Targeting Communication Excellence in Persons who Stutter

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Principal Investigator, Dr. Jennifer and Emanuel Bodner Developmental Stuttering Laboratory
History

NIH postdoc

Provost Innovation Fund

Austin Center for Stuttering Intervention and Research

Bodner Developmental Stuttering Lab

Michael and Tami Lang Stuttering Institute
Camp Dream. Speak. Live. is our annual intensive therapy program for children who stutter that effectively targets the affective and cognitive components of stuttering.

"I would have given my life to have a camp like this when I was a child. Because of Camp Dream. Speak. Live. my son will never know the struggles I did."

-Stephen Washington, Jr.
Targeting Communication Excellence is our therapy program that effectively targets core competencies to promote communication excellence in social, academic, and employment settings.

"My experience at the Lang Stuttering Institute helped me to realize communication is not defined by fluency and that when you are confident and competent in your ability to communicate, nothing can stop you from achieving your dreams. Now, as a practicing lawyer, I hope to be an example to other children who stutter and to encourage them to never let their stuttering define their ability to communicate."

- Chris Hefner

Kiara poem

Byrd (2017)
Everyday Leaders is our evidence-based leadership program that targets the development of skills in advocacy on behalf of self and others.

"The Lang Stuttering Institute taught me that my voice matters and sharing my message of what I wish people knew about stuttering can help the world be more accepting and understanding."

-Will Johnson

What I wish people knew about stuttering...

Stuttering is not CAUSED by nervousness or anxiety; it is neurophysiological in nature.

People who stutter can be excellent communicators.

Chris speech

Book In Press related to Everyday Leaders Program
Lang Stuttering Institute Community Connection promotes awareness, sensitivity, and understanding of stuttering among persons who may one day provide medical care, teach, work for/with, or employ persons who stutter.

"The Lang Stuttering Institute is absolutely an amazing organization. Thank you for allowing me and my team learn from and be a part of this exceptional program. Such an honor!"
- Tracy Linsley, Dell, Inc.

Executive from Dell Gives Advice to Children who Stutter
Lang Stuttering Institute Student Leadership Organization is our award winning organization whose mission is to unite students from diverse backgrounds and majors in order to educate, to advocate, and to spread awareness about stuttering.

"Being a part of the Lang Stuttering Institute Student Leadership Organization was a gift of lifetime - it opened my eyes to the pervasive ignorance about stuttering and gave me the opportunity to make a difference in the world."

- Veronica Vasquez

Example of LSI-SLO in action
Pay It Forward fosters mentorship opportunities wherein individuals of all ages help one another achieve communication goals, leading to enhanced empathy, resiliency, and self-confidence.

"My affiliation with the Lang Stuttering Institute taught me that helping others helps me to value my experiences with stuttering. Paying it forward has given my life meaning."

-Pratyush Singh

Pay It Forward Advice Book

Sam helping Jack
**Parent to Parent** is our family centered training program that educates parents about stuttering and how to best advocate on behalf of their children.

"Our participation in the wonderful programs offered through the Lang Stuttering Institute was of extraordinary benefit to our son and our entire family. The knowledge and unwavering support they provide is remarkably inspiring. We will spend the rest of our lives seeking ways to give back all that has been given to us."

-April & Keith White

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*Example of Parent Advocating*
Byrd (2017)

Research

• Etiological Contributors
• Diagnostic Markers
• Risk Factors for Persistency
• Evidence-based Practice
• Reduction in Stigmatization
• Experiences that Promote Specialization
• Simulated Training

Funding

• NIH F32 DC00655-01
• ASHFoundation
• ASHA Multicultural Affairs
• Department of Education
• TSHFoundation
• Malcolm Fraser Foundation
• The Stuttering Foundation
• National Stuttering Association
• Austin Community Foundations
• Lang Endowment
• Bodner Endowment

Byrd (2017)
What distinguishes monolingual speakers from bilinguals?
• Bilinguals have functional knowledge of more than one language; thus, bilinguals present a unique case for exploring motoric and linguistic demands on speech fluency.

• Language knowledge of bilinguals is not limited to one language; rather, it is spread across two.

• We can’t simply say a person is bilingual, rather we have to consider a variety of factors.

