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# AN INVESTIGATION OF THE NEED FOR SIGN LANGUAGE ASSESSMENT IN DEAF EDUCATION

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HE ATTITUDES of educators of the deaf and other professionals in deaf education concerning assessment of the use of American Sign Language (ASL) and other sign systems was investigated. A questionnaire was distributed to teachers in a residential school for the deaf in California. In addition to questions regarding the availability of sign language assessment at their schools, participants responded to items concerning their motivation to use a test for sign language measurement. Of the 100 distributed surveys, 85 were completed and returned. Results showed overwhelming agreement among respondents concerning the importance of sign language assessment, along with the need for tools that appropriately measure signing skills.

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Few standardized assessment tools are available that effectively provide a detailed evaluation of a deaf individual's ability to use language proficiently, whether in spoken or written form, and particularly in the visual-gestural modality (Haug, 2005). Among the instruments that are used with this target group, most were originally developed for hearing students—e.g., the Carolina Picture Vocabulary Test, 1985—or were standardized more than 25 years ago—e.g., Total Communication Receptive Vocabulary, 1981 (Nielsen & Luetke-Stahlmann, 2002; White & Tischler, 1999).

Widespread use of standardized tests—developed for hearing individuals—for diagnostic and educational placement purposes (French, 1999) fails to detect deaf students' primary

linguistic knowledge. Consequently, it is often not possible for professionals in deaf education and related disciplines to adequately evaluate and identify language skills that are effectively developed in deaf children or those skills that require intervention (Schembri et al., 2002). Not only do deaf students receive insufficient accurate feedback from traditional assessment measures; teachers fail to obtain information about the communicative/linguistic abilities of students sufficient to evaluate "the academic progress of their students, which also means the success of their own instruction" (Schembri et al., 2002, p. 19). Moreover, it is mainly on the basis of these communicative and language measures that appropriate intervention approaches can be developed.

Over the past three decades, a growing number of studies have examined the acquisition of natural sign languages in deaf children or have focused on ways to provide a linguistic validation of sign language as a true natural language (e.g., Emmorey, 2002; Morgan, Herman, & Woll, 2002). Most of these studies have focused on American Sign Language (ASL) and British Sign Language (BSL), while research on other natural sign languages, in particular, ways to appropriately assess sign language proficiency of deaf children, remains limited. While the lack of instruments to measure deaf students' language capabilities in both sign and written language is discussed in the current literature (e.g., Haug & Hintermair, 2003; Herman, 1998; Johnson, Kimball, & Brown, 2001; Nielsen & Luetke Stahlman, 2002), most reports lack empirical data (e.g., surveys, interviews) to scientifically document the pressing need for such instruments, especially in regard to programs that include a natural sign language as a primary means of instruction. Generating successful academic performance by deaf students over the long term requires that administrators of such programs produce detailed documentation of their objectives and how these objectives are attained. This may include a list of formal assessment procedures (e.g., language tests) as well as informal ones (e.g., in-class observation) used to evaluate students' language proficiency. Information obtained through the use of assessment measures can assist school administrators with placement questions and support educational decisions regarding appropriate support services.

A likely reason for the lack of empirical research on deaf education professionals' perceptions of sign language assessment tests is the varying degree of sign language proficiency deaf chil-

dren show as a result of their exposure to different forms of sign language input (e.g., natural sign language vs. pedagogical sign systems). This variance makes appropriate assessment difficult. Consequently, instruments designed to measure individual language performance need to target specific linguistic forms and functions inherent in these sign languages and sign systems. In one of the few studies to address the subject of sign language measurement, Haug and Hintermair (2003) conducted a survey of German deaf education professionals' perceptions of a number of assessment-related issues. Participants were asked to answer questions concerning the availability of assessment at school, types of items to be measured in a sign language test, and respondents' attitudes toward tests constructed to assess deaf individuals' signing skills. The majority of the German educators of the deaf who responded to the survey expressed a need for consistent assessment and, in particular, for instruments designed to evaluate mastery of specific linguistic features of sign language. The educators particularly stressed the significance of assessment tools designed specifically for children who acquire a natural sign language as a first language.

