

Oral corrective feedback: Pre-service English as a second language teachers' beliefs and practices

Language Teaching Research

2020, Vol. 24(2) 220–249

© The Author(s) 2018

Article reuse guidelines:

sagepub.com/journals-permissions

DOI: 10.1177/1362168818787546

journals.sagepub.com/home/ltr**Eva Kartchava**

Carleton University, Canada

Elizabeth Gatbonton

Concordia University, Canada

Ahlem Ammar

University of Montreal, Canada

Pavel Trofimovich

Concordia University, Canada

Abstract

This study investigated the relationship between pre-service English-as-a-second-language (ESL) teachers' pedagogical beliefs and their actual teaching practices. To determine the nature of this relationship, 99 teachers-in-training with little or no teaching experience were asked to complete a questionnaire seeking information about their teaching beliefs, particularly about oral corrective feedback (i.e. teachers' responses to students' language errors). The teachers' responses were subjected to an exploratory factor analysis which revealed several dimensions underlying their beliefs. To examine how these beliefs affect classroom performance, 10 of the teachers were first asked to indicate how they would correct language errors illustrated in hypothetical (videotaped) classroom scenarios and were then observed teaching an authentic ESL class. The classes were video-recorded and 30-minute teacher-fronted communicative segments from the lessons were analysed for the number and type of errors learners made and the teachers addressed. Results indicate a multifarious relationship between stated beliefs and actual teaching practices in that while the teachers corrected fewer errors than they believed they would, they preferred the same corrective techniques in both hypothetical and actual teaching situations. Most notably, the study suggests that the complexities of the language classroom and the pre-service teachers'

Corresponding author:Eva Kartchava, Carleton University, 1125 Colonel By Drive, 241 Paterson Hall, Ottawa, ON, K1S 5B6,
CanadaEmail: Eva.Kartchava@carleton.ca

lack of experience at integrating theoretical knowledge and practical skills, lead them to behave overall as native-speaking interlocutors, not as language teachers. Implications for teacher training are discussed.

Keywords

beliefs, corrective feedback, pre-service teachers, teaching practice, teacher training

I Introduction

The field of education has experienced an increase in research investigating teachers' beliefs – 'suppositions, commitments, and ideologies' (Calderhead, 1996, p. 715) - especially as they relate to such common pedagogical issues as student learning, teaching, and teacher efficacy (Brumfit, 1997; Clark & Peterson, 1986; Kagan, 1992). This interest in teachers' beliefs has also spread into second language (L2) education, where investigations have not only described the teachers' general attitudes towards L2 learning and teaching (e.g. Borg, 2003, 2006; Woods, 1996), but have also begun to outline the complex processes inherent to the development of and changes in beliefs that relate to factors within and beyond the individual teacher, instructional context, and the teaching practice as a whole (Barcelos & Kalaja, 2011). This attention to teacher beliefs paralleled a rise in the number of inquiries into corrective feedback (CF) – teachers' reactions to learners' language errors- as evidenced by numerous studies and meta-analyses on this issue (e.g. Li, 2010; Lyster & Saito, 2010; Mackey & Goo, 2007; Nassaji, 2015, 2016; Nassaji & Kartchava, 2017; Russell & Spada, 2006). In light of these developments, this paper reports on a study that examined the relationship between pre-service L2 teachers' theoretical beliefs about CF and their instructional practices. Pre-service teachers are 'those engaged in initial teacher education programmes (at undergraduate or graduate level) and who typically have no formal language teaching experience' (Borg, 2006, pp. 50–51).

The need for this inquiry is three-fold. First, while there is extensive research on the link between teachers' beliefs and practices, much of it is based on case studies (Basturkmen, 2012) which, by definition, limit the generalization of the findings (Mackey & Gass, 2016). Second, studies of pre-service teachers' beliefs are rare (e.g. Almarza, 1996; Gathbonton, 2008; Johnson, 1992), and this is especially true of empirical investigations that compared beliefs with classroom behaviour (e.g. Baleghizadeh & Rezaei, 2010; Junqueira & Kim, 2013). Finally, research into teachers' CF beliefs is 'an understudied area in the descriptive CF research domain' (Gurzynski-Weiss, 2016, p. 255), with studies that have employed questionnaires, observations, stimulated recalls, and interviews to prompt teachers' beliefs about feedback in general (e.g. Agudo, 2014; Bell, 2005; Cathcart & Olsen, 1976; Gurzynski-Weiss, 2016; Jean & Simard, 2011; Mori, 2011; Rahimi & Zhang, 2015; Schulz, 1996, 2001) and on the efficacy of particular feedback techniques (e.g. Farrokhi, 2007; Yoshida, 2008, 2010). Still, few studies have juxtaposed teachers' stated beliefs about CF with their corrective in-class practices; when they did, participants were experienced teachers (Kamiya, 2014; Roothoof, 2014; Sepehrinia & Mehdizadeh, 2016). Regarding research on pre-service teachers specifically, we know of only one

study that compared the CF beliefs and practices of a novice teacher in Iran (Baleghizadeh & Rezaei, 2010) and another that contrasted the beliefs and corrective practices of one novice teacher and one experienced teacher in the context of English-second-language (ESL) (Junqueira & Kim, 2013). Given the limited number of investigations, it is premature to draw conclusions about what guides teachers' CF behaviour and what teachers-in-training need to know about the practice as they embark on their teaching careers.

If the path to understanding teachers' professional lives lies through the examination of their 'mental lives' (Clark & Peterson, 1986), then the process needs to begin as soon as trainees embark on a teacher training program. For this reason, teacher educators are repeatedly advised to determine pre-service teachers' beliefs prior to instruction and use this knowledge to inform course contents and facilitate 'in time' learning (Lo, 2005; Peacock, 2001). Identifying what pre-service teachers think about a particular pedagogical aspect and observing them implementing it prior to instruction can highlight gaps in their understanding and point to ways of addressing/resolving these through teacher training. Such examinations are especially valuable with 'incidental aspects of teaching, such as error correction, [...] since in responding to incidental events in the classroom teachers might largely draw on automatic and generally unexamined behaviours' (Basturkmen, 2012, p. 291). Understanding teachers' 'mental lives', then, stands to benefit not only teachers and various stakeholders concerned with teacher cognition, but also to inch the inquiry closer to its 'ultimate goal [of] construct[ing] a portrayal of the cognitive psychology of teaching' (Clark & Peterson, 1986, p. 255). The study reported here aims to contribute to this objective by examining the relationship between pre-service teachers' CF beliefs and their corrective practices. A group of teacher-trainees were first asked to complete a questionnaire investigating their beliefs about teaching in general and CF in particular and, then, to teach an authentic group of ESL learners. Videotaped lessons were examined to determine the number of errors the teachers treated and the types of CF techniques they employed. Comparing the teachers' stated views with observational data allowed for a deeper understanding of when, how, and how much teachers corrected students' spoken errors prior to training and to what extent classroom instruction reflected the beliefs teachers hold about unplanned aspects of teaching like CF.

II Literature review

I Research on teacher beliefs and practices

The connection between teacher beliefs and actions is widely acknowledged (Borg, 2011). It is said to be dynamic and shaped by 'affordances, one's interpretations of one's own actions, emotions [...] self-concepts, [and] socio-historical contexts' (Barcelos & Kalaja, 2011, p. 286). Importantly, this relationship is bidirectional in that while beliefs shape behaviour (Arnett & Turnbull, 2008; Borg, 2003), they themselves can be shaped, re-shaped, and augmented through teacher education, actual teaching, and reflection on that teaching (Borg, 2011); this is a process that brings about new 'understandings' (Woods & Çakir, 2011) of what it means to know teaching (i.e. theoretical knowledge) and to be an effective teacher (i.e. practical knowledge). Early research, however, saw

beliefs and practices as being in a linear cause-and-effect relationship, where teachers approached and taught their subject area either in compliance or noncompliance with their theoretical views (i.e. beliefs defined practice). These studies first identified similarities/differences in teachers' beliefs and practices and then attributed these to various sources in the teachers' backgrounds and experiences they might have undergone as language learners, teacher trainees, or practicing language teachers (Borg, 2003, 2006).

This body of research has produced mixed results. Johnson (1992), for instance, found that ESL teachers' choice of methodological approach and the type of instruction they implemented consistently reflected their theoretical beliefs. This was also the case among ESL teachers (Jensen, 2001) and English-as-a-foreign-language (EFL) teachers (Borg, 1998; Ng & Farrell, 2003), whose beliefs about grammar teaching corresponded to their classroom practices. Still, several studies have reported discrepancies between beliefs and practices (e.g. Basturkmen, Loewen & Ellis, 2004; Sato & Kleinsasser, 1999). For example, in their study of 10 Japanese L2 in-service teachers in Australia, Sato and Kleinsasser (1999) tackled the teachers' beliefs about and practices with communicative language teaching (CLT). The results suggest that the teachers' in-class practices were not rooted in their beliefs or CLT training. In another study, Basturkmen et al. (2004) examined the relationship between teachers' beliefs and practices regarding focus on form (pointing out learners' errors through a variety of pre-planned and reactive techniques), revealing a 'tenuous relationship' (p. 243) between the two. Interestingly, the beliefs and practices of the teacher with the most experience were in more congruence than those of less experienced peers, suggesting that teaching experience may be a necessary equalizer in minimizing the tensions between beliefs and practices.

