

Teachers' Intentions and Learners' Perceptions about Corrective Feedback in the L2 Classroom

*Alison Mackey, Maymona Al-Khalil, Gergana Atanassova,
Mika Hama and Aubrey Logan-Terry*
Georgetown University, Washington, DC, USA

Kimi Nakatsukasa
Michigan State University, MI, USA

The efficacy of corrective feedback provided during classroom interaction is the topic of much current debate in the second language (L2) literature, and innovative methodology is needed in order to explore this complex issue. Several studies have investigated learners' perceptions about corrective feedback (Egi, in press; Kim & Han, in press; Mackey *et al.*, 2000; Roberts, 1995); however, the degree of overlap between teachers' intentions and learners' perceptions about corrective feedback and the factors influencing such overlap are little understood. The current research investigated perceptions about feedback in Arabic foreign language classrooms. Corrective feedback was provided during authentic lessons on a range of linguistic targets (e.g. phonology, morphology/lexis and syntax) in a number of different ways (e.g. explicit feedback and implicit feedback, including declarative/interrogative recasts and negotiation). Shortly after the language classes, the teachers and their students viewed video clips of feedback episodes and provided comments about the episodes. These comments were analysed for evidence as to whether or not the learners understood the intentions of the teachers who provided the corrective feedback. The results demonstrated that learners' perceptions and teachers' intentions about the linguistic target of corrective feedback overlapped the most when feedback concerned lexis and was provided explicitly. Also, the linguistic targets of the feedback were perceived more accurately when feedback was directed at the learners themselves rather than at their classmates.

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Corrective feedback has been defined as 'any reaction of the teacher which clearly transforms, disapprovingly refers to, or demands improvement of the learner utterance' (Chaudron, 1977: 31). In second language (L2) classrooms, language teachers use a wide range of corrective feedback to help learners identify problems in their non-targetlike utterances. Corrective feedback can be overtly corrective (explicit) as in Example 1¹ (all examples in this paper came from data collected for the current study).

Example 1. Explicit feedback

- T: ʔənə ð^ʔənəntʊ .. wə hum?
 I I-thought and they
 I thought; and they?
- L: jəð^ʔʊnnu:n
 They-think [*incorrect*]
- T: a .. past tense .. mad^ʔi
 Past tense
- L: ð^ʔənnu
 they-thought [*correct*]
 they thought
- T: ð^ʔənnu .. third person .. ð^ʔənnu
 They-thought .. third person they thought

In this example, the teacher began by eliciting a verb form. When the form was supplied erroneously, she provided feedback explicitly by asking the learner to use the past tense.

Teacher feedback may also be implicit. In other words, it does not overtly mark the learner's production as non-targetlike. It has been found that in meaning-oriented language classrooms, teachers are more likely to use implicit feedback than explicit feedback (e.g. Ellis *et al.*, 2001; Lyster & Ranta, 1997). Implicit feedback may take the form of a recast, or a more targetlike version of what a learner has just said. Recasts can be declarative recasts as in Example 2, in which the teacher provides the targetlike form with declarative intonation.

Example 2. Declarative recast

- L: lɪʔannəʃʊ wəjəðə wəð^ʔɪfə munəʃɪb
 because-he he-found job suitable-masc.
 because he found a suitable [*incorrect*] job.
- T: munəʃɪbəh
 suitable-fem
 suitable [*correct*]

Recasts may also be provided with interrogative intonation as in Example 3.

Example 3. Interrogative recast

- L: huwə mutəxəs^ʔs^ʔɪs^ʔ fɪ ... fɪ-l .. fɪ .. ɪl-fɪzɪ:kə... fɪ-l-fɪzɪ:kə
 he specialized in in-the in the-fizika in the-fizika?
 he specializes in fizika [*incorrect*].
- T: fɪ:zɪjə:??
 physics?
 physics?

In this example, the learner pronounced the lexical item **fɪ:zɪjɑ:ʔ** 'physics' incorrectly: **fɪzɪ:kə**. The teacher provided the correct form with interrogative intonation.

Another common form of implicit feedback is negotiation, shown in Example 4.

Example 4. Negotiation

- L: s'əyɪr ʔuxt .. ʔɪndi s'əyɪr ʔuxt? ʔɪnduki?
 Young-masc. sister I-have [incorrect] young-masc. sister you-have
 Young sister .. I have a young sister? Do you?
- T: həl ʔɪndi?
 do I-have
 do I have ..?
- L: ʔɪnduki səyɪrə ʔuxt?
 You-have [correct] young sister
 Do you have a young sister?

Negotiations typically occur when a teacher does not understand a learner's utterance. In some negotiations the teacher may repair communication breakdowns by repeating the learner's problematic utterance as shown in the teacher's response in Example 4. A teacher may also negotiate by asking clarification questions without repeating any part of a learner's utterance. In Example 4, the negotiation **həl ʔɪndi?** resulted in the learner changing the non-targetlike formulation **ʔɪndi** 'I-have' to the more targetlike formulation **ʔɪnduki** meaning 'you-have'.

Is Corrective Feedback Helpful for L2 Learning? If so, How?

Whether or not corrective feedback is helpful in L2 learning has been examined in both laboratory and classroom settings (see, for example, the review in Mackey, 2006). The results from laboratory studies have demonstrated a facilitative effect for corrective feedback on L2 development. Also, studies conducted in classroom settings have also generally been supportive of the claim that corrective feedback positively affects learning. As a result, corrective feedback is now considered to be helpful for L2 learning by most researchers in the field of SLA (see the review in Long, 2006), although different types of feedback need to be studied independently and together for information about their role in learning. In general, the questions currently being asked in the field concern *how* corrective feedback facilitates L2 learning and *which* factors influence this process. Innovative methodologies are required to provide answers to these questions.

What Impacts Perceptions?

Important early studies of learners' perceptions were conducted in L2 classroom contexts by researchers like Allwright (1984) and Slimani (1989).

