Measuring deaf learners' language progress in school

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<1> Abstract

It is unquestionable that the varying needs of increasingly diverse deaf learners in special schools as well as mainstream programs pose a challenge to both researchers and practitioners, specifically when it comes to assessment. There has been progress in developing standardised psychometric tests that are more appropriate for deaf children, for example, in form of sign language assessments. However, these tests continue to suffer from certain limitations: a) they provide information about a child's learning outcome but not the learning process, and b) provide children with limited opportunity to contribute to the assessment process. This chapter highlights the potential of using dynamic assessment (DA), an interactive approach to psychological assessment that embeds intervention within the assessment procedure, with deaf learners. After providing some background on language assessment of deaf learners and a brief introduction to the concept behind DA, the chapter discusses the relevant research that has been done and address possible consequences and future directions for teachers and teaching to make DA meaningful in the classroom.

Keywords: dynamic assessment, learning, cognitive skills, mediation, mediated learning experience, testing, zone of proximal development

It is unquestionable that the varying needs of increasingly diverse deaf learners in special schools as well as mainstream programs pose a challenge to both researchers and practitioners (Knoors & Marschark, 2012; Leigh & Marschark, 2016; Mayer, 2016). This is particularly true when it comes to language assessment. On one hand, there has been considerable international progress in developing standardised tests that are appropriate for signing deaf children (see Enns et al., 2016; Haug, 2005 for overviews). A growing number of such tests, for example, ASL Assessment Instrument (Hoffmeister et al., 2014), German Sign Language Receptive Skills Test (Haug, 2011), Test for SLN (Hermaans, Knoors, Verhoeven, 2009), Web-based BSL-VT (Mann & Marshall, 2012) have taken advantage of new technologies by using computer- or web-based formats which facilitate test access and administration as well as scoring (Mann & Haug, 2015). On the other hand, deaf children's opportunities to develop speech and spoken language have significantly improved, in part due to technological progress.

Despite these positive developments, a number of challenges remain: One such challenge is the use of signed/spoken language tests with deaf children who present with language problems as a possible result of limited cognitive ability, additional needs, socioeconomic status, cultural and linguistic background, age and time of intervention, and/or type and quality of early intervention. Adding to this challenge is deaf children's delayed exposure to meaningful and consistent language. While this risk has been reduced in many Western countries through the introduction of newborn hearing screening programs and early access to cochlear implantation (Knoors & Marschark, 2012), it still exist in other parts of the world (Tucci, Merson, & Wilson, 2010). Traditionally, clinicians have relied on traditional psychometric methods, that is, standardised tests, to compare the performance of these children with the performance of same-aged peers. However, as pointed out in the literature on spoken language assessment, this approach has limitations for a number of reasons one

being that a single-time assessment leaves room for measurement error (Bracken, 1988; McCauley & Swisher, 1984a; 1984b, Plante & Vance, 1994, Swanson & Horward, 2005).

Another challenge of language testing that equally exists for deaf and hearing populations is that the test in question may not account for cultural bias and/or to natural variations in the learning backgrounds (Hart & Risley, 1995). For instance, using tests with an individual who comes from a 'non-testing' culture, for example, Sweden or Mexico, with little or no experience with this means of assessment introduces an element of uncertainty that can affect the interpretation of results (Gutierrez-Clellen, Simon-Cereijido, & Sweet, 2012; Sternberg, 2002; Sternberg & Grigorenko, 2002). In a similar vein, research on deaf learners suggested that norms used for hearing children do often not apply for deaf populations and may lead to over-identification of these children as having a language impairment (Herman, 1998). This, in turn, may have critical implications on the recommendations made for support and lead to an increasing divide between such recommendations and the actual needs of deaf children. While the development of signed language assessments for signing deaf learners marks an important step in the right direction, this approach introduces other complications: one is the difficulty of collecting normative data from deaf children due to the limited size of this population, specifically the small number of deaf children with deaf parents. Another is the variability in language experience: deaf children may be exposed to multiple languages (see Crowe, this volume), which may include separate grammars in separate modalities (e.g. English, American Sign Language [ASL]) or multiple methods of representing the same grammar (e.g. English, Signed English, sign-supported speech, cued speech).