While Basturkmen et al. (2004) recognize that beliefs should not necessarily be in perfect alignment with one's teaching practice, examining the role of experience on the beliefs-practice relationship is of merit. This is because teaching experience can impact what teachers think about both planned and unplanned aspects of language teaching and the extent to which they act on these views (Basturkmen et al., 2004; Gatbonton, 2008; Gurzynski-Weiss, 2016; Mori, 2011; Tsui, 2003). Experience has also been shown to determine the ease with which teachers '*enact* what they know during activity' (Breen et al., 2001, p. 498; original emphasis) as well as how they facilitate learning and manage classroom interaction (Berliner, 1995; Gatbonton, 2008; Tsui, 2003). In her examination of novice and experienced teachers' pedagogical knowledge, Gatbonton (2008) found that while four novice and four experienced teachers described similar instructional pre-occupations as they watched their own lessons after having taught them, the two groups differed in the order of importance that they assigned to the categories. That is, the experienced teachers were more concerned with language management (i.e. focusing on students' use of language, accuracy of output, vocabulary learning, etc.) than their novice counterparts, who were primarily focused on keeping the students happy and worrying about how the learners perceived them as teachers. Experienced teachers also tend to engage with learners more, draw on their pedagogical knowledge during lesson planning and delivery, and act on their intentions in the classroom (Gurzynski-Weiss, 2014; Junqueira & Kim, 2013; Mackey, Polio & McDonough, 2004). If, for example, an experienced teacher values CF, he/she may intentionally provide it (Kamiya, 2014).

While these studies offer important insights into the benefits of experience, little is known about how pre-service teachers view CF and may eventually go about providing it in the classroom. Understanding where new teachers stand on the issue of correction and why they hold these beliefs has important implications for teacher education since ‘examining the thinking and performance of novice teachers as they grapple with essential aspects of teaching (e.g. managing learning in the classroom) provides insights into the difficulties they encounter in becoming experienced’ (Gatbonton, 2008, p. 163). This research is also important in light of the general consensus in second language acquisition (SLA) that CF facilitates L2 acquisition.

2 Corrective feedback

The value of CF, from the cognitive perspective, lies in the role it plays in drawing learners’ attention to form. This attention, in turn, facilitates learners’ noticing of the differences between their incorrect utterance and the target form (i.e. *noticing the gap*; Schmidt & Frota, 1986) or the insufficiency of their output (i.e. *noticing the hole*; Doughty & Williams, 1998; Swain, 1993): the realizations that lead to re-evaluation of the original hypotheses. Because this re-assessment happens at the time when learners are trying to communicate, they are not only more likely to focus on the form of the message (the meaning of which they understand, VanPatten, 1990), but also map the form onto its intended meaning, a practice required for L2 development (e.g. Doughty & Varela, 1998; Pica, 1992, 1994). Furthermore, repeated instances of CF promote modified and ‘pushed’ (Swain, 1993, 1995) output that may help learners ‘to reflect on their output and consider ways of modifying it to enhance comprehensibility, appropriateness, and accuracy’ (Swain, 1993, p. 160) as well as engage them in morphosyntactic processing (Swain, 1993, 1995). Similarly, modifications to L2 input made in the process of interaction via linguistic simplification, slower speech rate, gestures, contextual clues, and CF not only render input comprehensible, but also bring about L2 learning, which, according to the interactionist view, is supported by ‘the connection of input, internal learner capacities, particularly selective attention, and output in productive ways’ (Long, 1996, pp. 451–452).

Different strategies can be used to provide CF. They range from input-providing (recasts and explicit correction) to output-pushing (prompts), but both categories can differ in how explicit or implicit they are (Ellis, 2006; Sheen & Ellis, 2011). While recasts and explicit correction provide learners with the target form, prompts (i.e. formerly, ‘negotiation of form’ techniques include clarification requests, repetition, elicitation, and metalinguistic cues, Lyster & Ranta, 1997) push them to correct the error on their own. While the effectiveness of these techniques is still a topic of debate (for review, see Nassaji, 2015, 2016), the overall utility of CF relies on learners’ ability to notice feedback and recognize its corrective intent (Nassaji, 2016). Recasts, in particular, are more difficult to notice since they are implicit and depend on a number of variables (e.g. length, type, and opportunities for uptake) to be recognized. Prompts, on the other hand, are more noticeable because they clearly mark the presence and locus of the error and push learners to self-correct. Ellis (2015) argues that both strategies are important in that

each contributes to L2 learning differently: recasts help learners to acquire new features whereas prompts assist them in consolidating their existing L2 knowledge.

3 Beliefs about CF

Early research on learners' and teachers' CF views (Cathcart & Olsen, 1976; Jean & Simard, 2011; Schulz, 1996, 2001) found a mismatch, with learners overwhelmingly wanting to be corrected and teachers not always sharing that opinion. In her oft-cited study, Schulz (2001) surveyed ESL/EFL teachers' and learners' attitudes towards grammar teaching/learning and correction of oral and written errors and found a substantial discord between the two groups. Cathcart and Olsen (1976), who focused exclusively on oral CF, found similar results. Lyster et al. (2013) suggest several reasons why teachers' attitudes towards CF may differ from their students. First, because learners may see CF as anxiety-yielding, teachers may intentionally avoid CF to prevent negative affects (e.g. slump in motivation and self-esteem) in their classroom (Vásquez & Harvey, 2010; Yoshida, 2010). A recent study (Rahimi & Zhang, 2015), however, suggests that experienced teachers view CF more positively (90%) than novice teachers (75%) do. Second, teachers may feel that providing CF during a student's attempt to communicate may unduly interrupt the communicative flow (Brown, 2009; Roothoof, 2014; Sepehrinia & Mehdizadeh, 2016); thus, only those errors that inhibit understanding need to be addressed (Jean & Simard, 2011; Roothoof, 2014). To avoid the perceived 'humiliating' (Kamiya, 2014) nature of explicit correction, some teachers may gravitate towards recasts when CF is needed (Bell, 2005; Rahimi & Zhang, 2015), seeing them as a non-intruding yet face-saving and target-providing solution (Lee, 2013; Yoshida, 2010); experienced teachers, however, are more likely to vary the types of CF they use (Junqueira & Kim, 2013; Rahimi & Zhang, 2015). Finally, certain teachers may feel that oral communication classes should focus exclusively on fluency practice and avoid CF altogether (Junqueira & Kim, 2013; Kamiya, 2014).

4 Teachers' CF beliefs and practices

To further understand the gap between teachers' and learners' CF views, examinations of teachers' in-class corrective practices were undertaken and, similar to the findings of previous research on teachers' beliefs-practice relationship, revealed mixed results. That is, while some studies showed congruence in the teachers' CF views and practices (e.g. Jensen, 2001; Junqueira & Kim, 2013; Kamiya, 2014), others did not (Basturkmen et al., 2004; Roothoof, 2014). A similar trend has been observed in teachers' preferences for and provision of certain CF types. Jensen (2001), for example, found that the teachers who reported concerns about interrupting learners during communication gravitated towards implicit CF types, and the teacher who saw value in frequent CF employed a range of techniques. At the same time, several studies have documented teachers expressing preference for one CF type, but either not using it (Farrokhi, 2007; Roothoof, 2014) or using another type in practice (Basturkmen et al., 2004; Roothoof, 2014). The teachers in Basturkmen et al. (2004), for example, expressed preference for prompts but provided recasts instead. This was also the case with the teachers in Roothoof (2014), who

either used recasts instead of their preferred prompts or resorted to prompts thinking that they were providing recasts. Interestingly, a preference for recasts was observed in studies where, despite their reported ill-feelings towards CF, teachers used the technique to focus on the issues of form (Junqueira & Kim, 2013; Kamiya, 2014).

Drawing conclusions about the CF beliefs-practice link from studies that have produced mixed results is premature as it is still 'necessary to gather more information about teachers' beliefs and feedback practices if we intend L2 research to have an impact on classroom practice' (Roothoof, 2014, p. 67) and teacher training. The present study adds to a limited body of research on pre-service teachers' thought processes and actions regarding CF by investigating the beliefs of 99 pre-service ESL teachers and observing a representative sample ($n = 10$) as they provide CF in the classroom. A t -test conducted on the responses of these two sets of teachers indicated that the 10 teachers and the remaining 89 were not significantly different from each other ($t(95) < 1.61, p > 0.11$). The following research questions guided this investigation: (1) What do pre-service ESL teachers believe about CF in the second language classroom? (2) What are the sources of the pre-service teachers' beliefs? and (3) Are these teachers' beliefs about CF consistent with their corrective practices in the classroom?

III Methodology

I Participants

Ninety-nine pre-service teachers (84 females, 15 males) with little or no teaching experience were recruited from three universities located in Quebec, Canada. The majority was enrolled in the first year ($n = 79$) and some in the second year ($n = 20$) of the four-year Bachelor of Education teacher-training programs offered by the participating institutions.¹ The average age of participants was 28.6 years, ranging from 18 to 62 years (median: 25.5 years). The teachers were mostly English ($n = 43$) and French ($n = 34$) L1 speakers, with 22 reporting other languages (Greek, Romanian, Arabic, Italian, Chinese, Czech, Korean, and Japanese) as their mother tongue. The participants knew at least two languages (mostly English and French), with some claiming proficiency in a third language ($n = 14$). The researchers visited the three universities to invite the teachers to participate in the study, having explained the study and the participants' role in it. Only those who provided consent to participate were asked to complete two questionnaires: a background questionnaire and the Part 1 of a three-part beliefs questionnaire (BQ). These were administered in one sitting, with the background questionnaire preceding the BQ.

