

Corrective Feedback to Second Language Learners of American Sign Language

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ABSTRACT

Corrective Feedback to Second Language Learners of American Sign Language

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This study focused on the feedback practices that Deaf American Sign Language teachers used with hearing students, who are learning both a new second language (L2) and a new modality (signed versus spoken). Feedback is well-researched in the L2 teaching of spoken languages but is under-researched in sign languages, despite the growth in hearing adults' enrollment in sign language courses (Bochner et al., 2011). Four introductory classes for university students taught by two instructors were observed for over 30 hours. An observation grid captured instances of feedback to handshape, movement, and place of articulation errors, challenging features for hearing students. The analyses examined types of feedback (based on Lyster and Ranta's (1997) widely adopted categories), recourse to a spoken language (English) for explanations, and students' responses (uptake) to the feedback. Teacher interviews probed perspectives on ASL acquisition, correction strategies and teaching philosophies. The findings revealed that, in contrast with research on spoken languages, i) reformulated utterances were the most common forms of feedback (direct corrections followed by recasts) and iii) students' repetition of the reformulation was frequent. Prompts (elicitations and clarifications requests) and recourse to English were rare. The predominance of direct corrections is consistent with research on Australian sign language (Willoughby, Linder, Ellis and Fisher (2015), and adds new information on the efficacy of this type of feedback in terms of student responses. The results further our understanding of feedback in second language pedagogy in general, and point to several future directions for research on the teaching of signed languages.

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Contribution of Authors

Leslie Gil conceptualized the idea for this study, designed the methodology, pilot tested the data collection instruments, conducted data collection, analyzed the data and authored this manuscript. Throughout this process, Laura Collins offered immensely helpful insights and comments that have greatly improved the methodology and manuscript.

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Chapter 1: Introduction

Languages have been intriguing to me since elementary school; however, my interest in American Sign Language (ASL) began rather abruptly while visiting my best friend at The Rochester Institute of Technology (RIT) during my junior year of high school. According to the New York Times, the city of Rochester has the highest deaf¹ population per capita of anywhere in the United States, which is due in no small part to RIT's National Technical Institute for the Deaf (NTID) (York, 2006). Since NTID was conceived and established in the late 60s, Rochester has become a hub of Deaf culture as graduates settle into the community and local businesses prioritize accessibility to expand their clientele (York, 2006). In turn, this has attracted Deaf individuals, families and professionals from across the country who wish to use ASL and live in an area with a strong, vibrant Deaf community, even if they are unaffiliated with NTID, leading to an increase in opportunities for using ASL and for hearing people interested in learning ASL as classes have become widely offered in Rochester schools and universities (York, 2006). My friend, who is hard of hearing (HoH), was a freshman starting an undergraduate engineering degree and learning ASL. Walking around campus, I was completely captivated by how expressive and vivid signing was, which was a very stark contrast to my dull Latin classes taught using the grammar-translation method. Later that night, I had my first ASL lesson as we sat on the floor of her dorm common room with her friends and practiced the ASL alphabet and basic conversational phrases.

Since then, I have continued learning ASL and found that using linguistics as a lens to study and learn ASL has benefits and disadvantages. Applying skills and concepts I have learned in my study of theoretical and applied linguistics has given me an opportunity to appreciate and understand ASL, and language more generally, beyond what I could have otherwise. As

¹ The lowercase term 'deaf' denotes an audiological status (i.e., hearing loss) while the capitalized term 'Deaf' refers to individuals who were born deaf and are part of the Deaf community (Mann et al., 2014).

fascinating as it is to explore what is known about signed languages, it has been frustrating to read about research and proposals for spoken languages in my linguistics classes and find that so little research on the second language (L2) teaching of ASL exists, and that the existing research is rarely referred to in the L2 pedagogy literature or in meta-analyses of L2 classroom teaching. I have often speculated about how a particular concept might appear in signed languages or signed language classrooms without any evidence beyond my own experiences. One instance of this occurred during a graduate seminar, during a group discussion of different articles on corrective feedback in second language classrooms. We compared the terminology and methodology including the context, target language and modality (spoken and written language). Towards the end of the small group discussion, I began to reflect on my experiences and how corrective feedback in signed language classes might be similar or different from the corrective feedback documented and discussed in the class readings. Although production and perception errors of second modality second languages learners (M2-L2) have received some attention in ASL linguistics literature (Beal & Faniel, 2018; Rosen, 2004; Williams & Newman, 2016), I was disappointed to discover there was scant literature on how ASL teachers respond to errors that could be used to inform either linguistics researchers discussing how corrective feedback functions and aids second language acquisition or ASL teachers interested in empirically-based pedagogy.

For the reading discussion, I read an article by Lyster and Mori (2006) which compared the distribution of corrective feedback types and rates of uptake (the student's immediate response to corrective feedback) in elementary school Japanese and French immersion classes. Corrective feedback was categorized into (a) explicit correction in which the teacher identifies the error and provides the correct form, (b) recast in which the teacher reformulates the utterance with the correct form but does not highlight the error beyond intonational stress, or (c) prompt which includes

several strategies (elicitation, metalinguistic clue, clarification request and repetition) that do not supply the correct form, but rather push the student to retrieve the correct form. Consistent with other corrective feedback research, they reported that recasts were the most common type of feedback provided in both classes, likely because recasts do not disturb the flow of communication, do not divert the student's attention from course content, and support or scaffold the students in expressing thoughts beyond their current linguistic repertoire. Interestingly, although the distribution of corrective feedback was similar in both classes, the student responses were not: prompts were more effective in the French immersion classroom and recasts were more effective in the Japanese immersion classroom. This introduction to corrective feedback piqued my interest in how corrective feedback in signed language classrooms might pattern. Would ASL students be able to interpret a recast as a correction or would they be unable to perceive subtle changes because their attention capacity was overwhelmed by the acquisition of a new phonological system (i.e. the placement, movement, and shape of the hands) in addition to lexical and grammatical inventories? If experienced ASL teachers had little success supporting their students with recasts, would they rely on another corrective feedback strategy instead? Would they have to use written English to provide detailed metalinguistic feedback to students who did not have the vocabulary to discuss abstract linguistic forms in ASL?

Drawing from my own experiences, I remember feeling clumsy and inarticulate while learning how to move my hands and body in ways that felt awkward, feeling very unsure of my signing inside and outside the classroom, and sometimes not being confident that I understood my teacher's instructions or feedback. While some of my hearing ASL instructors did not eschew the use of English, I remember being immensely impressed that my Deaf ASL teachers would do figurative gymnastics to help students understand course material and provide feedback in ASL.

Although I might not have been aware of the different corrective feedback strategies my teachers employed during the class, I remember some of the corrections I received years ago and I think those interactions played a large role in developing an awareness of my signing and drawing my attention to features that, at the time, seemed very subtle to me (e.g., non-manuals such as the use of mouth shape to indicate size or eyebrows to indicate question type, signs with similar handshapes or movement paths) but constitute significant differences in meaning to signers. These ponderings eventually led me to the professor of the aforementioned graduate seminar to hypothesize about the nature of corrective feedback in signed languages, which eventually produced this M.A. thesis advised by this professor, Dr. Laura Collins.

This manuscript reports on an empirical study exploring Deaf teacher feedback on lexical phonology errors (handshape, movement and place of articulation) in M2-L2 introductory ASL classes, focusing on the feedback strategies employed to correct the errors as well as the student response to corrective feedback. The results are discussed in the context of previous research on both signed and spoken L2 teaching and learning. The final chapter details the implications of the findings and makes note of areas that would benefit from further research. Because this thesis is manuscript-based, the second chapter consists of a research paper in the form of a manuscript, in which some content of this chapter and the final chapter are reiterated in condensed or expanded form. It is hoped that the study will contribute to the understanding of how the function and efficacy of corrective feedback may vary across contexts and target languages, and that it will also provide an empirical basis to support future studies of feedback practices in signed language teaching, including how those practices may be similar to and differ from those employed in the teaching of spoken language.

Chapter Two: Manuscript

Hearing adults' interest in signed languages (bimodal second language or M2-L2 learners) has been growing in recent decades; indeed Bochner et al. (2011) claim that ASL has become a frequently taught second language in Canada and the United States. This increased attention has raised pedagogical questions about how signed language teachers can best facilitate language acquisition (Willoughby et al., 2015). Although signed languages have received considerable attention in linguistics since William Stokoe's (1960) seminal publication, relatively little is known about signed language *acquisition* by M2-L2 learners (Beal & Faniel, 2018). Furthermore, there has been little research on M2-L2 pedagogy and few empirical resources for teachers to reference: The American Sign Language Teachers Association certification standards require coursework in ASL literature, ASL linguistics and Deaf culture but do not require knowledge of second language acquisition theory or pedagogy (American Sign Language Teachers Association, 2020; Jacobowitz, 2007). Consequently, teachers of signed languages have little empirical evidence to guide them in choosing feedback strategies for communicating with M2-L2 learners and sometimes have to rely only on their intuition and teaching experiences (Quinto-Pozos, 2011). Feedback is an interesting aspect of M2-L2 pedagogy to examine for two reasons: i) it is a central aspect of L2 pedagogy and is well-researched in spoken language teaching; and ii) there is some evidence that there may be differences between spoken and signed feedback behavior, both in terms of the type of errors that occur, which could impact the types of errors corrected, and the type of feedback that is most commonly used. It is hoped that the findings of this study can be used to deepen the understanding of how corrective feedback facilitates language learning, in particular its function and efficacy in directing students attention to lexical phonology in M2-L2 contexts, and be used to support subsequent study of corrective feedback in signed language classrooms.

Motivation for the Study of Corrective Feedback Practices in Signed Languages

Several SLA theories offer support for the importance of feedback for L2 development, including skill acquisition theory (Lyster & Saito, 2010), socio-cultural theory (Lyster, et al., 2013), and the interactionist perspective (Nassaji, 2016). Empirical research has revealed that corrective feedback is a multi-faceted phenomenon containing reformulations (direct corrections and recasts), prompts (elicitations, clarification requests, and repetitions), student responses (uptake) and types of repair (generation of the correct form). Since Lyster and Ranta's (1997) seminal study of feedback, there has been considerable research documenting contextual, teacher and learner factors contributing to the success, or lack thereof, of corrective feedback, which has led to a number of meta-analyses on moderating variables of feedback (see list in Brown, 2016) and helped inform SLA pedagogies. Some of this research has focused on how a specific variable influences uptake and repair, for instance, corrective feedback strategy (Lyster & Ranta, 1997; Panova & Lyster, 2002, among others) and linguistic target (Brown, 2016; Lyster, 1998; Sheen, 2006), as well as how teachers make use of a student's L1 in corrective feedback (de la Campa & Nassaji, 2009). Despite numerous and varied corrective feedback studies in spoken languages, very little research has been conducted in regard to sign language acquisition by M2-L2 learners and the sparse literature that exists has reported some disparate results in terms of types of feedback used and the linguistic targets of the feedback (Huenerfauth, et al., 2017; Willoughby et al., 2015). Furthermore, although the use of other known languages (such as the L1) of the students to facilitate learning of the target language has received some attention in spoken language classrooms, it remains unexplored in sign language classrooms.