They found that learners' reports were idiosyncratic and that learners' perceptions about the same classroom event differed considerably. Roberts (1995) also examined how much students noticed error correction provided to them by teachers in a college-level L2 Japanese class. His results showed that of 92 total instances of error correction, the students were able to identify 32 on average (35%) and understood about 19 (21%). Roberts hypothesised that the efficacy of error correction is not only related to students' perceptions about corrections, but also to the understanding of the nature of those corrections, including target of the feedback and the type of feedback. Subsequent studies utilised more refined operationalisations in order to further explore what impacts learners' perceptions about corrective feedback in terms of the linguistic target of the feedback and the type of corrective feedback.

Linguistic target

Using a similar method to Roberts (1995), Mackey *et al.* (2000) found that learners' perceptions about corrective feedback were influenced by the linguistic target of the feedback. Ten learners of English as a second language (ESL) and seven learners of Italian as a foreign language (IFL) participated in dyadic interactional tasks with native speakers and were provided with corrective feedback in the form of negotiations and recasts. Immediately after the completion of the task activities, each learner viewed the recorded interaction and took part in a stimulated recall interview (Gass & Mackey, 2000, provides complete details about stimulated recall). This study found that learners were most accurate in their perceptions about lexical and phonological feedback, and much less accurate in terms of their perceptions about morphosyntactic feedback. Morphosyntactic feedback was often perceived as pertaining to semantics for the ESL learners and lexis for the IFL learners. Mackey *et al.* (2000) proposed that inaccurate perceptions about morphosyntactic feedback stemmed from the fact that morphosyntax often does not interfere with understanding in the same manner as incorrect pronunciation or inaccurate lexical usage.

In a conceptual replication of Mackey *et al.* (2000), Gass and Lewis (in press) examined Italian heritage and non-heritage learners' perceptions about corrective feedback. Their results showed that both non-heritage language learners and heritage language learners perceived phonological and lexical feedback much more accurately than morphosyntactic feedback. Perceptions about semantic feedback differed between the two groups. The non-heritage learners were generally not accurate in terms of their perceptions about semantic feedback, whereas the heritage learners perceived semantic feedback accurately approximately 70% of the time.

Also using the stimulated recall method, Kim and Han (in press) found a significant relationship between students' perceptions about corrective feedback and the type of linguistic target. They investigated the extent to which teacher intent and learner interpretation (i.e. perceptions) overlap. They also explored the extent to which learners accurately perceive the gap between their non-targetlike output and the linguistic information contained in the recasts, and whether their recognition is affected by the types of linguistic

target. Four intermediate English as a foreign language (EFL) classes at a private institute in Seoul, Korea, were videotaped. A stimulated recall protocol was conducted with both the students and the teachers in their respective L1s. Kim and Han found the following trend in their data: phonological feedback is perceived more accurately than lexical feedback, which is perceived more accurately than morphological corrections. They suggested that lack of noticing of morphosyntactic feedback in complex recasts may have been driven by learners' natural inclination for processing input according to meaning (as argued by VanPatten, 1996, 2004).

It is important to note that a number of researchers have argued that not all linguistic forms may be processed and acquired in the same manner (DeKeyser, 2005; VanPatten, 1996). Long (2006: 103–104), for instance, has suggested that instances of implicit corrective feedback, such as recasts and negotiations shown in Examples 2–4, 'work better for certain classes of target linguistic forms, and less effectively for other classes of items than more explicit treatments of learner error'. Some researchers also argue that perceptions about feedback may vary across different language contexts (Gass & Mackey, 2006); therefore, the present study addresses this issue.

Type of feedback

The same study by Kim and Han also investigated the relationship between students' perceptions about the linguistic target of corrective feedback in relation to different types of recasts. They found that learners perceived teachers' corrective intentions when corrective feedback was provided through declarative recasts more often than when interrogative recasts were used. They argued that an interrogative recast may be interpreted as either corrective or as a request to confirm the intended meaning (Kim & Han, *in press*).

Egi (*in press*) also examined how type of feedback, specifically the particular characteristics of recasts in terms of length and number of changes, might be related to learners' perceptions about recasts. Forty-nine learners of Japanese as a foreign language participated in dyadic communicative interactions with a native speaker who provided recasts of their non-targetlike production. Immediate and retrospective comments were gathered from the learners to examine how they interpreted recasts. Their perceptions about recasts were significantly related to recast length and the number of changes made to the learner's original problematic utterance. Learners were less likely to understand that they were being corrected when recasts were longer and involved multiple changes. In contrast, they were more likely to understand they were receiving negative and positive evidence when recasts were shorter and involved minimal changes. These findings suggest that examination of the relationship between different types of recasts and other types of feedback, on the one hand, and perceptions about the linguistic target, on the other, would be helpful. In addition to the target of feedback and the type of feedback, research has focused on the effects of the nature of learner participation on learners' perceptions about corrective feedback.

Nature of learner participation

In a case study, Nabei and Swain (2002) discovered that their participant often did not attend to feedback if it was targeted towards other learners. However, Ohta (2000) reported the contradictory finding that learners were most likely to react to recasts that were not actually addressed to them. In Kim and Han's (in press) study, learners were found to perceive the target of teachers' corrective feedback equally well irrespective of whether they were the direct or indirect addressees. Due to these contradictory findings, the relationship between the nature of learner participation and learners' perceptions about corrective feedback is still unclear.

While previous studies have examined learners' perceptions in relation to the type of feedback, target of the feedback and the nature of learner participation, a common limitation of many of them is rooted in the lack of attention given to teachers' perceptions about their own corrective feedback intentions. Only one study, Kim and Han (in press), considered the degree to which teachers' and learners' perceptions overlapped. The present study is innovative in that it explores overlap between teachers' intentions and learners' perceptions about the linguistic target of corrective feedback, considers a full range of variables, and is also situated in Arabic classrooms. Arabic is one of the less commonly taught languages and has rarely been the topic of SLA research in general, and feedback research in particular.