Regardless of modality assessed, all standardised language assessments face two restrictions: First, they provide information about a child's learning outcome in form of

performance scores but not on the learning process. In addition, they provide little opportunity for children, themselves, to contribute significantly to the assessment process, for example, by sharing their own perceptions of the support they require (Landor, Lauchlan, Carrigan, & Kennedy, 2007). These restrictions create the need for alternative methods of assessment that could help reduce the bias of previous or different language experiences when assessing deaf children. One such method is dynamic assessment.

<1>Dynamic Assessment

Dynamic assessment (DA) combines teaching and assessment within a single procedure and evaluates the enhanced performance that results (Mann & Haug, 2016). It aims to measure learning potential, that is the extent to which a child's performance at a given time can be modified with intervention, rather than learning outcome. This is done by generating information about the learner's responsiveness to different teaching strategies during mediation (Lidz & Elliott, 2000). In other words, DA is more interested in what a child *can* learn than in *how much* a child knows.

DA builds on Vygotsky's (1978) sociocultural theory, specifically the notion that a child learns through social interaction and develops higher mental functioning by collaborating with a more knowledgeable peer or adult. In this context, the term ZPD or 'Zone of Proximal Development' plays a critical role. ZPD describes what a child is capable of doing with proper assistance compared to a child who works alone ('Zone of Actual Development'). DA stresses the interactive and social relationship between the assessor and the assessee, bringing about change in the learner and generating intervention (Landor et al., 2007). Advocates of DA have applied Vygotsky's ideas of promoting higher functioning within the ZPD when describing the mediated interaction, or 'learning' that takes place during the teaching phase.

One of the main characteristics of DA is its interactive nature, specifically the individual achievement under supported conditions whereby children receive feedback and training that enables them to show differences in progress when solving cognitive and/or linguistic tasks (Elliott, 2003; Haywood & Lidz, 2007; Sternberg & Grigorenko, 2002). DA frequently follows a test-mediation-retest approach to capture change in response to mediated learning. During the mediated learning session or experience (MLE), the mediator observes the child's use of cognitive-linguistic skills and strategies, including problem solving, flexibility, motivation, response to feedback, and task orientation (Peña, Reséndiz, & Gillam, 2007). These emerging skills and strategies along with the level of support children required from others for learning a new skill are also referred to as *modifiability* (Feuerstein, 1979). A child who is highly modifiable demonstrates positive learning behaviour (e.g., understanding of the task, motivation, problem-solving skills). This is often accompanied by improvement in post-testing. Observations of modifiability (e.g., by means of checklists that mediators complete following a learning session) have been reported to be very good indicators of language ability (e.g., Peña et al., 2006; Peña, Iglesias, & Lidz, 2001; Ukrainetz, Harpell, Walsh, & Coyle, 2000).

One way in which DA differs from traditional, or *static* assessments (Cotrus & Stanciu, 2014), is the level of interaction between test administrator and test taker. In DA, this level is high with the administrator/mediator instructing the child in carrying out a task that is difficult for him or her while –at the same time- providing maximal support. As a result, the interaction itself becomes the focus of the assessment.