Despite a growing interest in test development for purposes that include the screening of early signing skills in preschool deaf children, assessment of sign language proficiency in school-aged deaf students, and the investigation of specific linguistic features of sign language in signers at various ages, the number of available assessment tools remains small. In addition, there are certain limitations in some of the tests under development. These shortcomings include a limited age range of participants, a lack of large sample norms and valid psychometric properties, and use of instru-

ments that are not appropriate for administration in an educational setting (for reasons of test length, for example). In addition, most of the tests have not been standardized or published, nor are they commercially available, with a few exceptions (e.g., the BSL Receptive Skills Test, Herman, Holmes, & Woll, 1999). This presents an obstacle for professionals in deaf education, who lack the appropriate assessment instruments to successfully monitor their students' language and academic progress. Although it may seem apparent that no single sign language assessment tool is likely to demonstrate the same level of appropriateness for all situations and skills, additional research on assessment-related issues is needed. This includes qualitative research that may provide vital information concerning how effectively assessment works in practice.

## The Present Study

In an effort to more systematically investigate the need for appropriate tools to assess American deaf students' sign language skills, a survey was distributed to 100 participants in a residential school program that integrates ASL as a primary means of instruction and communication. (Because of the inconsistencies in the type of sign language input—e.g., natural sign languages such as ASL, invented systems such as Signing Exact English, or a mix of both—that deaf students receive in and outside of school, the term *sign language* is used in a wider sense in the present study unless stated otherwise.) The survey consisted of a written questionnaire that had two main functions:

1. to gather information on the availability of formal and informal types of assessment at the school site to measure students' sign language proficiency

2. to investigate deaf education professionals' attitudes toward assessments of ASL proficiency (e.g., potential use, concerns)

The survey responses served as indicators of the need for appropriate ASL test measures; they also provided suggestions for future educational efforts.

A major objective of the present study was to examine the level of agreement among professionals concerning their attitudes towards assessment of deaf students' sign language skills. We were particularly interested in surveying participants' perceptions of sign language assessment as a key factor in evaluating individual students' ASL skills. Additionally, we wanted to explore potential differences in attitudes regarding the need for appropriate assessment instruments, based on respondent hearing status. Another objective of the survey was to document the perceptions of professionals, who are concerned with assessment-related issues on a daily basis.

### Research Questions

To investigate attitudes of educators of the deaf and other professionals in deaf education toward sign language assessment, four research questions were posed:

1. Are deaf students' sign language skills assessed on a regular basis at the school?
2. Do professionals in deaf education see a need for assessment of deaf students' sign language performance at school? If yes, how does such a need relate to respondents' own use of sign language at school and in other contexts?
3. To what extent does the respondents' hearing status have an influence on their perception of sign language assessment?

4. Do professionals who are deaf, hard of hearing, or hearing agree in their evaluation of which grammatical features of a natural sign language, such as ASL, are important to be assessed?

### Methodology

#### Participants

The targeted sample in the present study consisted of 100 respondents, of whom 85 completed and returned a written questionnaire concerning the need for tests of sign language. All of the survey respondents worked in a bilingual-bicultural residential school exclusively serving deaf and hard of hearing students from preschool through high school age. The school provided instruction to both day and residential students. In this school, ASL was recognized as an autonomous language used as means of instruction in the classroom. In addition to the large number of deaf and hard of hearing students, the program also had deaf faculty and staff members, which was of particular importance to us, given the small number of deaf professionals in the field of deaf education (Rosenfeld, Mounty, & Ehringhaus, 1994). Forty-five of the 85 completed questionnaires (53%) came from respondents who were deaf or hard of hearing.

#### Survey Instrument

The survey developed for the present study consisted of a written questionnaire incorporating 24 items aimed at ASL assessment issues and 10 demographic questions (see Appendix). Drawing on research by Herman (1998) and Haug and Hintermair (2003), the questionnaire was designed by the first author in collaboration with an item panel consisting of a teacher of the deaf, a professor specializing in deafness and ASL assessment (who is also the second author

of the present article), and a graduate student with background in measurement and evaluation. (The term "item panel" is used here with reference to Wilson, 2005. It describes a group of people consisting of professionals, people knowledgeable about measurement, and potential respondents, all of whom participate in creating the best set of items to provide a well-rounded representation of the framework of the research.) Different types of questions were mixed, including Guttman scale items (e.g., "Which of the following statements best describes your value of sign language assessment?"), multiple-choice items (e.g., "Who assesses deaf students' sign language skills?"), Likert-type scale items (e.g., "How important would the following elements be for your decision to use a test for sign language assessment?"), and open-ended questions (e.g., "Please describe briefly what form of sign language or signed communication is used in your program").

