of input (Anderson,
10 1980). L2 research has also shown that modality places constraints on the way input is
11 processed; Johnson's (1992) and V. Murphy's (1997) studies, for instance, revealed that (adult)
12 learners' performance on grammaticality judgement tasks was slower and less accurate in the
13 aural mode than in the written mode. And Wong (2001) compared the ability of learners to
14 focus on both form and meaning in aural and written modes and found that the aural mode
15 was more challenging than the written mode.

16 In terms of aural enhancement, early SLA research into teacher talk has shown frequent use
17 of speech modifications by ESL teachers. Some studies (Dahl, 1981; Håkansson, 1986; Henzl,
18 1979) revealed that teachers adjusted their speech rate to the level of learners' proficiency,
19 and others (Chaudron, 1982; Wesche & Ready, 1985) reported teachers' insertion of pauses
20 around certain aspects of their speech production to make it more comprehensible to
21 learners. Chaudron (1982), in particular, descriptively observed native teachers' tendency
22 to insert pauses around difficult words to make them more comprehensible to ESL learners.
23 Other phonological, intonational, or stress characteristics have been reported to be
24 modified by teachers (Chaudron, 1982; Henzl, 1973). Although those early studies are not
25 generalizable due to the lack of a comparable baseline, Chaudron (1988) concludes that
26 native teachers seem to modify their speech in certain ways to make it more comprehensible
27 for learners. A decade later, in a study on the effects of recasts, Doughty and Varela (1998)
28 used recasts with a rising intonation to draw learners' attention to a particular form. Because
29 the study did not include a baseline recast (with no intonational emphasis), it is difficult to
30 interpret the effects of intonational emphasis in recasts; however, it seems likely that such
31 intonational emphasis has been accepted by practitioners and researchers as one possible
32 attention-drawing technique.

33 No studies, to the best of our knowledge, have investigated the effects of aural manipulation
34 in the input on drawing learners' attention to form in the experimental context. Leow's
35 (1995) study does give us some insight, as it was a replication of an earlier study (1993) into
36 the effects of simplified written input, type of linguistic items, and L2 experience on intake,
37 but in the aural mode, allowing for a comparison between the two. Although the studies did
38 not reveal modality effects of simplified input on learner intake of the target form, mode of
39 input did seem to have an effect on learners' intake of different types of input, possibly due
40 to the phonological salience of different morphemes. Leow emphasised the need to further
41 investigate the effects of modality on input processing.

43 Study

44 Participants

45 A total of 72 Korean learners of English participated in the study. Participants were enrolled
46 in a compulsory freshman English course, entitled "Academic English for business majors."
47 They were from three intact classes taught by the same instructor. Students in the classes
48

49 1 It should be noted, however, that there is also an important age effect.
50
51
52

1 were randomly placed into one of these classes, if they had insufficiently high scores on one
2 of the accepted university entrance tests (e.g., TOEFL or the university entrance exam).
3 The experiment was conducted as part of classroom activity on extensive listening, and
4 participants received extra points for their participation. Participants' TOEFL IBT scores
5 ranged from 80 to 110 (out of 120) and national university entrance exam scores in English
6 from 94 to 100 (all students had at least one of these scores), indicating that participants
7 could be expected to be able to complete listening to an audiobook independently outside
8 of the classroom without too much trouble. The class instructor was consulted regarding
9 the participants' English ability to complete the task. Participants were told the purpose of
10 the study was to look at extensive listening practice and were given information about the
11 length of the study and its procedures.

12 Participants at this level might be expected to know the basic rules pertaining to passive
13 structures, especially considering the fact that they are introduced early in formal education
14 (e.g., compulsory English education from Grade 3) and the fact that their formation is
15 relatively simple. Nonetheless, many previous studies have noted challenges for students in
16 fully mastering passive forms, even at advanced levels (Hinkel, 2002). This was confirmed for
17 the participants in this study also as shown in their pretest scores (see below).

18 Design

19 A computer-based timed grammaticality judgement test (GJT) was administered to
20 participants as a pretest. The GJT was preceded by instructions and a practice session.
21 Next, the three classes were randomly assigned to either one of the two experimental
22 groups [the Pause Group (PG, $n=24$), or the Reduced Speed Group (SG, $n=23$)], or the
23 control group (CG, $n=25$). Participants in each group were given an audio version of a
24 graded reader (see below) to listen to. They received their respective files via the university
25 course management system so that no other individuals except the study participants
26 could access the audio files. Students were told they were only to use the files themselves
27 for the purposes of the study and not to share the files with others. The two experimental
28 groups were given artificially manipulated files, which either included short pauses around
29 the target forms (PG) or which had the speed of the audio recording reduced for the target
30 items (SG). The control group received the original (unaltered) audio file. Participants
31 were asked to listen to the audio files for the purpose of enjoying the story in the book as
32 part of their course homework. They were given one week to complete listening to the
33 approximately 90-minute recording.