Historically, most DA measures were motivated by limitations when assessing children with special educational needs or children with inadequate or different educational experiences (Tzuriel, 2000). One additional difference between static assessment instruments

and DA is that DA generates data that indicates what a child can do in the future, given that s/he receives the support that is most appropriate for his/her needs. This helps to minimize the mismatch between support received by a child and the child's actual needs. Furthermore, DA evaluates not only cognitive skills or language proficiency but also behavioural and motivational factors during the teaching phase. Examples include self-regulation, feelings of competence, reaction to challenge, criticism - all of which are aspects that contribute significantly to learning (Tzuriel, 2001). While the concept of combining teaching and assessment with measuring a child's learning may not seem something completely new to many teachers of the deaf (ToDs), DA offers a more structured way of doing this. Traditionally, research on DA has been carried out mostly within a cognitive learning context. However, this changed and there is now a growing literature on the use of DA procedures within a language-learning context, including research on lexical development (Kapantzoglou, Restrepo, & Thompson, 2012), narrative skills (Peña et al., 2006), reading (Dörfler, Gloke, & Artelt, 2009), and writing (Thouësnay, 2010).

<2> The potential of DA for deaf learners

Using DA with deaf learners offers a lot of potential for a number of reasons: One is its emphasis on the process of learning (the *how*) rather than the result (the *what*). This includes measuring what DA advocates refer to as the child's latent traits, or capacities, for change (Lidz & Gindis, 2003), which is different from assessing a particular skill based on a one-time performance. A practitioner in school can make hypotheses regarding a child's response to instructional strategies and/or future intervention, using information from the mediation in combination with pre-test-to post-test comparisons instead of emphasizing

normative comparisons. Such normative comparisons can still be used alongside the DA to provide information about the child's possible need for additional assessment. For instance, many deaf signing children, whose language performance may differ from school expectations regarding language usage, are at risk of being over-identified as having cognitive or social impairments if they have limited experience with the language in which they are tested (Herman, 1998). Addressing this issue requires an extension of currently used assessment practices that takes individual students' strengths and weaknesses for language learning into consideration.

Another advantage of DA is that it generates more extensive information in comparison to test scores provided by standardized assessments (Asad et al., 2013). At the same time, placing the emphasis on children's learning process, rather than outcome, enables practitioners in schools to focus on the individual child's optimal – not average or typical -- performance. This is what the aforementioned term modifiability refers to, that is, the child's emerging skills and strategies as s/he learns a new skill along with the level of support required to enable this learning (Haywood & Tzuriel, 1992; Haywood & Wingenfled, 1992).

Finally, DA has potential for use with deaf children because it is not restricted to a particular modality for example, spoken English. Traditionally, debates on how to best support deaf learners have often been polarized by modality preferences for example, spoken vs. signed. DA avoids this discussion because it provides mediation that is tailored to the specific needs and preferences (including language) of the individual regardless of modality. Of course, this requires a highly skilled mediator who -ideally- is fluent in both signed and spoken language.

<2> Research on use of DA with deaf learners, so far

In spite of the aforementioned benefits, surprisingly little research has been carried

out on the use of DA with deaf populations. Most of this work focused on the use of DA for assessing deaf children's cognitive skills, comparing their performance on dynamic and static assessments to depict learning potential (Huberty & Koller, 1984; Katz & Buchholz, 1984; Lidz, 2004; Olswang & Bain, 1996; Tzurriel & Caspi, 1992). Findings from these early studies demonstrated that deaf children can perform similarly to hearing peers on complex problem-solving tasks, given that they receive proper training in carrying out these tasks (see Nunes, this volume).

More than 10 years later, Asad and colleagues (2013) extended this work within a language-learning context by applying DA procedures to explore deaf children's narrative language learning in English. In their study they examined responsiveness of three deaf children (ages 7-12 years) with moderate to profound hearing loss to a mediation targeting oral narrative skills. The Test of Narrative Language (*TNL*, Gilliam & Pearson, 2004) served as pre/post-test measure following two MLE sessions, targeting principles of fictional narrative production for example, naming people and places, with particular focus on areas of difficulty identified by the pre-test results. Outcome measures included rating scales for the child's ability to learn and the mediator's appropriate and consistent use of mediated teaching techniques (Asad et al., 2013). Findings revealed that two of the participants showed good responsiveness and modifiability during the MLE sessions that was consistent with their performance on the subsequent narratives tasks. These students also produced better stories during the post-test measure. Asad and colleagues interpreted these findings as a possible sign of typical language ability, proposing that participants' language difficulties may have been due to a lack of appropriate input rather than inability to learn language. Both participants did have experienced limited exposure to language as a result of their hearing loss, which also reduced their ability to overhear conversations by others. Moreover,

participants' experience with (re-) telling stories to others was also limited as a result of their speech impairments.