To measure reliability, an alternate test version ("B") was developed that contained the same number of items. This version differed from the original survey ("A") in that the wording of each item had been modified without changes in content. Examples are question 11 (test A), "Are deaf students' sign language skills assessed on a regular basis at your school?" and question 1 (test B), "Is sign language assessment administered regularly at your school?" The rationale for this approach was to give the appearance of new items. Both sets of items were included in the same questionnaire. To distinguish them from each other, they were labeled "part A" and "part B." Respondents received a cover letter in which they were informed about the format of the questionnaire and asked to complete both parts.

## Criteria for Evaluation

All returned questionnaires were collected and scored by the first author, who also entered the responses for all items into a computer data file using Quest (Adams & Khoo, 1996), an interactive test analysis program, and Microsoft Excel. Because the sample was small, no additional rater was involved.

## Analyses

The survey developed for the present study contained two types of questionnaire items: prewritten items and open questions. For the analysis of the responses, we took a mixed-methods approach. For those survey items with prewritten responses, quantitative measures were applied. In this context, we used mainly descriptive statistical analysis because of the small sample size. All data obtained from items with open questions were analyzed for recurring themes.

## Quantitative Analysis

In order to elicit responses to the research questions in the introduction, we emphasized four criteria:

1. degree of availability of sign language assessment tools at the school site and type of sign language measured, and the use of assessment strategies
2. respondents' evaluation of grammatical features according to these features' level of significance for sign language assessment
3. respondents' perception of the need for sign language assessment
4. criteria to evaluate respondents' interest in and motivation to make use of a sign language assessment test

## Reliability and Validity

An alternate form of reliability coefficient was produced for the sign language assessment questionnaire by creating two sets of items, both of which were part of the survey that respondents filled out. These sets of items (i.e., "A" and "B") were administered at the same time and calibrated. This was followed by (a) correlation of both sets to produce alternate forms of reliability coefficients. Overall, the sign language assessment questionnaire demonstrated high alternate form reliability, exceeding an  $r$  of .75 for all items.

To facilitate deeper analysis, the survey items were divided into three groups, each of which yielded high values for within-group correlations and low values for between-group correlations:

- group I: assessment of sign language skills in school
- group II: elements of sign language that require assessment
- group III: criteria that have an impact on professionals' use of sign language assessment instruments

Once we had distributed the items among these three groups and eliminated answers that had been given exclusively in part B, reliability increased significantly for comparisons between both test versions, with  $r = .86$  (group I),  $.85$  (group II), and  $.90$  (group III). New answers were not included in the analysis to prevent falsely inflated calculations of the reliability coefficient.

## Demographic Background of Respondents

As previously stated, the majority of participants were teachers ( $n = 79$ ), although the sample also included responses from speech-language pathol-

ogists ( $n = 3$ ), school psychologists ( $n = 1$ ), and resource specialists ( $n = 2$ ). Of all participants, 40 (47%) were hearing, 36 (42%) were deaf, and 9 (11%) had other types of hearing loss. When asked to evaluate their expressive and receptive signing proficiency, the majority of respondents gave high ratings to their comprehension skills ( $n = 52$ ) and production skills ( $n = 58$ ). Ninety-five percent ( $n = 81$ ) of all participants reported that they used ASL as their primary means of communication at school, while 48% ( $n = 41$ ) indicated that they made frequent use of fingerspelling. With regard to respondents' personal use of communication in other contexts (e.g., at home), results showed a similar pattern, with more than half of the participants ( $n = 49$ ) indicating predominant use of ASL, followed by occasional use of fingerspelling ( $n = 32$ ).

## Sign Language Assessment at School

One of the questions investigated in the present study was the availability of ASL assessment in programs that provide services to deaf students. Forty-nine percent of the respondents stated that they were not aware of any regular sign language assessment at their school. Regarding the question concerning types of assessment strategies used, the most common response (given by 24% of participants who answered the question) was to indicate that using combinations of different strategies was the foremost approach. Such strategies include the use of an observation checklist and video recordings. A similar observation was made regarding participants' responses regarding assessment responsibility. Judging by the answer that was selected most frequently (i.e., by 26% of those who answered the question), usually more than one person was involved in assessment-

related processes. In addition to the teacher, these professionals often would include a speech-language pathologist or an assessment specialist.

### *Professionals' Need for Sign Language Assessment*

Another important issue was the question of whether professionals in deaf education perceive a need for sign language assessment. We studied this question from different perspectives by examining participants' professional opinions concerning sign language assessment measures, along with their expressed need for such tests. In addition to items that asked for respondents' perceptions of individual issues related to sign language assessment (e.g., the linguistic features that were measured), there were items that asked participants to select from a number of preformulated statements regarding the significance of sign language assessment.