In addition to completing the questionnaires, 10 first-year teacher trainees (7 females, 3 males), drawn from the 99 described above, volunteered and provided consent to be observed teaching a class of ESL learners. All 10 were enrolled in their first pedagogy class, had little (i.e. one year or less) or no teaching experience upon entering the course, and had not been overtly exposed to information on CF. Each participant taught a one-hour lesson (outside of the course hours) and completed BQ Parts 2 and 3. To ensure that the results would not be influenced by the course contents and/or students' experiences in the course, the teaching sessions took place early in the term (week 3). The teachers received help (from the researchers) in planning their lessons but were free to choose any

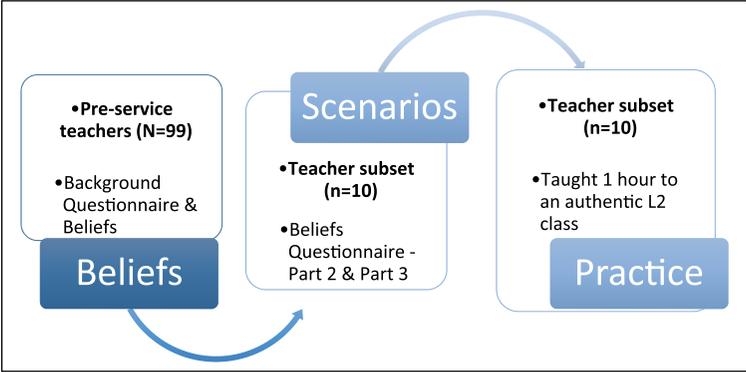


Figure 1. Procedure.

topic or task they wished. The guidance was provided to alleviate the challenge that lesson planning often entails for beginning teachers.

Two groups of 12 ESL learners ($n = 24$) from various linguistic backgrounds participated as the students the teachers taught. While the learners were recruited using printed (i.e. posters) and word-of-mouth advertisements, the selection was based on their willingness to participate in the study and their being at the intermediate level of proficiency in English (determined by a short phone/oral interview). The learners knew that they were taking part in an experiment and that some of the instructors would be pre-service teachers. The classes met twice a week for two hours each time over a period of three weeks (i.e. each group received a total of 12 hours of instruction). While the first hour was taught by a pre-service teacher, the researchers took turns teaching the remaining hour. Hence, out of the 12 hours, 5 hours were taught by the pre-service teachers (1 hour each) and 7 hours – by the researchers. Care was taken to provide thematically-coherent, student-centred classes that promoted communication. To ensure opportunities for CF provision, all lessons involved task-based speaking activities. The procedure is illustrated in Figure 1.

2 Materials

The data were gathered by means of (1) a background questionnaire, (2) a three-part BQ, and (3) video-recorded one-hour lessons. The background questionnaire (Appendix 1) elicited the participants' basic demographics (e.g. age, gender), information on their educational background, training, any teaching experiences they might have had, and the courses they were attending. To ensure that the participants had not had much exposure to the literature on CF, a list of eight courses assumed to deal with CF either as a major or peripheral concern was also included in the questionnaire. From this list, the participants were asked to specify the course(s) they had already completed. Only those teachers who had not taken any of the courses were deemed eligible to instruct the ESL learners.

Created to uncover the teachers' CF beliefs, the BQ comprised three parts. Part 1 (Appendix 2) contained seven categories of statements (43, in total) that expressed

opinions about CF, grammar teaching, vocabulary and pronunciation work, pedagogical techniques, and the role of the native language and teachers in language learning. The majority of the statements (i.e. 19), however, focused on CF. These were based on theoretical and empirical findings in the literature and focused on such aspects as the importance of feedback, learner anxiety and motivation, interruption of the communicative flow, as well as the delay and extent of feedback. Participants indicated how strongly they agreed/disagreed with each statement, using a scale of one to nine, where 1 indicated strong disagreement and 9 strong agreement.

	STRONGLY DISAGREE						AGREE		
	1	2	3	4	5	6	7	8	9
Error correction is essential in promoting L2/FL learning.									

Since ‘teachers’ theoretical beliefs are situational and are transferred into instructional practices only in relation to the complexities of the classroom’ (Fang, 1996, p. 55), Parts 2 and 3 of the BQ (Appendix 2) were designed to simulate the classroom environment by placing the participants in the shoes of a language teacher whose task it is to deal with students’ spoken errors. These questionnaires, administered one to two weeks after the actual teaching, examined the participants’ CF beliefs further. While Part 2 surveyed the teachers’ beliefs about whether or not a correction was needed in a given situation, Part 3 investigated the corrective techniques the teachers deemed useful.

In Part 2, the teachers watched twelve video-recorded scenarios that showed a student committing an error. After watching each scenario, the teachers indicated whether or not they would correct the error and explained their choice. This was done to ascertain the extent of importance the teachers assigned to CF and the likelihood that they would provide feedback when teaching. The scenarios came from the lessons taught by the researchers and represented common learner errors, which included plurals, third person singular agreement, simple past tense, question formation, prepositions, and articles; two examples per error type were used. For Part 3, after watching the same videos as in Part 2, the teachers listened to a recording of a language teacher vocalizing six possible ways each error could be corrected. On a scale from one to nine, where 1 implied complete ineffectiveness (‘not at all useful’) and 9 total effectiveness (‘very useful’), the teachers indicated the usefulness of each corrective strategy. The strategies were based on Lyster and Ranta’s (1997) taxonomy and included 4 recasts (regular, isolated, integrated, and interrogative), 1 explicit correction, and a prompt – please note that all 4 types of prompts were provided, one at a time (see Table 1). To avoid redundancy, interrogative recasts were not used for question errors.

IV Results

To answer the first research question, a factor analysis with an alpha factoring extraction method and Varimax rotation with Kaiser Normalization was performed on the responses of the 99 teachers in Part 1 of the BQ. This analysis was conducted to examine common

Table 1. Example of six corrective feedback strategies suggested for 'I have one children*'.^a

Corrective strategy	Not at all useful									Very useful
'One child.' (Isolated recast)	1	2	3	4	5	6	7	8	9	9
'No, what is the singular form of 'children'?' (Negotiation of form)	1	2	3	4	5	6	7	8	9	9
'Oh, you have only one child.' (Regular recast)	1	2	3	4	5	6	7	8	9	9
'You have one child. Is it a boy or a girl?' (Integrated recast)	1	2	3	4	5	6	7	8	9	9
'We don't say <i>one children</i> [stressed]. You should say: <i>one child</i> [stressed].' (Explicit correction)	1	2	3	4	5	6	7	8	9	9
'How many children did you say you have?' (Interrogative recast)	1	2	3	4	5	6	7	8	9	9

themes in the participants' CF beliefs. The suitability of the data for factor analysis was confirmed by the Kaiser–Meyer–Olkin value of .65, which meets the recommended value of .6, and Bartlett's Test of Sphericity that reached statistical significance. The six-component solution explained 42.3% of the variance. Of the 19 statements specifically designed to probe the teachers' beliefs about CF, 16 loaded onto the six components. As Table 2 shows, among the five statements that loaded onto Component 1, the majority were concerned with the importance of CF (Items 9 and 36) and the fact that feedback promotes noticing (Item 33) and self-correction (Item 40), but one item (Item 8) focused on the type of errors that need to be addressed. Because these items suggest that the participants see CF as important in promoting language learning, this factor was labelled 'Learning'. Three statements that loaded onto Component 2 allude to the role of timing in the corrective process ('Timing'). While Item 21 suggests that errors are best treated in a separate lesson or as part of homework, Item 26 advocates for error treatment at the end of the lesson, rejecting the notion of immediate correction put forth by Item 31. Component 3 statements indicate that while provision of feedback is generally appreciated by learners (Item 19), it may raise learner anxiety (Item 28), which can be mitigated by use of implicit techniques (Item 12). A common trait that these statements share is the affective impact of correction, leading us to label it as 'Affect'. The amount of feedback learners should receive in class emerged as a common theme for Component 4 ('Extent'), with teachers either seeing it as necessary for all errors (Item 5) or only for the important ones (Item 42). The only statement that loaded onto Component 5 spoke of CF disrupting speech flow ('Flow'). Finally, due to the diverse nature of the two items that loaded onto Component 6, the labelling of this factor proved problematic. Because the participants saw fear of correction (Item 3) and learner motivation (Item 17) as other affective factors of CF, the component was named 'Other Affects'. In sum, the pre-service teachers believe that CF promotes learning, carries affective consequences, disrupts communicative flow, and affects motivation/interest in learning an L2. Timing and extent of correction are also seen as important.

To answer the second question of the research, the participants' age, university attended, teacher training, own language learning and teaching experience probed

Table 2. Factor analysis results for the 19 questionnaire statements on corrective feedback.

Statements	Varimax rotation					
	1	2	3	4	5	6
No. 09 Correction instrumental to understanding how L2 works	.807					
No. 08 Persistent errors must be systematically corrected	.638					
No. 36 Correction essential in promoting L2 learning	.623					
No. 33 Correction promotes noticing match b/w error and correct forms	.534					
No. 40 Correction leads to self-correction	.475					
No. 26 Correct at END of lesson		.692				
No. 21 Correct in separate lesson or as homework		.559				
No. 31 Correct immediately		-.432				
No. 28 Correction raises anxiety			.790			
No. 12 Signalling error keeps Ss' anxiety level low			.430			
No. 19 Ss like to be corrected			-.415			
No. 05 Ts should correct ALL errors				.745		
No. 42 Correct only most important errors				-.486		
No. 24 Correction disrupts the flow of Ss' speech					.602	
No. 03 Ss fear being corrected						-.499
No. 17 No correction decreases motivation						.484

through the background questionnaire were each subjected to analyses of variance with repeated measures design to reveal their possible contributions to the teachers' belief systems. For each ANOVA, the within-subjects variables were the participants' regression factor scores on each of the six beliefs factors (Learning, Timing, Affect, Extent, Flow, Other Affects). The between-subjects variables consisted of two (or three) levels of participants distinguished from each other on the basis of one piece of biodata described above as well as their exposure to grammar and pronunciation instruction, being encouraged to engage in oral interaction, and being led to participate in reading and listening activities. Results show that the participants' responses to the six belief factors did not differ as a function of age ($F(1,97) = 0.146$, n.s.), university attended ($F(2,96) = 4.88$, n.s.), training received ($F(1,97) = 2.104$, n.s.) or teaching experience ($F(2, 96) = .316$, n.s.).