Predominance of Direct Corrections in Signed Language Classes

One of the most intriguing findings from an observational study of six Auslan (Australian Sign Language) teachers was that direct corrections (e.g., explicitly addressing the error and contrasting it with the correct form) was the most common feedback strategy (Willoughby et al., 2015). This behavior differs from findings in spoken language research: recasts (e.g., reformulating the utterance with emphasis on the correct form) have often been reported as the most common, while direct corrections has been relatively rare, accounting for 7% (Lyster & Ranta, 1997) and 2% of feedback turns (Panova & Lyster, 2002). Because Willoughby et al. (2015) is the only existing study of corrective feedback in a signed language, it is unknown whether the prevalence of direct correction exists broadly across signed languages or if it was unique to that context. The use of direct corrections in signed languages may be a reaction to students' inability to perceive the corrective intention of subtle feedback; one of the teachers described an incident in which she had to repeat a correction several times because the student did not recognize the movement path difference between the teacher's production and her own (Willoughby et al., 2015). However, since all but one of the teachers expressed a preference for direct corrections², it is possible that the amount of direct corrections observed was related to their pedagogical philosophy, as teacher preferences have been shown to impact the distribution of feedback strategies (Junqueira & Kim, 2013) and the frequency of linguistic targets (grammatical, lexical and phonological) (Brown, 2016).

Furthermore, Willoughby et al. (2015) focused primarily on error distribution and types of corrective feedback to develop an educational Auslan game. As a result, this study did not report on any measure of efficacy (uptake, the student's immediate response to the feedback, and repair,

² One teacher expressed a preference for prompts which was paralleled in his teaching. It is not reported how significantly this influenced his behavior (i.e., if he used prompts more often than reformulations or simply more often than the other teachers used prompts) (Willoughby et al., 2015).

the student's correction of the error). However, research in spoken languages suggests that direct corrections are very unlikely to produce uptake, or a student response that indicates recognition of the error and demonstrates that the feedback had some benefit (Loewen & Philp, 2006; Lyster & Ranta, 1997; Panova & Lyster, 2002). Given their prevalence in Willoughby et al. (2015), direct corrections may either function differently in signed language classrooms and therefore be more effective, which may provide novel insights on L2 feedback, or they could exhibit the same ineffectual responses documented in spoken languages, which would underscore the need for further research and development of pedagogical tools to support sign language teachers.

Linguistic Targets of Corrective Feedback

Researchers have compared the linguistic targets to analyze how error correction corresponds to error distribution and which errors receive the most feedback, revealing that grammatical errors are the most common and most likely targets of feedback, while phonological targets are fairly rare in spoken languages (Brown, 2016). Although research suggests that students struggle with numerous aspects of signed languages including pronouns, agreement verbs and classifiers (Boers-Viskere & Van Den Bogaerde, 2019), lexical phonology presents unique challenges as signed language learners must overcome the same difficulties as those faced by spoken language learners, while they also master a new set of articulators (the hands, arms, face, and body) and acquire phonological awareness of handshapes, movement, place of articulation (POA) and nonmanual features (which are articulated by the face and serve a variety of functions including marking for conditional clauses, negation, adverbs, topics, questions, and relative clauses) (Rosen, 2004) (for more information on the phonology of signed languages, see Fenlon et al., 2017, and Sandler, 2017). Willoughby et al. (2015) reported that the majority of lexical phonological errors (almost 80%) were either movement, handshape, or location errors. Signed

language studies exploring the acquisition of phonological parameters have shown that handshape and movement pose the most significant challenges to learners (Marentette & Mayberry, 2000; McKee & Mckee, 1992; Ortega & Morgan, 2010; Williams & Newman, 2016), while place of articulation tends to be acquired more easily (Boers-Viskere & Van Den Bogaerde, 2019; Emmorey & Corina, 1990; Grosvald et al., 2012; Morford & Carlson, 2011; Williams & Newman, 2016). Given that research in spoken languages has shown phonological corrections to be the most successful at producing uptake (Lyster, 1998; Sheen, 2006), if signed language teachers focus predominantly on phonological errors, their corrections may have significantly higher rates of uptake compared to spoken language corrections and may offer insight into how to effectively correct phonological errors in spoken languages.

Recourse to English in ASL Classes

A third intriguing aspect of ASL acquisition is the lack of orthography or written form (Rosen, 2008) and the popularity of the No Voice Policy in ASL classrooms, which is common as many Deaf individuals prefer not to use spoken language (Quinto-Pozos, 2011). One consequence of this is that many ASL classes in Canada and the United States use English (the L1 or common language among the students) for writing on the board and class handouts (Quinto-Pozos, 2011), but do not allow or strongly discourage the use of spoken languages (Cooper, Reisman, & Watson, 2011). In spoken language research, there is increased support for the beneficial effects of referring to students' first (L1) and/or known (LN) languages while teaching the target language (Dault & Collins, 2017; Horst et al., 2010). Upon examining L1 use in foreign language classes, de la Campa and Nassaji (2009) reported that the student's L1 was used in more than 10% of teacher talk and included corrective feedback. Since this type of spoken interaction is not encouraged in a No Voice

Policy classroom, the teachers may give feedback via a whiteboard, handout or by referring to course materials (PowerPoint slides or a textbook) and may impact uptake.

In summary, the frequency and efficacy of direct corrections has been shown to be varied and complex in spoken languages; this relationship has likely obscured by the scarcity of direct corrections in some contexts. In contrast, Willoughby et al. (2015) observed that direct corrections were frequent in signed language classrooms but did not report on whether they were effective. Additionally, the teaching of a signed language may offer an interesting opportunity for the teacher to focus on lexical phonology and incorporate other languages known to the students while delivering feedback, neither of which have been explored in previous signed language research. This study seeks to explore the types of lexical phonological errors that generate teacher feedback in M2-L2 introductory ASL classes, and to report on the types of feedback moves employed, including the teachers' use of English (a spoken language common to all students in the context of the present study) and on immediate student response (uptake) to that feedback. Thus, the guiding research questions for this study are as follows:

- (a) What feedback strategies do Deaf instructors of ASL use to correct errors in lexical phonology (handshape, movement, place of articulation) made by hearing learners in an introductory level class?
- (b) Do Deaf instructors of ASL incorporate reference to English in their feedback on lexical phonology errors?
- (c) How do students respond to these corrections?

Because there is very little research on corrective feedback strategies in signed language classes and none reporting on the use of English in corrective feedback or student responses to feedback in signed languages, no specific hypotheses were entertained for this study.

Methodology

Context, Participants and Recruitment

Data were collected through classroom observations and interviews with two experienced ASL instructors (henceforth Teacher A and Teacher B) of four ASL 101 classes, two at a university in Canada and two at a university in the United States. Both teachers self-identify as Deaf and started learning ASL in childhood. Both teachers hold M.A. degrees from Gallaudet University (one in Deaf Studies: Sign Language Teaching and the other in Sign Language Education) and have more than ten years of ASL teaching experience. Teacher A taught three-hour classes once a week and Teacher B taught one hour and fifteen-minute classes twice a week. A No Voice Policy was used in both contexts (spoken language was not permitted), but written English was used in PowerPoint presentations and the *Signing Naturally* curriculum, which draws from a communicative teaching approach (Quinto-Pozos, 2011) and the functional/notional approach (Wilcox & Wilcox, 1991). The students progressed through units covering personal information, family relationships and storytelling. Both teachers limited their use of lectures and preferred to focus on students' production, as such, most classes started with meaning and form of key vocabulary and transitioned into controlled production activities in pairs or small groups.

The students were young adults enrolled in elective ASL classes as part of their university education. Teacher A taught sections with 27 and 24 students, and Teacher B had classes of 18 and 20 students. The students had little or no previous knowledge of ASL (more proficient students were placed in advanced courses). Detailed demographic data were not collected because the focus was not on individuals; data for student responses to feedback were aggregated and anonymous.

The recruitment procedure was initiated by emailing a recruitment letter (Appendix A) to ASL instructors at universities and community institutions across Eastern Canada and the

Northeastern US. If the teacher responded with interest, following ethical approval from the institution, observation and interview dates were scheduled. On the first day of class observations, the teacher signed a consent form (Appendix B) and then the researcher distributed a description of the study (Appendix C) and requested students consent to participate (Appendix D).

Instruments and Procedure

Observation Grid

The observational data were recorded using a grid (Appendix E) developed for this study containing four columns: the type of error corrected, feedback strategy, recourse to English and type of repair. The grid allowed space for additional notes such as more information about the erroneous sign or the type of recourse (whiteboard, handout, etc.). The error categories included handshape (HS), movement (MOV), place of articulation (POA) and other. A handshape error could involve the student substituting a plausible handshape for another in the production of a sign or producing an unacceptable handshape, a student could produce the sign YES (an S-handshape) with a A-handshape or the sign for ART (an I-handshape) with both the pinky and ring finger extended (an unacceptable ASL handshape) (see ASL University, 1997, for lexical entries of the glossed signs and Rosen, 2004, for a comprehensive list of phonological error types made by M2-L2 learners). The uppercase (e.g., YES) indicates a gloss, which is an English word that represents a sign; these are commonly used to refer to lexical items of signed languages in written texts (Quinto-Pozos, 2011). The movement category includes signs that have internal, required movement (i.e., a change in finger, wrist or arm position) (Sandler, 2017), for example, signing PAPER (which has a circular backwards movement of the dominant hand) rather than SCHOOL (which has the same handshape and place of articulation as PAPER with vertical movement). POA errors occur when a student produces a sign in an incorrection location, e.g., a student signing RED

on the cheek rather than the chin. The ‘other’ category captured feedback given to errors such as the use/nonuse of nonmanual features (e.g., WH question markers), grammatical errors (e.g., word order) and so on. No specific counts were made of these errors. These error types are not mutually exclusive, a learner can produce multiple errors in one sign, however, this study focused on the error or errors targeted by corrective feedback.

The feedback categories primarily corresponded to Lyster and Ranta’s (1997) framework for the purpose of facilitating comparison as these categories have been widely adopted (Brown, 2016). Nonmanual features play a large role in prompts, much in the same way that spoken intonation helps the student recognize the error. A clarification request can be a question (e.g., MEAN WHAT?) or articulated only by nonmanuals (i.e., nonmanual features indicate that the utterance was ill-formed, and the teacher waits for the student to self-correct or elaborate). Likewise, a repetition of a movement error would include nonmanuals to indicate that the student may have mis-formed the sign. For an elicitation, the teacher could use an incomplete question, an explicit question or ask the student to reformulate the utterance. If a student made a POA movement error in a sentence, the teacher could repeat the utterance up to the incorrect form and pause to give the student an opportunity to correct the sign or ask for a reformulation more explicitly (e.g., AGAIN). If a student fingerspells a word for which a sign exists, the teacher could ask the student to produce the sign (e.g., SIGN *fingerspelled word* HOW?).

