**Swedish school-based speech-language pathologists’ perception of language assessment tools and practices**

Linnéa Cooke¹, Ketty Andersson²*, Monica Blom Johansson¹

¹Department of Public Health and Caring Sciences, Speech-Language Pathology, Faculty of Medicine, Uppsala University, Uppsala, Sweden; ²Logopedics, Phoniatrics, and Audiology, Department of Clinical Sciences Lund, Faculty of Medicine, Lund University, Lund, Sweden

*Corresponding author: Ketty Andersson, Logopedics, Phoniatrics, and Audiology, Department of Clinical Sciences Lund, Faculty of Medicine, Lund University, Lund, Sweden. Email: ketty.andersson@med.lu.se

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**Abstract**

This qualitative study aimed to increase the knowledge about Swedish school-based speech-language pathologists’ (SLPs) perception of language assessment tools and practices. Topics included purposes of language assessments within a school context, experience of the existing tools and important dimensions. Nineteen school-based SLPs were interviewed in focus groups and the data were analysed using qualitative content analysis. The findings indicated that the existing tools are only partly functional, and therefore the SLPs sometimes needed to depart from standardized procedures or use assessment with age groups outside the test manuals. The SLPs stressed the importance to combine multiple assessment forms and to collaborate with other professions in schools. The results have increased our knowledge of how Swedish school-based SLPs perceive language assessments and their opinions on how assessments need to be designed. The present study contributes to the growing body of research that shed light on the importance of combining different assessment forms to reach a functional focus.

**Keywords**: SLP; school-based speech-language pathologists; language difficulties; assessment; language assessment

**Introduction**

The number of school-based speech-language pathologists (SLPs) in Sweden has increased significantly in recent years (National Board of Health and Welfare, 2022). Clinical guidelines for school-based SLPs in Sweden were recently presented officially for the first time by the Swedish Speech-Language Pathologist Association (Logopedförbundet, 2022). The guidelines stress that school-based SLPs must contribute to language accessibility for all students and that SLPs can support individuals...
with major difficulties in language and communication with intervention. However, agreements between the municipality and the health care system differ regionally in Sweden, or are completely missing, which means that school-based SLP services vary. A large number of Swedish SLPs work in hospitals/SLP clinics where they serve children with speech and language disorders. For children with greater and more complex needs, SLP services are provided within habilitation centres. Regardless of the service provider, all SLP services are tax-funded, but a lot of children are waiting for SLP services. Swedish school-based SLPs are usually part of the Student Health-Care Services (Sandgren et al., 2023). The main goal of the Swedish Student Health-Care Services is preventative and to support students in their academic attainments. When students are at risk of academic failure, assessment of, for example, language abilities at different levels is also a part of their objectives. This approach to assessment is in line with the recommendations of the Criteria and Terminology Applied to Language Impairments (CATALISE) consortium, which stresses a focus on language functioning in everyday life, rather than using cutoffs on standardised tests. This approach also enables intervention to be provided at different levels, including adjustments in the environment (Bishop et al., 2016, 2017). Similarly, the International Classification of Functioning, Disability and Health (ICF; WHO, 2001) highlights both individual’s functioning in real-life situations based on the individual’s capacity and environmental and personal factors. The use of ICF as a framework for the assessment practices of US school-based SLP services has been described by Westby and Washington (2017). By involving all stakeholders, the SLP can get a better picture of the students’ needs and possibilities. Using the framework in students’ individual education plans might facilitate developing more socially oriented, rather than impairment-based, goals (Westby and Washington, 2017).

**Assessment procedures available to SLPs**

Despite the push for taking a more functional approach in SLP assessments, few standardised assessments of functional language have been published (Bishop et al., 2017). Even fewer include discourse skills, a domain needed to measure functional impact of language difficulties of older school-aged students. In addition, studying discourse skills also enables functional goal setting (Hill et al., 2021). However, CATALISE provides several important guidelines to achieve a functional focus and emphasizes that both test performance and functional impact need to be considered when identifying a child’s needs. This should be done by combining multiple sources of information in assessment, for example, direct observation of the child, interview/questionnaires with caregivers or parents, criterion-based assessments, and standardized age-norm tests (Bishop et al., 2016).

One assessment approach suitable to measure functional impact of language difficulties in school-aged children is Curriculum-Based Language Assessment (CBLA), where the SLP uses school content in assessment and intervention (Robinson, 2012; Meaux and Norris, 2018; Newkirk-Turner and Johnson, 2018). In addition, Language Sample Analysis (LSA) is also particularly well suited for assessing curriculum-based oral and written language (Westerveld and Claessen, 2014).
Several researchers have developed LSA-based assessment tools designed to provide the information needed to set intervention goals to support academic progress (Heilmann et al., 2010; Heilmann and Malone, 2014; Gillam et al., 2017; Hill et al., 2021).

**School-based SLPS’ perception of assessment tools**

Denman et al. (2021) suggest that assessments used by SLPs in different countries need to be examined, with most studies researching English-speaking contexts. School-based SLPs’ assessment practices in the United States have been explored through structured open interviews in a study conducted by Fulcher-Rood et al. (2018). The results showed that standardized tests were used to examine specific language skills and to obtain an overview of the student’s language profile. However, the participants’ view was that standardized testing could not always capture the language difficulties that caused most barriers in the school context. To address this and to obtain information about language performance in naturalistic settings, the participants reported that they used contextualized and activity-based assessment, and that the assessment could be delivered by, for example, proxy reports (Fulcher-Rood et al., 2018). Furthermore, Waine et al. (2023), in a survey of the UK SLP assessment practices, found that SLPs primarily carried out standardized assessments and also collected other types of information using, for example, LSA and parent–teacher reports. Swedish school-based SLPs’ perception of language assessment tools and practices has been examined recently by Hallin and Partanen (2023). Their results paint a similar picture. Few SLPs reported using dynamic assessment and different language sampling techniques. The kind of material chosen by the SLPs could not solely be explained by factors, such as work setting or experience. Challenges for Swedish SLPs were, for example, lack of clinical guidelines and time to learn more about new procedures. Relatedly, Sandgren et al. (2023) found that employment characteristics for Swedish school-based SLPs differed greatly. Half of the respondents reported working solely with individual assessment and intervention, while the other half worked as a resource to teaching staff.