Research Questions

While previous studies have indicated that learners' perceptions about corrective feedback vary depending on the linguistic target of feedback and type of feedback, it appears that the nature of learner participation also impacts learners' perceptions. Thus, the current research was designed to investigate teachers' and learners' perceptions about corrective feedback in relation to these three factors in a foreign language classroom setting. The study addresses the following research questions:

- (1) Do teachers' intentions and learners' perceptions about the linguistic target of corrective feedback overlap?
- (2) Do teachers' intentions and learners' perceptions about the linguistic target of corrective feedback overlap in relation to the type of feedback?
- (3) Do teachers' intentions and learners' perceptions about the linguistic target of corrective feedback overlap in relation to the nature of learner participation?

Based on previous research, we predicted that teachers' and learners' perceptions about corrective feedback with a lexical or phonological target would overlap more than their perceptions about feedback directed at morphosyntax. We also expected more explicit types of feedback to result in greater overlap in teachers' and learners' perceptions about the linguistic targets of the feedback. Because of the lack of agreement in findings from previous studies, we made no prediction about how the nature of participation

would influence overlap between teachers' and learners' perceptions about the linguistic target of the feedback.

Method

Context and participants

All participating learners were volunteers enrolled in a US university from two beginning Arabic classes, which met five times per week for 65 minutes.² The learners in both classes ($n = 25$) were video-taped during their regular classroom interactions, and 11 learners volunteered to participate in a stimulated recall interview session following the video-taping of their respective classes. All learners who participated in the interview sessions were native speakers of English, aged 18–20 years, and had studied Arabic formally from 3 to 13 months. Table 1 provides additional information about the learners. The classroom teachers for both classes also participated in the study. Both teachers were female, near-native speakers of Arabic, aged 30 and 64, and had been teaching Arabic as a foreign language for 6 and 10 years respectively.

Table 1 Learners' biodata

<i>Learner</i>	<i>Gender</i>	<i>Age</i>	<i>L1</i>	<i>Months of prior formal study of L2</i>
1	F	18	English	3
2	F	18	English	3
3	F	17	English	3
4	M	19	English	3
5	F	18	English	13
6	F	18	English	3
7	F	20	English	8
8	M	20	English	8
9	F	19	English	8
10	F	18	English, Russian	8
11	F	18	English	8

Procedure

Figure 1 illustrates the data collection procedure. Each class was videotaped for one session using non-intrusive digital video- and audio-recording technology that was hard-wired into the classroom. Both teachers wore lapel microphones during recording sessions. They were instructed to provide corrective feedback as it was natural and appropriate to do so.³ Twenty-six feedback episodes were selected from the two classes (13 episodes from each).

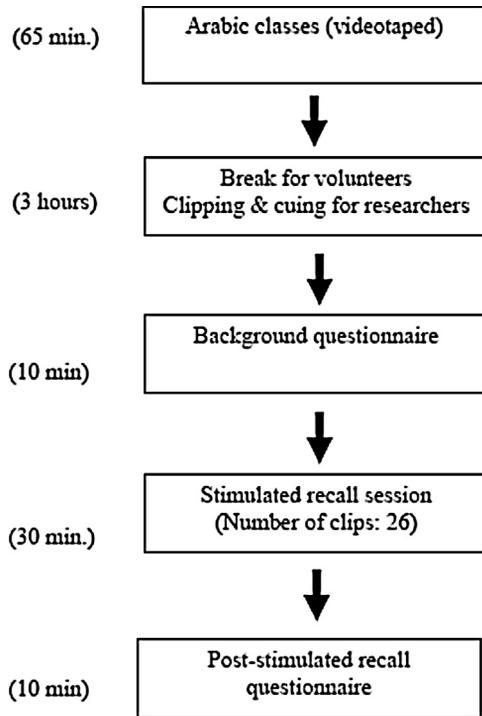


Figure 1 Data collection procedure

We only selected episodes in which learners' utterances and teachers' feedback were clearly audible. A feedback episode was defined as an error in the learners' speech, followed by feedback provided by the teacher, and ending with the reaction of the learner to the teacher's feedback, where a reaction is appropriate (Lyster & Ranta, 1997). Example 5 illustrates a typical feedback episode.

Example 5. Feedback episode

- L: kænət ʔəskun fi əl-wɪləjæt Iowa Idaho
 she-was I-live [incorrect] in the-state-of Iowa Idaho
 I was living in the state of Iowa, Idaho.
- T: hɪjə kænət təskun
 she was-fem. she-live [correct]
 She was living
- L: hɪjə kænət təskun
 she was-fem. she-live
 She was living

In the feedback episode above, the learner conjugated the verb **ʔəskun** 'I-live' incorrectly. The teacher provided the targetlike verb form **təskun** 'she-live' in the form of a declarative recast, and the learner reacted by repeating the correct verb form.

Volunteers⁴ from both Arabic classes came to a computer laboratory for a stimulated recall session that took place approximately three hours after their respective classes. Five volunteers from one class and six from the other participated in two separate sessions. Upon coming to the lab, they were given background questionnaires to fill out. The volunteers from each class were seated together in one computer lab containing a large drop-down screen. Each volunteer was assigned an individual computer station equipped with headphones, a microphone and audio-recording software. Care was taken to distance the computer stations in the lab from one another so that it was difficult for volunteers to hear one another talking.

Instructions for the stimulated recall session were read out to the volunteers. These stated that participants should watch each episode carefully and report their thoughts from the moment when the episode took place originally. Instructions also stated that if volunteers could not recall their thoughts at the time, they should state they could not remember. The selected feedback episodes were then played once for all the volunteers on the drop-down screen in the lab in the order in which they took place. Volunteers only saw episodes from their own class. After each episode, the researchers prompted the group of volunteers to speak into their individual microphones and recall their thoughts. A pause of 30 seconds was provided for volunteers to record their comments. The researchers circulated the room throughout the sessions reminding volunteers to try to recall their thoughts at the original time of the interaction. After all episodes had been played and comments recorded, participants were given post-stimulated recall questionnaires to fill out. All digital audio-recordings made by the learners were then retrieved from the individual computer stations for transcription and analysis. The two Arabic teachers also carried out individual stimulated recall interviews in which they were asked to comment on the feedback episodes selected from their own classes. Under the supervision of a researcher, these interviews were conducted in separate rooms on the same day as the classes recorded. The teachers viewed the same episodes and followed the same instructions as the learners. Each stimulated recall session lasted approximately 30 minutes.