Learning experiences and courses taken, however, predicted some of the beliefs. For the learning experiences, the teachers' estimates of the CF amount they had received on speaking yielded a significant interaction with Component 4 ('Extent'), $p < .05$, suggesting that those teachers who received more oral correction believed more strongly than those who received less CF that all errors should be corrected. This finding was confirmed when other learning experiences (i.e. grammar and pronunciation instruction, amount of oral interaction and participation in reading and listening tasks) were investigated and produced a significant Grammar \times Beliefs Factor interaction, $F(5,480) = .906$,

Table 3. Errors the teachers claimed they would correct per error type.

Teacher	Error types						Would correct total/ 12	
	Plurals	Auxiliary	3rd person singular	Prepositions	Questions	Past simple		
1	2	2	2	1	0	0	7	58
2	2	0	0	2	1	0	5	42
3	1	2	2	1	0	0	6	50
4	1	2	2	1	0	2	8	67
5	2	1	2	1	0	0	6	50
6	2	1	1	2	0	2	8	67
7	2	2	2	0	0	0	6	50
8	2	1	2	2	0	2	9	75
9	1	0	1	1	1	0	4	33
10	1	0	1	2	1	1	6	50
Totals	16	11	15	13	3	7	65	54

$p = .011$, with Component 4 ('Extent'), suggesting that those teachers who were exposed to more grammar instruction believed more strongly that all errors should be addressed.

Finally, the impact of the SLA course taken by the 20 second-year trainees on beliefs was examined, revealing a significant Language Acquisition \times Beliefs Factor interaction, $F(5,485) = 2.375$, $p = .052$, and a statistically significant difference for Component 2 (Timing), $p < .014$. This suggests that the teachers who had not taken the course believed that CF should not be provided immediately after an error has been made, but be done at the end of or in a separate lesson. To summarize, the participants' beliefs on the timing and extent of correction appear to be influenced by exposure to grammar instruction, the amount of oral CF they received when learning another language, and completion of an SLA course.

To answer the third research question, the teachers were asked to teach a one-hour ESL lesson and to complete Parts 2 and 3 of the BQ. The questionnaire results are discussed first. Table 3 details the responses the 10 teachers provided about whether or not they would correct learners (Part 2). As a whole, the teachers said they would correct 54% of all errors. Among the error types, they would correct plurals and 3rd person singular agreement the most (16% and 15%, respectively), followed by errors in auxiliary verbs and prepositions (11% and 13%, respectively), but would least correct questions and simple past errors. As for the CF techniques they would use (Part 3), the teachers preferred recasts the most (66%), followed by explicit correction (17%) and prompts (8%); in 9% of the cases no strategies were selected (Table 4).

To determine whether there were preferred CF strategies per error type, the teachers' scores for each error type were subjected to a series of two-way ANOVAs. Significant differences occurred only with respect to the correction of plurals and questions. In both cases, the teachers overwhelmingly preferred recasts (regular and interrogative) to any other strategy. When correcting plurals, regular recasts (6.1) were preferred significantly more than prompts (3.95) and explicit feedback (4.1), $p < .05$, Bonferroni adjusted

Table 4. Corrective feedback strategies the teachers would use to treat errors per error type.

Error type	Would correct*	Corrective strategies**			
		Recast	Prompts	Explicit	No strategy
Plurals	16	12	1	3	0
Auxiliary	11	10	0	0	1
3rd person singular	15	11	1	2	1
Prepositions	13	7	1	3	2
Questions	3	1	1	0	1
Past simple	7	2	1	3	1
Totals	**65 *(54%)	**43 ***(66%)	**5 ***(8%)	**11 ***(17%)	**6 ***(9%)

Notes. * Calculated out of 120 possible errors (12 errors × 10 teachers). ** Calculated out of 65 errors the teachers said they would correct.

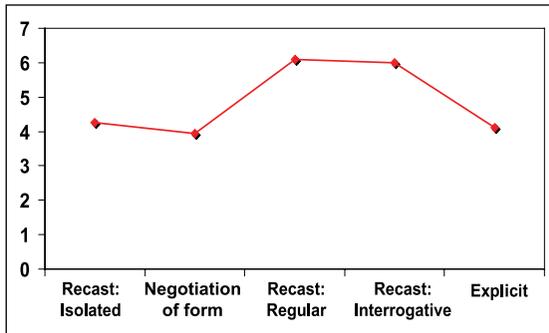


Figure 2. Corrective feedback strategies on plural errors.

(Figure 2). For the second question error, regular recasts (7.0) were preferred significantly more than isolated recasts (1.9), prompts (3.4), and explicit correction (3.6), $p < .05$, Bonferroni adjusted (Figure 3).

The classroom observation data comprised of one-hour video-recorded lessons taught by the 10 teachers. A 30-minute teacher-fronted communicative segment from each lesson was transcribed and analysed for the number and type of errors the learners made and the teachers addressed. Inter-rater reliability was established at a .85 reliability coefficient; any disagreements were solved through discussion. As a group (Table 5), the teachers corrected 63 of 368 errors (17%), 24 (12%) of which dealt with the six target errors and 39 (23%) with the remaining errors (pronunciation and word choice). Recasts were used 86% of the time whereas explicit correction accounted for 13% of corrections; prompts were never used.

Table 6 breaks down the total number of errors corrected by type and teacher. While Teacher 1 and Teacher 5 corrected the most errors overall (17 and 16, respectively), all the teachers chose to address the ‘other’ error types more than the targeted six. Table 7

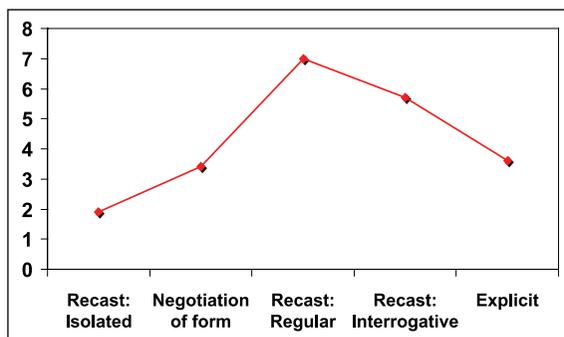


Figure 3. Corrective feedback strategies on question error 2.

Table 5. Errors made and corrected.

Error type	Errors		Corrective feedback strategies*		
	Committed by students	Corrected by the Ts	Recast	Prompts	Explicit
Plurals	27	5	5		
Auxiliary	19	4	3		1
3rd person singular	27	2	2		
Prepositions	72	7	4		3
Questions	20	2	2		
Past simple	36	4	3		1
Sub-total	201	24	19	0	5
		(12%)	*(79%)	*(0%)	*(21%)
Other types of errors	167	39	35	1	3
		(23%)	***(90%)	***(2%)	***(8%)
Total number	368	63	54	1	8
Percentage	NA	17%	****(86%)	****(1%)	****(13%)

Notes. * Calculated out of 24 (sub-total) errors the teachers corrected. ** Calculated out of 39 other types of errors the teachers corrected. *** Calculated out of 63 (total) errors the teachers corrected.

summarizes the total number of errors the teachers said they would correct and the actual number of errors they addressed. It is clear that the teachers corrected fewer errors (17%) than they said they would (54%).

To summarize, the data show that ESL teachers have certain beliefs about CF prior to training. These seem to depend on the experience of having received CF on spoken errors, exposure to formal grammar instruction during language learning, and completion of an SLA course. In the classroom, the participants' behaviour did not systematically reflect their beliefs because they corrected a smaller percentage of errors than they said they would. They did, however, prefer the same corrective techniques in the hypothetical scenarios as they used in the classroom.

Table 6. Errors corrected per error type and teacher.

Teacher	Plurals	Auxiliary	3rd person singular	Prepositions	Questions	Past simple	Other	Total
1	0	0	0	3	0	0	14	17
2	0	0	0	0	0	0	2	2
3	3	0	0	0	0	0	2	5
4	1	1	0	2	0	0	3	7
5	0	3	0	0	0	1	12	16
6	0	0	0	2	0	0	1	3
7	0	0	0	0	1	1	1	3
8	0	0	1	0	0	1	1	3
9	1	0	1	0	1	0	2	5
10	0	0	0	0	0	1	1	2
Totals	5	4	2	7	2	4	39	63

Table 7. Errors teachers would correct and actually treated in class.