**Aims and research questions**

The aim of this study was to describe Swedish school-based SLPs’ perception of language assessment tools and practices within the school context. The specific research questions are as follows:

- According to Swedish school-based SLPs, what are the purposes of language assessment conducted within a school context?
- What experiences do Swedish school-based SLPs have regarding the functionality of the existing language assessment tools in a school context?
- According to Swedish school-based SLPs, what dimensions (modalities, linguistic domains, perspectives, and procedures) have to be taken into account when assessing language within a school context?
Materials and methods
Qualitative method was used as it is suitable to reflect the opinions and views of the respondents (Malterud, 2001). In this study, school-based SLPs were interviewed in focus groups, after which the data were analysed using qualitative content analysis applied according to the principles of Graneheim and Lundman (2004).

Selection of participants
Recruitment took place in April 2021 via social media using purposive sampling methods (Tong et al., 2007). The goal was to recruit 20 Swedish school-based SLPs, divided into four focus groups. Previous studies have found that saturation is often achieved after 3–6 interviews with focus groups of similar composition (Guest et al., 2017; Hennink et al., 2019). Information about the study was provided in an information letter, which was published in the Facebook groups ‘Logopedgruppen’ and ‘Skollogopeder och Skollogopedi’. Based on national statistics (Saco, 2020), it was inferred that most school-based SLPs were included in these groups.

A total of 24 Swedish school-based SLPs expressed an interest to participate in the study. When registering their participation, they also filled a form with information about their year of graduation, years of practice as a school-based SLP, geographical location, and type of employment. Participants with a variety of experiences increase the opportunities to shed light on research questions from different points of view (Graneheim and Lundman, 2004). Therefore, the information about the potential participants were listed in a table and 20 participants were selected and divided into four groups to ensure a variation in each group regarding year of graduation, experience, geographical location, and type of employment. To qualify for participation, the SLPs had to work within the Swedish school system, any grades, and provide assessment services to students with language difficulties. Table 1 describes participant characteristics. To ensure anonymity, the geographical base and gender are excluded.

At the time of the focus group interviews, one participant was unable to attend due to technical problems. Thus, in total 19 participants participated in the interviews.

Collection of data
As suggested by Denman et al. (2021), data was collected through focus group interviews, which are suitable for gathering experiences and knowledge from school-based SLPs as a group, rather than focusing on individual experiences (Acocella, 2012; Cyr, 2016). The exchange based on dialogue offers an opportunity for deeper reflection on concepts and opinions, in contrast to surveys (Husband, 2020). The interview format also encourages the participants to discuss with each other, rather than with the moderator (Acocella, 2012). Three focus groups consisted of five participants and one group consisted of four participants. One of the first authors, a school-based SLP, moderated the interviews. The field of school-based speech language pathology is relatively small in Sweden, and the moderator knew about

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1In English: ‘The SLP-group’.
2In English: ‘School-based SLPs and School-based speech-language pathology’.
some of the participants, but there were no close personal connections. Using focus groups minimized the risk that the moderator’s own presumptions would affect the interview and responses of the participants. The moderator had training in group processes, group guidance, and conversational techniques from an advanced-level university course in group counselling, further contributing to a less subjective approach. However, the moderator recognises the possible effect of her presence. The moderators’ presumptions that the functionality of the existing Swedish assessment tools in the field of school-based speech-language pathology is limited, might have influenced the participants’ answers.

The interviews were conducted in May 2021, digitally via Zoom. Semi-structured interviews were chosen as the form of interview, because it allows the participants to speak freely within the framework provided by the moderator, based on an interview guide (Table S1). Based on the interview guide, the moderator presented topics to be discussed (Acocella, 2012). The same interview guide was used in all four interviews and mainly consisted of research questions and issues related to these questions. The related issues were chosen to cover as many situations and perspectives as possible that a school-based SLP might need to consider and face when performing language assessments.

Table 1. Participant characteristics (n = 19)

<table>
<thead>
<tr>
<th>Graduation year</th>
<th>n</th>
<th>%</th>
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<tbody>
<tr>
<td>1980–1999</td>
<td>2</td>
<td>11</td>
</tr>
<tr>
<td>2000–2010</td>
<td>5</td>
<td>26</td>
</tr>
<tr>
<td>2011–2015</td>
<td>9</td>
<td>47</td>
</tr>
<tr>
<td>2016–2020</td>
<td>3</td>
<td>16</td>
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</tbody>
</table>

<table>
<thead>
<tr>
<th>Years of experience as a school-based SLP</th>
<th>n</th>
<th>%</th>
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<tbody>
<tr>
<td>0–2</td>
<td>6</td>
<td>32</td>
</tr>
<tr>
<td>3–4</td>
<td>5</td>
<td>26</td>
</tr>
<tr>
<td>5–7</td>
<td>5</td>
<td>26</td>
</tr>
<tr>
<td>8–11</td>
<td>3</td>
<td>16</td>
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</table>

<table>
<thead>
<tr>
<th>Type of employment</th>
<th>n</th>
<th>%</th>
</tr>
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<tbody>
<tr>
<td>Central, assigned to multiple schools</td>
<td>4</td>
<td>21</td>
</tr>
<tr>
<td>Local, employed directly by principal</td>
<td>15</td>
<td>79</td>
</tr>
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</table>

<table>
<thead>
<tr>
<th>Grades in caseloads</th>
<th>n</th>
<th>%</th>
</tr>
</thead>
<tbody>
<tr>
<td>Kindergarten - grade 3</td>
<td>2</td>
<td>11</td>
</tr>
<tr>
<td>Kindergarten - grade 6</td>
<td>6</td>
<td>32</td>
</tr>
<tr>
<td>Kindergarten - grade 9</td>
<td>7</td>
<td>37</td>
</tr>
<tr>
<td>Grade 4–grade 9</td>
<td>1</td>
<td>5</td>
</tr>
<tr>
<td>Grade 7–grade 9</td>
<td>1</td>
<td>5</td>
</tr>
<tr>
<td>Kindergarten–upper secondary school</td>
<td>2</td>
<td>11</td>
</tr>
</tbody>
</table>
The interview guide had been piloted by the first author in an in-depth interview with a school-based SLP as part of a university course in Qualitative Scientific Methods. However, due to a small number of SLPs working in a school context, no further piloting was made. The focus group interviews lasted about 60 minutes and were audio-recorded and transcribed verbatim. The participants did not receive a transcript for review. Field notes were not taken during the interviews.