Analysis

The data set for this study was comprised of (1) feedback episodes and (2) stimulated recall comments from both teachers and learners. Definitions and examples of coding categories follow.

Coding of feedback episodes

Corrective feedback episodes were coded according to the linguistic target the teachers intended to correct and the type of feedback used in the episode.

The linguistic target of corrective feedback episodes

The feedback episodes were coded according to the teachers' reports about their intentions in relation to the linguistic error(s) that triggered the feedback. In cases where a feedback episode corrected multiple errors, each error was

coded separately. In the few episodes where the teachers did not specify a linguistic target for their feedback (2 out of the total 26 episodes), the episodes were coded according to the researchers' interpretations.

Feedback episodes were coded as syntactic, morphological/lexical and phonological.

Example 6. Syntactic target

- L: huwə walɪdəhu ʔuħɪb rut^ʕ:ubə wə har t^ʕəqs
 he father-his I-like [*incorrect*] humidity and hot weather [*incorrect*]
 his father I like humidity and hot weather
- T: walɪdɪhu jɪħɪb ər-rut^ʕ:ubə
 father-his he-likes [*correct*] the-humidity
 his father likes the humidity...
- L: rut^ʕ:ubə wə
 humidity and
 humidity and...
- T: wət^ʕ-t^ʕəqs ɪl-ħar?
 and-the-weather the-hot [*correct*]
 and the hot weather?
- L: yah...I mean, na'am.
 yes

Syntactic feedback episodes concerned linguistic errors at the sentence level. Feedback in (6) targeted both morphology and syntax. As far as syntax was concerned, the learner inverted the word order by placing the adjective **ħar** 'hot' before the noun **t^ʕəqs** 'weather'. The teacher then provided the correct syntactic order **wət^ʕ-t^ʕəqs ɪl-ħar?** 'and hot weather?' in an interrogative recast.

Example 7. Morphological/lexical target

- L: əl-dʒæmɪfə ... lɪfusu:lhu
 the university for-seasons-his [*incorrect*]
 the university for his seasons ..
- T: ok .. past tense verbs .. fəs^ʕ:ələt-hu from work?
 Fired-she-him [*correct*]
 Ok .. past tense verbs.. Fired him from work?
- L's: mɪn əl-fəməl
 From the-work
 From work

Morphological/lexical feedback concerned linguistic errors at the level of the word. This included specific aspects of grammar such as verb conjugation, verb form, using the verbal noun instead of the verb and vice versa, tense, negation, subject-verb agreement, gender, number, definiteness and agreement. Both morphological and lexical linguistic errors are grouped together in this category as a result of the root-and-pattern Semitic system of Arabic. In Arabic one root like *f-s-l* can be morphologically framed in a multitude of patterns to render a variety of different lexical items such as **fəs^ʕ:ɪl** 'partition,'

fəs¹l 'season', fus¹u:l 'seasons,' and məfs¹u:l 'fired.' The learner's non-target-like form lɪfus¹u:lhu 'for-seasons-his' cannot be classified as strictly morphological or lexical. In the learner's attempt to say 'the university fired him', the learner used the pattern (CvCvC- fus¹u:l) usually used for nouns, making his utterance literally mean 'the university for his seasons'. The teacher provided the targetlike form fəs¹ələthu 'fired-she-him' in the form of explicit feedback.

Example 8. Phonological target

- T: lɪmæðə tʌfrɪf əl -fəsbæniyyə
 Why you-know the-Spanish-fem
 Why do you know Spanish [language]?
- L: a .. ʔuxrəti
 xamily-my [incorrect]
 my xamily
- T: ʔusrəti
 family-my [correct]
 My family
- L: ʔusrəti ...
 family-my
 My family

In Example 8 the teacher directed her feedback at a linguistic item ʔuxrəti 'family-my' pronounced in a non-targetlike way.

The type of feedback used in the feedback episodes

Corrective feedback provided by the teachers was coded as more explicit or more implicit. Explicit feedback was operationalised as including the teacher's metalinguistic explanation of grammar or vocabulary, the teacher's use of grammatical terminology, or cases where the teacher directly elicited completion of the utterance by strategically pausing to allow the student to fill in the blank (see Example 1 above). Implicit feedback included declarative recasts, interrogative recasts and negotiations for meaning (see Examples 2, 3 and 4 above).

Coding of stimulated recall comments

The stimulated recall data from teachers and learners of each language were coded according to the linguistic focus of their comments and the nature of learner participation in the feedback episode.

The linguistic focus of stimulated recall comments

The coding scheme for the stimulated recall comments featured the same linguistic categories as those used to code the feedback episodes for each of the languages. The coding categories for the linguistic foci of stimulated recall comments are exemplified in the Appendix.

In addition, stimulated recall comments that contained no content or content unrelated to the feedback episode were coded as 'no-content'. Examples of no-content comments are found below.

Example 9. A no-content comment

I don't think I was paying attention too much at that point but I didn't really understand much at that point. I was fixing my hair a little bit too much.

Example 10. A no-content comment

I don't remember . . . I don't remember.

The nature of learner participation in stimulated recall comments

The nature of learner participation was coded according to whether or not it was self-directed (the learner who was commenting was also the direct recipient of the corrective feedback in the classroom during this particular episode) or other-directed (the learner was not the recipient of the corrective feedback (Nabei & Swain, 2002).

Example 11. Self-directed feedback

I was looking for it, I was looking for it. She was trying to get me to say the right suffix. For some reason I couldn't figure out what was wrong because I knew I had the short vowels in the right places so um I knew I was trying to talk about Keith⁵ and I knew what I was trying to say. I guess in some ways it's good that I knew what I was trying to say in Arabic, but yeah, I couldn't figure out what I was doing wrong at first. Then I figured out . . . aha . . . talking about **huwa**.