What is interesting here that both participants were able to improve their narratives when taught how to generate narratives during the mediation. In comparison, the third participant in this study showed no improvement in narrative performance on the post-test measures and limited response and modifiability during the MLE sessions. Asad and colleagues interpreted these findings as an indication that his limited progress might have been a result of poor language learning ability. In sum, the study highlights the importance of examining learning behavior with children who do not match typical developmental trajectories for speech and language (which applies more or less to all children with hearing loss) to provide more in-depth information than one-time test scores (Asad et al., 2013).

The work by Asad and colleagues was extended by Mann, Peña, and Morgan (2014, 2015), who explored the use of DA with signing deaf children, aged 6-11 years. In Mann et al. (2014) we developed DA procedures targeting semantic categorization and piloted them with two deaf children (aged 7;4 and 8;4 years) both with deaf parents. One child had Attention Deficit Disorder (ADD). Our tasks were adapted from the *Bright Start Curriculum* by Haywood, Brooks, and Burns, (1992), which supports children between the ages of 3-6 years in their development of concepts and problem-solving strategies. They involved grouping objects, pictures, and ASL signs. One aim of the curriculum is teaching children 'to understand the reasons for classification' (Hayward et al., 1992, p. 1) and be aware that objects, words, etc. can be classified in multiple ways. This awareness is of particular importance to children's thought and language development as they learn to pay attention to the defining characteristics of categories for example, that an object or word may belong to more than one class. For instance, during the first of our two 30-minute mediated learning sessions, which were carried out by a CODA (child of deaf parents) fluent in ASL and

English, participants were presented with paper models that contained two shapes and colors, such as a blue square and a red triangle, and had to construct duplicates of these models by combining two single shapes. The purpose of this task was to help children focusing on two dimensions or characteristics. Another activity which required matching pictures of animals aimed at promoting children's thinking of classes of objects as being composed of subclasses, for example, big dogs vs. small dogs, standing dogs vs. sitting dogs, etc. Similar to the findings reported by Asad and colleagues (2013) we observed differences in the way our two participants' responded to mediation. For instance, the child with additional needs struggled with the categorization activities and also required more support during the MLE compared to her peer with better language skills. In addition, both children differed in their use of cognitive strategies, specifically the ability to use multiple strategies and the willingness to accept alternative strategies. These observations made during MLE were corroborated by teacher reports.

We extended our work in a follow up study (Mann et al., 2015) with a larger, more diverse sample, using the same DA procedures targeting knowledge of semantic categorization. Two groups of deaf children identified as either stronger (N=25) or weaker (N=12) language learners based on teacher/speech language pathologist feedback received two scripted MLE sessions targeting their ability to classify objects, pictures and words. As before, these sessions were carried out in ASL, this time by two CODAs, both fluent in ASL and English. At the end of each session, the mediator rated a child's response to the mediation and the level of support they required, using a checklist with behaviors and cognitive features (*Mediated Learning Observation*, Peña & Villarreal, 2000). Figures 1 and 2 show items from this list.

Put Figure 1 here

Put Figure 2 here

Figure 1 shows a set of items that focus on children's social-emotional behavior, including anxiety, motivation and tolerance to frustration. Figure 2 shows a set of items that focus on children's cognitive behaviors, including elaboration, verbal mediation, and flexibility. The numbers on the columns indicate the rating score. A low rating means that the student is engaged in the task and needs little support whereas a high rating means that the child requires a lot of help from the mediator.