34 After one week participants completed a posttest GJT, which included the same items
35 as the pretest but in a different order. A survey (see Appendix A) was administered after
36 the posttest, and this asked learners about their background in learning English, their
37 experience in listening to the audiobook (for example, where and when they listened to it),
38 what devices they used for listening, as well as whether they had noticed anything special
39 about the recording (to establish whether they had noticed the input enhancement). In
40 addition, participants were asked whether, and how often, they had listened to the book
41 in the debriefing questionnaire. Nine participants indicated they had not listened to the
42 audiobook or had listened to it more than once. They were removed from the dataset.

43 Target structure

44 The English passive was chosen as the target form for the study. As Hinkel (2002) points
45 out, although the passive structure is common in English, classroom practice and instruction
46 on passives have focused on deriving passives from active structures, making it difficult for
47 learners to master the form on its own. Particularly in L2 production, common types of
48
49
50

1 errors in passive production include the use of the intransitive verb in passive constructions
 2 and the use of the form in inappropriate contexts.

3 For example:

- 4 a. The accident happened.
 5
 6 b. *The accident was happened.

7 Previous studies on L2 learners' passive acquisition have revealed that even advanced L2
 8 learners tend to overpassivitize unaccusative verbs such as *occur* and *happen* (Kim, 2003;
 9 Yip, 1995) and tend to accept ungrammatical sentences including passive structures
 10 with unaccusative verbs. Further complicating matters for learners is the fact that the
 11 agent of an action verb in an active structure tends to be phonologically suppressed
 12 and that the passive structure does not follow the *first noun principle*. VanPatten (1996,
 13 2004) has shown that learners, regardless of their L1, tend to perceive the first noun or
 14 pronoun in a sentence as an agent, which is not the case in passive structures. These
 15 factors together make it difficult for L2 learners to recognise thematic relationships in
 16 passive sentences. Based on the level of the participants (see above), we felt the passive
 17 form was both challenging enough, while not being beyond the participants' grasp. In
 18 order not to make the tests too difficult, we included mainly simple passives, similar to
 19 those found in the audiobook. In addition, the passive structure occurred frequently in
 20 the audiobooks we considered, thus making it a good practical choice. In general, for
 21 the correct passive forms, grammatically correct simple sentences with a *by*-phrase were
 22 presented (e.g., 'The new rules were written by the head teacher'), and for the incorrect
 23 forms, the *be* verb in the passive structure was omitted (e.g., '*He injured when he fell
 24 off his bike').
 25

26 Treatment

27 After consulting with the course instructor, the book *Frankenstein*, a level three book from
 28 the Penguin Active Reading series of graded readers was chosen. Permission was obtained
 29 from the publisher to manipulate the audio recordings for the purpose of our study². The
 30 audio files were digitally manipulated with the use of the sound editing software Audacity
 31 (a freely available audio editing program) by inserting pauses of about 1.5 seconds before
 32 and after the target forms or by slowing down the playback speed of the target items. We
 33 slowed down the recording by 7–10% while not altering its pitch—so as not to make the
 34 slowed down text sound unnatural. The files were then converted to mp3 files, and students
 35 were instructed to download the files through the university course management system and
 36 listen to the audiobook through their mobile phones or any other listening device. Further,
 37 they were asked to listen to the book only once (so as to avoid adding length of exposure as
 38 an additional variable). Participants were not told about the purpose of the study, other than
 39 that it was about extensive listening. No instruction on the target structure was given during
 40 the experimental period.
 41

42 Tests

43 A timed grammaticality judgement test (GJT) was administered as a pretest and a posttest.
 44 Both tests contained the same items but in a different order. There were 50 sentences of
 45 which 20 contained the target structure and the remaining 30 were distracters. Out of the
 46 20 target items, 10 were grammatical and 10 were ungrammatical. Items were randomly
 47

48 ² The narrator of the story uses British English. Korean learners of English are more used to hearing
 49 American English. However, because of the relatively low level of the text and the absence of any
 50 clear regional expressions in the text, we considered this acceptable.
 51
 52

1 presented. The items were similar to those found in the audiobook in terms of their
2 complexity. Before the test, participants were instructed on how to complete the GJT
3 and completed a number of practice items. Participants were asked to press the *enter* key
4 on the keyboard if they thought a sentence was grammatical and the left-hand *shift* key if
5 they thought it was ungrammatical. The keys were labelled with stickers indicating *correct*
6 and *incorrect*. Since the tests aimed at measuring learners' implicit knowledge of the target
7 feature, learners received only a few seconds to judge their grammaticality. They were
8 encouraged to use their intuition, rather than to consciously apply grammar rules. The
9 sentence presentation time differed, depending on the length of the sentence, and was based
10 on Reinders (2009).