**Data analysis**

The data was analysed using qualitative content analysis applied according to the principles of Graneheim and Lundman (2004). The analysis focussed on abstraction and interpretation of texts at different levels. Since this issue had never been studied before in the Swedish context, the method was considered appropriate.

The analysis started with the first author (LC) reading all transcripts several times to get an understanding of all. The discussions about each topic in the focus groups were not analysed separately but as a whole, and only manifest content was analysed in the study. All phrases relating to the research questions were included in the analysis.

The identified phrases (meaning units) were reformulated and condensed without losing information, after which they were openly labelled with a code, representing the condensed meaning unit. Codes with similar content were grouped together into subcategories and then related subcategories were grouped into categories. At this point in the analysis, it was evident that the categories could easily fit in with each of the research questions: (1) Purposes of language assessment conducted within a school context, (2) Experiences regarding the functionality of existing language assessment tools and (3) Important dimensions (modalities, linguistic domains, perspectives, and procedures) of language assessment within a school context, which were therefore used as main categories. The main categories served as the units of analysis (Graneheim and Lundman, 2004) and thus required that the data belonging to one main category (unit of analysis) was analysed separately. The result from the original content analysis was thus reviewed and discussed by all the authors to check that the inductively emerged categories and subcategories were based on data belonging to the analysed research question and fitted well within the analysed main category.

The terminology used for describing language assessment practices in this study is based on the taxonomy developed by Denman et al. (2019). In this taxonomy, language assessment is described across four dimensions: modality/domain, assessment purpose, assessment delivery, and assessment form. Modality/domain describes whether the spoken or written modality is targeted, if comprehension or production is assessed, and which linguistic domains are being assessed, such as morphosyntax or meta-abilities. Assessment purpose is divided into prognostic purposes, such as selecting intervention, and analytical purposes, for example, arriving at a diagnosis. Assessment delivery describes whether the assessment is conducted by person, by proxy-report, or by software, and whether the assessment takes place in a clinical or community context. Finally, assessment form describes, for example, whether the assessment is standardised or non-standardised, static or dynamic. However, this taxonomy is not well established yet in Swedish SLP practices and was therefore not...
used by the participants in interviews. Instead, the participants used terminology, such as ‘formal tests’, ‘informal assessment’ etc. when talking about assessment practices. This is further discussed in the section ‘Limitations’.

**Quality**

Credibility and dependability are two of the concepts that are used to describe aspects of trustworthiness in qualitative research (Graneheim and Lundman, 2004). Participants with various experiences were chosen to enhance the credibility. Data collection through focus group interviews was decided to be the most appropriate when gathering experiences and knowledge from school-based SLPs as a group and to minimise potential effects of the moderator’s own presumptions. The first author (LC) also recognised and was transparent about her previous knowledge of the issues being studied and the relations with the participants (Malterud, 2001), that is, the presumption that the functionality of the existing Swedish assessment tools in the field of school-based speech and language pathology is limited, may have affected the participants’ answers and the analysis so that it supports the presumption. However, measures to minimise this risk were taken and reflexivity was used during the whole data collection and analysis processes. The first author constantly tried to be aware of herself as a researcher, asking questions, such as ‘How may the preconception that the study was carried out with and me being a school-based SLP myself impact on the interviews or on the interpretations of the data?’ (Malterud, 2001). Also, the same interview guide was used for all focus groups.

To reduce misinterpretation of participants’ opinions and experiences, techniques, such as summarising and paraphrasing, were used by the moderator in the interviews. Conducting group discussions digitally presents greater challenges than physical group conversations for both moderator and participants. This may have affected the credibility. To mitigate this, all interviews began with reviewing recommendations about how to make the digital exchange as functional as possible. All participants had experience of digital meetings from the COVID-19 pandemic, and the moderator had previous experience of moderating groups digitally.

To further increase credibility, representative quotations from the transcribed interviews are presented to add trustworthiness and transparency to the findings and interpretations of the data (Malterud, 2001).

Dependability refers to whether data changes over time, and whether alterations regarding the decisions and methodological processes have occurred (Graneheim and Lundman, 2004). To achieve dependability, all interviews were carried out in the same month to reduce the risk of changes in data collection, for example, whether a new test was published between the interviews. Furthermore, the authors have focused on transparency throughout the study and while describing the method and analysis in accordance with COnsolidated Criteria for REporting Qualitative Research (COREQ) (Malterud, 2001; Tong et al., 2007).

**Ethical aspects**

The study has been carried out in accordance with the Swedish Research Council’s guidelines for ethics in research (Vetenskapsrådet, 2017). Also, an ethical approval was given by the board of the SLP program at Uppsala University prior to the study.
Participants were informed in writing and verbally about the ethical aspects of processing the data, their voluntarily participation, and option to withdraw their consent to participate at any time. All participants signed consent forms.

**Results**

Table 2 presents the results from the qualitative content analysis with an overview of the categories and subcategories for each content area. The main categories are based on the following research questions: (1) Purposes of language assessment conducted within a school context, (2) Experiences regarding the functionality of the existing language assessment tools and (3) Important dimensions (modalities, linguistic domains, perspectives, and procedures) of language assessment within a school context. For an overview of the categories and subcategories for each main category, see Table 2.

The following headings correspond to the main categories. Each main category is presented first by a summary of the results and then a more detailed description of each category. The results from the data analysis are presented in the results section and discussed in the discussion section. The quotations are translated to English. The original Swedish quotations are provided in Table S2.