A recast would function similarly in spoken and signed languages, with the teacher restating the utterance with the correction. If a student produced a handshape error (e.g., a D handshape instead of a 1 handshape), the teacher would recast by signing the correct handshape and possibly sign more slowly. A direct correction for a movement error, the teacher might produce the sign slowly and repeatedly, turn her body so the student can more easily see the path, point to

show the path of the movement, use her non-dominant hand to manipulate her dominant hand into the correct position or juxtapose the correct sign with the incorrect sign and using nonmanual features to indicate the correct form. If the error is a minimal pair of the correct sign, the teacher could write both glosses on the board and point to each while showing the corresponding sign (e.g., the signs for MOTHER and FATHER both use the 5-handshape but MOTHER touches the chin with the thumb and FATHER touches in forehead), this example would also be recorded as providing recourse to another known language.

Although there is a significant overlap between the definition of a direct correction and Lyster and Ranta's (1997) 'explicit correct,' there are two important distinctions. First, the term direct correction reflects that a feedback move cannot be inherently implicit or explicit, and second, based on Lyster and Ranta's (1997) finding that recast plus metalinguistic feedback would be better defined as explicit correction than multiple feedback, a direct correction includes the possibility of a metalinguistic comments or explanations (not metalinguistic clues which have been subsumed by the elicitation category). The observation notes include a column to record the use of another language as part of a corrective feedback move. Generally, recourse could be to the student's L1 or another language the learner has acquired before the target language and could be presented orally or visually. In signed language, the teacher could write on a whiteboard, use signs from another signed language, or fingerspell a term (not a loan sign³). In this study, recourse to English consists only of teacher-initiated use, not a student's unprompted use.

The final observation sheet column contained types of repair: no uptake (teacher generated repair), student repetition of the teacher's correction, student generated repair of his or her error and peer generated repair of another student's error. Because this study focused on successful

³ Loan signs include more than one letter of the ASL alphabet but are included as signs in the ASL lexicon, for example STAFF includes S and F handshapes while BANK utilizes all four handshapes (Caselli et al., 2017)

repair, meaning responses that offer evidence that the feedback was beneficial for the student, if the learner responded in a way that Lyster and Ranta (1997) categorized as ‘needs repair’ (i.e., acknowledged the error but did not fix it, repeated the error or uttered a response that did not address the feedback), the observation chart indicated the teacher provided the correct form but it was not repeated by the student, and therefore no uptake occurred. Although separated in Lyster and Ranta’s (1997), repetition of the correct form and incorporation of the correct form, have been collapsed into a repetition category. If the teacher provided the correct form either in a reformulation or in response to the student not answering a prompt and the student repeated the correct form, the repair was marked as repetition. If the teacher used a prompt and the student did not know the correct form, the correction may be provided by another student, in the form of peer-repair (Lyster & Ranta, 1997). Before data collection began, the chart was piloted in an ASL class, which confirmed that the categories and layout worked well for data collection.

Teacher Background Questionnaire and Interview

A background questionnaire (Appendix F) elicited information on the teachers’ education and teaching experience. The interview questions (Appendix G) were adapted from the questionnaire used in Willoughby, Linder, Ellis and Fisher’s (2015) study of Australian sign language. These questions were tailored to this study’s goals (i.e., questions were added to explicitly address proficiency, linguistic targets, efficacy of prompts, the use of English and a comparison spoken and signed feedback) and additional follow-up questions were used to encourage elaboration and clarification as needed.

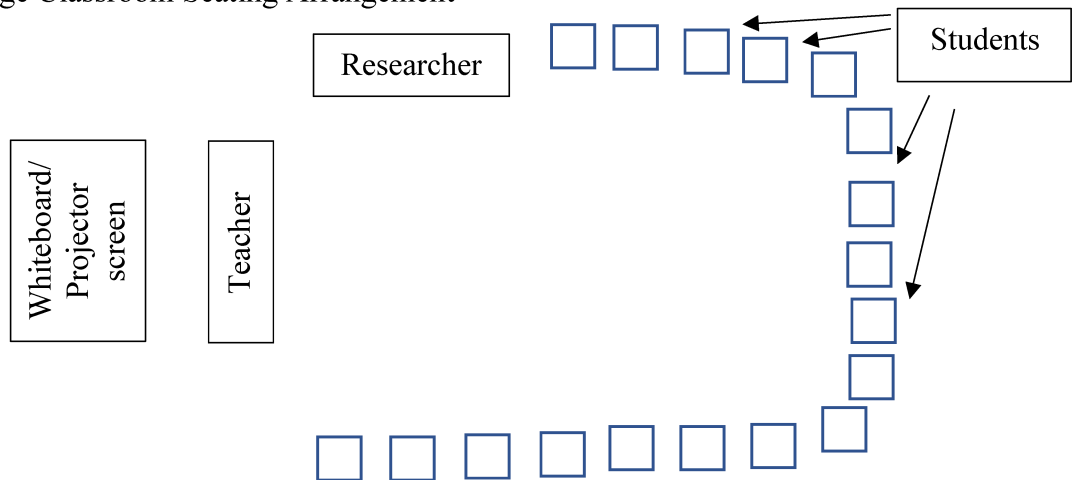
Procedure

Teacher A’s three-hour classes were observed four times, amounting to twenty-four hours of observations: twelve hours for each Class 1 and Class 2. Teacher B’s hour and fifteen-minute

classes were observed three times, four and a half for each Class 3 and Class 4 and nine hours total. Due to geographical constraints, the teachers had to be observed at different points in the semester: Teacher A was observed towards the end of the semester and Teacher B was observed towards the beginning of the semester. Figure 1 shows the seating plan used in all four classrooms, and how the vantage point of the observations made it possible to see both the instructor and the students' signing.

Figure 1.

Sign Language Classroom Seating Arrangement



After all of the observations were completed, the teacher and researcher met in the teacher's office for a video recorded interview in ASL with the assistance of the teacher's preferred interpreter. This was done to enhance the communication, as although the researcher is proficient in ASL (having studied it for five years) and is currently employed at a school for the Deaf and Hard of Hearing, she is not a native signer.

Analyses

The observational data were entered into SPSS files with variables for teacher (A and B), class (A, B, C, D), observation number (1, 2, 3, 4), error type (handshape, movement, POA and

Other), corrective feedback move (Direct correction, Recast, Elicitation, Clarification request, and Repetition), recourse to English (Y/N) and repair (student generated, peer generated, student repetition, teacher generated). For analysis, the data were divided by teacher (A and B) and then further sorted by error type to explore the relative frequencies of handshape, movement and place of articulation corrections. To investigate the distribution and nature of corrective feedback strategies, the data were sorted by correction, recourse to English and repair. Data on uptake were not directly recorded, however, the repair move was used to determine whether there was successful uptake, as student repetition, peer repair and student repair all demonstrate uptake, while the remaining category, teacher generated repair, indicates no uptake.

The interview data were transcribed by the researcher and sent to the teachers to give them the opportunity to verify the accuracy of the transcribed content and to provide any additional information or clarification on their interview responses. No changes or additions were requested. The transcripts were coded for linguistic targets chosen for correction, correction strategies, and use of English for corrections.

Results

Distribution of Corrective Feedback Strategies

Table 1 contains the relative frequency of strategies targeting handshape, movement or POA. In total, Teacher A had 338 instances of feedback and Teacher B had 194, this includes both class sections and all observation dates (four classes for Teacher A and three for Teacher B), given that the findings were similar across classes and observation dates. The raw numbers differ between teachers, given that Teacher A was observed for 24 hours of class, while teacher B was observed for 7.5 hours. If calculated as the ratio between total teaching time and number of corrections, Teacher A averaged just over fourteen corrections per hour (338 corrections over 24

hours), while Teacher B averaged twenty-six corrections per hour (194 corrections in 7.5 hours). Table 1 shows that both teachers favored reformulations in the form of direct corrections which accounted for over half of the corrective feedback by Teacher A and over three quarters of the corrective feedback for Teacher B. The remaining corrections were primarily recasts (which is also a reformulation), while prompts (elicitations and clarification requests) were rare. Although both teachers almost always used reformulations, Teacher A made more use of recasts than Teacher B.

Table 1.

Distribution of corrective feedback moves

CF Move	Teacher A		Teacher B	
	Cases	%	Cases	%
Direct Correction	174	51.5	148	76.3
Recast	146	43.2	45	23.2
Elicitation	11	3.3	0	0
Clarification Request	7	2.1	1	0.5
Total	338	100	194	100

The interview revealed that both teachers were aware of their preference for direct corrections, specifically modeling, which often required repetition. Teacher B said, “I feel modeling the behavior and repetition, I mean repetition to the Nth degree you really have to show this over and over, are really the best ways to effectively correct a student.” When asked whether prompts were effective, Teacher A said “That (prompts) would be something that I would typically do, I act like I don’t understand for sure and try to get the student and empower the students to self-correct. Some of the strong students I know they have the capacity,” which was paralleled by Teacher B,

I think it (prompts) could work... I tend to do that with more advanced students so they have the foundation of some type parts of ASL in terms of word order and structure, I might say 'tell me a little bit more,' 'what is that you mean by that,' 'I'm not sure I understand what you're getting at' whereas if we are looking at ASL 1 students, they're still very limited

right so that type of conversation might shift them to focusing on English or texting something to me because that's their comfort level so I don't want to deter them from wanting to learn ASL 1. They just don't have the skills to gesture yet, they are just not there and often people will say gesturing is easy because it's standard and everyone can do it and that's not true, they'll revert back to their English; they will text or finger spell and fingerspelling is fine, but I really prefer acting it out, show me what you're talking about. It benefits them, each little interaction going forward in terms of language learning so I try kind of to avoid pulling them too much because I feel that if I can see that they can do it and they're more of a go getter, I might do that type of approach but with my more advanced and I would say advanced would be in ASL 3 or 4 they're much more, it's much more of an effective strategy but that's just my experience in the classroom.

In addition to avoiding the use of English, a second reason for the lack of prompts that the teachers discussed was student anxiety; the teachers were aware of how a prompt or corrective feedback directed at one student might cause discomfort. They addressed this in two ways, by stressing the importance of the feedback's tone and delivery or by addressing the whole class rather than one student individually. Teacher A commented,

I will push a little if in the back of my mind I know that maybe the students has some anxiety or they are nervous and you can see that this is not coming along for them like it should and I typically can see that and in that case I won't push too hard. Other students are more comfortable and I'll sort of get them moving because you can see that they've got the capacity to move but sometimes when a student is super anxious usually the weaker students are the students that are a bit more anxious you know, you can only push so far.