Example 12. Other-directed feedback

I think that I was thinking during this part how Will, the student who was speaking, is going to Syria over the summer.

Reliability of coding

One coder was given 100% of the data to code and an additional coder coded a randomly selected 25% portion of the data. Inter-rater reliability scores were calculated using a simple percentage. Inter-rater reliability was calculated to be 93.5%. Coding of problematic episodes was negotiated until a consensus was reached. In the case of one episode, agreement could not be reached and the data in question were not used.

Results

As noted earlier, 26 feedback episodes were selected and 11 learners contributed a total of 275 stimulated recall comments on the errors featured in the episodes. It is important to note that this study only analysed selected proportions of second language classroom feedback. These corrective feedback episodes targeted morphology/lexis, phonology and syntax.

Teachers' and learners' perceptions and the linguistic target

The first research question asked, 'Do teachers' intentions and learners' perceptions about the linguistic target of corrective feedback overlap?' To address this question, learners' stimulated recall comments indicating their perceptions about the linguistic targets of corrective feedback were analysed in the context of teachers' stimulated recall comments specifying their corrective intentions. The extent to which the teachers' and learners' perceptions overlapped was identified by tabulating the instances in which the learners recognised the linguistic target their teachers had intended to correct. This information is shown in Table 2 and Figure 2.⁶

As can be seen from the data presented in Table 2, overlap between teachers' intentions and learners' perceptions was found in 36.4% of the data. 14.7% of the data was misinterpreted by the learners, while no comments pertaining to the feedback episodes were provided for the remaining 48.9% of the data.

Table 2 Overlap between teachers' intentions and learners' perceptions about linguistic targets of corrective feedback

<i>Learner perception</i>	<i>Syntax</i>		<i>Morphology/lexis</i>		<i>Phonology</i>		<i>Total</i>	
	<i>Number</i>	<i>%</i>	<i>Number</i>	<i>%</i>	<i>Number</i>	<i>%</i>	<i>Number</i>	<i>%</i>
Overlap	4	33.3	45	39.5	3	17.6	52	36.4
No overlap	6	50	9	7.9	6	35.3	21	14.7
No content	2	16.7	60	52.6	8	47.1	70	48.9
Total	12	100	114	100	17	100	143	100

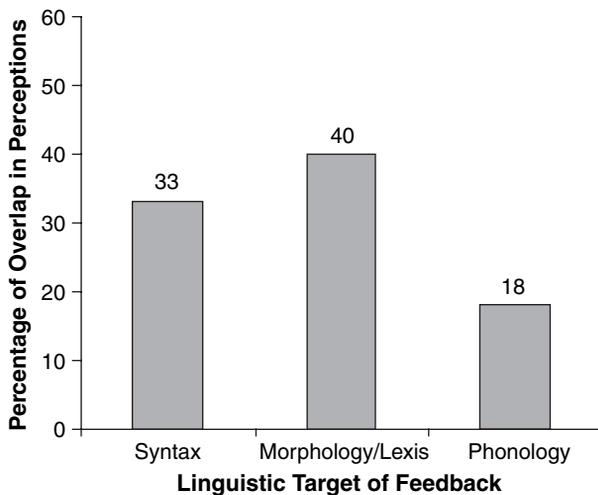


Figure 2 Overlap between teachers' intentions and learners' perceptions about linguistic targets of corrective feedback⁷

Figure 2 illustrates the instances of overlap in perceptions between teachers and learners in each linguistic domain in the data. What it shows is that when teachers corrected morphology/lexis, the learners usually understood that correction correctly. The percentage of overlap between teachers' intentions and learners' perceptions about the linguistic targets of feedback was highest for morphology/lexis (39.5%), second highest for syntax (33.3%) and lowest for phonology (17.6%).

We predicted that teachers' and learners' perceptions about corrective feedback featuring a lexical or phonological linguistic target would overlap more than for corrective feedback featuring morphology or syntax. The data confirm this prediction as far as lexis is concerned. Morphology/lexis, a category coined for the purpose of this study and explained above, yielded the most overlap in perceptions of teachers and learners. However, the data do not support the prediction in regard to phonology. Although phonology was found to be mostly accurately perceived by learners in previous studies as a result of its high communicative value and salience, it was the target that yielded the least overlap between teachers' corrective intentions and learners' perceptions in these Arabic as a foreign language classrooms.

Teachers' and learners' perceptions about the linguistic target of feedback and the type of feedback

Research question 2 asked about the relationship between teachers' and learners' perceptions about the linguistic target of corrective feedback in relation to the type of feedback. Results for this question were obtained through tabulating the instances of overlap in explicit feedback, declarative recasts, interrogative recasts and negotiations.

As shown in Figure 3, learners' perceptions about the target of feedback mostly overlapped with their teachers' intentions if the linguistic target was corrected in an explicit feedback episode. Table 3 shows that learners did not misinterpret explicit feedback in the data. They either accurately perceived the

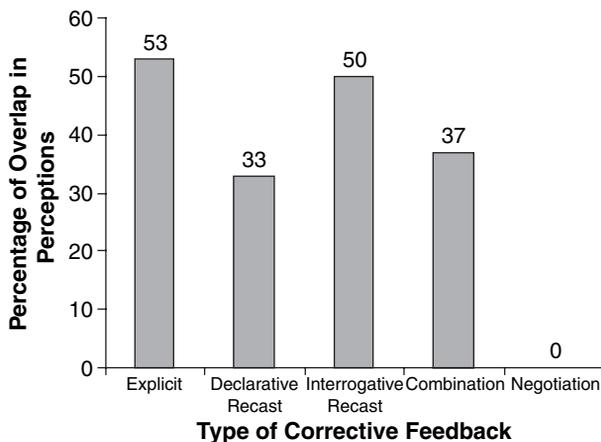


Figure 3 Overlap between teachers' and learners' perceptions about the linguistic target of corrective feedback in relation to type of feedback