Teacher	Would correct total/ 12		Corrected/ 368	
1	7	58	17	4.6
2	5	42	2	0.5
3	6	50	5	1.4
4	8	67	7	1.9
5	6	50	16	4.3
6	8	67	3	0.8
7	6	50	3	0.8
8	9	75	3	0.8
9	4	33	5	1.4
10	6	50	2	0.5
Totals	65	54%	63	17%

V Discussion

1 Teachers' beliefs about CF and their sources

The results show that pre-service teachers have opinions about CF before they embark on teacher training. While the teachers recognize the importance of feedback in language learning, they are particular about the timing of CF and the types of errors to be addressed. They are also concerned about the affective consequences of feedback, worrying that providing it may interrupt the conversational flow and negatively affect learners' motivation to keep learning. On the one hand, these findings are supported by other beliefs' studies, where teachers saw CF as important (Rahimi & Zhang, 2015; Schulz, 1996), agonized about the affective consequences of CF (Brown, 2009; Vásquez & Harvey, 2010), felt ambivalence about whether CF should address all or most persistent errors (Bell, 2005; Jean & Simard, 2011; Schulz, 1996), and questioned when provision of CF

is most effective (Bell, 2005; Brown, 2009; Rahimi & Zhang, 2015). These beliefs appear to also have been shaped by the teachers' language learning experiences. This, of course, is not surprising given that at the time of the study the participants were in the initial stages of teacher training and possessed little or no classroom experience. The tendency of new teachers to draw on their personal experiences as learners when forming beliefs about teaching (i.e. 'apprenticeship of observation', Lortie, 1975) is well documented in general education (e.g. Fang, 1996, Kagan, 1992) and language teaching alike (e.g. Borg, 2006, 2009). In fact, the impact of 'apprenticeship of observation' can stretch beyond 'the initial conceptualization of teaching and learning that pre-service teachers bring to teacher education' (Borg, 2009, p. 164). This was the case in Junqueira and Kim's (2013) study, where the CF views of both a pre-service and experienced teacher were 'heavily influenced' (p. 199) by their previous language learning experiences. This was also true of an Iranian teacher-trainee (Baleghizadeh & Rezaei, 2010) and the teachers here, whose language learning experiences (i.e. receiving oral CF and exposure to grammar instruction) positively predicted their CF beliefs.

CF views, however, can be amended by teacher training, a finding that is supported by previous research (e.g. Baleghizadeh & Rezaei, 2010; Busch, 2010; Gurzynski-Weiss, 2016; Vásquez & Harvey, 2010). In this study, the participants who had taken an SLA course ($n = 20$) felt more strongly about providing immediate correction to learners' errors than those who had not ($n = 79$). The difference in the opinions may be attributed to the nature of the course, the goal of which, according to the course outlines, is to introduce teacher-trainees to the various aspects and theories of L2 learning and teaching, with CF figuring prominently among them. The students had participated in discussions on CF and had been introduced to the varying opinions on when CF is most effective. A combination of theory and dialogue may, thus, have 'trained' the second-year pre-service teachers to see the timing of CF differently than their first-year peers. Similarly, Vásquez and Harvey (2010) found that participation in research replication changed the CF perceptions of nine graduate students attending an SLA course. Prior to the replication, the students were unsure about the role of CF and its effectiveness, worrying about the negative effects (e.g. decrease in self-esteem and motivation) of feedback provision. This preoccupation, however, diminished after the students analysed CF episodes in an L2 lesson and as a result, became cognizant of such CF variables as 'the relationship between feedback and uptake, the interaction between error type and feedback, understanding the differences between various feedback moves that supply learners with correct responses versus those feedback moves that do not' (Vásquez & Harvey, 2010, p. 437).

Changes in beliefs about language learning among the 381 pre-service teachers enrolled in their first SLA course were also documented by Busch (2010). While at the onset the students deemed error correction as 'the most important part of language teaching' and felt that speaking a language 'perfectly' was the goal, their views post-training shifted towards seeing errors as 'a natural part of language acquisition' and distinguishing between when CF should happen, what it should address, and how it should be done (Busch, 2010, p. 330). These changes, however, are unlikely without the experiential component since reading research alone is not sufficient to affect teachers' beliefs (Kagan, 1992; Kamiya & Loewen, 2014). It is necessary to provide novice and experienced teachers with learning opportunities that not only combine theory with practice,

but also allow teachers to experience and reflect on the obtained knowledge, thus personalizing the results (Woods & Çakir, 2011). After all, ‘professional coursework which includes experiential and reflective activities seems to have a stronger effect on the development of beliefs systems than declarative knowledge (theories and research) taught alone’ (Busch, 2010, p. 319).

2 Teachers’ reported beliefs and in-class behaviour

In the classroom, the pre-service teachers corrected a markedly smaller percentage of errors than they said they would, a finding corroborated by previous research (Basturkmen et al., 2004; Farrokhi, 2007; Roothoof, 2014; Sato & Kleinsasser, 1999). One reason for this may be a gap between teachers’ technical and practical knowledge.² While technical knowledge ‘denotes the body of explicit ideas derived by a profession from deep reflection or empirical investigation’ (Basturkmen et al., 2004, p. 246), practical knowledge represents decisions teachers make during teaching. The teacher-trainees in this study were at a double disadvantage as they were only beginning to learn about the profession and had little teaching experience. However, even when teachers see CF as important in promoting L2 development, they often struggle to provide correction, worrying about interrupting the communicative flow, negatively affecting learners’ well-being, or simply not knowing when the right time to correct may be (Basturkmen et al., 2004; Brown, 2009; Roothoof, 2014; Sepherinia & Mehdizadeh, 2016). The concern for learners’ reaction to CF and confusion about the proper timing of CF was evident in the pre-service teachers’ responses on the beliefs questionnaire when, as a group, they appeared cognizant about the affective factors of CF and could not decide on the phase (immediately, at the end of a lesson, or in a separate lesson) that would render correction most effective. Perhaps, these concerns prevented the teachers from providing as much feedback as they deemed necessary, especially in the case of Teachers 4, 6, and 8 who corrected considerably fewer errors than they stated they would. While additional teaching experience and consistent reflection might help teachers to reconcile their technical and practical knowledge, there is evidence that ‘apprenticeship of observation’ may continue to shape teachers’ corrective practices (Junqueira & Kim, 2013) and even CF training may not yield practices that are supported by both research and learner expectations (Junqueira & Kim, 2013; Mackey et al., 2004).

The complexity of the language classroom may be another reason for the beliefs-practice incongruity (Borg, 2006; Tsui, 2003) observed here. Although the teachers were not asked to comment on their lessons, the transcripts show that being in front of a class for the first time affected their performance. For example, one of the teachers shared her inexperience with the class by saying, ‘This is my first class. I am very nervous.’ Another teacher attempted to discipline the learners by ‘threatening’ them with his inexperience: ‘So, this is my first night over here, so listen to what I want you to do, OK?’ This preoccupation with student behaviour may be a manifestation of the ‘survival’ stage in the process of becoming a teacher (Tsui, 2003), where the novice is consumed by such issues as ‘reconciling educational ideals and realities, maintaining classroom discipline, establishing an appropriate relationship with students, playing the role of a teacher, and having an adequate mastery of knowledge as well as instructional methods’ (ibid, p. 79).

Positive experiences here lead to the ‘stabilization’ stage, where teachers gain confidence in themselves and their teaching. Only then do they move away from concerns about self to concerns about instruction and student achievement (Kilgore, Ross & Zbikowski, 1990), reconcile their theoretical and practical knowledge, and begin to draw fulfilment from their chosen profession.

A notable finding of this study is also congruence in the one CF technique (namely, recasts) the pre-service teachers preferred and actually used in teaching. The link may be indicative of three things. First, recasts are the only CF technique the teachers know. Second, the teachers prefer recasts to other techniques. Third, the teachers see recasts as the least disturbing, yet effective, CF type. Given the limited knowledge and practice with CF, recasts were likely the only feedback type the teachers knew; however, it is possible that they were exposed to other CF techniques. The teachers in this study indicated receiving written and oral feedback when learning L2. This feedback was likely varied and most importantly, noticed, as evidenced by the finding that the participants who received feedback on grammar felt more strongly about treating grammar errors than those who did not. Furthermore, the teachers used explicit correction to address 17% of errors, suggesting variety in their CF repertoire. The final reason for the preference may lie in the teachers’ preoccupation with affective variables of CF and the fear of breaking communication flow. It is possible that, due to their unobtrusive nature, recasts were seen as a ‘natural’ and only way to correct without hindering communication.

Teachers’ preference for recasts has been documented widely (e.g. Jensen, 2001; Kamiya, 2014; Lee, 2013; Lyster & Ranta, 1997; Roothoof, 2014; Yoshida, 2008, 2010). The implicit nature of recasts allows teachers to focus on accuracy without embarrassing learners (Kamiya, 2014), especially when their proficiency makes self-correction challenging (Yoshida, 2010). Although Japanese as a foreign language teachers believed in the effectiveness of prompts more than recasts, they used the latter to move the lesson along and to prevent the unnecessary embarrassment that attempts at self-correction in front of peers may bring (Yoshida, 2010), a finding echoed by the preferences of EFL teachers (Sepehrinia & Mehdizadeh, 2016) and Spanish literature professors (Zyzik & Polio, 2008). Furthermore, novice teachers’ concern for learners’ feelings about CF and lack of teaching experience may be the reasons why they avoid explicit correction (Rahimi & Zhang, 2015) but instead, prefer recasts and clarification requests (Junqueira & Kim, 2013).

VI Conclusions

The findings of this study suggest that pre-service language teachers carry beliefs about CF and its different types from their own learning into their teaching. The limited knowledge they possess about how, when, and in what amounts to provide feedback, however, prevents them from reconciling their beliefs with classroom practices, leading them to behave as native-speaking interlocutors, not as language teachers. Teacher education and additional teaching experience are likely to bridge this gap, as is training that addresses concepts specific to CF (i.e. what constitutes an error, the role of correction in promoting learning, whether errors should be corrected, and if so, then, which errors, when, how, and by whom). Reading about feedback alone will not be enough; the trainees will also need to engage with the research through hands-on learning projects, critical assessment

of their and peer CF beliefs and practices, and investigations of their own. Reflection on the resulting knowledge and teaching practices is likely to promote understanding of teachers' beliefs and corrective choices and reinforce the bi-directionality of the beliefs-practices relationship.