Teacher B expressed similar sentiments,

Modeling is the best way in terms of teaching... I will use their error; suppose they were signing an error with their thumbs out for YEAR okay? I'll say 'hey this isn't right (showing incorrect handshape) put in your thumbs (showing correct handshape) right in this way' but that's a general bit of feedback to the class and not calling out one student and saying 'hey everyone look over here' because I feel that you know often if students are making a mistake then most of the students have seen or are making the same mistake... If I have a meek student who doesn't often participate and looks petrified, I'm not going to call them out with other students and say 'hey everyone look at this person' but if someone who is confident and has really been outgoing and participating in class then I may kind of give them a hard time and use them as a model because I feel that that's kind of a safe relationship. I'm very intentional, I'm very deliberate with who I kind of choose or call upon to use as an example in the classroom I think that very often Deaf people have a good sense of judgement in terms of who has that level of confidence, who you can kind of razz with and who you should kind of just take a step back when you work with them.

Corrective Feedback and Error Type

As shown in Table 2, the teachers directed most of their lexical phonology corrections at handshape and movement, with Teacher B focused more frequently on handshape and less than five percent of the corrections directed to place of articulation for either teacher.

Table 2.

Distribution of linguistic targets of corrective feedback

Error Addressed	Teacher A		Teacher B	
	Cases	%	Cases	%
Handshape	172	50.9	120	61.9
Movement	150	44.4	68	35.1
Place of Articulation	16	4.7	6	3.1
Total	338	100	194	100

When POA was addressed by the teachers, it was often in the instance of an uncommon location; for example, Teacher A corrected the POA of GLASS (the material), which is articulated with an X handshape tapping the teeth, when the student articulated the sign on the lips. In addition to handshape, movement and POA, two more categories emerged: other, which was a catch-all for errors outside this study's scope and multiple errors, which contained instances of the teacher addressing more than one error in one corrective move. Although detailed data were not collected on the "other" category, the observation notes reveal it contained numerous error types including nonmanual, grammatical, and classifiers. Multiple errors rarely occurred and were excluded from further analysis.

When asked which features were the most challenging for students, Teacher B said,

I think handshapes are probably, sometimes palm orientation can be a bit challenging, but I'd say movement students can typically follow better but handshape ... because there are so many different handshapes right that match to many different meanings and students are still trying to figure out which finger goes which way.

Teacher A commented that how she prioritizes lexical phonology,

I'm really fussy around the manual stuff. Sometimes I'm teaching and I see somebody off in the corner of my eye with a production problem in their sign language, I can see that really fast so I can be pretty picky, a lot of teachers may not make such a big deal about it, their thing might be structure or something else but for me, it's really about production.

Tables 3-5 display the frequency of corrective feedback strategies for each of the lexical phonology categories (handshape, movement and POA respectively), which is largely consistent across linguistic target. The majority of the lexical phonological error corrections recorded were with handshape. Both teachers used reformulations in almost all cases, in the form of direction

corrections for most of Teacher B's feedback and both direct corrections and recasts for Teacher A. Prompts were rare.

Table 3.

Distribution of corrective feedback moves for handshape errors

CF Move	Teacher A		Teacher B	
	Cases	%	Cases	%
Direct Correction	90	52.3	89	74.2
Recast	70	40.7	30	25
Elicitation	7	4.1	0	0
Clarification Request	5	2.9	1	0.8
Total	172	100	120	100

Teacher B commented on her preference for direct corrections for handshape errors,

Often I'll see handshape errors and I'll correct students but not every time because if the moment fits and it feels appropriate I might say 'oh hey' and correct in positive ways not in a 'oh that's terrible' way but rather modeling the right sign and then having the students copy. I think that's better for me, and it really shows the students that they can have some confidence in this process versus making them feel devalued.

The movement corrections (Table 4) shows a similar distribution to the handshape errors, with reformulations the most frequent strategy (divided among direct corrections and recasts for Teacher A). Prompts were rare for Teacher A and non-existent for Teacher B.

Table 4.

Distribution of corrective feedback moves for movement errors

CF Move	Teacher A		Teacher B	
	Cases	%	Cases	%
Direct Correction	74	49.3	54	79.4
Recast	70	46.7	14	20.6
Elicitation	4	2.7	0	0
Clarification Request	2	1.3	0	0
Total	150	100	68	100

As shown in Table 5, POA corrections were most often addressed with direction corrections by both teachers. There were no instances of a place of articulation error being addressed with a prompt. Teacher A's use of recasts for POA errors was proportionally smaller than her use of this feedback type for movement and handshape errors, but with so little feedback given to POA errors, the percentages needed to be interpreted with caution.

Table 5.

Distribution of corrective feedback moves for POA errors

CF Move	Teacher A		Teacher B	
	Cases	%	Cases	%
Direct Correction	10	62.5	5	83.3
Recast	6	37.5	1	16.1
Elicitation	0	0	0	0
Clarification Request	0	0	0	0
Total	16	100	6	100

The observation grid did not record feedback given to nonmanual features of sign, but both teachers referred to nonmanual errors in the interviews, and their reasons for giving more attention to the lexical phonology categories targeted in this study for observations. Teacher A explained:

I feel as though for me sign production is a real thing that I sort of nitpick about a little bit so I really want to make sure that it gets done properly. I think generally Deaf people know that hearing people will not acclimate to the way we use facial expressions, but sign production, there really is no excuse for making mistakes on that so we really want to get that right so that Deaf people can communicate with you more, rather than sort of looking like a mess. So, I want to make sure the production pieces are really good for their sake, the student's sake for when they are communicating with Deaf folks.

In addition to ensuring successful communication with the Deaf community, both teachers commented that their expectations for their students' production of nonmanuals are much lower

than other features, Teacher B commented, “In general hearing people don’t use facial grammar in the same way that Deaf folks do.” Similarly, Teacher A said,

For the nonmanuals, my expectations are not as high as they are for the handshapes and the parameters of ASL... I mean 70% of ASL is facial grammar but I know that hearing students will never attain what a Deaf person is able to do and so my expectations are a little bit lower.

When the teachers were asked about how they would address different error types, they both indicated that regardless of error type, modeling was the best method, however, Teacher A stressed that nonmanuals may require a more in-depth explanation,

I would say that the facial grammar is something that you can’t fix without giving examples so I would have to give examples when I fix that. I use myself as the model, there’s lots of repetition. For a handshape mistake, I would just fix the production, and I would always demo what the proper handshape looks like and the proper production looks like. But again, for facial grammar you have to really give the example of it looks like this in contrast to looking like this and doing it wrong. So, it’s important that the student really is identifying what they are doing, I don’t want them to just look at the example and have it be beyond their comprehension.

Recourse to English

Table 6 illustrates that the teachers almost never used English in their corrections, and only did so by referencing written text on a PowerPoint or writing a word on the board as a part of a direction correction. For example, if a student produced an error that resulted the production of a phonologically similar sign, the teacher might write both glosses on the board and contrast them to highlight the differences. One rather common example for low-level ASL learners is SPEAK,

which uses an open-4 handshape that taps the chin twice, versus BITCH, which uses a closed-4 handshape starting on the chin and moving away from the signer.

Table 6.

Recourse to English

Recourse to English	Teacher A		Teacher B	
	Cases	%	Cases	%
None	335	99.1	189	97.4
Recourse to English	3	0.9	5	2.6
Total	338	100	194	100

The teachers gave two reasons for their preference for conducting classes in ASL as much as possible. It was their preferred communication mode and they also felt an immersive learning environment minimized the students' opportunity to conflate a sign and an English gloss as having a 1:1 meaning mapping. Teacher B commented, "I am willing to stand on my head and put my legs on the wall, I'll act it out in a different way, I'll think of different examples. There are many approaches that I employ to make sure that the students get it... I try really hard to avoid that (English) most often but from time to time." In addition to avoiding English being a personal preference, Teacher A also commented that it was helpful for the students because "I think separating from English and the sound of English and oral language is a challenge for students." Similarly, Teacher B said, "It's a language class, it really requires the use of the language. Full immersion (no voice) is important, students learn best with that type of immersive language learning. I think that's number one, that's key."

Despite the teachers desire to avoid English, both teachers acknowledged that it had some benefits for their students. Teacher B found English useful as "kind of a backup for some students who need to see the information in different ways so not only modeling but also writing in their

primary language or gesturing in different ways or drawing pictures right if need be.” Teacher A explained that English was useful for students who did not understand the correction in ASL,

If they (the students) don't understand a sign then I will gesture it and try and explain in some way and if they don't get it, they don't get it. I will use English. Rarely, rarely I will write like an English sentence on the board and translate it or explain it in ASL, I will almost never do that...I'll write a word, sometimes it's just a word and I'll gesture it rather than writing a full English sentence, I'll almost never use that kind of strategy so it's using the words and kind of putting in an application in ASL. So, if you come into my classroom, it's one or two words, it might be a very brief phrase or a sentence, but very brief, that's it.

Teacher A also commented that she would use English with some of the less proficient students to help them save face or feel more comfortable,

I think among most ASL teachers, certainly Deaf teachers, you will see that they gravitate towards English as sort of a last resort. We use a lot of visual methods for sure, PowerPoint, lots of pictures, making things very visual, and less actual English words because students will often associate a word with a sign and we really want them to get them moving away from that as much as possible... the other thing I will say is that in terms of what is effective for students who are struggling the most is going to the English because they really want to talk, they're feeling really sort of nervous in class... Sometimes when I give students feedback, they say yes, I'll walk away, and I know that they didn't quite get it and so they'll go to a peer to get some help. So again, it does depend on the students, some students really rely on their peers and they want to sort of float back to English, the stronger students will say 'you know what I actually don't get it you need to do it again.'

Uptake and Repair

Table 7 shows how the students responded to the corrective feedback (uptake) and whether the error was successfully corrected (repair): either by the teacher, student or a peer. Strikingly, students showed extremely high rates of successful uptake, meaning the student produced the correct form after the corrective feedback intervention. Repair was most often performed by the teacher providing the correct form which was repeated by the student. Consequently, the rates of student generated repair and peer generated repair are low.

Table 7.

Distribution of repair

Repair	Teacher A		Teacher B	
	Cases	%	Cases	%
Student Repetition	274	81.1	163	84
Student Generated	1	0.3	0	0
Peer Generated	1	0.3	0	0
Uptake	276	81.7	163	84
No Uptake	62	18.3	31	16

Despite not often prompting the students, the teachers of both classes were very successful in engaging the students with feedback and focusing on the error until the student produced the correct form, repeating it until the student mirrored her or directly prompt the student to repeat it (e.g., COPY ME). Teacher A said, “It really depends on the student... some students, they get the feedback, they see it once and they’re like 'yeah I got it yeah.' They’re off and running and other students really do not do that.”

This experience was echoed by Teacher B,

I feel that some students have it, they are really able to internalize but students who kind of look a bit awkward in their production have to work a lot harder. They have to study more, they have to practice more hours and I just try to support them through that process

because I can't, you can't make someone a good dancer you can teach them the moves but it doesn't mean that they have the rhythm.

When asked how she would support a student who was struggling, Teacher A responded,

I do not move on until everyone in the class has got it whereas in a regular class that would have a hearing teacher sort of barrel on whether you got it or not and some students are lost completely, and other students already have it and you're boring them. But in an ASL class with a Deaf teacher, you cannot move on without making sure that 99.9% of the students have got what we are doing so it's a totally different I think feeling for students being in a class with a Deaf instructor.

