CHAPTER 5

Gender and recasts

Analysis of males’ and females’ L2 development following verbal and gesture-enhanced recasts

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This study investigated the influence of learners’ gender on the effectiveness of verbal recasts and gesture-enhanced recasts. A total of 40 adult English-as-a-second-language learners participated. In the first condition, the learners received verbal recasts during two communicative tasks. The results showed no difference across gender. In the second condition, the learners received gesture-enhanced recasts. Females significantly outperformed males with a strong effect size in the immediate to delayed posttests gain score but not in the gain score of pretest to immediate posttests. This indicates that the long-term effectiveness of recasts seems to be influenced by learners’ gender. The results are discussed in relation to learners’ memory and the exposure to visual cues.

Keywords: communicative tasks, gesture, learner gender, recasts

Introduction

This study investigates whether or not the effectiveness of verbal recasts and visually-enhanced recasts vary between male and female learners by bridging two gaps in the existing literature. The first gap deals with the impact of gender differences in second language (L2) learning. Psychological and neurolinguistic studies have illustrated that gender plays an integral role in L2 learning because there is a significant difference in males’ and females’ attitude toward language learning and in short-term and long-term memory. Specifically, with regard to males’ and females’ cognitive systems, it has been reported that females surpass males in the use of both memory systems. However, whether or not such differences in cognition influence interlanguage (IL) development differently in communicative tasks with recasts in a classroom setting has not been investigated. The second contribution of this study deals with the effectiveness of visually-enhanced recasts. For example, examining recasts has shown
and still others were acquainted (e.g., living room or bedroom, 2006; living room or study, 2004; study, 2002; bedroom, 1999). Still others were acquainted as a result of a specific event or activity, such as a class trip or a family gathering. In some cases, the relationship developed over time, as people got to know each other through repeated interactions. The nature of these relationships varied widely, from casual acquaintances to close friends, and from those that were strictly professional to those that were deeply personal.
psychology also support the significance of multimodality (e.g., Cohen, Horowitz, & Wolfe, 2009). For example, Dual Coding Theory, proposed by Clark and Paivio (1991), argues that integrating verbal and nonverbal modalities reinforces learning because learners are left with more traces in the memory system after coding the information through different modalities.

Even though the general consensus is that the instructor’s gestures help L2 learning, so far, only a few studies have addressed the use of gestures during corrective feedback, including recasts. Overall, the descriptive studies have illustrated how a language instructor incorporates gestures during the provision of feedback (e.g., Faraco & Kid, 2008; Wang & Loewen, 2015). For example, Wang and Loewen (2015) observed about 65 hours of an ESL classroom and identified that more than 60% of corrective feedback was accompanied by various nonverbal behaviors. Specifically, as for the explicitness of feedback, they found that the more explicit feedback was accompanied by nonverbal behaviors. In a similar line of study, Davies (2006) also observed how frequently nonverbal cues were used during focus-on-form episodes (FFEs) and reported that 47% of FFEs were accompanied by nonverbal cues.

These descriptive studies have illustrated that instructors, indeed, use nonverbal features during the provision of corrective feedback; however, the number of experimental studies has been extremely limited. As for the empirical studies, Nakatsukasa (2016) is the only study thus far that has investigated the effectiveness of gestures accompanied by corrective feedback. Comparing the effectiveness of verbal recasts with gestures (gesture-enhanced recasts) and without gestures during the acquisition of prepositions in an ESL classroom, the study found that learners who received verbal recasts with gestures showed better linguistic development, and the learning was maintained better in a delayed posttest.

Gender and L2 learning

In the past decade, the field of SLA has investigated what types of earner factors influence the acquisition of L2. The reported factors include biological factors, such as gender, working memory, age, aptitude, and learners’ psychological factors, including motivation and anxiety (e.g., Bowden, Sanz, & Stafford, 2005; Matsuda & Gobel, 2004; Robinson, 2010).

Gender, which is the key variable in the present study, seems to influence L2 learning both psychologically and cognitively. As for learners’ psychology, many studies addressed gender as a significant variable in relation to learners’ motivation based on societal bias (e.g., Kissau, 2006; Kissau, Kolano, & Wang, 2010; Kissau & Turnbull, 2008; Pajares & Vaiante, 2001; Pajares, Vaiante, & Cteoun, 2007), learning strategies (e.g., Green & Oxford, 1995; Oxford, Nyikos, & Ehrman, 1988), and goals (e.g., Koul, Roy, Kaeukvekool, & Ploisawasch, 2009). With regard to learners’ L2 ability, overall, females’ superior performance than males has been reported, including with respect to L2 comprehension (Payne & Lynn, 2011), classroom performance (Matsuda & Gobel, 2004), and grammar learning (Wucherer & Reiterer, 2016). Regarding phonological recognition and production, however, several studies have reported that males outperformed females (Lim, 1994; Reiterer, Hu, Erb, Nardo, Grodd, Winkler, & Ackermann, 2011; Wucherer & Reiterer, 2016). These studies illustrate that the overall differences between males and females in academic performance are due to both psychological and social factors.