The following excerpts are taken from one activity during MLE #1 in which children matched pictures of animals (see Figure 3). They were translated from ASL to English by a SODA (sibling of deaf adult). During the activity, the child and mediator discuss different ways in which the pictured animals can be grouped together. The excerpts are presented to provide a better understanding of the rationale behind the child's responses.

Put Figure 3 here

Child 1 – Age: 6;3 years; no additional needs

A: Can I group this one, the cat? Can I group the cat with this one?

C: *Shakes head*

A: Why not?

C: Because the cat looks different.

A: Ah, so they look different. I see. Well, can I group the rabbit with the dog?

C: *Shakes head*

A: Why not?

C: Because they look different. And they also are called different words. It is not the same word. For example, cat is different.

A: So if they have different words, like dog and rabbit, okay.

Child 2 – Age: 6;9 years, Pervasive Developmental Disorder (PDD), Autism Spectrum Disorder (ASD)

A: So can I group the cat with the dogs?

C: These two dogs are the same.

A: I see. A long haired dog.

C: They are the same. And this one is the same as this one down here.

A: The two cats are alike. Good.

C: And these four [dogs] are the same. And this one too.

A: Okay, so the dogs with similar fur can be grouped together.

Now imagine that both of these children were to take a standardized test in which they are asked if it was possible to group dogs and cats/rabbits together. Based on the presented excerpts above, one could assume that both may say 'no' although for different reasons. This would result in a score of '0', which - to the person interpreting the score - suggests that neither of the two understands the concept of categorization. In comparison, the information provided by DA suggests three things: 1. each child knows something about categorization, 2. their knowledge is different and 3. the effort required by the mediator is different for each child. To practitioners in schools, this information is important as it can guide the decision which type of support would be most suitable for a particular child.

During the second MLE session, we extended the concept of thinking about objects and pictures as members of (broader) categories to language, that is, ASL. The activities we used required participants to match ASL prompts to one of four signs, which belonged in the same category. All signs were pre-recorded and presented on a laptop computer. There were

arranged in a similar format as the pictures from the matching task in the first MLE session (see figure 4). One aim of MLE #2 session was to teach participants that objects/signs can be members of categories that are themselves members of broader categories, for example, DOG + CAT = ANIMAL; APPLE = FRUIT = FOOD.

Put Figure 4 here

This is illustrated in the following excerpts from MLE #2. In this task, participants were presented with the target sign APPLE and asked which of the four response signs in ASL, SWEETS, FRUIT, TEA, and CAR it could be grouped with. As before, the conversation was translated from ASL to English.

Child 1 – Age: 6;3 years

A: Apples, grapes, berries and strawberries can be grouped together? All fruit together? Okay, can apples be grouped with candy?

C: *Shakes head*

A: Why?

C: Because it does not match candy.

A: Suppose you candy, would you like to have an apple?

C: *Shakes head*

A: Never. You can't group those. What about tea?

C: You can.

A: How would you do that?

C: You could mix the apple in with the tea.

Child 2 -- Age: 6;7 years, Attention Deficit Hyperactivity Disorder (ADHD)

A: Can you group apple with candy?

C: No.

A: Why not?

C: They are different. Because they don't look the same and they taste different.

A: But fruit is a food, right?

C: Food, yeah. No.

A: Fruit is a food, right?

C: Yeah.

A: Is candy a food?

C: No.

A: Candy is not a food?

C: Food? No.

A: So you can't eat candy?

C: No, because of my teeth.

Similar to the previous set of excerpts, each child responds differently to the mediation provided by the examiner, yet both show existing knowledge about categorization. This reflects the findings from our study, which revealed differences in child modifiability between strong and weak ASL users specifically regarding their learning pace, information uptake, and effort required by the mediator.

<2> Dynamic Assessment = Teaching?