Successful uptake for each of the linguistic targets was similar across teachers: handshape corrections generated repair 80.8% and 81.7% of the time for Teacher A and Teacher B's students respectively; movement corrections 82% for Teacher A and 86.8% for Teacher B, and place of articulation corrections (although infrequent) 87.5% for Teacher A and 100% for Teacher B.

Uptake and Repair by Corrective Feedback Type

The results for uptake and repair are summarized in Tables 8 and 9 for Teacher A and Teacher B respectively. Uptake for both teachers is much higher for direct corrections than for recasts.

Table 8.

Uptake frequencies across CF strategies for Teacher A

Response Type	Direct correction	Recast	Elicitation	Clarification request
Student Repetition	162	98	8	6
Student Generated	0	0	0	1
Peer Generated	0	0	1	0
Successful Uptake	162 (93.1%)	98 (67.1%)	9 (81.8%)	7 (100%)
No Uptake	12 (6.9%)	48(32.9%)	2 (18.2%)	0

Teacher A's recasts did lead to successful uptake in 67% of cases but were much less successful in Teacher B's class. Although prompts (elicitation/clarification requests) were infrequent (especially for Teacher B), when they were used, they tended to lead to successful uptake. In most cases, if the student hesitated or had a confused expression in response to a prompt, the teacher would supply the correct form, which meant that student repetition was the most common type of repair across strategies.

Table 9.

Uptake frequencies across CF strategies for Teacher B

Response Type	Direct correction	Recast	Elicitation	Clarification request
Student Repetition	146	16	0	1
Student Generated	0	0	0	0
Peer Generated	0	0	0	0
Successful Uptake	146 (98.6%)	16 (35.6%)	0	1 (100%)
No Uptake	2 (1.4%)	29 (64.4%)	0	0

The teachers both expressed that they felt that the learners were sometimes unable to repair their errors, despite being provided with the correct form, because they were unable to recognize the differences between the corrected form and the form they were producing, Teacher B described a common scenario in her class,

For example if I give a student the sign for TO FEEL, and they are using this finger (pointer finger) and I say 'hey this finger here' (middle finger) and I correct it and then they look at me and make the same error and I say 'okay let's bend down the middle finger and we are going to use the middle finger' as I'm showing you and then they will still go back to the error ... those students don't understand me yet so when I say 'this isn't the right finger (pointer finger) this is the right finger' (middle finger) ... the students in the class are stymied. This is the first time they've ever seen this. This is the first time they've ever been

corrected on which finger they should use for this sign and they will say 'I did it I did it I'm doing what you said' because they're not seeing the same thing... I think that sometimes students aren't seeing the same thing that I'm doing, it's like they don't see me.

To summarize the findings, both teachers favored reformulations, mostly direct corrections, which were most often directed at handshape and movement errors. They very rarely referred to English in their feedback to students. The direct corrections and prompts were largely successful in producing uptake in the form of student repetition, while the rates of uptake following recasts was lower. The distribution of feedback and uptake varied only slightly in relation to each linguistic target (handshape, movement, POA). The teachers' comments on their feedback practices revealed that they consciously choose direct corrections, prioritized handshape accuracy and avoided the use of English in their feedback to students.

Discussion

In this section, the findings for each research question are summarized and are compared to previous research on spoken and signed languages.

What feedback strategies do Deaf instructors of ASL use to correct errors in lexical phonology (handshape, movement, place of articulation) made by hearing learners in an introductory level class?

The predominant feedback strategy used by both teachers was direct correction followed by recasts. Prompts were rarely used. One explanation for the high proportion of direct corrections is the teachers' experience with students not always noticing the corrective intention or the corrected form in a recast, which was also discussed in Willoughby et al.'s (2015) results. The limited use of prompts appeared to be in part due to the teachers' fear of making the students feel self-conscious and also that it could push them to use English. This practice aligns with the

teacher's pedagogical beliefs as they both referred to modeling as the most effective correction strategy for their students. While divergent from spoken language findings of corrective feedback, these practices corroborate the results of Willoughby et al. (2015), who found that most of the feedback in a beginner Auslan class was in the form of direct corrections, and closely aligned with the teachers' pedagogical beliefs: accurate phonological production is essential to ensure communication with the Deaf community; interaction should be emphasized in ASL classes, and sensitivity to the students' anxieties benefited their learning outcomes.

Although the distribution of corrective feedback has varied across contexts in spoken language studies, generally direct corrections have been reported as uncommon. For example, Brown's (2016), meta-analysis of twenty-eight observational studies, including beginner, intermediate, and advanced learners, reported that recasts accounted for nearly sixty percent of corrective feedback, followed by elicitation at twenty percent (with metalinguistic prompts included); all other strategies (including direct corrections) near or less than ten percent. Similarly, Panova & Lyster's (2002) study of early intermediate adult ESL found recasts were also the majority of feedback, while direct corrections, repetition, and elicitation were each less than five percent. Other studies have reported higher rates of direct corrections, up to almost forty percent in an intermediate adult ESL classes (Loewen & Philp, 2006), but the high rate of direct corrections found in the four ASL classes observed here are still much higher.

One of the factors that appeared to influence the choice of corrective feedback strategies was the learner's proficiency, which may have an impact on the use of prompts in particular, as well as the difference in feedback distribution between the teachers. The teachers commented on how proficiency impacts their student's anxiety, stating that initially students are often uncomfortable and anxious in the classroom, as it is very likely a new experience for them, and

once students were acclimated, the teachers are able to push them a bit more with corrective feedback. These intuitions have been supported by research in spoken language classrooms showing that adult ESL learners' anxiety influences the amount they benefit from corrective feedback, with low anxiety learners significantly outperforming high anxiety learners on posttests (Sheen, 2008). As the learners adjust and progress in their language development, the teachers may get more confident in their ability to respond to and benefit from prompts.

Although both teachers strongly favored reformulations, specifically direct corrections, Teacher A made more use of other corrections (recasts and prompts) than Teacher B. As Teacher A was observed at the end of the semester and therefore had slightly more proficient learners, she may have felt more confident that her students would be able to benefit from other types of corrective feedback whereas Teacher B (observed at the beginning of the term) may have been reluctant to use less explicit CF as her students may not have had the skills to interpret them. Considering that direct corrections from both teachers often needed repetition for the student to recognize the target and produce the form correctly, the teachers may be hesitant to use other corrections with low level students (i.e., if a student does not understand a repeated direct correction, what are their chances of being able to identify the target of a recast or respond to a prompt?). Teacher B stated as much, saying that she is much more likely to use prompts in higher level classes compared to low level classes where a prompt might not be understood or might push a student to use English, which she wanted to avoid. However, this change is not necessarily a graduated change, and the frequency of prompts may increase over the course of a semester as the teacher builds rapport with the students and the student advance their language skills.

The results here indicate that corrections targeted handshapes more often than movement, particularly for Teacher B, and rarely focused on place of articulation. As the teacher interviews

indicated, this is likely because the teachers' have higher expectations for handshape and movement to ensure successful communication outside the classroom or due to the feature-internal values presented in the curriculum. Because so few POA errors were corrected in this study, it is difficult to make conclusions about their nature; only sixteen place of articulation corrections were made by Teacher A and only six made by Teacher B. However, these findings are consistent with those of Willoughby et al. (2015) who reported that, of the lexical phonology errors observed, a large majority were handshape or movement while very few were place of articulation (termed location in the article). It must also be acknowledged that the teachers addressed issues beyond these parameters, such as nonmanuals; teachers are well aware of that these are challenging for learners but feel that the existing pedagogical tools are not sufficient enough to support their students in target-like production.

The internal values have been shown to play a significant role in how difficult a sign is for learners to perceive and produce (Ortega & Morgan, 2010). For example, the order of acquisition for place of articulation has been found to begin with signs in the neutral space, then the body and lower face, and finally upper face, and that horizontal position is more accurate than vertical in native signers (Conlin, et al., 2000; Marentette & Mayberry, 2000). Similarly, Marentette and Mayberry (2000) found evidence that handshapes are more accurately produced on the dominant hand and are acquired in stages possibly related to their frequency and motor-complexity. Proximal movements have been shown to be acquired before distal movements (Conlin, et al., 2000) (see Rosen, 2004, for further discussion of learner errors caused by internal features). The data here were observational, the signs introduced in class were not preselected to balance internal measures of difficulty between handshape and movement. It is possible that if a more complex movement

inventory had been introduced, there would be a corresponding increase in teacher attention to movement.

When asked what aspects of ASL are challenging for their students, the teachers focused on handshapes and nonmanuals, and to a lesser extent movement. Some research has shown that movement is the most difficult parameter to acquire (Bochner et al., 2011; Marentette and Mayberry, 2000; Morgan, 2006), though these findings have not been unanimous. In a case study of an L1 British Sign Language (BSL) learner, Ortega and Morgan (2010) reported that movement was most common phonological error followed by handshape and place of articulation, however, a subsequent study involving beginner M2-L2 BSL learners revealed that handshape errors were more common than movement or POA with significant differences reported between the handshape x movement and handshape x POA but not movement x POA. Unfortunately, further research in this area has not yielded a consensus; Williams and Newman (2016) analyzed the phonological processing errors of intermediate M2-L2 ASL learners, finding that the learners made twice as many movement errors as handshape errors and few location errors. Another study of M2-L2 learners in ASL 2 and 4 found that handshape was the most accurately perceived in a minimal pair task while place of articulation was the least accurate, while production reflected the opposite pattern, place of articulation was more accurately produced than handshape or movement (Bailey, 2013). Furthermore, the learners did not pattern identically across proficiency, the ASL 2 group made the most errors with handshape while the ASL 4 group made the most errors with movement, and the ASL 4 group perceived nonmanuals more accurately but the ASL 2 student produced them more accurately (Bailey, 2013).

Do Deaf instructors of ASL incorporate reference to English in their feedback on lexical phonology errors?

The findings of this study reveal that the use of the students' common language – English - was infrequent and actively avoided by both ASL teachers. When used, it is usually as a last resort when communicating in ASL had not yielded the teacher's desired results. This also suggests that the lack of recourse to English may be a testament to their success communicating with their students in ASL. Their pedagogical reason for avoiding English was their belief that it helped their students focus on the unique properties of signed language, which is arguably complicated for hearing students because the lack of an ASL orthography necessitates the use of written English and glosses for course texts. These sentiments, namely that the target language should be used exclusively in the classroom, have also been expressed by spoken language teachers (Burton, & Rajendram, 2019).

Despite this, both teachers acknowledged that, in some situations, referencing English was advantageous, echoing spoken language research indicating that referencing another language known to the students, first language or otherwise, can be beneficial (Dault & Collins, 2017; Horst et al., 2010). Both teachers saw using some English as an accommodation for the students, with Teacher A commenting that weaker students sometimes respond better to English and Teacher B emphasizing that presenting the course material multiple ways, including in English, was helpful for students. It should also be reiterated that the participants of this study are self-identified Deaf ASL teachers, and hearing ASL teachers may view and use L1-English differently.