Table 3 Overlap between teachers' and learners' perceptions about linguistic target of corrective feedback in relation to type of feedback

<i>Teacher intention and learner perception</i>	<i>Explicit feedback</i>		<i>Declarative recast</i>		<i>Interrogative recast</i>		<i>Negotiation</i>		<i>Combination</i>		<i>Total</i>	
	<i>N</i>	<i>%</i>	<i>N</i>	<i>%</i>	<i>N</i>	<i>%</i>	<i>N</i>	<i>%</i>	<i>N</i>	<i>%</i>	<i>N</i>	<i>%</i>
Overlap	8	53.3	21	32.8	6	50	0	0	17	37	52	36.4
No overlap	0	0	9	14.1	1	8.3	0	0	11	23.9	21	14.7
No content	7	46.7	34	53.1	5	41.7	6	100	18	39.1	70	48.9
Total	15	100	64	100	12	100	6	100	46	100	143	100

linguistic target (53.3%) in the feedback episodes or provided no-content comments (46.7%). When the recasts were interrogative, the overlap between teachers' and learners' perceptions about the target of the feedback reached 50%. However, when the feedback episodes were in the form of declarative recasts, learners' perceptions about the linguistic targets of the feedback overlapped with teachers' intentions 32.8% of the time. With negotiations, there were a total of six opportunities for overlap in perceptions about the linguistic targets of negotiations. They yielded no overlap in perceptions. In contrast, when feedback episodes consisted of a combination of different types of feedback, such as two declarative recasts or a recast and a negotiation, learners' perceptions about the target overlapped with teachers' intentions 37% of the time.

We also predicted that more explicit types of feedback, such as metalinguistic feedback and elicitations, would yield more overlap between the teachers' and learners' perceptions about the targets of corrective feedback than more implicit types of feedback, such as recasts and negotiations. The results confirmed this prediction. The highest percentage of overlap between teachers' intentions and learners' perceptions about the linguistic target occurred in feedback episodes that were entirely or partially explicit, although interrogative recasts were accurately perceived at about the same rate as explicit feedback.

Teachers' and learners' perceptions about the target of feedback and nature of participation

The third research question asked, 'Do teachers' intentions and learners' perceptions about the linguistic target of corrective feedback overlap in relation to the nature of learner participation?' As there was little previous research on this topic, and it was not conclusive, we made no prediction as to the influence of this variable on the overlap in perceptions. Tabulations of the

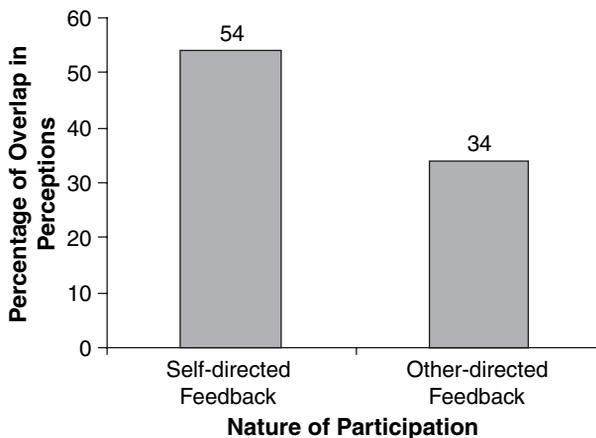


Figure 4 Overlap between teachers' and learners' perceptions about the linguistic target of corrective feedback in relation to nature of learner participation

Table 4 Overlap between teachers' and learners' perceptions about the linguistic target of feedback in relation to nature of participation

<i>Teacher intention and learner perception</i>	<i>Self-directed</i>		<i>Other-directed</i>		<i>Total</i>	
	<i>Number</i>	<i>%</i>	<i>Number</i>	<i>%</i>	<i>Number</i>	<i>%</i>
Overlap	7	53.9	44	33.8	51	35.7
No overlap	4	30.8	11	8.5	15	10.5
No content	2	15.4	75	57.7	77	53.8
Total	13	100	130	100	143	100

instances of overlap in self-directed and other-directed corrective feedback yielded the results displayed in Figure 4. As illustrated by the data in Table 4, overlap between teachers' intentions and learners' perceptions about the linguistic target of corrective feedback was higher (53.9%) when feedback was self-directed than when it was other-directed (33.8%). These figures clearly suggest that the target of corrective feedback is more accurately understood by learners when the feedback is directed to them as opposed to their classmates.

Discussion

Summary of findings

The data indicate that the learners generally understood their teachers' intentions when the linguistic target of the corrective feedback was morphology/lexis, but mostly did not interpret phonological corrections as such. More explicit feedback yielded the highest percentage of overlap between teachers' and learners' perceptions. Finally, when the feedback was directed at learners themselves, rather than their classmates, they were more accurate in understanding what the teacher meant by it.

Where the current study differs from previous research is that in this study phonological feedback did not yield the high levels of overlap reported in other perception studies (Gass & Lewis, in press; Kim & Han, in press; Mackey *et al.*, 2000; Roberts, 1995). It is possible that our results can be explained by the operationalisations we adopted here. We relied on teachers' comments as the gold standard by which the targets of corrective feedback episodes were coded. However, learners may perceive a (legitimate) linguistic target in the feedback episode other than the one specified by the teacher who provided that feedback. When learners reported perceiving a different linguistic target than that specified by the teacher, this was coded as no overlap in our data set. Example 13 from the data set illustrates this situation.

Example 13. Problematic feedback episode

- L: əl-bɪnt əl-wa:ɦɪdə ... wa:ɦɪdə
 The-girl the-one-fem. ... one-fem.
 The one girl ... one
- T: əl-wəɦi:də
 The-only-fem.
 The only girl
- L: əl-wəɦi:də
 The-only-fem
 The only girl

Example 14. Teacher's stimulated recall comment on Example 13

This is [...] for the whole class...əl-bɪnt əl-wa:ɦɪdə ... wa:ɦɪdə ...this was a phonological recast.