Still, the use of written questionnaires to capture the participants' beliefs is a limitation since the provided statements represent ideas/wording of the researchers, which may not have fully captured the teachers' attitudes. Another limitation is that the participants were not given a chance to explain their beliefs or CF choices, with conclusions having been drawn from the trainees' responses on the beliefs questionnaire. Including stimulated recall data and/or interview data could yield a more comprehensive picture of the respondents' beliefs. Furthermore, because the teachers planned different lessons, the tasks they used varied. It may be argued that had the task been controlled for, the findings would have been more conclusive (Basturkmen et al., 2004). Similarly, the teaching style was not controlled for and may present another limitation of the study. Finally, it is important to acknowledge that the beliefs questionnaire probed the participants' hypothetical behaviours, but the classroom interactions focused on real-life actions. As such, the comparisons may be seen unsound; yet, our primary goal was to understand the kind of knowledge/beliefs about CF that teacher-trainees come in with (as this is something that teacher-educators are advised to do early on in the training) and to see if their previous learning experiences influence what they think is important feedback-wise and what they end up doing with these in the classroom. To this end, this study went beyond investigations that simply probe beliefs without comparing their practical manifestations.

While recognizing these various limitations, future research could nevertheless build on the methodological framework presented here and employ it in different contexts, with different populations, as well as draw comparisons between these contexts and populations. If a beliefs questionnaire is used again, it should include items accounting for some of the moderating variables (e.g. learner proficiency level, aptitude, affect, error type) that have been uncovered by research investigating teacher CF practices. For example, it may be worth considering error type in the formulation of the questionnaire items since research shows that feedback, uptake, and noticing of CF varies depending on error type (e.g. Lyster, 1998; Mackey, Gass & McDonough, 2000). The effects of CF training on teachers' beliefs and practices should also be examined.

Dedication and Acknowledgement

We dedicate this article to the memory of Dr. Elizabeth Gatbonton, who was instrumental in guiding this investigation and was key to seeing this work come to life. Unfortunately, Dr. Gatbonton did not live long enough to see it published. It is our hope that this research will inspire others, as it has us, to continue Dr. Gatbonton's work by exploring ideas related to various aspects of L2 teaching and learning.

We would like to thank the two anonymous *Language Teaching Research* reviewers for their valuable comments and suggestions. Any errors that remain are, of course, ours alone.

Funding

This research received no specific grant from any funding agency in the public, commercial, or not-for-profit sectors.

Notes

1. The three programs prepare future teachers of English-as-a second-language to practise in the province. The programs adhere to the province-regulated teacher training requirements and regularly undergo the mandated accreditation process.
2. Andrews (1997, 1999, 2003) has also shown a clear link between teachers' knowledge (teacher language awareness, TLA) and their pedagogical choices, an area that is rarely accounted for in L2 research. To this end, it is possible that because the TLA of the participating student-teachers was still developing, at the time of the investigation they were unable/unready to recognize that particular errors were being made, which prevented them from addressing them with feedback.

References

- Agudo, J. (2014). Beliefs in learning to teach: EFL student teachers' beliefs about corrective feedback. *Utrecht Studies in Language and Communication*, 27, 209–362.
- Almarza, G.G. (1996). Student foreign language teacher's knowledge growth. In D., Freeman, & J.C. Richards (Eds.), *Teacher learning in language teaching* (pp. 50–78). New York: Cambridge University Press.
- Andrews, S. (1997). Metalinguistic awareness and teacher explanation. *Language Awareness*, 6, 147–161.
- Andrews, S. (1999). Why do L2 teachers need to 'know about language'? Teacher metalinguistic awareness and input for learning. *Language and Education*, 13, 161–177.
- Andrews, S. (2003). Teacher language awareness and the professional knowledge base of the L2 teacher. *Language Awareness*, 12, 81–95.
- Arnett, K., & Turnbull, M. (2008). Teacher beliefs in second and foreign language teaching: A state of the art review. In Siskin H.J. (Ed.), *From thought to action: Exploring beliefs and outcomes in the foreign language program* (pp. 9–29). Boston, MA: Thomson Heinle.
- Baleghizadeh, S., & Rezaei, S. (2010). Pre-service teacher cognition on corrective feedback: A case study. *Journal of Technology and Education*, 4, 321–327.
- Barcelos, A.M.F., & Kalaja, P. (2011). Editorial: Introduction to beliefs about SLA revisited. *System*, 39, 281–289.
- Basturkmen, H. (2012). Review of research into the correspondence between language teachers' stated beliefs and practices. *System*, 40, 282–295.
- Basturkmen, H., Loewen, S., & Ellis, R. (2004). Teachers' stated beliefs about incidental focus on form and their classroom practices. *Applied Linguistics*, 25, 243–272.
- Bell, T. (2005). Behaviours and attitudes of effective foreign language teachers: Results of a questionnaire study. *Foreign Language Annals*, 38, 259–270.
- Berliner, D.C. (1995). The development of pedagogical expertise. In Siu, P.K., Tam, T.P. & Xianggan, J. (Eds.), *Quality in education: Insights from different perspectives* (pp. 1–14). Hong Kong: Hong Kong Educational Research Association.
- Borg, S. (1998). Teachers' pedagogical systems and grammar teaching: A qualitative study. *TESOL Quarterly*, 32, 9–38.
- Borg, S. (2003). Teacher cognition in language teaching: A review of research on what language teachers think, know, believe, and do. *Language Teaching*, 36, 81–109.
- Borg, S. (2006). *Teacher cognition and language education: Research and practice*. London: Continuum.
- Borg, S. (2009). Language teacher cognition. In Burns, A., & J.C. Richards (Eds.), *The Cambridge guide to second language teacher education* (pp. 163–171). Cambridge: Cambridge University Press.

- Borg, S. (2011). The impact of in-service teacher education on language teachers' beliefs. *System*, 39, 370–380.
- Breen, M.P., Hird, B., Milton, M., Oliver, R., & Thwaite, A. (2001). Making sense of language teaching: Teachers' principles and classroom practices. *Applied Linguistics*, 22, 470–501.
- Brown, A.V. (2009). Students' and teachers' perceptions of effective foreign language teaching: A comparison of ideals. *The Modern Language Journal*, 93, 46–60.
- Brumfit, C. (1997). The teacher as educational linguist. In van Lier, L., & D. Corson (Eds.), *Encyclopedia of language and education: Volume 6: Knowledge about language* (pp. 163–172). Dordrecht: Kluwer Academic.
- Busch, D. (2010). Pre-service teacher beliefs and language learning: The second language acquisition as an agent for change. *Language Teaching Research*, 14, 318–337.
- Calderhead, J. (1996). Teachers: Beliefs and knowledge. In Berliner, D.C., & R.C. Calfee (Eds.), *Handbook of educational psychology* (pp. 709–725). New York: Macmillan.
- Cathcart, R., & Olsen, J. (1976). Teachers' and students' preferences for correction of classroom conversation errors. In Fanselow, J., & R. Crymes (Eds.), *On TESOL '76* (pp. 41–53). Washington, DC: TESOL.
- Clark, G., & Peterson, P.L. (1986). Teachers thought processes. In Wittrock, C.M., (Ed.), *Handbook on research on teaching* (pp. 255–296). New York: Macmillan.
- Doughty, C., & Varela, E. (1998). Communicative focus on form. In C. Doughty, & J. Williams (Eds.), *Focus on form in classroom second language acquisition* (pp. 114–138). New York: Cambridge University Press.
- Doughty, C., & Williams, J. (1998). Pedagogical choice in focus on form. In Doughty, C., & J. Williams (Eds.), *Focus on form in classroom second language acquisition* (pp. 197–262). New York: Cambridge University Press.
- Ellis, R. (2006). Researching the effects of form-focussed instruction on L2 acquisition. *AILA Review*, 19, 18–41.
- Ellis, R. (2015). *Understanding second language acquisition*. 2nd edition. Oxford: Oxford University Press.
- Fang, Z. (1996). A review of research on teacher beliefs and practices. *Educational Research*, 38, 47–65.
- Farrokhi, F. (2007). Teachers' stated beliefs about corrective feedback in relation to their feedback practices. *Journal of Faculty of Letters and Humanities*, 200, 91–131.
- Gatbonton, E. (2008). Looking beyond teachers' classroom behaviour: Novice and experienced ESL teachers' pedagogical knowledge. *Language Teaching Research*, 12, 161–182.
- Gruszynski-Weiss, L. (2014). Graduate instructor in-class cognition and feedback provision over time. In Miller, T., Martin, K.I., Eddington, C.M., et al. (Eds.), *Selected proceedings of the 2012 Second Language Research Forum* (pp. 227–239). Somerville, MA: Cascadilla Proceedings Project.
- Gruszynski-Weiss, L. (2016). Factors influencing Spanish instructors' in-class feedback decisions. *Modern Language Journal*, 100, 255–275.
- Jean, G., & Simard, D. (2011). Grammar learning in English and French L2: Students' and teachers' beliefs and perceptions. *Foreign Language Annals*, 44, 465–492.
- Jensen, M.T. (2001). Corrective feedback to spoken errors in adult ESL classrooms. Unpublished doctoral dissertation, Monash University, Clayton, VIC, Australia.
- Johnson, K.E. (1992). The relationship between teachers' beliefs and practices during literacy instruction for non-native speakers of English. *Journal of Reading Behavior*, 24, 83–108.
- Junqueira, L., & Kim, Y. (2013). Exploring the relationship between training, beliefs, and teachers' corrective feedback practices: A case study of a novice and an experienced ESL teacher. *Canadian Modern Language Review*, 69, 181–206.