Gender and memory

In addition to the aforementioned psychological and social factors, researchers have tapped into different mechanisms in males’ and females’ long-term and short-term memory. Overall, the studies report an advantage for females in both memory systems, as detailed in the following paragraph. Because the present study deals with the acquisition of locative prepositions, which requires learners to remember the association of each lexical item and its meaning, and also because visual cues seem to play an integral role in learners’ memory. In this section, I review studies which investigated the relationship between memory and gender.

Both short-term and long-term memory play an integral role in language learning. Some neurolinguistic studies have attempted to account for females’ linguistic advantage by examining whether short- and long-term memory is gender specific, the studies have shown females to be better than men on the tasks that involve short-term memory. The tasks in the previous studies required participants to retain information for a brief period of time, including numbers (Jensen & Reynolds, 1983; Kail & Siegel, 1978, as cited in Kaushaskaya, Mariani, & Yoo, 2011) and vocabulary words (Bleeker, Bolla-Wilson, Agnew, & Meyers, 1988; Kramer, Delis, Kaplan, O’Donnell, & Prifitera, 1997). As for long-term memory, researchers have compared males’ and females’ use of declarative memory, which is one of the two types of long-term memory and requires explicit learning. The studies that Ullman and colleagues (e.g., Hartsheke & Ullman, 2006; Ullman, Miranda, & Travers, 2007) have conducted have shown females to be better at linguistic tasks that use a declarative memory system, such as lexical retrieval and grammar formation.

To summarize the existing research, the following issues need further investigation: First, gesture has been used frequently during corrective feedback in language classrooms, and gesture-enhanced recasts seem to lead to better retention, enhancing learning outcomes. The neurolinguistic accounts seem to explain females’ superiority in L2 ability. However, the nature of the previous literature was
Chapter 2. English proficiency and performance

Participates

Participants

Method

1. Does the performance of English learners vary between males and females?

2. Does the effectiveness of oral English classes vary between males and females?

The following research questions were formulated to address these topics as:

1. How the effectiveness of oral English classes vary between males and females?

2. Does the effectiveness of oral English classes vary between males and females?
Materials

This intervention study included the following stages: (1) pretest, (2) 60-min treatment sessions, (3) immediate posttest within 24 hours of the treatment sessions, and (4) delayed posttest seven days after the treatment sessions. The detailed procedure is presented in the next section. The materials used in this study are identical to Nakatsukasa (2016).

Oral production test

Three versions of PowerPoint slides were developed, each of which was composed of two practice questions, eight questions, and four distractors to be used for the oral production tests. In the slides, the participants viewed an image of a room, and they were asked to focus on one specific item (e.g., "Please find the birds"). Then, they were asked to verbally respond to a prompt asking for a location of a specific object (e.g., "Where are the birds?"). Each question was created to elicit the prepositions, such as above, under, in, on, and next to. These responses were audio recorded using a voice recorder. The distractor questions were also included to deter learners’ attention to locations, and they were asked questions that were not related to the locations of the items (e.g., "Please find a poster; then, "What is the title of the movie?"). The scores were obtained by calculating the ratio of the correct use of prepositions in the obligatory context because the total number of prepositions was not controlled. The order of the versions was randomized for each participant.

Communicative tasks

A total of two communicative tasks were designed for this study to elicit prepositions in class. The tasks were constructed based on Ellis’s (2003) definition of focused tasks—that is, a task that includes a gap and a clearly defined outcome. In this study, the focus was on the use of locative prepositions, as well as meaningful interaction.

In the first task, the participants were divided into two groups. Group A was asked to pretend to be a group of burglars and hide a diamond in the least likely place to be found. Group B was asked to pretend to be a detective team and find the diamond. A floor plan of a house was attached to the blackboard, and each team was also given a letter-sized print of the same floor plan.

The researcher told participants that they would switch roles in a second run and that the winning team would be the one that could locate the diamond with fewer questions when they were assigned the role of detectives. As for the questions,

1. As in Nakatsukasa (2016), the present study also incorporated a grammar test. However, a majority of the students scored higher than 80% at the time of pretest and it did not allow further statistical analysis.

Procedure

Each condition took about two weeks, and a total of two semesters were used to complete the two sets of data collections. On the first day, participants were asked to complete the background questionnaire and the oral production test as pretest. About a week later, participants completed the treatment session consisting of the two communicative activities during which the participants received recasts. The immediate posttest, which was the oral production test in a different version from the pretest, was administered a day after the treatment session. This posttest was repeated a week after the treatment session as a delayed posttest.