Example 15. Learners' stimulated recall comments on Example 13

- a. Learner 1: *I was thinking about how I didn't know Ellen was an only child, and, um, yeah, I was thinking about comparing like əl-wɦɪdə and əl-wəɦi:də, like loneliness and lonely? I guess, and then I was also thinking about Susie's voice cause it's like a unique voice with unique inflection. So I was multitasking, thinking about Arabic and trying to like digest wɦɪdə and wəɦi:də, and sentence structure, I guess, yeah.*
- b. Learner 2: *This is when Susie is talking about Ellen and how Ellen is the only child, but then it's not that she's lonely it's just that she's an only child.*
- c. Learner 3: *Susie was talking about me so when I heard her say bɪnt wa:ɦɪdə I thought 'bɪnt wəɦi:də' just because 'wəɦi:də' was one of the words I just recently remembered how to spell correctly and show when I spelled it wrong I left out the yaa (alphabet indicating the [i:] sound) so um now it's really when I think about the word wəɦi:də, yaa is really pronounced for me. So I was like 'no, əl-bɪnt əl-wəɦi:də.'*

Our coding criteria required rating the comments made by Learner 1 and Learner 2 as focusing on morphology/lexis. Only Learner 3's comment, which explicitly mentioned phonology and pronunciation, was coded as overlapping with teacher's corrective intention, phonology. However, it is clear from all three learners' comments that the target of the feedback episode was perceived as generally corrective by all learners. Because in this case we relied on the teacher's specification of the target in order to code overlap, our percentage of overlap was lower for phonology. Also, Arabic is a root-and-pattern type of language. Any phonological change in the vowel pattern of a word changes its lexical meaning and morphological function. The example above is a classic example of this phenomenon. **əl-wa:ɦɪdə** contains a short /i/ sound, meaning 'the one', and has the morphological pattern of a noun. The teacher corrected

this form to the more targetlike, *al-wahīda*, which contains a long /i:/ sound, meaning 'only', and has the morphological pattern of an adjective. Thus, it was natural that the teacher felt this episode was targeting phonology, whereas the learners believed it was targeting morphology/lexis. In reality, they could have been all correct in their linguistic assessments and overlapped in their perceptions. This suggests that more finely grained operationalisations may be required for languages in which linguistic foci such as phonology, morphology and lexis are difficult to disentangle. Arabic, one of the less commonly taught languages, deserves special attention in this regard.

In terms of the type of feedback, our results showed that explicit feedback was perceived more accurately than recasts which, in turn, were perceived more accurately than negotiations. This finding is intuitive in the sense that the more explicit the feedback was, the more accurate the learners' perceptions of the target of that feedback were. We also found that teachers' and learners' perceptions overlapped more when feedback was provided in the form of a recast than when it was provided in the form of a negotiation. The same pattern was reported in Roberts' (1995) classroom study of perceptions. This may be accounted for by the nature of classroom interaction. The majority of the stimulated recall comments resulted from episodes that involved learners' classmates rather than learners themselves. So, it is possible that participants who were not directly involved in negotiation were less likely to focus on language form. In other words, feedback through negotiation might place a demand on the learner directly involved in the utterance, requiring them to modify their utterances. However, as our data did not include many recall comments about self-directed negotiations, it would not be appropriate to speculate further here. What we did find is more overlap with recasts.

In the current study two types of recasts, declarative and interrogative, were examined. In the data, interrogative recasts yielded a 50% overlap between teachers' intentions and learners' perceptions about the linguistic target while overlap for declarative recasts was lower, at 33%. These results differ from those of Kim and Han (in press). The fact that the Arabic learners were more accurate in their perceptions in relation to interrogative recasts may possibly be attributed to the difference in proficiency levels between the two studies. The Arabic learners were at a lower level than the participants in Kim and Han's study. To the best of our knowledge, no studies so far have examined the relationship between perceptions about corrective feedback in relation to proficiency levels. Further exploration of this issue would be helpful.

Our results show that learners' perceptions about the linguistic target overlapped with teachers' intentions noticeably more when the feedback was self-directed. The same pattern was also found in Nabei and Swain (2002) although Kim and Han (in press) did not find significant differences in learner perceptions about teachers' intentions between direct and indirect addressees' feedback. There is also a potential explanation for our findings on self versus other-directed feedback. Six learners mentioned reasons for why they were *not* listening or had not heard corrective feedback directed at their classmates. We coded learners' comments in terms of whether or not they contained 'vested interest' which we identified as a reason to listen or not. Only examples of

negative vested interest (reasons not to listen) were found and examples are shown below.

Example 16. Reason not to listen

I wasn't even trying to understand cause whenever Graham says anything I just kind of try to pretend that he doesn't exist. So yeah in my head I was saying, 'shut up Graham, shut up Graham.' But I guess I wasn't really paying attention which is I guess a basic pattern in this class.

Example 17. Reason not to listen

I was maybe just angry at Martha. Yeah, I remember actually trying to follow what she was saying and then kind of . . . stopping, just tired of listening to her.

A further analysis of the data showed that when learners provided reasons why they were not listening, their perceptions about the linguistic target of the episodes overlapped with the teachers' intentions only 11% of the time, and they mostly made no-content comments (89% of the time). For the same episodes, where learners did not make these sort of 'reasons why I was not listening' comments, there was a 40% overlap with teachers' intentions. Learners did not talk about why they had a particular reason to attend to the feedback. They only made comments that suggested they had a particular reason *not* to listen. Of course it is possible that learners made these comments about why they were not listening as a way of explaining why they had nothing to say about the feedback, or did not understand it correctly.

It is also possible to consider that while examining learners' participation in terms of whether they are direct recipients of the feedback or whether they observe the feedback as it is directed towards other learners is logical, it may fail to distinguish among a range of different levels of participation. Analysing whether learners had a reason to listen or not may provide us with a clearer understanding of perceptions and active participation, and their relationship to interaction-driven L2 learning.