Nearly all participants ( $n = 83$ ) said they considered the availability of tests to assess sign language proficiency useful. Furthermore, the majority of respondents ( $n = 51$ ) selected the statement "I see it as a key element to determine the skills of individual students along with their needs and use it consistently" when asked to assess the value of sign language assessment. An even larger majority ( $n = 60$ ) selected a statement indicating that there is a "strong need" for sign language tests.

### *Impact of Hearing Status*

In order to determine whether respondents' hearing status had any effect on their judgment of various grammatical features of ASL with regard to their importance for assessment, correlations were determined between respondents' hearing status and all items in group II (i.e., elements of ASL that require assessment, including language

**Table 1**

Correlations Between Respondents' Hearing Status and Their Ratings of the Significance of Grammatical Aspects of ASL to Be Assessed

Features	HI %	SI %	NI %	Correlation coefficient: hearing status and respondents' judgment
Language comprehension	98	2	—	.018
Language production	96	4	—	.092
Lexical knowledge	51	48	1	.071
Specific linguistic features (e.g., classifiers)	69	30	1	.067
Communicative competence	91	8	1	.061
Nonmanual features	47	53	—	-.037
Narrative skills	65	35	—	.032
HI = highly important, SI = somewhat important, NI = not important.				

comprehension, language production, and lexical knowledge). The results of these statistical analyses are summarized in Table 1.

The respondents considered three elements particularly important in the assessment of sign language skills in deaf students: language comprehension ( $n = 83$ ), language production ( $n = 82$ ), and communicative competence ( $n = 77$ ). Factors such as nonmanual features ( $n = 40$ ) and lexical knowledge ( $n = 43$ ), generated much lower values. None of the correlation coefficients were statistically significant, which suggested that hearing status did not have a significant impact on respondents' perceptions of sign language assessment.

**Table 2**

Respondents' Ratings of Criteria They Might Apply in Deciding Whether to Use an ASL Proficiency Assessment

Features	HI %	SI %	NI %
Level of difficulty of test administration	46	45	9
Length of test	42	46	12
Level of difficulty of test scoring	46	44	10
Level of difficulty of test analysis	54	34	12
Amount of training needed	49	41	10
Level of linguistic expertise needed	59	37	4
HI = highly important, SI = somewhat important, NI = not important.			

### *Criteria for the Use of a Sign Language Assessment Test*

Survey participants were also asked to rate the importance of several test-related variables (e.g., test length) in their decision to use an assessment test for sign language. The results are displayed in Table 2.

Fifty-nine percent of participants rated the level of linguistic expertise a highly important criterion in their decision to use an assessment test. Other elements that received high ratings included the level of difficulty of test analysis (54%) and the amount of training needed (49%). A smaller proportion (42%) considered test length highly important; 46% rated it somewhat important.

## Qualitative Analysis

An additional objective of the survey on sign language assessment was to provide qualitative data in form of responses to open-ended questions. Some of the qualitative items allowed participants to comment (e.g., "What are other issues that are important to you with regard to sign language assessment?") or elaborate on the way they had answered related questions (e.g., "If you answered 'yes,' please explain why"). Almost every completed survey contained remarks of some kind by participants. All comments were entered into a separate file and subjected to a content analysis in which we identified recurring themes and organized comments accordingly. Several recurring "key themes" emerged during this process, which can be summarized as follows:

1. Although the majority of respondents agreed on the overall significance of having deaf students' sign language skills assessed in a consistent and systematic way, the question remained, Who can be considered most qualified to oversee this type of assessment?
2. With regard to the fact that many deaf children often do not consistently use a single type of signing (e.g., ASL, Sign Exact English, manually coded English), it is necessary for assessors to be closely familiar with the different means of communication that deaf students use in order to recognize what they are assessing. In this context, many professionals reported having difficulties determining what language(s) a student had been exposed to outside of school.
3. In order to make assessment effective, students need to be assessed on a regular basis in-

dependent of their signing skills. Also, it is important that other professionals and a student's parents be able to easily interpret the results of a sign language assessment test.

4. Responsibility for assessing the deaf student's skills should not be left with teachers. Instead, this task requires a team approach that includes speech-language pathologists, ASL teachers, and classroom teachers.
5. Most current testing of deaf students' sign language skills occurs in an environment that is not natural (e.g., a student will manifest these skills differently in a test situation and during recess) and thus provides only limited understanding of many individuals' true capacities. Consequently, it is necessary for assessment instruments to be able to evaluate language used in "a more naturalistic, communicative setting" (Schembri et al., 2002, p. 37) such as the individual's home.