Verbal recasts

In this condition, the participants received oral recasts. When the participants did not use prepositions or used nontargetlike prepositions during the tasks, the researcher provided verbal recasts without gestures. To keep the consistency of recast quality, the researcher positioned her hands next to the body and tried not to emphasize any words as much as possible. Overall, a total of 38 recasts (an average of 9.50 [SD = 3.90] feedback moves per class of 15) were provided verbally.

Gesture-enhanced recasts

This condition is identical to the previous condition except that gesture-enhanced recasts were used instead of verbal recasts. Specifically, during the information-gap activities, which were designed to elicit locative prepositions (on, in, under, next to, and above), the researcher used the same gestures that Nakatsukasa (2016) used (See Figure 1). Those gestures correspond to a native English speaker’s gestures when describing the locations for under, above, on, and next to as shown in Tutton (2011). Overall, a total of 35 recasts (an average of 11.75 [SD = 1.59] feedback moves per class of 15) were provided verbally.

2. In order to measure learners’ awareness, the author also administered stimulated recall. However, the learners’ comments mostly concerned their active participation in activities and none were about linguistic targets or corrections. See Nakatsukasa (2016) for the detailed contents of the stimulated recall comments.
### Results

A 2 x 2 x 2 repeated measures ANOVA was conducted to examine the effects of the experimental factors on the production of negative feedback. The factors were gender (male vs. female) and condition (control vs. feedback). The dependent variable was the number of negative feedback comments produced by the participants.

#### Table 1

<table>
<thead>
<tr>
<th>Condition</th>
<th>Male</th>
<th>Female</th>
</tr>
</thead>
<tbody>
<tr>
<td>Control</td>
<td>12</td>
<td>15</td>
</tr>
<tr>
<td>Feedback</td>
<td>20</td>
<td>25</td>
</tr>
</tbody>
</table>

Significant main effects were found for gender (male: 18; female: 12) and condition (control: 10; feedback: 20). No significant interactions were found.

#### Figure 2

- **Left panel**: Example of a control condition, where participants were not prompted to provide negative feedback. The feedback was generated spontaneously by the participants.
- **Right panel**: Example of a feedback condition, where participants were prompted to provide negative feedback in response to a specific criterion.

In order to account for the change in the number of negative feedback comments, the scores were normalized across the gender and condition groups. The normalized scores were then compared using a repeated measures ANOVA. A significant main effect of condition was found, with participants in the feedback condition producing more negative feedback comments than those in the control condition.
According to Mauchly’s test of sphericity, the sphericity of the data was confirmed \( p < .01 \). A repeated-measures ANOVA showed that there was a significant time effect \( F(2, 18) = 9.12, p < .01 \), a nonsignificant time and gender interaction effect \( F(2, 18) = 2.43, p = .12 \), and a nonsignificant gender effect \( F(1, 9) = 235.10, p = .77 \). Effect sizes, however, were large for time and the interaction between time and gender, but small for gender: \( \eta^2 = .50, \eta^2 = .21 \), and \( \eta^2 = .01 \), respectively.

Although the significant level was not reached in the repeated-measures ANOVA, it is also crucial to administer a post-hoc analysis in order to investigate whether or not there were any differences in the two groups’ gain scores. The descriptive statistics showed that the average gain score from the pretest to immediate posttest for males was \(-7.70 (SD = 17.36)\) and \(25.56 (SD = 12.24)\) for females. A one-way ANOVA showed no significant differences in these gain scores, \( F(1, 11) = 3.90, p = .07 (d = 1.56) \), although the effect size was large. The gain score from the immediate to delayed posttest for males was \(-5.10 (SD = 39.06)\) and \(-6.10 (SD = 29.06)\) for females. A one-way ANOVA showed that there was again no significant difference in these gain scores \( F(1, 11) = .00, p = .96 (d = .03) \). In short, the results showed no significant differences in either gain scores for learners who received verbal recasts.

Males vs. females in gesture-enhanced recasts

In the second condition, I compared the males and females who received the gesture-enhanced recasts. The descriptive statistics showed that the pretest scores were \(61.30 (SD = 16.20)\) for females and \(56.30 (SD = 11.90)\) for males. In the immediate posttest, females scored \(79.80 (SD = 14.80)\) and males scored \(83.60 (SD = 15.00)\). In the delayed posttest, females scored \(85.20 (SD = 10.10)\), and males scored \(86.60 (SD = 6.57)\). The visual representation of test scores is shown in Figure 3.