- Kagan, D.M. (1992). Implications of research on teacher belief. *Educational Psychologist*, 27, 65–90.
- Kamiya, N. (2014). The relationship between stated beliefs and classroom practices of oral corrective feedback. *Innovation in Language Learning and Teaching*, 10, 206–219.
- Kamiya, N., & Loewen, S. (2014). The influence of academic articles on an ESL teacher's stated beliefs. *Innovation in Language Learning and Teaching*, 8, 205–218.
- Kilgore, K., Ross, D., & Zbikowski, J. (1990). Understanding the teaching perspectives of first-year teachers. *Journal of Teacher Education*, 41, 28–38.
- Lee, E. (2013). Corrective feedback preferences and learner repair among advanced ESL students. *System*, 41, 217–230.
- Li, S. (2010). The effectiveness of corrective feedback in SLA: A meta-analysis. *Language Learning*, 60, 309–365.
- Lo, Y.-H.G. (2005). Relevance of knowledge of second language acquisition: An in-depth case study of a non-native EFL teacher. In Bartels, N. (Ed.), *Applied linguistics and language teacher education*. New York: Kluwer Academic.
- Long, M. (1996). The role of the linguistic environment in second language acquisition. In Ritchie, W.C., & T.K. Bhatia (Eds.), *Handbook of language acquisition: Volume 2: Second Language Acquisition* (pp. 413–468). New York: Academic Press.
- Lortie, D. (1975). *Schoolteacher: A sociological study*. Chicago, IL: University of Chicago Press.
- Lyster, R. (1998). Negotiation of form, recasts, and explicit correction in relation to error types and learner repair in immersion classrooms. *Language Learning*, 48, 183–218.
- Lyster, R., & Ranta, L. (1997). Corrective feedback and learner uptake: Negotiation of form in communicative classrooms. *Studies in Second Language Acquisition*, 19, 37–61.
- Lyster, R., & Saito, K. (2010). Oral feedback in classroom SLA: A meta-analysis. *Studies in Second Language Acquisition*, 32, 265–302.
- Lyster, R., Saito, K., & Sato, M. (2013). Oral corrective feedback in second language classrooms. *Language Teaching*, 46, 1–40.
- Mackey, A., & Gass, S.M. (2016). *Second language research: Methodology and design*. 2nd edition. New York: Routledge.
- Mackey, A., & Goo, J. (2007). Interaction research in SLA: A meta-analysis and research synthesis. In Mackey, A. (Ed.), *Conversation interaction in SLA: A collection of empirical studies* (pp. 408–452). New York: Oxford University Press.
- Mackey, A., Gass, S.M., & McDonough, K. (2000). How do learners perceive implicit negative feedback? *Studies in Second Language Acquisition*, 22, 471–497.
- Mackey, A., Polio, C., & McDonough, K. (2004). The relationship between experience, education and teachers' use of incidental focus-on-form techniques. *Language Teaching Research*, 8, 301–327.
- Mori, R. (2011). Teacher cognition in corrective feedback in Japan. *System*, 39, 451–467.
- Nassaji, H. (2015). *The interactional feedback dimension in instructed second language learning: Linking theory, research, and practice*. London: Bloomsbury.
- Nassaji, H. (2016). Anniversary article: Interactional feedback in second language teaching and learning: A synthesis and analysis of current research. *Language Teaching Research*, 20, 535–562.
- Nassaji, H., & Kartchava, E. (Eds.) (2017). *Corrective feedback in second language teaching and learning: Research, theory, applications, implications*. Oxon: Routledge.
- Ng, E.K.J., & Farrell, T.S.C. (2003). Do teachers' beliefs of grammar teaching match their classroom practices? A Singapore case study. In Deterding, D., Brown, A., & E.L. Low (Eds.), *English in Singapore: Research on Grammar* (pp. 128–137). Singapore: McGraw Hill.
- Peacock, M. (2001). Pre-service ESL teachers' beliefs about second language learning: A longitudinal study. *System*, 29, 177–195.

- Pica, T. (1992). The textual outcomes of native-speaker–non-native speaker negotiation: What do they reveal about second language learning? In Kramsch, C., & S. McConnell-Ginet (Eds.), *Text and context: Cross-disciplinary perspectives on language study* (pp. 198–237). Lexington, MA: D.C. Heath and Company.
- Pica, T. (1994). Research on negotiation: What does it reveal about second language learning conditions, processes and outcomes? *Language Learning*, 44, 493–527.
- Rahimi, M., & Zhang, L. (2015). Exploring non-native English-speaking teachers' cognitions about corrective feedback in teaching English oral communication. *System*, 55, 111–122.
- Roothoof, H. (2014). The relationship between adult EFL teachers' oral feedback practices and their beliefs. *System*, 46, 65–79.
- Russell, J., & Spada, N. (2006). The effectiveness of corrective feedback for the acquisition of L2 grammar. In Norris, J.M., & L. Ortega (Eds.), *Synthesizing research on language learning and teaching* (pp. 133–164). Philadelphia, PA: John Benjamins.
- Sato, K., & Kleinsasser, R.C. (1999). Communicative language teaching (CLT): Practical understandings. *The Modern Language Journal*, 83, 494–517.
- Schulz, R.A. (1996). Focus on form in the foreign language classroom: students' and teachers' views on error correction and the role of grammar. *Foreign Language Annals*, 29, 343–364.
- Schulz, R.A. (2001). Cultural differences in student and teacher perceptions concerning the role of grammar instruction and corrective feedback: USA – Columbia. *The Modern Language Journal*, 85, 244–258.
- Schmidt, R., & Frota, S. (1986). Developing basic conversational ability in second language: A case study of an adult learner of Portuguese. In Day, R. (Ed.), *Talking to learn: Conversation in second language acquisition* (pp. 237–326). Rowley, MA: Newbury House.
- Sepehrinia, S., & Mehdizadeh, M. (2016). Oral corrective feedback: Teachers' concerns and researchers' orientation. *The Language Learning Journal*. Electronic publication ahead of print version. Published online: 1 June 2016 (doi: 10.1080/09571736.2016.1172328).
- Sheen, Y., & Ellis, R. (2011). Corrective feedback in language teaching. In Hinkel, E. (Ed.), *Handbook of research in second language teaching and learning* (pp. 593–610). New York: Routledge.
- Swain, M. (1993). The output hypothesis: Just speaking and writing aren't enough. *The Canadian Modern Language Review*, 50, 158–164.
- Swain, M. (1995). Three functions of output in second language learning. In Cook, G., & B. Seidlhofer (Eds.), *Principle and practice in applied linguistics* (pp. 124–144). Oxford: Oxford University Press.
- Tsui, A.B.M. (2003). *Understanding expertise in teaching: Case studies of ESL teachers*. New York: Cambridge University Press.
- VanPatten, B. (1990). Attending to form and content in the input: An experiment in consciousness. *Studies in Second Language Acquisition*, 12, 287–301.
- Vásquez, C., & Harvey, J. (2010). Raising teachers' awareness about corrective feedback through research replication. *Language Teaching Research*, 14, 421–443.
- Woods, D. (1996). *Teacher cognition in language teaching: Beliefs, decision-making, and classroom practice*. Cambridge: Cambridge University Press.
- Woods, D., & Çakir, H. (2011). Two dimensions of teacher knowledge: the case of communicative language teaching. *System*, 39, 381–390.
- Yoshida, R. (2008). Teachers' choice and learners' preferences of corrective feedback types. *Language Awareness*, 17, 78–93.
- Yoshida, R. (2010). How do teachers and learners perceive corrective feedback in the Japanese language classroom? *The Modern Language Journal*, 94, 293–314.
- Zyzik, E., & Polio, C. (2008). Incidental focus on form in university Spanish literature courses. *The Modern Language Journal*, 92, 53–70.

Appendix I. Background questionnaire

At the beginning of every session, I ask my students to tell me about themselves. I would appreciate it very much if you, like so many before you, would share this information with me. Please answer ALL the questions. Thank you for your time.

FIRST NAME: _____ LAST NAME: _____

AGE: _____ GENDER: Male Female

EDUCATIONAL BACKGROUND (TO DATE):

a) Program currently enrolled in: _____
Years in the program: _____

b) Courses currently registered in (please list *ALL*): _____

c) Have you taken the following courses? If YES, please specify when you took the course(s).

COURSES	YES	NO	WHEN?
Phonology for Teachers			
Language Acquisition			
Methodology I			
Methodology II			
TESL Pedagogy: General			
Practicum			
Error Analysis			
Testing, Evaluation and Course Design			

d) Other degrees already completed (e.g. B.A. – psychology): _____

LANGUAGE LEARNING EXPERIENCE (TO DATE):

a) Mother tongue(s): _____
Second language(s): _____

b) Second language(s) learned in a classroom: _____
How many years *per language*? _____

c) **HOW MUCH of the following activities did you engage in when you were learning your second/foreign language(s)?** Please circle your answer on the scale to the right of each activity, where 1 = **NOT AT ALL** and 9 = **A LOT**. Circle 5 if you are **NOT SURE**.