Both quantitative and qualitative data reveal a number of interesting findings: Qualitative results indicate that many professionals in deaf education see a need for assessment tools that are appropriate for measuring deaf students' ASL proficiency. This perspective can be observed similarly across type of professions as well as hearing status. Furthermore, the main reason that deters many participants from effectively employing a sign language test is the degree of linguistic expertise deemed necessary to successfully administer and score such a test. These perceptions are corroborated by the results of the qualitative analysis, which reveal an emphasis on such issues as involvement in test development and test administration as

well as the need for more consistent sign language assessment.

## Discussion

The present study investigated how professionals in deaf education perceive the assessment of deaf students' sign language skills. Using data derived from responses to a written questionnaire distributed to 100 participants in a residential program serving a large number of deaf students, we examined professionals' perspectives on current ASL assessment procedures (or the lack thereof) at the school. In addition, participants were asked to assign levels of importance to the assessment of different linguistic features of ASL (e.g., sign production, sign comprehension) and, on the basis of several factors (e.g., level of linguistic expertise required, test length), state their degree of motivation to use an ASL assessment test.

During the analysis of the survey results, four key themes and areas of concern surfaced in regard to the implementation of assessment measures in schools.

### Lack of Sign Language Assessment at School

One of the main findings of the present study was the noticeable lack of regular sign language assessment at the participating school. This trend was equally strong across professional roles within the program and hearing status of participants. The finding has particular importance in that it is derived from data gathered at a residential school with a bilingual-bicultural education program that recognizes ASL as means of instruction and communication. This observation illustrates the concurrent lack of assessment norms in schools for the deaf, particularly programs that include ASL as a means of instruction.

## **The Need for Sign Language Assessment**

In addition to the availability of sign language assessment at school, we investigated the extent to which respondents believed that there was a need for ASL tests. Results showed that a majority of participants regarded sign language assessment as a key element in gauging the language and academic skills of individual students, and that these respondents tried to use in it some form in the classroom (e.g., in informal assessment procedures). A belief in the importance of sign language assessment was shared by educators of the deaf and other professionals such as speech-language pathologists and curriculum specialists. The overwhelming agreement on the strong need for appropriate test instruments to measure deaf students' signing skill suggests that current assessment practices, which are mostly informal and inconsistently applied, are not sufficiently effective to provide adequate support services for these students.

## **The Influence of Hearing Status on Perceptions of Sign Language Assessment**

For one of our research questions, which concerned the effect of hearing status on respondents' views of sign language assessment, we did not receive a conclusive answer. We did find that deaf professionals appear to assess deaf students' in-class performance more often than their hearing colleagues do, and consider it slightly more useful to have tests available, and that both groups share the overall view that the currently available evaluation measures are not sufficient. Such a conformity of views could provide a starting point for a meaningful collaboration between deaf and hearing professionals. However, because of the fact that all survey responses

came from the same school, a residential program that supports ASL and has a high number of deaf teachers and other deaf staff, these findings are not necessarily representative of all professionals in deaf education.

## **Agreement Among Professionals Across Type of Profession and Hearing Status on Assessment Questions and Use of Assessment Tests**

As was the case with the prior question on the relationship between hearing status and perceptions of the value of assessment, we were interested in the possible existence of a relationship between such variables as respondents' type of profession or hearing status and their consideration of sign language assessment, as well as their decision to use assessment tests. The finding that none of the correlations between these variables showed any statistical significance is likely due to the fact that all of the data came from the same program. Nevertheless, the significance that was found for correlations within the groups for sign language characteristics and criteria to use tests, along with the significance ratings that were computed for these items, provided valuable information that warrants additional research. Regarding the importance of measuring particular grammatical and semantic features of ASL (e.g., lexical knowledge), most respondents considered it important to assess both language comprehension and language production, as well as overall communicative competence.

When asked to rate the significance of different criteria in their decision to use an assessment test, most participants agreed on required linguistic expertise as the most influential component. Surprisingly, respondents did not include test length among the aspects of greatest concern in their deci-

sion to use an assessment test. Given that many professionals claimed time constraints as the main factor that kept them from conducting assessment more consistently, this apparent contradiction may warrant further investigation.