Until now, DA within a language-learning context has been used predominantly with hearing populations, including those from culturally and linguistically diverse backgrounds (the interested reader is referred to Guitérrez-Clellen & Peña, 2001). Extending this work to deaf learners offers a unique perspective of its application to identify language learning

potential in a population for which there is little normative data available. As the research described above has shown, DA is not exclusive to one modality (sign or speech). For instance, in our studies, we offered participants, who struggled with signing, the choice to switch to English, which some of them accepted.

Gaining an improved understanding of children's learning strategies and responsiveness to mediation is important for practitioners in schools for several reasons: First of all, it enables them to develop strategies for determining how a pupil may respond to a particular type of intervention in the future. This, in turn, may inform intervention targets of deaf learners' strengths and weaknesses. To the ears and eyes of an experienced teacher, many things about DA might sound or look oddly familiar or even match the kind of pedagogical approach/interaction they already have in place. To any such readers I say: "You are correct!" There is hardly anything groundbreaking new about the DA procedures discussed thus far or the idea that a child is likely to perform better if supported by a more advanced partner, for example, a peer, parent, or teacher. And yet, what makes DA different than teaching in the traditional sense is that it provides information on how the child learns in a way that is short and structured. For instance, a MLE session usually does not take longer than 25-30 minutes, which is quite fast if compared to the amount of time it may take a teacher to identify a particular student's strength and weakness, specifically when working with new pupils. "Structured" in the context of our research means that the mediation followed a script targeting semantic categories, which incorporated key mediation strategies developed by Feuerstein and colleagues (1979, 1980), and extended by Lidz (1991): intention to teach, mediation of meaning, mediation of transcendence, competence, and mediation of transfer. (For an example of each strategy, see Mann et al., 2014). "Structured" in MLE also means that children's response to mediation was evaluated. In our studies, this was done by

using the Mediated Learning Observation form (MLO; Peña & Villarreal, 2000) to observe and record participants' learning behaviour during each session and the Modifiability Scale (based on Lidz, 1991), which measures child responsivity, mediator effort, and the child's ability to transfer new knowledge. This approach enabled us to go beyond assessing the child solely based solely on task performance by also taking into account non-intellectual factors that may affect the child's learning for example, self-regulation and/or response to challenge. Those factors are usually not evaluated in classic psychometric testing. In DA, however, they can be explored by the assessor/mediator.

<1> Conclusion: Getting practitioners to use DA in the classroom

This chapter has highlighted a number of benefits of using DA with deaf language learners. However, it is important for the reader to understand that the information this interactive assessment provides can and should be used complementary to any norm-referenced and descriptive testing practices that are already in place. This enables practitioners in schools to identify specific difficulties a child may experience when approaching a new task and allow them to make more valid conclusions regarding language-learning ability in this target group. In addition, DA helps to address important questions that follow assessment, for example, what are suitable strategies to tackle a particular child's learning difficulties? In this sense, DA may appear very similar to formative assessments in that it tries to link the findings of the assessment to the child's learning process to ways how this process can be supported to improve student attainment. However, developing and maintaining such links between assessment and intervention can be challenging in particular if links to classroom practice are not immediately visible to practitioners or if the amount of information and the language it is provided in makes it difficult for parents and teachers to understand (Deutsch & Reynolds, 2000). So how is possible then to implement DA in the

classroom in a meaningful way?

One possible suggestion comes in the way of a framework introduced by Lauchlan and Carrigan (2013), which breaks down the DA process/cycle into four parts/stages: *assessment, feedback, intervention* and *review* (Figure 5). *Assessment* involves completing a checklist of cognitive and emotional learning principles to record information when administering DA. *Feedback* involves 'transforming the information recorded during DA into a one-page learning profile of three key factors that were highlighted during the assessment' (Lauchlan, 2012, p. 101). These factors may be skills that were most amendable during the assessment or those that the student struggled with, depending on the individual case. The idea behind the learning profile is to have a practical resource that is available to all involved in the student's learning process, including the student. *Intervention* builds on the information gathered during the assessment by developing/providing recommendations for each observed learning principles. These may include activities, games, or other resources that can be used with the student in the classroom as well as home. Finally, the fourth stage, *review*, monitors the learning profile and suggested intervention strategies not only to acknowledge and promote those strategies that appear to be effective, but also to consider the need for different strategies in those cases where learning principles mentioned in the original learning profile have not changed at the time of a review.