11 Although GJTs have some drawbacks (see, for example, Birdsong, 1989), the timed GJT
12 seemed appropriate as the most likely effect of the extensive listening treatment would
13 be the development of implicit knowledge. With regards to item consistency, a Kuder-
14 Richardson 20 (*KR-20*) score was calculated. In the pretest the score was 0.715, and in the
15 posttest it was 0.878, showing sufficiently high consistency.

16 In addition to the GJT, participants were given a comprehension test at the same time as
17 the GJT posttest. This included six multiple-choice questions related to the main plot of the
18 story to confirm that they had listened to the audiobook. These questions were written so
19 as to be impossible to answer without having read the book (e.g., 'Where did Robert Walton
20 first meet Victor Frankenstein, as he wrote in his first letter?').

22 Analysis

23 To measure performance on the pre—and post-tests, participants were given one point for
24 each correct item and zero points for each incorrect or missing item. The score comparisons
25 among groups included both overall GJT scores and scores on the target features. The
26 analysis of the pretest revealed that there were no significant group differences for both
27 scores (overall scores and passive scores), so it was assumed that the three groups were similar
28 in terms of their knowledge of the passive structure and English grammar in general at the
29 start of the study.

31 Results

32 In order to examine mean differences in individuals' passive knowledge improvement under
33 different conditions of audio input, a mixed-design repeated-measures ANOVA was adopted.
34 That is, Condition was used as a between-subject factor with three levels—the pause group
35 (PG) vs. the reduced speed group (SG) vs. the control group (CG)—and Time was used as
36 a within-subject factor with two levels (pretest vs. posttest). The dependent variable was
37 learners' passive scores from the grammaticality judgement test. This analysis seemed more
38 appropriate than a one-way ANOVA on posttest scores only because it is possible that
39 all learners may benefit from merely listening to the audio file, regardless of the different
40 audio input.

41 Table 1 shows descriptive statistics for scores on passive structures from the pretest and
42 posttest. The mean score on the pretest for passives was 13.08 ($SD=3.49$) for the PG, 12.08
43 ($SD=2.97$) for the SG, and 11.88 ($SD=2.773$) for the CG. The posttest scores seem similar
44 across all three groups with the average scores of PG=14.208 ($SD=3.106$), SG=13.217
45 ($SD=3.147$), and CG=13.120 ($SD=3.059$), although overall PG (pause group) performed better
46 in both pretest and posttest, followed by SG and CG, in that order.

Table 1. Descriptive statistics for passive structures on the pretest and posttest

	group	N	Mean	SD	SE
pretest	PG	24	13.083	3.488	.712
	SG	23	12.087	2.968	.619
	CG	25	11.880	2.773	.555
posttest	PG	24	14.208	3.106	.634
	SG	23	13.217	3.147	.656
	CG	25	13.120	3.059	.612

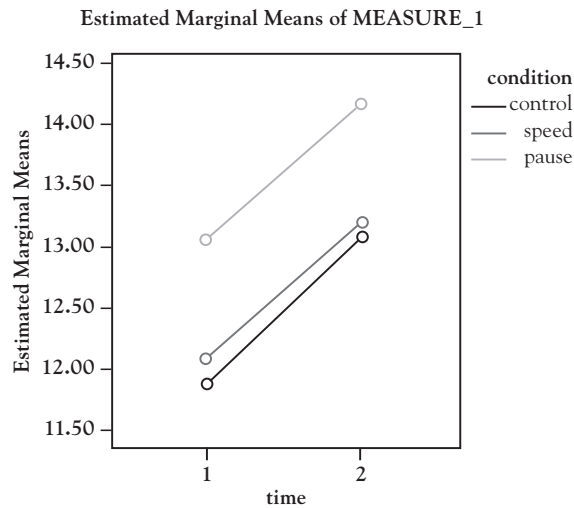
note. PG=pause group, SG=reduced speed group, CG=control group (original format)

In order to examine the main effects for Time (pretest-posttest) and Condition (treatment) and the interactions of Time by Condition, the repeated-measures ANOVA was used. As can be seen in Table 2, there was a significant Time effect in the analysis ($F(1, 69)=15.821$, $p=.00$), suggesting that learners' passive scores significantly improved from pretest to posttest. Although the proportion of variance explained by Time in the within group design was only 18.7% (partial $\eta^2=.187$), the significant result can be interpreted with substantial power (power=.975). However, in terms of the main effect for Condition, there was no significant difference in group scores ($F(2, 69)=.162$, $p=.319$, partial $\eta^2=.033$), with Condition explaining only 3.3% of the variance in the score in the between group design. The results suggest treatment differences in the three groups did not influence the amount of improvement from pretest to posttest scores on the target form. Further, no significant interaction of Time and Condition was observed ($F(1, 69)=.017$, $p=.983$, partial $\eta^2=.000$), with the interaction explaining 0.0% of the variance in the within group design. This suggests that there is no interaction effect for Time and Condition on learner scores.