**Purposes of language assessment in the school context**

The analysis revealed four categories of purposes of language assessments in the school context. The purposes were both prognostic and analytical, but most participants did not conduct analytical assessments with a diagnostic purpose, but rather used these assessments to describe a student’s difficulties or describe current status. Furthermore, important purposes were to help achieve optimal learning conditions for individual students or for a whole class to highlight the student’s situation in the school context, and to obtain the necessary information needed for planning intervention, evaluations, or re-referrals.

**To differentiate and describe the language difficulties**

I sometimes feel that many assessments of older children are about differentiating between diagnoses really. Sometimes they wonder ‘why is it so hard, other problems have been ruled out, maybe it could be language difficulties?’

The above quote highlights the participant’s experience that a common question is whether language difficulties are the primary issue or secondary to other difficulties. The SLP often needs to differentiate between, for example, different types of neurodevelopmental disorders or developmental language disorder (DLD), and lack of knowledge or exposure of the mainstream language, for example, in the case of second-language learners. To describe the difficulties is also important for early identification of students who need to be referred for various in-depth assessments. Another important purpose is to describe the current status or the linguistic profile of a student if language difficulties are already known:
<table>
<thead>
<tr>
<th>Main categories</th>
<th>Category</th>
<th>Subcategory</th>
</tr>
</thead>
<tbody>
<tr>
<td>Purposes of language assessment in the school context</td>
<td>To differentiate and describe language difficulties</td>
<td></td>
</tr>
<tr>
<td></td>
<td>To help achieve optimal conditions for learning</td>
<td></td>
</tr>
<tr>
<td></td>
<td>To highlight the student's situation in the school context</td>
<td></td>
</tr>
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<td></td>
<td>To obtain information needed for planning goals, intervention, evaluations, or re-referrals</td>
<td></td>
</tr>
<tr>
<td>Experiences regarding the functionality of existing language assessment tools in the school context</td>
<td>Needs that are already met in the existing assessment tools</td>
<td>Identifying language difficulties</td>
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<tr>
<td></td>
<td>Limitations in the existing assessment tools</td>
<td>Providing guidance by norms</td>
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<tr>
<td></td>
<td></td>
<td>Difficult to apply in the school context</td>
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<tr>
<td></td>
<td></td>
<td>Not suitable for older or multilingual students</td>
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<td></td>
<td></td>
<td>Lacking norms</td>
</tr>
<tr>
<td>Important dimensions (modalities, linguistic domains, perspectives, and procedures) of language assessment within the school context</td>
<td>Various factors influence and determine assessment design</td>
<td>Multiple assessment forms and assessment deliveries are needed</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Type of assignment</td>
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<tr>
<td></td>
<td></td>
<td>Purpose of assessment</td>
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<td></td>
<td></td>
<td>Student’s individual condition</td>
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<td></td>
<td></td>
<td>SLP’s job description</td>
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<tr>
<td></td>
<td>The importance of taking different perspectives into account</td>
<td>Specific tests/tools targeting different modalities and linguistic domains (e.g., writing skills and vocabulary tests)</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Dynamic assessment tools</td>
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<tr>
<td></td>
<td></td>
<td>Tools targeting social interaction</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Tools for older students</td>
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<tr>
<td></td>
<td></td>
<td>School staff questionnaires</td>
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<td></td>
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<td>Curriculum-based tools</td>
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<tr>
<td></td>
<td></td>
<td>Tools to facilitate understanding students’ language skills in relation to the school context</td>
</tr>
<tr>
<td></td>
<td>New assessment tools required to be developed</td>
<td>The importance of professional collaboration</td>
</tr>
<tr>
<td></td>
<td>Procedures when the difficulties are already known</td>
<td></td>
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</table>

Table 2. Main categories, categories, and subcategories from the qualitative content analysis
What you [the teacher] are describing, is it about language comprehension or language production? To sort out comprehension, reading, verbal production and writing. To find out what is what, and to help sorting.

**To help achieve optimal conditions for learning**

The outcome of an assessment can, according to the participants, form a basis when educating staff and providing the support the student needs to overcome barriers to academic progress. Thus, a purpose of assessment often is to improve a student’s learning environment both immediately and in the long term:

I have many students who […] can understand when pulled out from class. However, the system crashes when it becomes too much. This is where I think our competence can help with preventative measures, the system should not have to crash, and how do we work then. So that our […] assessment is the basis for removing barriers.

Academic success for all students, that is, whole groups or a whole class, also fits within this subcategory and was addressed by the participants as a purpose of assessments. When conducting assessments with this purpose, the same can be carried out individually face-to-face with subsequent interventions at group level or only at group level:

Also, it should be as equal as possible. You don’t always have to only assess those who are already in your SLP caseload. So that […] it can benefit everyone in that sense. That you can conduct guiding language assessments and being involved in screenings.

**To highlight the student’s situation in the school context**

To highlight the student’s situation in the school context helps both staff of the school and student himself/herself to gain a better understanding of his/her abilities and needs:

Another very important consideration is based on the international convention on children’s rights, to give the child a voice […]. We need to be the communication channel for those children who find it most difficult to raise their own voices.

**To obtain information needed for planning goals, intervention, evaluations, or re-referrals**

The fourth purpose mentioned was to collect information to help formulating intervention goals, selecting intervention, and planning intervention dosage. Furthermore, assessment could be used to evaluate the services provided through follow-ups to detect change and generalisation effects in the students’ language skills and thus to monitor progress over time. Finally, to obtain the information you need before making a referral:

Assessment to be able to set goals. Goals for pull-out services but also […] goals regarding what the teachers or specialist teachers should focus on. It’s a different
kind [of assessment] that is perhaps not about assessing how severe the difficulty is but more similar to ‘what should be the goal right now’. I think that school-based SLPs have a really important job here since the same diagnosis can be displayed by so many various symptoms in the classroom.

**Experiences regarding the functionality of the existing language assessment tools in the school context**

In all, the experiences regarding functionality in the school context of the existing language assessment tools could be categorised into three categories and five subcategories. There were several participants that expressed positive opinions and experiences, but also those who highlighted the need to be flexible when using existing standardised tests to reach functionality in the school context. Limitations of the existing assessment tools were also emphasised, including the fact that the norms of the existing standardized norm-referenced tests often are insufficient.