Byrd (2017)
<table>
<thead>
<tr>
<th>Factor</th>
<th>Characterization</th>
</tr>
</thead>
<tbody>
<tr>
<td>History</td>
<td>Age or years since first exposure</td>
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<tr>
<td></td>
<td>Order of acquisition</td>
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<tr>
<td></td>
<td>Languages exposed to at home</td>
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<td>Years of formal language instruction</td>
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<td>Mode</td>
<td>Participant awareness of bilingual testing or communication partner</td>
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</tr>
<tr>
<td>Covert Speech</td>
<td>Language used when performing non-verbal tasks</td>
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<td>Language used when expressing emotion</td>
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<td>Level of anxiety toward speaking</td>
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Byrd (2017)  
Grosjean, (2013). The psycholinguistics of bilingualism
Age of initial exposure to a second language (L2) has been correlated with a wide range of language skills in L2, including:

- phonetic (e.g., Fowler, Aramco, Ostry, Rowland, & Halle, 2008),
- phonological (e.g., Flege, Yeni-Komshian, & Liu, 1999; Jia, Strange, Wu, Collado, & Guan, 2006),
- semantic (e.g., Newman, Tremblay, Nichols, Neville, & Ullman, 2012),
- and syntactic abilities (e.g., Birdsong & Molis, 2001)

Byrd (2017)
• General language proficiency has been shown to interact with the amount of use within specific environments (Hakuta & D’Andrea, 1992), as well as the diversity of language experiences (Jia & Aaronson, 2003).

• Jia and Aaronson (2003) found that while bilingual children exhibited greater L2 proficiency than older immigrants, these children were also exposed to richer L2 experiences beyond those of immersive schooling (e.g., greater number of L2 speaking peers, L2 books read for leisure, instructional L2 television programs, and L2 spoken with family members).

• Amount of time each language is used at home uniquely predicts semantic and morphosyntactic performance (Bedore et al., 2012).
• For speakers still acquiring a language, L1 attrition is a well-documented product of language instability and environmental demand.

• In children, L1 attrition effects are commonly observed as a product of L2 immersive schooling.

• Children who learn a second language under these circumstances often lose or lag in proficiency in L1 and make greater gains in L2 than adult L2 learners (Jia, Aaronson, & Wu, 2002; Kohnert, Bates, & Hernandez, 1999).
• Degree of accent has been described as a “rough index” of L2 experience (Flege et al., 1999).

• Age of acquisition, language use (Flege, MacKay, & Piske, 2002; Munro & Mann, 2005) and also the quality of language experiences are predictors of accent (Flege et al., 2006; Moyer, 2011)

• Mode also plays a distinct role as code-switching increases when the speaker is aware that the listener speaks that language (Paradis & Nicoladis, 2007).
• Covert speech (aka “mental speech” or “inner speech”) has been a suggested product of frequency of use of L2 (Dewaele, 2007).

• Multilinguals typically report preference of L1 during mental language formulation, although patterns were mediated by language history and use.
• Affective variables can characterize the overall comfort and willingness to speak in a given language, particularly a nondominant language.

• Dewaele (2010) reported greater foreign language anxiety in younger L2 learners than older L2 learners, and elevated anxiety was associated with lower levels of proficiency.

• Jia et al. (2002) reported greater L2 proficiency correlated with less avoidance of L2 speaking opportunities.
• The heterogeneity of multilingual experiences during acquisition, and resulting language skills in L1 and L2, cannot be captured by a single descriptor.

• And constellation of factors that impact specific language skills may differ between first language (L1) and L2 (Hammer et al., 2012).

• Van Borsel (2011) suggested that the role of language dominance and stuttering remains uncertain due, in part, to the heterogeneity of the multilingual population.

• It will continue to remain uncertain, if we fail to consider these factors in our description of bilingual/multilingual participants.

Byrd (2017)
How has bilingualism been defined in the stuttering literature?

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• Systematic review demonstrate across the majority of studies (N = 23) bilingualism has not been defined with consistency or depth with regard to the core factors of history, function and proficiency (Coalson, Pena, & Byrd, 2013).

• Persisting lack of depth and breadth in these descriptions will continue to compromise interpretation of results within and across studies and limit meta-analytic efforts.