However, it is important to point out the possibility that respondents' ratings of the criteria for using a sign language assessment test may have been influenced by their own interpretation of who should administer tests. With the majority of professionals in deaf education being hearing, many of these individuals claim their lack of native ASL skills and strong linguistic/cultural background as the main reason for not using sign language assessment tests. Instead, they see assessment as being conducted by someone who is considered more competent (i.e., a native signer). For test developers, it is vital to acknowledge such notions by developing assessment tools that are appropriate for deaf test takers. At the same time, such tools need to be designed in a way that allows individuals with varying level of linguistic expertise in a natural sign language such as ASL to administer and score them.

## **Summary**

The overview of attitudes among educators of the deaf and other professionals toward ASL assessment provided in the present article points out an apparent need for appropriate assessment tools to measure deaf students' sign language skills. If educators of the deaf are to be able to monitor these students' success in acquiring ASL as their first or second language and facilitate decisions on effective intervention services, it is critical that all efforts to successfully meet those needs be increased. Such efforts include studies with larger, more diverse, samples.

Given that all survey responses



came from one school, the findings of the present study need to be approached with caution. In particular, in light of the fact that residential and center programs make up less than 30% of instructional settings for students with hearing loss in the United States, other types of programs with equal or greater representation, such as self-contained classrooms in regular or mainstreamed educational settings and regular educational settings (Gallaudet Research Institute, 2005) need to be acknowledged, and included in future studies.

Further, the results should not be generalized, because of the relatively small size of the sample. However, the fact that the study targeted participants who are representative of a "low-incidence population" (Maller & Ferron, 1997, p. 989) makes the complete sample ( $N = 85$ ) large enough to qualify for validity purposes. In order to evaluate whether the views expressed in the study are representative of deaf education professionals' attitudes towards sign language assessment throughout the United States, we recommend a follow-up study that would increase the number of participating programs to include those that do not offer sign language as means of instruction. It might also be beneficial to expand the physical distance between participating schools in order to enable cross-regional comparisons.

### Implications for Assessment and Intervention

The successful application of any type of theoretical framework in deaf education requires a comprehensive documentation of deaf students' skills along with their unique needs. This can be accomplished by establishing norms for assessment of deaf students' ASL skills along with formal guidelines on who should be involved in the assess-

ment process. In addition, educators may be able to expand their instructional strategies and maximize the amount of student data available by exploring meaningful ways to integrate assessment tools as a complementary measure in their classroom. These and other measures can be established much more effectively through coordinated efforts by the school and researchers. Collaborations with schools could allow researchers to oversee the implementation of their assessment tool and make adjustments where necessary, based on the feedback of teachers and other professionals who are using the test. For schools, this type of collaboration could provide additional expertise to deal with some of the issues related to sign language assessment (e.g., assessment content, use of assessment results, consistency of assessment).

As suggested by some respondents in the present study, the idea of assembling a team of professionals from different areas of expertise (e.g., education, language assessment, speech-language pathology, linguistics) holds the greatest promise for success. One of the potential advantages of such a team effort would be a substantial decrease in the amount of time between identification of existing problems and onset of intervention services. Such a reduction could be made possible by providing training to all team members in both the use of formal assessment tools and informal assessment strategies. At the same time, assessment would no longer be affected by the subjective views of a single person.

With the majority of professionals in deaf education being hearing, it is vital that test developers take into consideration the varying degrees of sign language competency within this group and how it may affect individuals' ability to administer an ASL profi-

ciency assessment. If norms and guidelines to assist those involved in the process of sign language assessment can be established, one of the main objectives of such a tool, which is to effectively monitor deaf students' academic progress, can more likely be achieved.

### Note

The first author wishes to express his thanks to the teachers and other professionals at the three programs for their participation in this study and the members of the construct item panel for their input.

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## Appendix

### *Sign Language Assessment Survey*

#### Part A

#### III. Demographics

1. Which of the following best describes your profession?
  - ☐ teacher
  - ☐ speech-language pathologist
  - ☐ school psychologist
  - ☐ resource specialist
  - ☐ curriculum specialist
  - ☐ literacy specialist/after-school coordinator
  - ☐ teacher assistant
  - ☐ other (please specify) \_\_\_\_\_
2. For how many years have you been working in your professional capacity?  
\_\_\_\_\_ years
3. Select the type of program you are currently working in from the following:
  - ☐ residential/special
  - ☐ day
  - ☐ mainstream
  - ☐ other (please specify) \_\_\_\_\_
4. Employment setting (choose one):
  - ☐ public school
  - ☐ private school
  - ☐ other (please specify) \_\_\_\_\_
5. Does your program include sign language as means of instruction?
  - ☐ yes - > continue with question 5.1
  - ☐ no - > continue with question 6
- 5.1 If you answered with "yes," please describe briefly what form of sign language or signed communication is used in your program (e.g., ASL, SEE 1, SEE 2, MCE):  
\_\_\_\_\_  
\_\_\_\_\_
6. What is your hearing status?
  - ☐ hearing
  - ☐ hard of hearing
  - ☐ pre-lingual deaf
  - ☐ post-lingual deaf
  - ☐ other (please specify) \_\_\_\_\_
7. How often do you personally use any of the following means of communication at school?  
(M = mostly, O = often, S = sometimes, N = never) Multiple answers possible!
 