As for the oral production test, Mauchly’s Test of Sphericity did not confirm the sphericity of the data \( p = .97 \); therefore, Greenhouse-Geisser adjusted scores were used. A repeated-measures ANOVA showed that there was a significant time effect \( F(1.99, 33.89) = 38.30, p < .001 \). A nonsignificant time and gender interaction \( F(0.96, 33.89) = 0.96, p = .39 \), and a nonsignificant gender effect \( F(1.33) = .00, p = .99 \). Effect sizes, however, were large for time but small for time and gender interaction and for a gender effect: \( \eta^2 = .69, \eta^2 = .05 \), and \( \eta^2 = .00 \), respectively.

Again, the post-hoc analysis involved the gain scores from pretest to immediate posttest and from immediate posttest to delayed posttest. As for the comparison between pretest to immediate posttest, males’ mean gain score was \(17.36 (SD = 30.79)\) and females’ gain score was \(8.38 (SD = 28.58)\). A one-way ANOVA confirmed that these differences were not significant \( F(1, 29) = .68, p = .42 (d = .09) \). As for the comparison between immediate to delayed posttest, males’ mean gain score was \(-27.91 (SD = 41.54)\) and females’ gain score was \(-.14 (SD = 19.83)\). A one-way ANOVA confirmed that the difference was significant with a strong effect size \( F(1, 29) = 4.96, p = .03 (d = .85) \).

![Figure 3. Oral production test scores from gesture-enhanced recasts condition](image)

Summary of results

Overall, the results showed that there were no significant differences in the overall test scores and in the gain scores between males and females following verbal recasts. As for gesture-enhanced recasts, there was also no significant difference in the overall results, but there was a significant difference in the gain score from the immediate to delayed posttest indicating that the females significantly maintained their learning better than males.

Discussion and conclusion

The present study examined whether or not the effectiveness of L2 instruction, notably recasts, varies depending on learners’ gender. The results have indicated that the effectiveness may vary depending on how recasts were provided. Specifically, when recasts were provided only verbally, both males and females exhibited similar patterns in L2 development. However, when recasts were provided with gestures, females were better able to retain their learning long-term than males.
Therefore, in order to fully understand the phenomenon of facilitative roles of pedagogical gestures for females and to truly argue that if effectiveness of exposure to gesture depends on gender type, future studies need to examine the level of learners’ attention using an eye-tracker. It will also be informative to assess the possible interaction between learners’ level of attention and their long-term learning.

Fourth, a few methodological issues need to be addressed. To begin with, this study did not control for the instructor’s gender. The female researcher served as an instructor for all the data collection, therefore, it is impossible to eliminate the possibility that the results might be different if the study is replicated with a male instructor. It would have been informative to have a male instructor to counterbalance the instructor’s gender, as well. Next, it is also important to note that the researcher visited each classroom only for the purpose of data collection. Thus, the results could follow a different pattern if the study is to be replicated with an instructor who has been assigned to teach the course over a semester, as educational studies have shown that an instructor seems to interact with males and females differently. Jones and Dindia (2004), conducted a meta-analysis of 32 studies about the interaction between gender and instruction and their results show that both male and female instructors tend to interact with male students more frequently and more negatively (i.e., blaming) than with female students. Indeed, the accumulation of those gender-specific interactions might naturally influence L2 learning, as well as learners’ gender-specific cognitive abilities. Thus, to fully understand gender influence on L2 learning longitudinally, it is also important to have a non-researcher as an instructor and observe how the instructor interacts with males and females in a daily classroom.

Pedagogical implications

As the field of SLA has matured and researchers have identified various individual differences that impact L2 learning, it is important to take a further step to raise awareness for language educators to understand how some learners tend to benefit more from corrective feedback over others. In this study, I presented how a gesture-enhanced recast, an explicit type of recast, can potentially be more beneficial for females than males. This, however, does not mean that I suggest avoid using gestures while providing verbal corrective feedback. As Nakatsuoka (2016) showed, the gesture-enhanced recasts were more effective than verbal recasts in general. What I suggest, instead, is that language instructors carefully observe what learners learn from corrective feedback, and tailor the explicitness of feedback depending on learners’ individual differences, including their gender.

With all the limitations mentioned above, I hope this study serves as one of the initial steps into examining the effectiveness of recasts between males and females, and contributes to the increasing research investigating relationships between learners’ individual differences and corrective feedback. This study showed that males and females developed their L2 similarly following oral recasts; however, when the gesture-enhanced recasts were used, females significantly outperformed males in terms of long-term retention of learning. A growing number of studies have addressed how individual differences affect the effectiveness of corrective feedback; however, the empirical studies which investigated the impact of gender on L2 development in a classroom setting is still fairly limited. I hope that this study contributed to the existing studies on recasts to further understand the relationship between learners’ individual differences and the effectiveness of recasts.

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References