**Needs that are already met in the existing assessment tools**

Existing assessment tools were reported to be well suited when the assessment purpose is analytical, particularly when assessing younger students’ linguistic skills. Even though most of the participants did not conduct assessments for diagnostic purposes, these tools may help identify language difficulties and support targeting specific parts of the varying linguistic demands of the school context. This provides information about the cause of the student’s difficulties in the classroom. Assessments of this type are requested by teachers and the outcomes provide a basis for conversations with students, parents, and teachers:

I think, however, there are quite many [existing language assessment tools] that could explain that the student has difficulties with these things. Tests that can tell us ‘this could explain what is difficult for the student in this particular situation.’

Specifically, the existing assessment tool, the Multilingual Assessment Instrument for Narratives (MAIN; Gagarina et al., 2019), was highlighted as a tool with high functionality within a school context, together with another Swedish narrative test Nellisagan (; Holmberg and Sahlén, 2000) and the vocabulary tool ‘Bedömning av skolordförråd’ (Olsson et al., 2012). These tools are standardized, but unfortunately not norm-referenced; the existing norm-referenced tests were reported to provide guidance if you as a school-based SLP have limited experience and/or no colleagues to discuss the test results with.

**Limitations of the existing assessment tools**

Existing speech-language pathology assessment tools, in the participants’ experiences, have several limitations. For example, standardized norm-referenced tests are socioeconomically and culturally narrow, they quickly become dated and translations of tests from English are sometimes inadequate. Furthermore, tools suited for older and multilingual students are scarce.
Also, according to the participants, the test results are often difficult to apply in the school context:

There are great demands on you as a school-based SLP to be able to connect those parts [test results and the school context], which are not included in our university training, to be able to understand it [the test results] in relationship to the school–classroom context. And be able to analyse without thinking like a paediatric SLP, but continuously think within a school context. When you take that step, then there is nothing to help you, you are sometimes or always very lonely [with these issues].

Even though most of the participants did not conduct assessments with diagnostic purpose, several participants emphasized that it is undesirable to make language assessment conclusions without using norm-referenced tests. Norms for multilingual students as well as norm-referenced tests for narrative skills were reported to be particularly scarce.

The need for flexibility when using the existing assessment tools
The participants’ experiences were that flexibility when using the existing assessment tools improves the functionality in the context of school. Emphasizing the qualitative aspects when, for example, testing with quantitative test materials provides very valuable information:

If I conduct a language comprehension test, I may not conduct it exactly in accordance with the manual but maybe I repeat a question once or more to really see how that works if the student is given further instruction. If I say it a bit slower, a bit clearer, ‘does that make a difference?’ You don’t need to emphasize the percentiles and stanines but think ‘okay, I’ve made some adjustments, but the outcome is still this low’.

Important dimensions (modalities, linguistic domains, perspectives, and procedures) of language assessment within a school context
This main category consists of five categories and 12 subcategories. Assessment design is dependent on the specific assignment, according to the participants. However, the importance of taking several different perspectives into account was stressed. Furthermore, the school-based SLPS in the study considered it important to assess written language and have age-appropriate and curriculum-based assessment tools. The participants also suggested tests and tools that do not currently exist in Sweden but need to be developed. Finally, some procedural aspects that the participants emphasized as especially important when conducting language assessments within a school context are highlighted in this section.

Various factors influence and determine the assessment design
According to participants, language assessment in school contexts should involve multiple assessment forms and assessment deliveries. For example, both standardized
and non-standardized assessments are needed as well as observations, obtaining the student's perspective and assessing environmental factors:

I usually combine both [standardized and non-standardized assessments] because I think there is no perfect approach. But sometimes I conduct some formal [standardized norm-referenced] tests [...] but together with classroom observations and information provided by teachers, parents and specialist teachers.

The non-standardized assessment form was highlighted as particularly important when students are multilingual, mainly based on the perceived lack of standardized tests and especially standardized norm-referenced tests.

The participants described that the design and content of the assessments are dependent on the assignment, the purpose of the assessment, and the student’s individual conditions. Furthermore, the content is dependent on the SLP’s job description, for example, whether the SLP should make a diagnostic decision or not. Clinical guidelines for language assessment in school settings were requested by the participants.

**The importance of taking different perspectives into account**

The importance of including the student’s point of view, the teachers’ perspectives, and the family’s thoughts in the assessments was highlighted. These different perspectives do not always match, nor do they always match test results. It is therefore important to assess a student’s entire context and to complement tests with interviews and observations, assess several linguistic modalities, assess the impact of environmental factors, and collect information related to multilingualism, if present. This holistic approach, according to the participants, enables individual recommendations:

At the same time, I feel that if I haven’t taken all different aspects into account or have not interviewed staff or others [...] or maybe if I continue on something that another SLP has started or you just think ‘well this difficulty exists’ and therefore you target it [...]. Then you might end up a little bit on the wrong side of things when all of a sudden you observe in the classroom and notice well, there were completely different things that this student actually struggled with that maybe I should have targeted instead.

**New assessment tools need to be developed**

For language assessments to be optimized in school contexts, new and more suitable assessment tools need to be developed. The school-based SLPs in the study needed, among other things, assessment tools guiding intervention decisions, better vocabulary tests, and assessment materials targeting depth of vocabulary, not just breadth. In addition, they described the need for assessment instruments to capture more subtle language difficulties, sentence repetition tests in different languages, and assessment tools for inference and various expressive tasks at the discourse level (e.g., compare and contrast, and explaining). The participants also addressed the
importance of the written modality. According to the participants, assessing writing skills is challenging and standardized tools need to be developed.

Furthermore, the participants requested dynamic assessment tools, assessment tools targeting social interaction, and tools for older students, especially tools assessing narrative skills. The participants also highlighted a need for age- and grade-appropriate school staff questionnaires.

The participants' stated that curriculum-based tools are needed. That is, tests should be based on language skills required to reach academic success and the assessment form should be criterion-referenced based on the curriculum expectations, rather than norm-referenced. Furthermore, assessment tools that address the relationship between the student's language skills and the school context are requested. For example, tools that help SLPs to answer how much scaffolding students need and what learning strategies they benefit from as well as the tools that include teachers' approaches and teaching methods:

You would like to include that relationship, both the student’s performance but also in relation to how the instruction or the environment is designed and how it affects the student. To make sure both perspectives are represented.