	M	O	S	N
American Sign Language (ASL)	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
sign systems (e.g., SEE)	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
fingerspelling	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
manually coded English (MCE)	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
other (please specify) _____	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

If you checked "never" for all -> continue with question 9.

8. How often do you personally use any of the following means of communication *in other contexts* (e.g., home)?  
(M = mostly, O = often, S = sometimes, N = never) Multiple answers possible!

	M	O	S	N
American Sign Language (ASL)	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
sign systems (e.g., SEE)	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
fingerspelling	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
manually coded English (MCE)	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
other (please specify) _____	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

9. Which of the following statements describes best your level of sign language *comprehension* skills:

- ☐ I consider myself fluent in sign language and have no difficulties comprehending sign language in any kind of context.
- ☐ I can follow most conversations in sign language without any difficulties.
- ☐ I feel fairly comfortable when following a conversation in sign language but still have to ask occasionally to understand everything.
- ☐ I can understand simple sentences in sign language but need to ask frequently in order to follow a conversation.
- ☐ I can understand single signs and simple sentences when they are produced slowly and repeated a number of times.
- ☐ I do not use any signs.

10. Which of the following statements describes best your level of sign language *production* skills:

- ☐ I consider myself fluent in sign language and have no difficulties actively participating in any kind of conversation in sign language.
- ☐ I can participate in most conversations in sign language without any difficulties.
- ☐ I feel fairly comfortable when partaking in a conversation in sign language but still have to reflect occasionally on how to express my thoughts in sign language.
- ☐ I can sign simple sentences but have to reflect frequently on how to express my thoughts in sign language.
- ☐ I can produce single signs (slowly) and answer basic questions.
- ☐ I do not use any signs.

## II. Sign Language Assessment of Deaf Children

11. Are deaf students' sign language skills assessed on a regular basis at your school?

- ☐ yes -> continue with question 11.1
- ☐ no -> continue with question 12

- 11.1 If "yes," what types of sign language skills are assessed (e.g., ASL, Signed English, SEE)? Please describe:

\_\_\_\_\_

- 11.2 Who assesses deaf students' sign language skills?

- ☐ speech-language pathologist
- ☐ assessment center
- ☐ teacher
- ☐ other (please specify) \_\_\_\_\_

- 11.3 Which of the following strategies are used? Multiple answers possible!

- ☐ observation of in-class performance
- ☐ observation outside the classroom
- ☐ video recordings
- ☐ using own test/task (describe) \_\_\_\_\_
- ☐ other (please specify) \_\_\_\_\_

12. Do you see any general problems in trying to assess deaf students' sign language skills?

- ☐ yes -> continue with 12.1  
☐ no -> continue with 13

12.1 If you answered "yes," please describe these problems briefly:

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13. Which of the following statements best describes your value of sign language assessment? Check only one!

- ☐ I see it as a key element to determine the skills of individual students along with their needs and use it consistently.  
☐ I see it as a useful tool and try to integrate it on a regular basis.  
☐ I believe it is meaningful but don't have the time to do it on a regular basis.  
☐ I don't think it is very helpful but do it because of school policy.  
☐ I do not consider it necessary for my work with students.

### III. Attitude Toward Test Instruments to Assess Sign Language Skills

14. Which of the following aspects of communication would you consider important to be assessed in a test for sign language skills? (HI = highly important, FI = fairly important, SI = somewhat important, NI = not important)  
Multiple answers possible!

	HI	FI	SI	NI
language comprehension	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
language production	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
lexical knowledge	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
specific linguistic features (e.g., classifiers)	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
communicative competence	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
nonmanual features	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
narrative skills	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
other (please specify) _____	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

15. How important would the following elements be for your decision to use a test for sign language assessment? (VI = very important, SI = somewhat important, NI = not important at all, N/A= not applicable):

	VI	SI	NI	N/A
level of difficulty to administer	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
length of test	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
level of difficulty to score test	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
level of difficulty to analyze test	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
amount of training needed	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
level of linguistic expertise needed	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

16. Do you think it would be useful to have tests available to assess deaf students' sign language skills?

- ☐ yes -> continue with 16.1  
☐ no -> continue with 17

16.1 If "yes," what sorts of tests (e.g., vocabulary, narrative skills)?

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17. What are other issues that are important to you with regard to sign language assessment?