Limitations

Of course, absence of comments indicating overlap in perceptions about the target is not necessarily indicative of evidence of absence of overlap in perceptions and should not be taken as such. Along with the limitations already discussed, several factors are likely to influence the generalisability of our results. The small number of participants (only 11 students) is clearly a drawback. In addition, because we selected feedback based on clear unambiguous episodes in the classroom, linguistic forms were not controlled or balanced. As a result of the limited number of episodes, inferential statistics were not used. Future research might also improve on the design by providing contexts and codes for morphology in isolation from lexis in Arabic, in order to see if there is any difference in the patterns for each. Furthermore, the

simultaneous stimulated recall setting employed in this study had its own limitations. For instance, comments in the stimulated recall data indicated that learners were conscious of being heard by others. Our collection of stimulated recall data involved getting each participant's individual insights regarding feedback episodes. It differed from common individually conducted stimulated recall protocol in that it collected a number of individual interviews simultaneously. In other words, instead of having used different rooms, times and interviewers for each stimulated recall interview with a participant; one room, one time period and the same researchers were used to gather any number of individual stimulated recall interviews all at once. While often yielding more complete and richer data, individual stimulated recall interviews, with direct interviewer involvement, might also run the risk of learners feeling they should 'please the researchers and report behaviors that they believe would be of interest to the researcher, or behaviors that they should be using as 'good' learners, rather than the actual strategies and processes employed' (Jourdenais, 2001: 356; also see Egi, 2004; in press; Ericsson & Simon, 1993). In our study, stimulated recall interviews with all learner participants were conducted simultaneously and without interference from interviewers. All participants viewed the video clips, listened to the instructions and then verbalised their thoughts into their individual microphones at the same time. Requests for elaborations or probing the learners for clearer or more accurate perceptions could not take place. While usually eliciting less detailed data, it is possible that such a simultaneous setting also results in more naturalistic data, reflective of the actual thought processes of participants at the time of the interaction. A limitation of such stimulated recall interviews is the fact that they are quite structured by researchers. Feedback episodes have to be selected and cued by the researchers, and it is not possible to allow the participants who are in large numbers to pause the video when they want to report thoughts they have at any particular point in the interaction. We believe it would be worthwhile to investigate the quality (and quantity) of stimulated recall comments obtained from the two different types of data collection settings.

We should also note that one of the teachers who participated in the study served as a researcher in the study as well. Despite the efforts made to give both teachers equal understanding of the main variables of the current investigation, we cannot be certain that the degree of influence to their stimulated recall comments was also equal.

Conclusions

Notwithstanding all of these limitations, the current study has contributed to the field in terms of our understanding of corrective feedback in foreign language classroom settings. The study was innovative in a number of ways. First, it used the increasingly popular stimulated recall methodology but in a group setting as opposed to the more familiar dyadic setting, and with foreign language learners as opposed to second language learners. It also investigated one of the less commonly taught languages. While examining learners'

perspectives in relation to feedback is becoming increasingly popular, the current study also added a little investigated factor, the level of participation of the learner. While not a learning outcomes study, the number of variables examined, including the target of feedback, type of feedback and whether or not the learners had a reason to listen, all contributed to the final picture of whether learners perceive corrective feedback as their teachers intended.

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Correspondence

Any correspondence should be directed to Alison Mackey, Georgetown University, Department of Linguistics, ICC 460, Washington, DC 20057-1051, USA (mackeya@georgetown.edu).

Notes

1. IPA symbols were used to transcribe Arabic data rather than transliteration.
2. The data were collected over the course of two semesters.
3. To make sure that our instructions had not prompted the teachers to change the way they provided feedback in their classrooms, we observed or videotaped several classes for each teacher before and after the instructions were given, and evaluated these classes to be sure there were no differences in terms of the quantity or quality of feedback.
4. Volunteers received no compensation for participating in the interview sessions.
5. Real names of learners and teachers were replaced with pseudonyms to protect the participants' identities.
6. The number of linguistic targets across the linguistic domains varies considerably. This variation is similar to how the linguistic targets of feedback were distributed in the language classrooms from which the 26 total episodes were taken.
7. Numbers on top of all bars were rounded.

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Appendix: Coding categories for the linguistic foci of stimulated recall comments

Example 1. Stimulated recall comment with a syntactic focus

Um at this time I remember thinking 'okay you always have to put the adjective after the noun'.

The learner was making comments about grammatical rules related to sentence structure and word order.

Example 2. Stimulated recall comment with a morphological/lexical focus

Well I had just answered that and I gave the wrong ending to the verb and she had kind of corrected me.

The learner was making comments about grammatical rules or grammatical forms.

Example 3. Stimulated recall comment with a lexical focus

OK, so that was me ... so I was thinking that ... I was going to use a vocab word that I wasn't sure was right, *wihdə* ['loneliness'], and I knew that there was probably a more recent vocab word that I was supposed to use but I couldn't remember what it was – it was *yurbə* ['homesickness'], homesickness or like longing for your country something like that, so ... I used the wrong word but it's ok.

The learner was making comments about a lexical (vocabulary) item. This includes comments about the meaning of a known/unknown word and English translations of a lexical item.

Example 5. Stimulated recall comment with a phonological focus

Ok ... so I was thinking about how to put *fɪ* [in] and *il-fɪzi:kə*, [the Physics], together and I was having problems with that so I was like "*fil-fɪzi:kə*" ... and then I remembered that when it's *fɪ* and *al* together it's *fɪ-l* so I was like "*fil-fɪzi:kə*" [in Physics] and that sounded weird so I just had a lot of issues with that and I was thinking how there's so many other things that I could say better ... that I wish I could be saying at that moment ... [laughs] ... yah.

The learner was making comments about pronunciation of a word or string of words.

Example 6. Stimulated recall comment with an unspecified correction/mistake

It was funny how Keith couldn't hear that the teacher was correcting him a couple of times.

The learner was making comments that indicate the learner's awareness that a mistake or a correction has been made (however, no linguistic target is mentioned for that correction or mistake).