How do students respond to these corrections?

Uptake occurred in more than three quarter of the feedback cases, most often with the correct form provided by the teacher in a direct correction, which yielded uptake rates more on par with those for prompts than reformulations in the L2 literature (e.g., Lyster & Ranta, 1997; Loewen & Philp, 2006). One key factor in producing this rate of uptake was the expectation, and sometimes

the teachers' insistence, that the student copy the teacher's production until it is produced in a target-like way. Although prompts here were exceedingly rare, when they did occur, they also led to uptake. As the teachers predominantly used modeling to address lexical phonology errors, this may have increased the amount of uptake as the students saw a direct comparison of their error and the correct form, often slowly repeated. Modeling may be easier for the student to repair because the error is explicitly identified, and the correct form is provided compared to a direct correction containing complex or abstract metalinguistic information or a recast that does not highlight the error or contain an obvious corrective intention.

Because there are no studies reporting on uptake in signed language classrooms, these results cannot be compared to research in signed languages, however these findings are inconsistent with the efficacy of direct corrections in spoken language classrooms. Lyster and Ranta (1997) original study found that explicit corrections were one of the least common corrective feedback moves in content-based immersion classrooms and led to uptake only half of the time. Since then, other studies have reported varied rates of direct corrections across contexts (Brown, 2016) but generally similar findings regarding uptake; in a study of adult ESL learners, Panova and Lyster (2002) reported that explicit corrections were rare and seldomly repaired. The results here show that for these classes recasts were not the most common form of CF and further suggest that studies that exclude direct corrections may not present a comprehensive representation of corrective feedback in that context.

Although not quantitatively recorded, students in both teachers' classes often repeated the teacher's correction even if it was not directed at them; this is a potential benefit of the feedback that was not captured by this study. As with other observational studies, no form of uptake or repair can guarantee learning or retention on the part of the student; however, successful uptake

demonstrates the student has been able to identify the change or changes the teacher made or called attention to and reproduce them. This success rate may indicate that the errors students make be less related to dexterity (in that the student does not have the motor control to form the correct form) and more so that the cognitive load required to form the utterance in all its components has overwhelmed the student's working memory, but with the cognitive load reduced by focusing on one features or one sign, the student is able to produce a target-like utterance.

Conclusion

This study examined the corrective feedback practices of Deaf instructors of ASL 1 classes in two North American Universities. It found that direct correction is the most common feedback move followed by recasts, while prompts were seldomly used. These corrections very rarely referenced English and the distribution was consistent across lexical phonology targets. Uptake was remarkably high for direct corrections and prompts, mostly by way of student repetition. Although these findings suggest that corrective feedback practices in ASL classrooms may not closely parallel spoken language research, it should be acknowledged that this methodology has its limitations, and consequently, these findings and limitations offer many avenues for future research in spoken and signed languages to inform a comprehensive description of corrective feedback and the development of empirically supported pedagogies for signed languages.

The research questions focused on lexical phonology and the class observations were not filmed; consequently, the results do not report every error made during class or how often additional students exhibited uptake. For example, despite being a beginner class, the teachers corrected errors related to complex features beyond lexical phonology that were not quantitatively captured by the observation instruments, such as giving directions from the correct perspective and using appropriate nonmanual question markers. Both existing research (see McKee & McKee,

1992) and the teacher interviews demonstrate that nonmanuals are one of the most difficult aspects of ASL. However, the teachers in this study asserted that native signers are accustomed to M2-L2 learners' lack of nonmanual features, therefore it was not as critical for intelligibility in the same way that other aspects of production are. Despite this claim, future SLA research should more actively include nonmanuals for the purpose of creating an empirically supported pedagogy to help M2-L2 learners produce target-like utterances.

Filming the classes and having a native signer code the interactions would have been ideal, however, the challenge of obtaining approval from all participants for recording and sharing data and the logistics of needing multiple cameras made this methodology impractical. The decision against filming the classes was made with the knowledge that this would be one of the consequences; however, it was determined that the benefits of filming did not outweigh the added distraction for the students and logistical complications. Future studies using video recordings may be able to provide more comprehensive and detailed insights into the roles of error types, corrective feedback and English in signed language classrooms.

Participant selection, in terms of the teachers and the students, has been shown to influence the distribution and efficacy of corrective feedback in spoken languages. The teachers had very similar education, experience and teaching contexts (No Voice policy ASL 101 class at a large urban university), which may have contributed to the similarities in their teaching practices. Teachers of other signed languages, with different backgrounds or education, more advanced classes or in other teaching contexts may view and use feedback and the L1 spoken language of the students differently, while students of different ages or proficiencies in another teaching context may not interpret and respond to feedback in the same way. The observational methodology did not allow for any manipulation of feedback strategies or linguistic targets, which

limits the ability of this study to comment on prompts, self-repair and peer repair as there were too few cases observed.

However, despite the methodological limitations, these results provide interesting implications for future research in signed and spoken language contexts, as the diversity of corrective feedback in signed language classrooms remains underexplored, as does the potential of direct corrections to facilitate language development in spoken language contexts, including the benefits of student repetition versus student retrieval for language retention. Furthermore, the frequency of direct corrections and how they were used to encourage student repetition of correct forms provides novel insights on an under-studied aspect of spoken L2 feedback, where much more of the focus has been on recasts (see Sheen, 2008; Saito, 2013, among others).

In recent decades, SLA researchers have delved into the mechanics of second language acquisition with special attention to corrective feedback resulting in fruitful and dynamic discussions on the most beneficial pedagogical strategies for teachers to support their students in their language development in general and across linguistic targets, contexts, and proficiencies. The exploration of corrective feedback has illuminated many issues for researchers and teachers to consider as they develop curriculums and teacher resources. It is crucial that this research aims to include and support all language teachers, regardless of target language or modality, including a comparison of not only written and oral feedback, but also oral and signed feedback. As both public interest and theoretical linguistic research in signed languages have grown remarkably in the last half century so has the necessity of collaboration between signed language and SLA researchers to form a mutually useful research compilation that supports signed language teachers and developing signed language pedagogies with empirical resources while also contributing to the understanding of language acquisition and theoretical models of language development.

Although these discussions have begun in some research areas, increasing the amount of crossover and comparison will benefit both teachers and future learners of signed languages.

Chapter Three: Future Directions

As the final chapter of this thesis, the following section will contain a brief, more general overview of the present study's results and the implications for sign language pedagogy and corrective feedback research, as well as discuss possible directions for future research based on the findings and limitations of this study.

General Findings

The primary finding of this research is that corrective feedback in signed language classrooms with Deaf teachers is not consistent with the previous findings in spoken language classrooms in terms of linguistics targets, distribution of feedback, rates of uptake, types of repair or amount of corrective feedback using recourse to another language. The majority of the errors were addressed using direct corrections, in which the teacher provided the correct form and often prompted the student to repeat it. Recasts were observed but considerably less often than in spoken language classrooms, while prompts were infrequent which is consistent with previous research. While the targets of spoken language feedback tend to be more grammatical, the targets were primarily phonological consisting mostly of handshape and movement corrections. It is clear that ASL teachers recognize the challenges that acquiring a new phonological system poses to M2-L2 learners and direct a significant amount of corrective feedback to these features. More handshape errors were corrected than movement errors, but this is not necessarily evidence that handshape is more difficult as the total number of errors was not recorded. The data were collected naturalistically, meaning the signs introduced in class were not preselected to balance internal measures of difficulty between handshape, movement and place of articulation, which may impact the distribution of the teachers' attention across linguistic targets. However, it must also be acknowledged that the teachers address issues beyond these parameters, as learners struggle to

acquire syntactic, lexical and nonmanual features simultaneously. The teachers are well aware of these difficulties but feel that the existing pedagogical tools are not sufficient enough to support their students in target-like production of all dimensions of sign, particularly in the acquisition of nonmanuals. As a result, they focus on more easily acquired aspects of ASL and those that they judge most likely to impede communication, to facilitate successful communication with the Deaf community outside of the classroom. The teachers viewed communicative skills as the primary objective for their students and their curriculum closely reflected that, with many production-focused activities, and often delivered feedback in a group setting to avoid discouraging or embarrassing their students.

Because of the prompted repetition included in direct corrections, the rates of uptake were very high as the teacher was generally not inclined to move on with the lesson until the student had successfully demonstrated the correct form, but the student was not often given an opportunity to produce the correct form initially so the rates of student repair are predictably low. This assumes that the students would be able to do so in response to a prompt, however studies have shown that learners of signed languages have difficulty perceiving and producing phonological distinctions across proficiency levels; Rosen (2004) observed ASL 1 students, Bailey (2013) reported on students in ASL 2 and 4, Williams and Newman (2016) included a range of proficiencies from high beginner to advanced and Morford and Carlson (2011) worked with near native signers. In combination with the teachers' experience that novice students are unable to recognize differences between their own production and that of the teachers', and their concern that students would respond to prompts by reverting to a shared spoken language (English in this study), direct corrections may be the most successful way to provide useful, comprehensible feedback to ASL students in introductory classes. However, the feedback practices may pattern differently for more

advanced students in the types of errors targeted and the distribution of correction strategies. Although direct correction has been shown to be relatively uncommon and unsuccessful in producing uptake in spoken language studies, it may be worth revisiting the potential of direct corrections with prompted repetition in some circumstances. The data also showed a deliberate avoidance of English in corrective feedback, but these findings are consistent with the teachers' views on the use of English in ASL classes generally. Although both teachers commented that they would use English as a last resort, the students were able to understand and respond to these interactions in almost every case, phonological or otherwise, so the teachers almost never had to rely on English for successful communication with their students.

Implications & Future Research

This study has yielded findings which could be useful to researchers designing future studies and also to in service and pre-service signed language teachers. First, although some research has suggested that sign language acquisition is similar to spoken language acquisition, there has been insufficient research to document aspects of acquisition that may also differ. Some phenomena may pattern similarly to spoken languages, but these hypotheses should be tested, evaluated and addressed more broadly in SLA literature. Similarly, second language pedagogies should be examined for validity in signed languages and, researchers and teachers should collaborate to develop empirically-tested pedagogies that are valid for signed languages. Given the current lack of research in the L2 acquisition of signed languages, the development of an empirically based pedagogy would require significantly more research in this area. Of particular interest may be the use of students' known languages as part of the pedagogy. The current study has indicated that the role of spoken language orthography in signed language classrooms is multi-faceted and to some extent controversial. The teachers limit their use of English in teaching

materials but sometimes refer students to the textbook to read instructions or explanations; they also use English sparingly in corrective feedback to create an immersive ASL environment and encourage signing as much as possible. While teachers of other languages may view the use of the students L1 as beneficial for the students, encouraging ASL teachers to use more English based on spoken language research may not yield similar results.