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Overall, I see . . .

- ☐ a strong need for test instruments that are appropriate for assessment of deaf students' sign language skills. Existing techniques (e.g., informal assessment, tests to assess spoken language) are not sufficient for this purpose.
- ☐ a noticeable need for test instruments that assess sign language skills in deaf children. Informal assessment strategies can be used as supplements.
- ☐ no particular need for test instruments that assess sign language skills in deaf children. Available strategies (e.g., informal assessment) work just fine.
- ☐ no need at all for test instruments that assess sign language skills in deaf children because my program does not make use of signs.
- ☐ other (please specify) \_\_\_\_\_

**End of Part A of the questionnaire. Please turn page and proceed with Part B.**

## Sign Language Assessment Survey

### Part B

1. Is sign language assessment administered regularly at your school?

- ☐ yes -> continue with question 1.1  
☐ no -> continue with question 2

- 1.1 If "yes," please describe the types of sign language skills that are assessed:

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- 1.2 Who is/are responsible for assessing deaf students' sign language skills in your school?

- ☐ speech-language pathologist  
☐ assessment center  
☐ teacher  
☐ other (please specify) \_\_\_\_\_

- 1.3 Are any of the following strategies used for assessment purposes? Multiple answers possible!

	Yes	No
observation of in-class performance	<input type="checkbox"/>	<input type="checkbox"/>
observation outside the classroom	<input type="checkbox"/>	<input type="checkbox"/>
video recordings	<input type="checkbox"/>	<input type="checkbox"/>
using own test/task (describe) _____	<input type="checkbox"/>	<input type="checkbox"/>
other (please specify) _____	<input type="checkbox"/>	<input type="checkbox"/>

2. Are there any problems that you associate in general with successful assessment of deaf students' sign language skills?

- ☐ yes -> continue with 2.1  
☐ no -> continue with 3

- 2.1 If you answered "yes," please explain why:

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3. Select from the following statements the *one* that best expresses your perspective on sign language assessment:

- ☐ I see it as a key element to determine the skills of individual students along with their needs and use it consistently.  
☐ I see it as a useful tool and try to integrate it on a regular basis.  
☐ I believe it is meaningful but don't have the time to do it on a regular basis.  
☐ I don't think it is very helpful but do it because of school policy.  
☐ I do not consider it necessary for my work with students.

4. How important would you consider the following grammatical features to be evaluated in a test of deaf sign language skills? (HI = highly important, FI = fairly important, SI = somewhat important, NI = not important) Multiple answers possible!

	HI	FI	SI	NI
language comprehension	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
language production	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
lexical knowledge	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
specific linguistic features (e.g., classifiers)	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
communicative competence	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
nonmanual features	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
narrative skills	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
other (please specify) _____	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

5. If you were to consider the use of an assessment test for sign language skills, what role would the following issues play in your decision? (VI = very important, SI = somewhat important, NI = not important at all, N/A = not applicable):

	VI	SI	NI	N/A
level of difficulty to administer	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
length of test	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
level of difficulty to score test	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
level of difficulty to analyze test	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
amount of training needed	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
level of linguistic expertise needed	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

6. Would you consider it helpful to have access to tests that assess deaf students' sign language skills?

- ☐ yes -> continue with 6.1  
☐ no -> continue with 7

- 6.1 If "yes," please specify what kinds of tests (e.g., vocabulary, narrative skills).

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7. Are there any additional issues regarding sign language assessment that are important to you?

Please describe:

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8. Which of the following statements about sign language assessment best describes your own perspective?

"Overall, I see . . ."

- ☐ a strong need for test instruments that are appropriate for assessment of deaf students' sign language skills. Existing techniques (e.g., informal assessment) are not sufficient for this purpose.  
☐ a noticeable need for test instruments that assess sign language skills in deaf children. Informal assessment strategies can be used as supplement.  
☐ no particular need for test instruments that assess sign language skills in deaf children. Available strategies (e.g., informal assessment) work just fine.  
☐ no need at all for test instruments that assess sign language skills in deaf children because my program does not make use of signs.  
☐ other (please specify) \_\_\_\_\_

End of Part B.

Thank you for taking the time to answer this questionnaire.

Your participation is greatly appreciated!