The importance of professional collaboration

The category of professional collaboration consists of codes that in various ways emphasize the importance of interacting with the school staff when conducting assessments. For example, obtaining information from teachers regarding students' academic success or discussing assessment outcomes and setting goals together with teachers. In addition, the participants emphasized that looking into the evaluations and screenings already conducted by the school can also play a part in the SLP assessment, that is, a joint assessment with the teacher. This was also perceived by the participants as something that may create a bridge between the professions, SLPs and teachers, and their different types of assessments:

The tools available are also the mandatory assessments from the Swedish National Agency for Education. It creates a bridge to the teachers. These tools can be very supportive whilst conducting other assessments. Combine these two and you unite two worlds. The clinical world of speech-language pathology and the world of education. It’s not always easy, but there is still common ground between them.

Procedures when the difficulties are already known

When students’ language difficulties are already known, perhaps because the school-based SLP, a colleague, or the paediatric SLP has previously conducted an assessment, the assessment approach becomes slightly different. The participants reported that in such cases the assessment form is mainly descriptive and often carried out together with intervention. Furthermore, follow-ups and dynamic assessment approaches are conducted. Describing the environment and the interaction between the student's language skills and the environment also becomes more important when the language difficulties are already identified.
Discussion

The current study explored Swedish school-based SLPs’ perception of language assessment through semi-structured interviews in focus groups. The participants reported several purposes of language assessments in school contexts: to differentiate and describe language difficulties, to help achieve optimal conditions for learning for individual students or classes, to highlight the student’s situation in the school context, and to obtain information needed for planning goals, intervention, evaluations, or re-referrals. For these purposes, the utility of the existing tools was reported to be only partly satisfactory. The results highlighted limitations with the existing assessment tools and that the SLPs needed to be flexible regarding how standardized tests are conducted. However, participants emphasized the importance of taking many perspectives into account as well as assessing written language and having age-appropriate and curriculum-based assessment tools. Finally, school-based SLPs should, according to the participants, combine multiple assessment forms and assessment deliveries and collaborate with other professionals in school.

Purposes of language assessment

The purposes identified by the participants were both prognostic and analytical. The purpose ‘to obtain information needed for planning goals, intervention, evaluations, or re-referrals’, as expressed by the participants, could be categorised using the Denman et al.’s (2019) taxonomy as ‘select intervention’ and ‘plan dosage’, while ‘to help achieve optimal conditions for learning’ could be classified as ‘predict outcome’. All of these are prognostic assessment purposes according to Denman et al. (2019). Furthermore, ‘to obtain information needed for planning goals, intervention, evaluations, or re-referrals’ is also, together with ‘to differentiate and describe the language difficulties’ consistent with the purposes ‘screening’, ‘detect change’, and ‘describe status’, which all are analytical purposes. Most participants in the present study did not conduct assessments to diagnose a condition. However, there is an important difference between the participants’ use of terminology and the taxonomy developed by Denman et al. (2019). When the participants talked about diagnostic purposes of assessments, they referred only to diagnosing a condition. The definition of diagnostic assessment proposed by Denman et al. (2019) is ‘diagnose a condition or make a comparison with peers’ (p. 3, Table S1). Determining whether a student’s language functioning differs from that of peers was something the participants in the present study clearly claimed to do, for example, if assessing multilingual students, or if identifying students who need to be referred for further assessments. On the other hand, these examples could also be classified as ‘screening’. To identify students who may need further diagnostic assessment (i.e., screening) includes determining if functioning is different to peers. However, Denman et al. (2019) emphasize that the assessment purpose categories are not mutually exclusive, since one assessment may have more than one purpose.

The assessment purpose ‘to highlight the student's situation in the school context’, which emerged from the results, does not closely match any category in the Denman et al.’s (2019) taxonomy. Thus, the participants highlighted the student’s own perspective to a higher extent than the taxonomy does; in the taxonomy this is done
more implicitly. Altogether, the authors of the present study agree with Denman et al. (2019) that greater attention should be placed on the purposes of language assessments in the future.

**Utility of language assessment tools**

The field of school-based speech-language pathology is still under development in Sweden. Comparing the results with those of Fulcher-Rood et al.’s (2018) results, who examined the assessment practices of American school-based SLPs, the limited access to age-appropriate assessment tools is not addressed but something faced daily in a Swedish context. However, the results of the current study are overall consistent with the previous findings regarding the use of standardized assessment tools (Fulcher-Rood et al., 2018; Waine et al., 2023). The participants, like the US and UK SLPs before them, state that while standardized assessments are essential when assessing different language domains, they do not always fully capture the language difficulties that cause most problems in schools. In assessment, information from teachers and observations are therefore also needed, which aligns with the recommendations of the CATALISE consortium (Bishop et al., 2016; Waine et al., 2023).

In the present study, many participants expressed a need for appropriate norms for standardized assessments, and several emphasized that it is undesirable to make decisions without that information. Indeed, there are few Swedish norm-referenced standardized language tests for school-aged populations. However, the statement could also reflect a lack in confidence and skills in conducting non-standardized assessment and using clinical experience to interpret results that may increase with work–life experience (Denman et al., 2021). Twelve of the 19 participants had less than 10 years of experience working as an SLP and may therefore feel the need to rely more heavily on standardized assessments. Another important point is that the participants in the present study reported that the utility of the existing standardized norm-referenced tests within the school context increased when they are used for dynamics assessment and with more flexibility. Although the need for flexibility is likely to be a consequence of the limitations of the existing assessment tools, this could also possibly jeopardize the purpose of the existing standardized assessments and, as stressed by Denman et al. (2019), the assessments should be used for the purposes for which they were designed.