Because this study is one of the first to examine corrective feedback in signed language classrooms, there are several directions for future research to explore. One possible direction is a replication of this study with teachers who have had specific training in corrective feedback. While the teachers in this study were highly educated, they did not receive corrective feedback training before participation; including a training could highlight the various strategies of corrective feedback that have been observed in spoken language classrooms and prompt the teachers to experiment in their choice of strategy or delivery. While the impact of pedagogy has received some attention in spoken languages (see Junquiera & Kim, 2013), the role that the teacher's culture plays into corrective feedback has yet to receive attention but may play into when and how corrective feedback is delivered. Future studies may find that hearing ASL teachers do not give feedback in the same way or may not avoid the use of English as much as Deaf instructors. In my personal experience, hearing ASL teachers tend to be more lenient about the No Voice Policy and use of English in the classroom.

Because the teachers indicated that their use of prompts increases as the students develop confidence and language skills, a replication with more advanced students is necessary to determine if this belief parallels with practice and how more advanced students respond to prompts, especially since there were so few prompts observed in this study. It would be interesting to compare ASL 101, ASL 201 and ASL 301 to see how the classroom interactions change across

proficiencies in terms of the types of errors the students make, distribution of corrective feedback strategies and how more advanced students interpret and respond to corrections. It is possible that the amount of attention to phonology in sign language classrooms decreases with more advanced learners. Because M2-L2 learners are acquiring a new phonological system rather than using an existing inventory and modifying it to represent the new language system, the teachers may direct more attention to phonology for low level learners and decrease attention to phonology at learners become more comfortable with signed language phonology. However, some signed language research indicates that higher proficiency learners make more handshape mistakes than lower proficiency learners (Williams & Newman, 2016) and make very little or no gains in production of nonmanual features (Bailey, 2013), so perhaps the attention to phonology would remain consistent or even increase across proficiency levels as learners acquiring these features may exhibit a U-shaped learning curve due to overgeneralization (Bailey, 2013). Additionally, facial expressions and gestures are often used in spoken languages, but do not generally convey linguistic content, which may result in cross-linguistic interference for M2-L2 learners (Bailey, 2013). For example, in a spoken language, eyebrow position may change to express surprise or emphasis, but it is obligatory and specified for ASL question formation (raised for yes/no questions, furrowed for WH) (Rosen, 2004). This may lead to M2-L2 learners struggling to segment facial expressions into specific features and misinterpreting native signers (Bailey, 2013).

It would also be important in future research to focus on the linguistic targets of feedback beyond the phonological parameters investigated here. While this study targeted handshape, movement and place of articulation, the results indicated that the teachers also directed corrective feedback and attention to other aspects of ASL such as nonmanual features and syntax. Future studies comparing uptake following corrective feedback targeting grammatical errors to this

research may match the spoken language research in that these types of correctives are less likely to produce uptake and therefore more likely to require supplementary focus in other pedagogical forms or nonmanual features which are relatively under researched but, as they have been shown to be very difficult for M2-L2 learners to acquire, necessitate further research and the development of pedagogical tools to help teachers support learners' acquisition. A study targeting all linguistic targets of corrective feedback could also report on the relationship between error distribution and linguistic targets of corrective feedback. As mentioned previously, Willoughby et al. (2015) reported on the overall number of errors in lexical phonology the researcher observed, while this study exclusively focused on the errors that received corrective feedback. While the combination of these two studies suggests that the distribution of errors might match the distribution of linguistic targets of corrective feedback, these studies findings cannot be consolidated as they have differing methodologies and did not study the same language. Therefore, a more comprehensive study examining the types of errors and linguistic targets for feedback would be interesting and informative for developing diverse pedagogies to aid learners in the acquisition of all features of signed languages.

An increasing number of corrective feedback studies of spoken languages has utilized a pretest-posttest methodology to quantitatively analyze how properties of corrective feedback influence student retention. These studies have been able to speculate on efficacy in a more concrete way than classroom observation studies, given that uptake may not have a strong correlation with retention. To this end, it would be very useful to have pretest-posttest studies in signed languages. Based on the results here, pretest-posttest studies investigating direct corrections could provide further evidence of their efficacy by comparing the effectiveness of long/short, immediate/delayed and one error/multiple error corrections, and analyzing the retention for

students who successfully repeat the teachers correction compared to students who retrieve the correct form themselves responding to prompts and students who are not able to reproduce the correct form.

In summary, the findings of this observational study of corrective feedback in introductory ASL 101 classes with Deaf instructors and hearing M2-L2 learners have interesting pedagogical and theoretical implications for second language teaching (both spoken and signed languages) and provide many directions for future research in corrective feedback and signed language pedagogy.

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Appendices

Appendix A: Teacher Recruitment Letter

To Whom It May Concern:

My name is Leslie Gil and I am an Applied Linguistics M.A. candidate from the Department of Education at Concordia University in Montreal, working under the supervision of Dr. Laura Collins. I am a second language user of American Sign Language, and for my thesis project, I am interested in investigating how Deaf teachers communicate with hearing students in introductory level American Sign Language classrooms. My focus is on the aspects of ASL signing that students find challenging, and the strategies Deaf teachers use to help them correct their errors. There is considerable research on how this is done with the teaching of spoken languages, but very little on the teaching of signed languages. I have received ethics approval from Concordia University in September in the form of a **Certification of Ethical Acceptability for Research Involving Human Subjects**

For the teachers that agree to participate in the study, I would like to observe and take notes on three or four classes during the 2019 Fall term or Winter 2020 term, preferably consecutive classes if possible. During data collection, I will arrive before the class and sit on the side of the classroom so that the teacher and students are clearly visible. I will observe and take notes on the interactions between the teacher and students. Following the final class observation, I will conduct a short interview with the ASL instructor to discuss their perspective on the learning challenges their students face, and their preferred ways of helping them address these challenges. This interview can be conducted in ASL or written English, depending upon the teacher's preference. The observation data for the teachers will be confidential (no names of the participating teachers or institutions will be used in the thesis or in any write up of the findings). The names of the participating students will be confidential but no identifying information will be collected during the observation (the students will be anonymous in the observation notes); observations on their interactions with the teacher will aggregate student data. I will not participate in classroom activities, lectures, discussions or interact with the students in any way.

Participation in this study is completely voluntary. If you would like to participate or have any questions about the study, please email or contact me at leslie.gil@mail.concordia.ca or 607-793-1860.

Thank you very much,

Sincerely,

Leslie Gil

Appendix B: Teacher Consent Form

**INFORMATION AND CONSENT FORM**

Study Title: Deaf teachers' corrective feedback to second language learners of American Sign Language

Researcher: Leslie Gil

Researcher's Contact Information: leslie.gil@mail.concordia.ca or 607-793-1860

Faculty Supervisor: Dr. Laura Collins

Faculty Supervisor's Contact Information: laura.collins@concordia.ca or 514- 848-2445 x2445

Source of funding for the study: Concordia Graduate Mobility Award

You are being invited to participate in the research study mentioned above that is being completed in partial fulfillment of an M.A. thesis at Concordia University. This form provides information about what participating would mean. Please read it carefully before deciding if you want to participate or not. If there is anything you do not understand, or if you want more information, please ask the researcher.

A. PURPOSE

The purpose of the research is to observe how Deaf teachers interact with hearing students in introductory American Sign Language classes.

B. PROCEDURES

If you participate, you will be asked to teach your class as you normally would, while the researcher observes the class. The researcher will sit to the side, so both the teacher and the students are visible and take notes. The researcher will not participate in class activities or interact with the students in any way after obtaining their consent. After the classroom observations, the researcher will conduct an interview to discuss the teacher's experience in the classroom, teaching practices and classroom management practices. This interview can be conducted in ASL or in written English. Interviews will be conducted in the teacher's office or in the pre-reserved private room on campus. If the teacher prefers to conduct the interview in ASL, the research will video record the interview so that it can be analyzed.

In total, participating in this study will consist of providing consent for the researcher to observe four (4) consecutive class periods and conduct an interview with you.

C. RISKS AND BENEFITS

You might face certain risks by participating in this research. The research involves no more than minimal risk to the your psychological well-being, which may occur in the form of discomfort at knowing that the observation notes will be viewed by the researcher and the faculty advisor.

Potential benefits include:

1. You will have the opportunity to reflect on your current and intended use of corrective feedback. This knowledge may help you be aware of how you interact with students and take advantage of what your students know about American Sign Language to facilitate the student's production of target-like utterances.
2. If you request, the observation notes of your classes will be made available to you, which could facilitate reflection on your teaching, classroom management or student interactions.
3. This research could also help inform your pedagogy for future classes by alerting you to the most commons types of errors students make and raising your awareness of the inventory of possible corrective feedback strategies.

D. CONFIDENTIALITY

We will gather the following information as part of this research: hand-written notes taken by the researcher during class observations. After the completion of the observations, the researcher will conduct an interview to explore the teaching philosophy and classroom practices of the teacher in written English or in ASL.

We will not allow anyone to access the information, except people directly involved in conducting the research. We will only use the information for the purposes of the research described in this form.

The information gathered will be coded. That means that the information will be identified by a code and the researcher will have a list that links the code to your name.

We will protect the information by keeping the digital files on a password protected computer and keeping the notes in the researcher's possession.

We intend to publish the results of the research. However, it will not be possible to identify you in the published results.

We will destroy the information two years after the end of the study.

F. CONDITIONS OF PARTICIPATION

You do not have to participate in this research. It is purely your decision. You can also ask that the information you provided not be used, and your choice will be respected. If you decide that you don't want us to use your information, you may tell the researcher at any time before March 1, 2020, as at this point the data will be undergoing analysis for the thesis (March 2020).

There are no negative consequences for not participating, stopping in the middle, or asking us not to use your information.

G. PARTICIPANT'S DECLARATION

I wish to receive a copy of the final paper about this study. (Additionally, a complete copy of the thesis will be available after July, 2020 on <https://spectrum.library.concordia.ca/>.)

I have read and understood this form. I have had the chance to ask questions and any questions have been answered. I agree to participate in this research under the conditions described.

NAME (please print) _____

SIGNATURE _____

DATE _____

I agree to being video recorded during the interview.

SIGNATURE _____

If you have questions about the scientific or scholarly aspects of this research, please contact the researcher. Their contact information is on page 1. You may also contact their faculty supervisor.

If you have concerns about ethical issues in this research, please contact the Manager, Research Ethics, Concordia University, 514.848.2424 ex. 7481 or oor.ethics@concordia.ca.

Appendix C: Student Information Letter



Dear student,

We would like to invite you to participate in a research project being conducted by researchers at Concordia University. The purpose of this research is to find out how Deaf teachers communicate with students in beginner American Sign Language classes. The project will run from ____ to ____, 20__, and it will consist of a researcher observing your ASL class for ____ consecutive classroom periods.

Please note that the purpose of this project is not to compare individual students and participation will have no impact on your grade in the course. The teacher will not be aware of your decision regarding participation in this study.

Participation in this study is completely voluntary. If you would like to participate or have any questions about the study, please email or contact me at leslie.gil@mail.concordia.ca or 607-793-1860.