Table 2. Statistics for the effects of Time, Condition, and their interaction

source of variance	SS	df	MS	F	p	partial η^2	power
within group							
Time	48.816	1	48.816	15.821	.000	.187	.975
Time*Condition	.103	2	.052	.017	.983	.000	.052
Condition							
error	212.897	69	3.085				
between group							
Condition	37.392	2	18.696	1.162	.319	.033	.247
error	1109.914	69	16.086				

Figure 1 reveals the score changes from pretest to posttest for the three groups. As the figure suggests, all groups improved from pretest to posttest (Time 1 to Time 2), implying that all groups in general improved their knowledge of the passive forms after listening to the audiobook. However, overall there is clearly no interaction between Condition and Time (i.e., score improvement).



17 **Figure 1. Plots for pretest and posttest scores for each group**

18

19 To sum up, the results indicate that learners' knowledge of the passive form improved from
20 pretest to posttest by listening to the audiobook regardless of the type of aural input they
21 received. At the same time, the results suggest no differential effect for aural enhancement
22 on learners' knowledge improvement of the target form. Although score improvement from
23 pretest to posttest occurred in all three conditions with substantial power (power=.975), the
24 findings for the effect of aural manipulation must remain tentative due to the low power
25 (power for Condition effect=.247; power for Condition * Time effect=.052), because the
26 lack of power may not allow us to detect any significant effects, even if such effects exist
27 in reality.

28 Questionnaire

29 Upon completion of the posttest, participants were given a questionnaire that asked
30 (among other questions) whether they had noticed anything special about the recordings.
31 Approximately 70% of participants (17/24) in the pause group (PG) said they had noticed
32 the pauses, and of those who did, about 47% (8/17) said the pauses were intended to make
33 them concentrate on the story, two said it was to give them more time to understand the
34 input (without mentioning the exact object of the input), and one said it was intended to
35 encourage attention to the words that followed the pauses. Three further students said they
36 did not know why the pauses were included. Participants in the reduced speed group (SG)
37 did not specifically point out the slowing down of the target structure. Some also mentioned
38 other aspects of the recording, which had not been altered by us, such as the British
39 pronunciation, the general speed of the recording, and the length of the book. This applied
40 to students in the control group (CG) also. None of the participants' responses indicated
41 they had noticed that the pauses or recording speed were intended to draw their attention
42 to the target structure, which indicated that students' attention to the target form had not
43 reached the level of awareness. However, given that some participants mentioned that the
44 reason for the pauses were to get them to pay attention to the recording (although none
45 specified a form), it seems possible that the pauses may have increased learners' readiness to
46 accept or process the subsequent input. Nonetheless, the students' responses clearly indicate
47 the contrasts in terms of learners' recognition of the manipulation; pauses seem to be more
48 salient than a reduction in recording speed.

49
40
50

1 Another aspect of our study was whether extensive listening can be successfully
2 implemented as an out-of-class activity. 60% of the learners indicated they listened to the
3 audiobook with their own portable devices such as MP3 players and mobile phones. Only
4 40% of participants had listened to the book on a computer. Most participants (66%)
5 indicated that they had listened to the book in an informal setting such as on the subway or
6 bus when commuting to and from home or before going to bed, while 25 respondents (34%)
7 said that they had listened to it at school. The responses point to the potential of using
8 mobile devices for encouraging out-of-class practice.

9 **Comprehension test**

10 Students performed well on the comprehension questions they were given at the same time
11 as the questionnaire ($Mean=87.04$, $SD =14.91$), showing that they had indeed listened to the
12 story and the level was suitable for them.

14 **Discussion**

15 This study investigated whether external manipulation of features in L2 aural input
16 contributes to the acquisition of the passive structure. Learners were exposed to natural
17 language input by listening to an audiobook in which the target structure was either slowed
18 down or in which pauses were inserted around the target structure. Participants' knowledge
19 of the form was examined by comparing their receptive knowledge on two grammatical
20 judgment tests (GJT), administered before and after the treatment. Although participants'
21 test scores improved from pretest to posttest (most likely as a result of completing the
22 extensive listening as part of the treatment), there was no effect for aural enhancement.
23 Although it is hard to directly compare the current results to previous input enhancement
24 studies, due to the different modality, some methodological issues can be raised in discussing
25 possible reasons for our findings.