The Swedish curriculum is highly taxing on language abilities (Skolverket, 2019; Borgfeldt and Magnusson, 2020) and the lack of language assessment tools to use in a school context is therefore challenging. Curriculum-based and criterion-referenced assessment tools are requested, but none of the participants stated that they used CBLA. Similarly, some participants mentioned that spontaneous speech was of great use for assessment, but none mentioned LSA either. If applied more broadly in Sweden, CBLA and LSA could potentially meet some of the needs that emerged in this study. However, SLPs require training to use these methods. Firstly, pre-service training of SLPs must better prepare students for school-based services, as also stressed in a survey to school-based Swedish SLPs (Sandgren et al., 2023). Secondly, for already licensed practitioners, continued professional development may be needed to introduce new assessment routines. In a recent trial, Steele et al. (2023)
trained SLPs to use LSA to improve diagnostic decision-making. The authors found that the SLPs required repeated training and hands-on practice with an experienced user to benefit from the tool. However, despite the training, because of limited time for assessment, many continued to use standardized assessments. Consequently, introducing and implementing new assessment routines is time-consuming and clinical guidelines are a necessary step (Hallin and Partanen, 2023).

**Limitations and future directions**

Even in the last interview, some new data emerged. Therefore, complete saturation may not have been accomplished. Also, when conducting interviews in focus groups, there is always a risk that participants with different opinions than those of the majority do not express their thoughts. Additional focus group interviews and individual interviews could therefore possibly have generated additional knowledge. Also, although there was a variety among the participants, 19 SLPs is still a relatively small sample, which limits generalisation.

Another limitation is that the terminology used in the study (based on Denman et al. 2019) did not correspond with the terminology used by the participants. This entails a risk for interpretation errors when describing the results. Even though the first author is familiar with the terminology currently used in Sweden, the challenges associated with inconsistent terminology increase the risk of misunderstandings. This highlights the need of professional reflection, discussion and of developing consistent use on assessment practice terminology in Sweden. In retrospect, the moderator could have asked more follow-up questions during the interviews regarding what the participants referred to by different terms to minimize the risk of misconceptions. Also, it was discovered during the interviews that some participants’ understanding of the Student Health-Care services’ goals was not as clear as expected. Since the questions in the interview guide referred to these goals, the moderator clarified the meaning of the Student Health-Care services when asked to, which may have affected the participants’ responses based on whether they were part of a focus group where this was clarified or not. At the same time, semi-structured interviews, which were used in the study, are fundamentally free in their design based on given question areas. Follow-up questions or clarifications are asked based on the answers that arise in the current interview (Husband, 2020). Thus, all interviews will be, and are allowed to be, different from each other.

This study has increased the knowledge about Swedish school-based SLPs’ perceptions of language assessment tools and assessment practices within the school context. The study has also provided insight into how Swedish school-based SLPs wish to further develop Swedish language assessment tools to improve their utility in a school setting. Finally, the present study contributes to the growing body of research that sheds light on the importance of combining different assessment forms to reach a functional focus necessary for developing individualized and targeted intervention. In future work, the implementation of functional assessments will be evaluated as a way to contribute to more equal provision of SLP services across the country.
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The authors reported that there was no competing interest to declare.

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Supplementary

**Table S1.** The interview guide.

**Main question:**
What are your thoughts on how a language assessment needs to be designed to guide you as school-based SLPs in the Student Health-Care services?

**Supplementary questions and issues to be discussed:**
What experiences do you have regarding the functionality of existing language assessment tools within a school context?
- Identification of what to target in intervention
- Diagnosis
- Consulting

What are the purposes of language assessment within a school context?
- Individual level
- Group level
- Direct/indirect
- Short-term/long-term

What content in language assessment within a school context do you see as important?
- Modalities
- Linguistic domains
- Different perspectives (student/teacher/parent/others?)
Table S2. Participants’ quotations in Swedish translated to English

<table>
<thead>
<tr>
<th>Swedish (original quote)</th>
<th>Quote translated to English</th>
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<tbody>
<tr>
<td><strong>Purposes of language assessment in the school context</strong></td>
<td></td>
</tr>
<tr>
<td>Jag upplever ibland att många ärenden som jag får när barnen är större handlar mycket om differentialdiagnostik egentligen. Att dom undrar ’det är så svårt, vi har uteslutit det här men kan det, det kanske kan va språkligt’</td>
<td>I sometimes feel that many assessments of older children are about differentiating between diagnoses really. Sometimes they wonder ‘why is it so hard, other problems have been ruled out, maybe it could be language difficulties?’</td>
</tr>
<tr>
<td>Det här du [pedagogen] beskriver, handlar det om språklig förståelse, är det muntlig uttrycksförmåga? Att sorterar ut de här förstå, läsa, tala och skriva. Bena ut vad som är vad, liksom att hjälpa till att sortera.</td>
<td>What you [the teacher] are describing, is it about language comprehension or language production? To sort out comprehension, reading, verbal production, and writing. To find out what is what, and to help sorting.</td>
</tr>
<tr>
<td>Jag har många elever som […] kan förstå enskilt men när det blir för mycket, det är då som systemet kraschar. Och det är där jag tycker också att vår kompetens behöver komma in utfårgått från ett förebyggande. Det vill säga att systemet ska inte behöva krascha, och hur behöver vi jobba då. Så att våran […] kartläggning ligger till grund för att undanröja hinder.</td>
<td>I have many students who […] can understand when pulled out from class. However, the system crashes when it becomes too much. This is where I think our competence can help with preventative measures, the system should not have to crash, and how do we work then. So that our […] assessment is the basis for removing barriers.</td>
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<td>Att det ska bli så jämlikt som möjligt också. Att man behöver inte alltid göra bedömningar bara på de som liksom vi vet om och som från början liksom är logopedeleverna. Utan att […] det ska komma alla till del på det viset. Att man kan göra vägledande kartläggning kring språk […] med screeningar och att liksom va involverad i det.</td>
<td>Also, it should be as equal as possible. You don't always have to only assess those who are already in your SLP caseload. So that […] it can benefit everyone in that sense. That you can conduct guiding language assessments and being involved in screenings.</td>
</tr>
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<td>En jätteviktig poäng också om man tänker utifrån barnkonventionen och det där, att verkligenta lyfta barnets röst […] De barnen som har faktiskt svårast att höja sin egen röst. Att vara liksom den där kommunikationskanalen därimerellan.</td>
<td>Another very important consideration is based on The International Convention on Children’s Rights to give the child a voice. We need to be the communication channel for those children who find it most difficult to raise their own voices.</td>
</tr>
<tr>
<td>Bedömning för att sätta mål. Både mål med den egna språkliga träningen om man ger det, men också […] vilken förmåga är det bra att läraerna eller specialpedagogerna fokuserar på och så vidare. Det är ju en annan typ alltså som inte handlar om kanske kartlägga hur stor är svårigheten utan mer att, ’jamen vad ska vara målet just nu’. Det tänker jag att vi som är på skolan har en jätteviktig funktion för att bara samma diagnos kan ju te sig så otroligt olika i klassrummen.</td>
<td>Assessment to be able to set goals. Goals for pull-out services but also […] goals regarding what the teachers or specialist teachers should focus on. It’s a different kind [of assessment] that is perhaps not about assessing how severe the difficulty is but more similar to what should be the goal, right now. I think that school-based SLPs have a really important job here, since the same diagnosis can be displayed by so many symptoms in the classroom.</td>
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Table S2. (Continued)