	<i>NOT AT ALL</i>	<i>A LOT</i>
Listening to teacher’s explanation of grammar rules	1 2 3 4 5 6 7 8 9	
Learning and practising grammar rules	1 2 3 4 5 6 7 8 9	
Participating in grammar drills	1 2 3 4 5 6 7 8 9	
Working on tasks in pairs or groups	1 2 3 4 5 6 7 8 9	
Working on tasks as a class	1 2 3 4 5 6 7 8 9	
Learning vocabulary	1 2 3 4 5 6 7 8 9	
Using a dictionary in class	1 2 3 4 5 6 7 8 9	
Writing in your second/foreign language	1 2 3 4 5 6 7 8 9	
Your teacher correcting your WRITTEN work	1 2 3 4 5 6 7 8 9	
Reading in your second/foreign language	1 2 3 4 5 6 7 8 9	
Listening to tapes	1 2 3 4 5 6 7 8 9	
Watching videos/movies	1 2 3 4 5 6 7 8 9	
Engaging in Pronunciation work (e.g. learning the rules, practising choral repetitions/drills, etc.)	1 2 3 4 5 6 7 8 9	

	<i>NOT AT ALL</i>	<i>A LOT</i>
Going out as a class to practise your second/foreign language	1 2 3 4 5 6 7 8 9	
Practising oral skills (e.g. games, presentations, role-plays, dialogs, etc.)	1 2 3 4 5 6 7 8 9	
Being corrected by your teacher when SPEAKING	1 2 3 4 5 6 7 8 9	
Finding your own errors and correcting them yourself	1 2 3 4 5 6 7 8 9	
Other (please specify):	1 2 3 4 5 6 7 8 9	

TEACHING EXPERIENCE (TO DATE):

a) **How much teaching experience do you have so far? Indicate the number of YEARS.**

Teaching English in North America: _____

Teaching English abroad: _____

Teaching another language (please specify the language): _____

Teaching subjects other than language (e.g. math, science): _____

Others (sports, music, CPR, etc.): _____

b) **If you have taught English as a Second or Foreign Language before, estimate HOW MUCH TIME you spent on any of the following activities in a typical day in your classroom.** Please circle your answer on the scale to the right of each activity, where 1 = **NO TIME AT ALL** and 9 = **A LOT OF TIME**. Circle 5 if you are **NOT SURE**.

	<i>NO TIME A LOT</i>					<i>AT ALL OF TIME</i>			
Explaining rules of grammar	1	2	3	4	5	6	7	8	9
Making your students learn and practise grammar rules	1	2	3	4	5	6	7	8	9
Giving students drills to practice grammar rules	1	2	3	4	5	6	7	8	9
Asking students to work on tasks in pairs or groups	1	2	3	4	5	6	7	8	9
Asking students to work on tasks as a class	1	2	3	4	5	6	7	8	9
Teaching Vocabulary	1	2	3	4	5	6	7	8	9
Encouraging students to use a dictionary in class	1	2	3	4	5	6	7	8	9
Asking students to write in the second/foreign language	1	2	3	4	5	6	7	8	9
Correcting your students' errors in WRITING	1	2	3	4	5	6	7	8	9
Asking students to read in the second/foreign language	1	2	3	4	5	6	7	8	9
Having them listen to tapes	1	2	3	4	5	6	7	8	9
Having students watch videos/movies	1	2	3	4	5	6	7	8	9
Engaging in Pronunciation work (e.g. teaching the rules, practising choral repetitions/drills, etc.)	1	2	3	4	5	6	7	8	9
Taking students out as a class to practise their second/foreign language	1	2	3	4	5	6	7	8	9
Asking students to practise oral skills (e.g. games, presentations, role-plays, dialogs, etc.)	1	2	3	4	5	6	7	8	9
Correcting your students' errors in SPEAKING	1	2	3	4	5	6	7	8	9
Letting your students find and correct their own errors	1	2	3	4	5	6	7	8	9
Other (please specify):	1	2	3	4	5	6	7	8	9

Thank you for filling out this questionnaire!

Appendix 2. Beliefs questionnaire: Part I.

Thank you for agreeing to complete this questionnaire. The information you provide will be very useful in helping us understand your views on language learning and language teaching. We ask you to please answer ALL the questions.

FIRST NAME: _____ LAST NAME: _____
 AGE: _____ GENDER: Male Female

Indicate how well you agree with each of the following statements. Please circle your answer on the scale to the right of each statement, where 1 = *STRONGLY DISAGREE* and 9 = *STRONGLY AGREE*. Please use the *entire scale* in making your decisions.

	<i>STRONGLY DISAGREE</i>					<i>STRONGLY AGREE</i>			
1. The study of grammatical rules is essential to learning a second language (L2) / foreign language (FL).	1	2	3	4	5	6	7	8	9
2. Learners can pick up accurate stress and intonation by simply being exposed to a L2/FL.	1	2	3	4	5	6	7	8	9

	<i>STRONGLY DISAGREE</i>				<i>STRONGLY AGREE</i>				
3.	Second language (L2) / foreign language (FL) learners fear being corrected by their language teachers.								
4.	Teaching pronunciation in a language classroom is a waste of time.								
5.	Teachers should correct ALL errors that learners make in class, so that they learn to speak accurately.								
6.	The use of a bilingual (L1–L2) dictionary promotes learners' success in learning L2.								
7.	Before learners begin to complete a communicative task, they should be formally taught all the vocabulary items they need in order to complete this task.								
8.	Teachers should systematically correct PERSISTENT errors in their learners' language production.								
9.	Teacher correction is instrumental in the learners' understanding of how their L2/FL works.								
10.	Working in pairs or in groups with classmates who do not speak English well is detrimental to learners.								
11.	Teachers should never use the learners' native language in the classroom.								
12.	Having the teacher provide the correct form without signalling the presence of an error keeps the learners' anxiety level low.								
13.	Errors are signals of what a learner CURRENTLY knows about his/her L2/FL.								
14.	Learners can pick up good pronunciation habits by simply being exposed to a L2/FL.								
15.	Language drills (e.g. making students repeat language items) do not have a place in a communicative classroom.								
16.	Teachers should leave learners alone during group work.								
17.	If NOT corrected, L2/FL learners' motivation to continue the study of the language will decrease.								
18.	Reading is the best way to increase one's vocabulary in L2/FL.								
19.	Most learners like being corrected in class.								
20.	Some pedagogical guidance is required to acquire grammar.								
21.	Teachers should treat learners' mistakes in separate lessons or as part of homework.								
22.	Good teachers are born, not made.								
23.	Repeating the student's utterance minus the error enables teachers to draw their learners' attention to the error while maintaining the flow of communication.								
24.	Error correction during communicative activities is disruptive to the flow of learners' speech.								

	<i>STRONGLY DISAGREE</i>					<i>STRONGLY AGREE</i>			
25.	Incidental teaching of vocabulary items while learners are engaged in communication tasks is useful in promoting learning.								
26.	Teachers should deal with learners' errors at the END of a lesson.								
27.	The goal of teaching pronunciation is to eliminate any trace of foreign accent in learners' speech.								
28.	Pointing out learners' errors raises their anxiety level.								
29.	Learners like the study of grammar.								
30.	Learners benefit more from studying vocabulary alone rather than in a class.								
31.	Teachers should correct a learner's error IMMEDIATELY after the error has been made.								
32.	Teacher training is essential in preparing effective teachers.								
33.	Telling the learner that there is an error and vocally stressing the correct form helps learners notice the difference between what they know and what they don't know in a L2/FL.								
34.	Explaining grammar rules helps learners gain the competence they need to communicate in their L2/FL.								
35.	Although they speak English fluently, teachers whose mother tongue is not English cannot be as effective as teachers who are native speakers of English.								
36.	Error correction is essential in promoting L2/FL learning.								
37.	Memorizing dialogs is an effective technique in helping learners develop communication skills.								
38.	Rephrasing the learner's statement minus the error is less intrusive than telling the learner that there is an error and providing the correct form.								
39.	Many of the errors learners make in L2/FL can be traced back to elements found in their native language (L1).								
40.	Pointing out learners' errors will push them to self-correct.								
41.	Teachers teach the way they were taught.								
42.	It is NOT necessary to correct all errors if the important ones are dealt with at the right time.								
43.	Non-native speakers of a L2/FL usually make better language instructors than the native speakers of that language.								

Thank you for filling out this questionnaire!

BELIEFS QUESTIONNAIRE – PART 2 (sample)

FIRST NAME: _____ LAST NAME: _____

The statements in this section have been taken from the video prompts that you will now be shown of an English class of adult learners. The statements correspond to errors in the prompts. For each statement, state whether you would correct the corresponding error. Justify your answer either way.

Please note that the underlined words in the statements below indicate the error.

Statement 1: 'I have only one children.'

T: Do you have any children?

S: Yes, I have.

T: How many children do you have?

S: I have only one children.**Would you correct the above error?** Yes No

If your answer is 'Yes', please indicate below what you would say to the student.

I WOULD SAY:

If your answer is 'No', please explain why you would NOT correct the error.

BELIEFS QUESTIONNAIRE – PART 3 (sample)

FIRST NAME: _____ LAST NAME: _____

The statements in this section were taken from the video prompts that you have just watched of an English class of adult learners. The statements correspond to errors in the prompts. For every statement containing an error, you are given six audio corrections of the given error. The corrections are also given below. For every correction listed, state the usefulness of that correction on a scale of 1 to 9, 1 being 'NOT AT ALL USEFUL' and 9 'VERY USEFUL'.

Please note that the underlined words in the statements below indicate the error. The words in italics in the correction strategies denote stress placed on the word(s) in speech.

Statement 1: 'I have only one children.'

T: Do you have any children?

S: Yes, I have.

T: How many children do you have?

S: I have only one children.

	NOT AT ALL USEFUL	VERY USEFUL
'One child.'	1 2 3 4 5 6 7 8 9	
'No, what is the singular form of 'children'?'	1 2 3 4 5 6 7 8 9	
'Oh, you have only one child.'	1 2 3 4 5 6 7 8 9	
'You have one child. Is it a boy or a girl?'	1 2 3 4 5 6 7 8 9	
'We don't say <i>one children</i> [stressed]. You should say: <i>one child</i> [stressed].'	1 2 3 4 5 6 7 8 9	
'How many children did you say you have?'	1 2 3 4 5 6 7 8 9	