27 First, it is possible that the amount of enhanced input in the current study was not sufficient
28 for learners to construct the rule (or at least to do so to a greater extent than participants
29 in the control group, who simply listened to the unaltered audiobook). Similarly, the period
30 of time over which the input was presented may have been too short. Participants listened
31 to only one fairly short audiobook and were exposed to only 65 correct exemplars of the
32 target structures. It is possible that they would need, if not more, than at least more repeated
33 exposure to the target structure, for example by listening to several books over an extended
34 period (weeks, months) of time. Schmidt (1990) emphasized the importance of frequency
35 of input, given other things being equal, along with perceptual salience in increasing the
36 likelihood of input to be perceived as intake and further processed for learning.

37 Another variable is the complexity of the target structure; simple rules are more susceptible
38 to enhancement than complex ones. Although variables determining complexity are subject
39 to debate (e.g., Dekeyser, 1994, 1998; Robinson, 1996), some studies (Kim, 2003; Yip, 1995)
40 have highlighted the difficulty of acquiring the passive form. Although the passive structure
41 adopted in the current study seems simple in terms of rule formation, adaptation of the
42 form and use of it in a sentence is relatively complex when it comes to the incorrect use of
43 intransitive verbs in passive and double-object constructions. Robinson's studies (1995, 1996)
44 showed that with complex rules, learners with explicit instruction are better at acquiring
45 the form than those in implicit and incidental learning conditions. Based on this, grammar
46 learning in sentences beyond identifying simple rule formation may not work in incidental
47 enhanced form learning conditions as used in the current study.

1 Moreover, the difficulty of processing *aural* input may have had an impact. A number of
2 studies have pointed out the challenges of processing aural input compared with written
3 input (Anderson, 1980; Danks, 1980; V. Murphy, 1997; Rost, 1990). One of the important
4 differences between written and aural input processing is that learners have very little
5 control over the incoming input when listening. Therefore, participants may have been
6 unable to benefit from the input enhancements.

7 Although no differential effect on learning was observed for the pause and the slowed speed
8 groups, the results from the debriefing questionnaire showed that about 70% of learners
9 (17/24) in the pause group had noticed the pauses, whereas none in the slowed speed group
10 (SG) had noticed the change in speed. Future studies investigating the effects of aural input
11 enhancement may thus wish to use pauses rather than alter the playback speed. In addition,
12 it is interesting to consider why such recognition did not lead to acquisition. Although there
13 was no effect for the enhanced input and participants were not aware of the enhancement's
14 purpose to draw their attention to the target structure, it is theoretically possible that
15 participants did in fact notice the target structure but not to the point of awareness and
16 therefore did not engage in further processing. Williams' study (1999) showed that, especially
17 in meaning-oriented tasks, further processing of noticed input is necessary for the underlying
18 rules to be formulated:

19
20 If learning distributional rules is critically dependent upon the subjects initially paying
21 attention to relations between elements in the input, then it follows that even the
22 simplest rules might not be learned if the subjects for some reason fail to attend to those
23 relationships (p. 32).

24 In other words, participants may have noticed the form but failed to allocate attention
25 to related grammatical segments or at least did not make the form-meaning connections
26 necessary to establish their underlying rules (cf. Baddeley, 1990). In addition, the lack of
27 explicit instruction and the fact that learners were not asked to focus on the target form
28 may have prevented them from allocating attention to the target grammar (G. Murphy &
29 Shapiro, 1994). Also, the lack of feedback may have prevented them from attempting to
30 generate their underlying rules (Baddeley, Gathercole, & Papagno, 1998; Williams, 1999).

31 To reiterate, a number of methodological issues identified in previous enhancement studies
32 may have played a role in this study also; external input saliency cannot guarantee internal
33 focus on the form. Although learners' attention may have been activated by the external
34 manipulation, their attention to form may have remained at a shallow level, thus not leading
35 to an association of the form and its underlying rule.
36

37 Nevertheless, as some students did notice the manipulation through the insertion of pauses,
38 without having been alerted to it through instructions or examples, it seems possible
39 to enhance learners' readiness to accept the following input (either in terms of content
40 or grammar) through this type of enhancement. This, nonetheless, needs more robust
41 empirical evidence.

42 We feel that the methodological significance of the study lies in its attempts to incorporate
43 authentic materials in the study of focus on form/input enhancement, as well as
44 incorporation of input enhancement in an out-of-class learning context. That is, this study
45 tried to examine whether L2 learners can successfully allocate their attention to salient
46 features of grammar within (purely) meaning-oriented activities in a non-pedagogical
47 environment. Unlike many other previous input enhancement studies where learners are
48 placed into experimental conditions where the target form is presented more frequently
49 than in its natural context, the extensive listening task adopted in this study more closely
50

1 resembles a natural language learning situation. Learners' main purpose for completing
2 the listening activity was to understand and enjoy the story rather than to pay attention to
3 details of the language or text. Further studies such as this may help to better understand
4 the pedagogical potential of implementing form-focused instruction in informal language
5 learning settings.