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<th>Swedish (original quote)</th>
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<tr>
<td><strong>Experiences regarding the functionality of the existing language assessment tools in the school context</strong></td>
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<tr>
<td>Jag tycker det finns ganska mycket ändå som skulle kunna förklara att eleven har svårt med dom här sakerna. Alltså tester som ringar in ’det här skulle kunna förklara att det här blir svårt för eleven i den här situationen’.</td>
<td>I think, however, there are quite many [existing language assessment tools] that could explain that the student has difficulties with these things. Tests that can tell us ‘this could explain what is difficult for the student in this particular situation’.</td>
</tr>
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<td>Det ställs stora krav på en om man är skol-logoped att kunna koppla de bitarna, som vi ju inte har med oss från utbildningen, till att liksom förstö den biten kopplat till skolan och liksom klassrumssyndromen. Och kunna analysera utfåfn från det och inte tänka som mottagningslogoped, utan verkliga tänka där ur skolans kontext. Och det steget är ju det som verkliga, där det inte finns någonting att ta hjälp av utan där är man ibland eller typ alltid väldigt ensam.</td>
<td>There are great demands on you as a school-based SLP to be able to connect those parts [test results and the school context], which are not included in our university training, to be able to understand it [the test results] in relationship to the school–classroom context. And be able to analyse without thinking like a paediatric SLP, but continuously think within a school context. When you take that step, then there is nothing to help you, you are sometimes or always very lonely [with these issues].</td>
</tr>
<tr>
<td>Om man tar och gör ett språkförståelse test så kanske jag inte gör exakt enligt manualen utan att man kanske frågar någon extra gång eller så för att verkliga se ’jamen hur funkar det där om dom får en instruktion till’. Eller om jag säger det lite längsmässigt, lite tydligare, ’hur går det då’? Eller så. Att man inte behöver stirra sig blind på percentilerna och stanine utan att man har med att ’okej jag har anpassat det här nu och då hamnar den ändå sårbar pass lågt’.</td>
<td>If I conduct a language comprehension test, I may not conduct it exactly in accordance with the manual but maybe I repeat a question once or more to really see how that works if the student is given further instruction. If I say it a bit slower, a bit clearer, ’does that make a difference’? You don't need to emphasise the percentiles and stanines but think ’okay, I've made some adjustments, but the outcome is still this low’.</td>
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<tr>
<td><strong>Important dimensions (modalities, linguistic domains, perspectives, and procedures) of language assessment within a school context</strong></td>
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<td>jag brukar nog göra en kombination av båda för jag tycker att det finns inget perfekt upplägg utan ibland så plötsligt och något formellt test ... men jag kombinerar det med klassrumssyndromer och med all den information som pedagoger och vårdnadshavare och specialpedagoger kan ge.</td>
<td>I usually combine both [standardized and non-standardized assessments] because I think there is no perfect approach. But sometimes I conduct some formal [standardised norm-referenced] tests [...] but together with classroom observations and information provided by teachers, parents, and specialist teachers.</td>
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<tr>
<td>Samtidigt så upplever jag att om jag har slarvat med dom bitarna eller liksom inte inhämtat så mycket från personal eller andra ... eller kanske fortsatt på något som en annan logoped har gjort eller man liksom bara ser att ’jamen den här svårigheten finns’ och så jobbar man med det ... Då kan man också hamna lite fel när man helt plötsligt börjar kolla i klassrummet och så bara ’jaha, det va helt andra saker som faktiskt den här eleven hade svårt med som jag kanske borde ha jobbat med istället’.</td>
<td>At the same time, I feel that if I haven’t taken all different aspects into account or have not interviewed staff or others [...] or maybe if I continue on something that another SLP has started or you just think ’well this difficulty exists’ and therefore you target it [...], then you might end up a little bit on the wrong side of things when all of a sudden you observe in the classroom and notice, ’well, there were completely different things that this student actually struggled with that maybe I should have targeted instead.</td>
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<td>Man skulle vilja få med den relationen, alltså både elevens prestation och också i relation till hur är undervisningen eller miljön utformad och hur fungerar det för eleven. Alltså så man får med båda perspektiven där.</td>
<td>You would like to include that relationship, both student’s performance in relation to how the instruction or the environment is designed and how it affects the student. To make sure, both perspectives are represented.</td>
</tr>
<tr>
<td>De instrument som man ändå har att tillgå är ju också bedömningsstöden från skolverket. Det ger ju mer bro över till pedagogernas tankar och så. Så det kan man ju hålla i handen när man gör det andra liksom. Kombinera dem och få ihop världarna liksom. Den kliniska logopedvärlden med skolvärlden. Det är inte alltid helt lätt men det finns ju ändå beröringspunkter.</td>
<td>The tools available are also the mandatory assessments from the Swedish National Agency for Education. They create a bridge with teachers. These tools can be very supportive while conducting other assessments. Combine these two and you unite two worlds - the clinical world of speech-language pathology and the world of education. It's not always easy, but there is still common ground between them.</td>
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