Thank you very much,

Sincerely,

Leslie Gil

Appendix D: Student Consent Form

**INFORMATION AND CONSENT FORM**

Study Title: Deaf teachers' corrective feedback to second language learners of American Sign Language

Researcher: Leslie Gil

Researcher's Contact Information: leslie.gil@mail.concordia.ca or 607-793-1860

Faculty Supervisor: Dr. Laura Collins

Faculty Supervisor's Contact Information: laura.collins@concordia.ca or 514- 848-2445 x2445

Source of funding for the study: Concordia Graduate Mobility Award

You are being invited to participate in the research study mentioned above that is being completed in partial fulfillment of an M.A. thesis at Concordia University. This form provides information about what participating would mean. Please read it carefully before deciding if you want to participate or not. If there is anything you do not understand, or if you want more information, please ask the researcher.

A. PURPOSE

The purpose of the research is to observe how Deaf teachers interact with hearing students in American Sign Language classes.

B. PROCEDURES

If you participate, you will be asked to participate in class normally, while the researcher observes the class. The researcher will sit to the side of the classroom so that both the teacher and the students are clearly visible and take observation notes. The researcher will not participate in class lectures or activities.

In total, participating in this study will consist of providing consent for the researcher to observe four (4) consecutive class periods.

C. RISKS AND BENEFITS

You might face certain risks by participating in this research. The research involves no more than minimal risk to your psychological well-being, which may occur in the form of discomfort at knowing that the observation notes will be viewed by the researcher and the faculty advisor. Another potential risk is that you might think that your course

grades will be affected by your decision to participate, however the choice to participate will not impact your grade in any way and the teacher will not know which students are participating and which are not.

You will not have any direct benefits; however, this study may encourage you to reflect on the types of errors you are making in class and put more effort into producing signs in a target-like manner.

D. CONFIDENTIALITY

We will gather the following information as part of this research: hand-written notes taken by the researcher.

We will not allow anyone to access the information, except people directly involved in conducting the research. We will only use the information for the purposes of the research described in this form.

The information gathered will be anonymous. That means that it will not be possible to make a link between you and the information you provide.

We will protect the information by keeping the digital files on a password protected computer and keeping the notes in the researcher's possession.

We intend to publish the results of the research. However, it will not be possible to identify you in the published results.

We will destroy the information two years after the end of the study.

F. CONDITIONS OF PARTICIPATION

You do not have to participate in this research. It is purely your decision. If you do participate, you can stop at any time by using the researcher's email or phone number (provided at the beginning of this form). You can contact the researcher before class, after class or during a class break; however, you cannot withdraw during class activities, as there is no way to do so confidentially and the researcher will be observing the class activities. If you decide that you don't want the researcher to use your information, you may tell the researcher at any time. However, the observation notes are aggregated and anonymous, meaning if you decide to withdraw after the observations have begun, previous observation notes cannot be excluded from data analysis.

There are no negative consequences for not participating, stopping in the middle, or asking the researcher not to use your information. The teacher will not be informed of which students are participating and which students are not at any point before, during or after data collection.

G. PARTICIPANT'S DECLARATION

I wish to receive a copy of the final paper about this study. (Additionally, a complete copy of the thesis will be available after July, 2020 on <https://spectrum.library.concordia.ca/>.)

If you checked the box above, please provide an email address so that the researcher can email you an electronic copy of the final manuscript.

I have read and understood this form. I have had the chance to ask questions and any questions have been answered. I agree to participate in this research under the conditions described.

NAME (please print)

SIGNATURE

DATE

If you have questions about the scientific or scholarly aspects of this research, please contact the researcher. Their contact information is on page I. You may also contact their faculty supervisor.

If you have concerns about ethical issues in this research, please contact the Manager, Research Ethics, Concordia University, 514.848.2424 ex. 7481 or oor.ethics@concordia.ca.

Appendix E: Classroom Observation Sheet

Date: _____ Class: _____

Errors	Reformulation		Prompt			Recourse to LN	Uptake			
	Direct Correction	Recast	Elicitation	Clarification Request	Repetition		SG	TG (w/ rep)	TG	PG
<input type="checkbox"/> HS <input type="checkbox"/> Mov. <input type="checkbox"/> POA <input type="checkbox"/> Other							<input type="checkbox"/> SG	<input type="checkbox"/> TG (w/ rep)	<input type="checkbox"/> TG	<input type="checkbox"/> PG
<input type="checkbox"/> HS <input type="checkbox"/> Mov. <input type="checkbox"/> POA <input type="checkbox"/> Other							<input type="checkbox"/> SG	<input type="checkbox"/> TG (w/ rep)	<input type="checkbox"/> TG	<input type="checkbox"/> PG
<input type="checkbox"/> HS <input type="checkbox"/> Mov. <input type="checkbox"/> POA <input type="checkbox"/> Other							<input type="checkbox"/> SG	<input type="checkbox"/> TG (w/ rep)	<input type="checkbox"/> TG	<input type="checkbox"/> PG
<input type="checkbox"/> HS <input type="checkbox"/> Mov. <input type="checkbox"/> POA <input type="checkbox"/> Other							<input type="checkbox"/> SG	<input type="checkbox"/> TG (w/ rep)	<input type="checkbox"/> TG	<input type="checkbox"/> PG
<input type="checkbox"/> HS <input type="checkbox"/> Mov. <input type="checkbox"/> POA <input type="checkbox"/> Other							<input type="checkbox"/> SG	<input type="checkbox"/> TG (w/ rep)	<input type="checkbox"/> TG	<input type="checkbox"/> PG
<input type="checkbox"/> HS <input type="checkbox"/> Mov. <input type="checkbox"/> POA <input type="checkbox"/> Other							<input type="checkbox"/> SG	<input type="checkbox"/> TG (w/ rep)	<input type="checkbox"/> TG	<input type="checkbox"/> PG
<input type="checkbox"/> HS <input type="checkbox"/> Mov. <input type="checkbox"/> POA <input type="checkbox"/> Other							<input type="checkbox"/> SG	<input type="checkbox"/> TG (w/ rep)	<input type="checkbox"/> TG	<input type="checkbox"/> PG
<input type="checkbox"/> HS <input type="checkbox"/> Mov. <input type="checkbox"/> POA <input type="checkbox"/> Other							<input type="checkbox"/> SG	<input type="checkbox"/> TG (w/ rep)	<input type="checkbox"/> TG	<input type="checkbox"/> PG
<input type="checkbox"/> HS <input type="checkbox"/> Mov. <input type="checkbox"/> POA <input type="checkbox"/> Other							<input type="checkbox"/> SG	<input type="checkbox"/> TG (w/ rep)	<input type="checkbox"/> TG	<input type="checkbox"/> PG
<input type="checkbox"/> HS <input type="checkbox"/> Mov. <input type="checkbox"/> POA <input type="checkbox"/> Other							<input type="checkbox"/> SG	<input type="checkbox"/> TG (w/ rep)	<input type="checkbox"/> TG	<input type="checkbox"/> PG
<input type="checkbox"/> HS <input type="checkbox"/> Mov. <input type="checkbox"/> POA <input type="checkbox"/> Other							<input type="checkbox"/> SG	<input type="checkbox"/> TG (w/ rep)	<input type="checkbox"/> TG	<input type="checkbox"/> PG
<input type="checkbox"/> HS <input type="checkbox"/> Mov. <input type="checkbox"/> POA <input type="checkbox"/> Other							<input type="checkbox"/> SG	<input type="checkbox"/> TG (w/ rep)	<input type="checkbox"/> TG	<input type="checkbox"/> PG
<input type="checkbox"/> HS <input type="checkbox"/> Mov. <input type="checkbox"/> POA <input type="checkbox"/> Other							<input type="checkbox"/> SG	<input type="checkbox"/> TG (w/ rep)	<input type="checkbox"/> TG	<input type="checkbox"/> PG

Appendix F: Teacher Background Questionnaire

Background Questionnaire

Please circle your answer choices. If you select "Other," please write in your answer.

University/Affiliation _____

1. Was ASL the first language you learned as a child?

Yes No

If you answered "No,"

What was the first language you learned?

English French Other: _____

When did you start learning ASL?

Age 0-5 Age 6-17 Age 18+

2. Besides ASL, what other languages do you know?

English French Other: _____

3. Have you taken ASL classes?

Yes No

If you answered "Yes,"

How many years of ASL classes have you taken?

1-2 3-5 6+

4. Have you taken spoken language classes?

Yes No

If you answered "Yes,"

How many years of classes did you take?

1-2 3-5 6+

5. Have you completed a teacher training program?

Yes No

If you answered “Yes,”

Which type of program did you complete? (Circle all that apply)

B.A. Teaching Certificate M.A.

Other: _____

What was major/focus?

ASL Interpretation Education Linguistics

Other: _____

6. How many years have you taught ASL?

0-2 3-5 6-9 10+

Appendix G: Teacher Interview Questions

Teacher Interview Questions

1. In your experience, what aspects of learning ASL are the most difficult for your students?
2. Why do you think students struggle with these aspects of ASL?
3. Do these challenges change as the students learn more ASL? (beginners struggle more with X, advanced learners struggle with Y)
4. Do you follow any particular approaches or methodologies of language teaching? If yes, please explain your approach and why you prefer that approach
5. Are there situations where you are more or less likely to correct a student's mistake?
6. How do you correct a student when she/he makes a mistake while signing in the classroom? (see #7 for examples if needed)
7. Have you found some ways of correcting a mistake are more or less effective than others? (examples: demonstrating the correct sign slowly or repeatedly, explaining the error using English, giving feedback like 'not quite right' and seeing if the student corrects himself/herself). If yes, why do you think that is?
8. Do you change the way you correct a mistake depending on the student? (e.g., give different feedback to someone who is struggling in class vs someone who is progressing well) If yes, please explain how/why
9. Do you change the way you correct a mistake depending on the mistake? (e.g., give different feedback depending on if the mistake is handshape, word order, nonmanual, etc.) If yes, please explain how/why
10. Do you change the way you correct a mistake if the student does not understand your correction? (e.g., if you give the correct form, but the student does not understand or repeats the mistake) If yes, please explain how you address this situation

11. Do you use English in your teaching? If yes, please explain how/why
12. Do you use English to correct student's signing mistakes? If yes, please explain how/why
13. During my observations, I noticed that sometimes you correct a student by showing the correct form and then contrasting it with the erroneous form (e.g., CORRECT ERROR CORRECT). I have not seen this correction strategy in spoken language classrooms; did you discover this method through your teaching experience?
14. Sometimes language teachers pretend to not understand a student who makes a mistake to prompt the student to recognize and correct the mistake, do you think your students would be able to recognize a mistake if you did this?
15. There is some research that suggests hearing learners of ASL do not notice some features of ASL (e.g., nonmanual features) and therefore do not incorporate them into their signing. In your experience, do you find that you have to more clearly/directly correct these mistakes?
16. What is different about correcting mistakes in signed and oral languages?