6 Conclusion

7
8 This study attempted to investigate whether aural input enhancement in extensive listening
9 can facilitate acquisition of the passive structure. Passive structures in an audiobook
10 were aurally enhanced, and the effect of the enhancement on learning was measured
11 with a grammaticality judgement test. Analysis of the results showed no significant aural
12 enhancement effect on acquisition of the target structure. The results could be attributed
13 to the cognitive demands in processing extensive auditory input; extensive listening is a
14 primarily meaning-oriented type of language practice, which may have made participants
15 less likely to pay attention to language form.

16 However, a number of limitations prevent us from making definitive statements to explain
17 our research findings. First, a lack of a noticing measurement in the study means we were
18 unable to determine whether learners did not notice the form, or did notice it but did not
19 acquire the structure as a result. Although post-treatment self-reports were used to reveal
20 participants' noticing of the enhanced target structure, self-report can only provide limited
21 information. Also, because participants listened to the audiobook in an uncontrolled
22 environment, contextual factors could have had an effect. These include the time interval
23 between finishing listening to the book and taking the test, as well as the conditions during
24 listening (e.g., listening in silence vs. listening in a noisy environment). Finally, the modality
25 in the treatment was different from that in the tests (listening versus reading). Our reason
26 for using the GJT was that it would allow us to easily include a large number of target items
27 in an easy-to-administer test of relatively short duration. In future studies, however, it will be
28 important to reconsider this issue.

29 Despite these limitations, we do feel it is important to investigate extensive listening in
30 its natural environment, and by using tools that the young adult learners in this study
31 are most comfortable with, we feel that the study benefits from greater ecological validity
32 (Van Lier, 1996). Laboratory conditions, although affording greater control in terms of data
33 collection, may not be suitable if the results are to be a true indication of the potential effect
34 of extensive listening activities. In this sense, the current study hopefully makes a small but
35 significant contribution to contextualizing aural input enhancement research.

37 References

- 38 Anderson, J. (1980). *Cognitive psychology and its implications*. New York: W.H., Freeman.
39 Baddeley, A. (1990). *Human memory*. London: Lawrence Erlbaum Associates.
40 Baddeley, A., Gathercole, S., & Papagno, C. (1998). The phonological loop as a language
41 learning device. *Psychological Review*, 105, 158–173.
42 Barcroft, J. (2003). Distinctiveness and bidirectional effects in input enhancement for
43 vocabulary learning. *Applied Language Learning*, 13, 133–159.
44 Birdsong, D. (1989). *Metalinguistic performance and interlinguistic competence*. New
45 York: Springer.
46 Chaudron, C. (1982). Vocabulary elaboration in teachers' speech to L2 learners. *Studies in*
47 *Second Language Acquisition*, 4, 170–180.
48
49
50
51
52