Put Figure 5 here

While this framework has not been developed specifically with deaf students in mind, it still offers helpful guidelines on how to make DA 'real and effective' (Lauchlan & Carrigan, 2013, p. 9) in the classroom. These guidelines can serve as starting points for teachers and other practitioners working with deaf children to move from theory to practice. Moreover, Lauchlan and Carrigan provide materials for each stage that have been developed to help practitioners to adopt the DA approach. Such materials include checklists of learning

principles to facilitate recording of information during the mediation, a one-page learning profile to highlight important factors during the mediation, and intervention strategies for one-on-one, group, or class level. The appropriateness of these materials for deaf populations still needs to be confirmed empirically but, in the meantime, practitioners working in schools are encouraged to take a closer look at Lachlan and Carrigan's framework (2013) and think about ways how it could be adapted for their own classroom.

I would like to finish this chapter by going back to the start: the challenge of meeting the varying needs of increasingly diverse deaf learners in deaf education. As recently stated by Marshark and Leigh (2016) we know that despite all challenges and differences stakeholders in deaf education share the same goal, supporting deaf learners in reaching their full academic potential. This goal aligns very well with one of the primary aims of DA, which is to design the best possible guidance to exploit an individual's full potential and provide an improved understanding of children's learning strategies and responsiveness to mediation. As emphasised throughout this chapter, the information DA provides in addition to a score can guide practitioners to form hypotheses about how a student may respond to a particular type of intervention in the future. While psychometric testing offers a short and fairly inexpensive way to provide a snapshot of the child's language abilities and rank his/her performance in a population of the same age (Cotrus & Stanciu, 2014), DA requires a long-term (time) investment that builds on a close collaboration between researchers and practitioners to assure that the ideas and concepts of DA are successfully implemented in the classroom. One way to accomplish this could be through in-service training in DA to schools.

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Figure 1: *Prompt for understanding class inclusion* (© Haywood, Brooks, & Burns, 1992)

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Figure 2: *Mediated Learning Observation Form (Peña & Villareal, 2000) – Social – Emotional -Behavior*

	1	2	3	4	5
AFFECTIVE					
• Anxiety	Calm, little to no soothing required	Fidgety, but can be soothed	Uncomfortable, breaks needed to sooth	Distressed, much soothing required	Distraught, crying, cannot be soothed
Comments:					
• Motivation	Enthusiastic, engages in tasks readily	Curious, asks about tasks	Ambivalent, unsure about tasks	Guarded, seems fearful of tasks	Avoidant, does not want to engage
Comments:					
• Tolerance to frustration	Persistent, wants to continue despite difficulty	Contrite, voices difficulty, but continues	Tentative, appears unsure about continuing	Frustrated, continues under protest	Rejecting, cannot continue
Comments:					

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Figure 3: *Mediated Learning Observation Form (Peña & Villareal, 2000) – Cognitive Features*

COGNITIVE (cont.)					
Elaboration					
• Problem-solving	Systematic and efficient	Organized, but inefficient	Sketchy plan	Disorganized, haphazard plan	No plan; trial and error
Comments:					
• Verbal mediation	Elaborates plan clearly	Talks through problem	Talks occasionally	1-2 word utterances only	No verbal mediation
Comments:					
• Flexibility	Uses multiple strategies readily	Has preferred strategies, but can change when necessary	Some evidence of more than one strategy and occasionally utilizes them	Recognizes limitations of strategy, but cannot see alternatives	Persists with one strategy, regardless of outcome

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Figure 4: *Prompt for finding semantic categories in ASL* (© Mann, 2011)

Figure 5: *Key elements of DA based on Lauchlan (2012)*

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