- 1 Chaudron, C. (1988). *Second language classrooms: Research on teaching and learning*. New
2 York: Cambridge University Press.
- 3 Dahl, D. (1981). The role of experience in speech modifications for second language learners.
4 *Minnesota Papers in Linguistics and Philosophy of Language*, 7, 78–93.
- 5 Danks, J. (1980). Comprehension in listening and reading: Same or different? In J. Danks
6 & K. Pezdek (Eds.), *Reading and understanding* (pp. 25–40). Newark, DE: International
7 Reading Association.
- 8 DeKeyser, R. (1994). How implicit can adult second language learning be? *AILA Review*,
9 11, 83–96.
- 10 DeKeyser, R. (1998). Beyond focus on form: Cognitive perspectives on learning and
11 practicing second language grammar. In C. Doughty & J. Williams (Eds.), *Focus on form*
12 *in classroom SLA* (pp. 42–63). New York: Cambridge University Press.
- 13 Doughty, C., & Varela, E. (1998). Communicative focus on form. In C. Doughty & J.
14 Williams (Eds.), *Focus on form in classroom second language acquisition* (pp. 114–138).
15 Cambridge: Cambridge University Press.
- 16 Dulay, H. C., & Burt, M. K. (1978). Some remarks on creativity in language acquisition.
17 In W. C. Ritchie (Ed.), *Second language acquisition research: Issues and implications* (pp.
18 65–89). New York: Academic Press.
- 19 Ellis, R. (2009). Implicit and explicit learning, knowledge and instruction. In R. Ellis, S.
20 Loewen, C. Elder, R. Erlam, J. Philp, & H. Reinders (Eds.), *Implicit and explicit knowledge*
21 *in second language learning, testing, and teaching* (pp. 3–26). Bristol: Multilingual Matters.
- 22 Fotos, S., & Ellis, R. (1991). Communicating about grammar: A task-based approach. *TESOL*
23 *Quarterly*, 25, 46–69.
- 24 Gascoigne, G. (2006). Toward an understanding of incidental input enhancement in
25 computerized L2 environments. *CALICO Journal*, 24, 147–162.
- 26 Håkansson, G. (1986). Quantitative aspects of teacher talk. In G. Kasper (Ed.), *Learning,*
27 *teaching, and communication in the foreign language classroom* (pp. 83–98). Aarhus,
28 Denmark: Aarhus University Press.
- 29 Han, Z., Park, E. S., & Combs, C. (2008). Textual enhancement of input: Issues and
30 possibilities. *Applied Linguistics*, 29, 597–618.
- 31 Henzl, V. (1973). Linguistic register of foreign language instruction. *Language Learning*,
32 23, 207–227.
- 33 Henzl, V. (1979). Foreigner talk in the classroom. *International Review of Applied Linguistics*,
34 17, 159–167.
- 35 Hinkel, E. (2002). Why English passive is difficult to teach (and learn). In E. Hinkel &
36 S. Fotos (Eds.), *New perspectives on grammar teaching* (pp. 233–260). Mahwah, NJ:
37 Lawrence Erlbaum Associates.
- 38 Johnson, J. (1992). Critical period effects in second language acquisition: The effect of
39 written versus auditory materials on the assessment of grammatical competence.
40 *Language Learning*, 42, 217–48.
- 41 Jourdenais, R., Ota, M., Stauffer, S., Boyson, B., & Doughty, C. (1995). Does textual
42 enhancement promote noticing? A think-aloud protocol analysis. In R. Schmidt (Ed.),
43 *Attention and awareness in foreign language learning* (pp. 183–216). Honolulu: University
44 of Hawai'i, National Foreign Language Resource Center.
- 45 Kim, Y-W. (2003). The acquisition of English unaccusative verbs by Korean EFL learners.
46 *English Language Teaching*, 15, 203–221.
- 47
48
49
50

- 1 Labrie, G. (2000). A French vocabulary tutor for the web. *CALICO Journal*, 17, 475–499.
- 2 Lee, S., & Huang, H. (2008). Visual input enhancement and grammar learning: A meta-
3 analytic review. *Studies in Second Language Acquisition*, 30, 307–331.
- 4 Leow, R. P. (1993). To simplify or not to simplify. *Studies in Second Language Acquisition*,
5 15, 333–355.
- 6 Leow, R. P. (1995). Modality and intake in second language acquisition. *Studies in Second*
7 *Language Acquisition*, 17, 79–89.
- 8 Leow, R. P. (1997). The effects of input enhancement and text length on adult L2 readers'
9 comprehension and intake in second language acquisition. *Applied Language Learning*,
10 8, 151–182.
- 11 Leow, R. P. (1999). Attention, awareness, and focus on form research: A critical overview.
12 In J. F. Lee & A. Valdman (Eds.), *Form and meaning: Multiple perspectives* (pp. 69–96).
13 Boston: Heinle & Heinle.
- 14 Leow, R. P. (2001). Do learners notice enhanced forms while interacting with the L2?
15 An online and offline study of the role of written input enhancement in L2 reading.
16 *Hispania*, 84, 496–509.
- 17 Leow, R. P., Egi, T., Nuevo, A., & Tsai, Y. (2003). The roles of textual enhancement and
18 type of linguistic item in adult L2 learners' comprehension and intake. *Applied Language*
19 *Learning*, 13, 1–16.
- 20 Murphy, G., & Shapiro, A. (1994). Forgetting verbatim information in discourse. *Memory*
21 *and Cognition*, 22, 85–94.
- 22 Murphy, V. (1997). The effect of modality on a grammaticality judgment task. *Second*
23 *Language Research*, 13, 34–65.
- 24 Penny, C. (1980). Order of report in bisensory verbal short-term memory. *Canadian Journal of*
25 *Psychology*, 34, 190–95.
- 26 Reinders, H. (2009). Learner uptake and acquisition in three grammar-oriented production
27 activities. *Language Teaching Research*, 13, 201–222.
- 28 Reinders, H., & Ellis, R. (2009). The effects of two types of positive enhanced input on
29 intake and L2 acquisition. In R. Ellis, S. Loewen, R. Erlam, J. Philp, C. Elder, and
30 H. Reinders (Eds.), *Implicit and explicit knowledge in a second language* (pp. 262–280).
31 Clevedon: Multilingual Matters.
- 32 Robinson, P. (1995). Review article: Attention, memory, and the noticing hypothesis.
33 *Language Learning*, 45, 283–331.
- 34 Robinson, P. (1996). Learning simple and complex second language rules under implicit,
35 incidental, rule-search, and instructed conditions. *Studies in Second Language*
36 *Acquisition*, 18, 27–68.
- 37 Rost, M. (1990). *Listening in language learning*. London: Longman.
- 38 Schmidt, R. (1990). The role of consciousness in second language learning. *Applied*
39 *Linguistics*, 11, 129–158.
- 40 Schmidt, R. (1993). Awareness and second language acquisition. *Annual Review of Applied*
41 *Linguistics*, 13, 206–226.
- 42 Schmidt, R. (1994). Deconstructing consciousness in search of useful definitions for applied
43 linguistics. *AILA Review*, 11, 11–26.
- 44 Schmidt, R. (1995). Consciousness and foreign language learning: A tutorial on the role
45 of attention and awareness in learning. In R. Schmidt (Ed.), *Attention and awareness*
46
47
48
49
50
51
52

- 1 *in foreign language learning* (pp. 259–302). Honolulu: University of Hawai'i, National
2 Foreign Language Resource Center.
- 3 Schmidt, R. (2001). Attention. In P. Robinson (Ed.), *Cognition and second language*
4 *instruction* (pp. 3–32). Cambridge: Cambridge University Press.
- 5 Sharwood Smith, M. (1991). Speaking to many minds: On the relevance of different types of
6 language information for the L2 learner. *Second Language Research*, 7, 118–132.
- 7 Sharwood Smith, M. (1993). Input enhancement in instructed SLA: Theoretical bases.
8 *Studies in Second Language Acquisition*, 15, 165–179.
- 9 Spada, N., & Lightbown, P. M. (1999). Instruction, first language influence, and
10 developmental readiness in second language acquisition. *Modern Language Journal*,
11 83, 1–22.
- 12 Tomlin, R., & Villa, V. (1994). Attention in cognitive science and second language
13 acquisition. *Studies in Second Language Acquisition*, 16, 183–203.
- 14 Trahey, M., & White, L. (1993). Positive evidence and preemption in the second language
15 classroom. *Studies in Second Language Acquisition*, 15, 181–204.
- 16 Van Lier, L. (1996). *Interaction in the language curriculum: Awareness, autonomy, and*
17 *authenticity*. London: Longman.
- 18 VanPatten, B. (1996). *Input processing and grammar instruction in second language acquisition*.
19 Norwood, NJ: Ablex.
- 20 VanPatten, B. (2004). *Processing instruction: Theory, research, and commentary*. Mahwah, NJ:
21 Lawrence Erlbaum Associates.
- 22 Wesche, M., & Ready, D. (1985). Foreigner talk in the university classroom. In S. Gass
23 & C. Madden (Eds.), *Input in second language acquisition* (pp. 89–114). Rowley, Mass.:
24 Newbury House.
- 25 White, J. (1998). Getting the learners' attention: A typographical input enhancement
26 study. In C. Doughty & J. Williams (Eds.), *Focus on form in classroom second language*
27 *acquisition* (pp. 85–113). Cambridge: Cambridge University Press.
- 28 Williams, J. N. (1999). Memory, attention, and inductive learning. *Studies in Second Language*
29 *Acquisition*, 21, 1–48.
- 30 Wong, W. (2001). Modality and attention to meaning and form in the input. *Studies in*
31 *Second Language Acquisition*, 23, 345–368.
- 32 Wong, W. (2003). Textual enhancement and simplified input: Effects on L2 comprehension
33 and acquisition of non-meaningful grammatical form. *Applied Language Learning*,
34 13, 17–45.
- 35 Yip, V. (1995). *Interlanguage and learnability: From Chinese to English*. Amsterdam:
36 John Benjamins.
- 37
38
39
40
41
42
43
44
45
46
47
48
49
50

1 Appendix

2
3
4
5
6
7
8
9
10
11
12
13
14
15
16
17
18
19
20
21
22
23
24
25
26
27
28
29
30
31
32
33
34
35
36
37
38
39
40
41
42
43
44
45
46
47
48
49
50
51
52

Q1. What device did you use for the listening?

MP3 player

cell-phone

computer

other, please specify:

Q2. Where did you listen to the audiobook?

on the subway

on the bus

at home

in school

other, please specify:

Q3. How many times did you listen to the audiobook?

none

once

twice

more than three times

Q4. When did you finish listening to the audiobook?

today

yesterday

two days ago

three days ago

more than four days ago

Q5. Had you read this book before (or listened to it as an audiobook)?

yes

no

Q6. Did you notice anything unusual about the recording (quality of recording)? If so, what?

Q7. If you answered yes, what do you think was the purpose of the unusual recording?