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<table>
<thead>
<tr>
<th>Measurement Tool</th>
<th>Author(s)</th>
<th>History</th>
<th>Stability</th>
<th>Function</th>
<th>Proficiency</th>
<th>Mode</th>
<th>Accent</th>
<th>Inner Speech</th>
<th>Affect</th>
</tr>
</thead>
<tbody>
<tr>
<td>History of Bilingualism (HOB) &amp; Language Background Questionnaire (LBQ) [from Bilingual Aphasia Test: BAT]</td>
<td>Paradis (1987)</td>
<td>✓</td>
<td>✓</td>
<td>✓</td>
<td></td>
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</tr>
<tr>
<td>Language Background Questionnaire (LBQ-LP)</td>
<td>Liow &amp; Poon (1998)</td>
<td>✓</td>
<td>✓</td>
<td>✓</td>
<td></td>
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</tr>
<tr>
<td>Family History Questionnaire (FHQ), Language History Questionnaire (LHQ), &amp; Language Use Questionnaire (LUQ)</td>
<td>Munoz et al. (1999)</td>
<td>✓</td>
<td>✓</td>
<td>✓</td>
<td>✓</td>
<td>✓</td>
<td></td>
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<td></td>
</tr>
<tr>
<td>Bilingualism and Emotions Questionnaire (BEQ)</td>
<td>Dewaele &amp; Pavlenko (2001)</td>
<td>✓</td>
<td>✓</td>
<td>✓</td>
<td>✓</td>
<td>✓</td>
<td>✓</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Bilingual Language History and Proficiency Form (BLHP)</td>
<td>Roberts &amp; Shenker (2007)</td>
<td>✓</td>
<td>✓</td>
<td>✓</td>
<td>✓</td>
<td></td>
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<td></td>
</tr>
<tr>
<td>Self-Classification Tool for English-Mandarin (SCT-EM)</td>
<td>Lim et al. (2008)</td>
<td>✓</td>
<td>✓</td>
<td>✓</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Bilingual Dominance Scale (BDS)</td>
<td>Dunn &amp; Fox Tree (2009)</td>
<td>✓</td>
<td>✓</td>
<td>✓</td>
<td>✓</td>
<td>✓</td>
<td>✓</td>
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</tbody>
</table>

*Coalson, Peña, & Byrd (2013)*

*Byrd (2017)*
• Over the past 5 years there has been improvement in defining bilingualism, but a critical concern remains...

• Monolingual English speaking guidelines have been and continue to be used to identify the presence of stuttering in bilinguals/multilinguals.

• We cannot use monolingual guidelines to determine what is atypical in a bilingual speaker without first establishing what is typical.

Is bilingualism a risk factor for development and/or persistence of stuttering?

Byrd (2017)
• If bilingualism was a risk factor, countries with majority bilingual populations would show marked increase in stuttering prevalence.

• Children who speak more than one language are at risk for false positive identification of communication disorders, in general.

Artiles et al. 2003; Coalson et al. 2013; Karimi et al., 2011; Mohamadi et al., 2008

Byrd (2017)
Do speech-language pathologists consider bilingualism to be a risk factor for development and/or persistence of stuttering?

Byrd (2017)
• Participants included 207 speech-language pathologists from across 30 states.

• Completed web-based surveys addressing their generalized knowledge of perceived risk factors associated with stuttering including bilingualism.

• Preliminary results indicate that approximately 20% (N=42) strongly agree that bilingualism is a risk factor.

Should perception of increased risk and/or the potential for false positive identification even be a concern?

Doesn’t research demonstrate clinicians can reliably identify stuttering in speakers of other languages, despite not speaking or understanding those languages?

Byrd (2017)
• Listeners can accurately identify stuttering in speakers of languages they do not speak/understand

• The more similar the language is to the listener’s language the more accurate and easier it is to identify

• Accuracy is not limited to presence or absence; it extends to severity.
• However, with the rare exception (Einarsdóttir & Ingham, 2009) the focus has not been on identification in children who stutter near onset.

• In the child focused research, typically fluent children were not assessed among the children who stutter.

• Accurate identification of stuttering in children who speak a language the clinician does not speak/understand should not be interpreted to suggest accurate identification of typical speech disfluency.

Byrd (2017)
Are clinicians able to identify typically fluent versus stuttered speech in bilingual children who do not stutter, or are these children at increased risk for false positive identification of stuttering?
• 14 bilingual SE SLPs who ranged in experience from 3 years post CF to 37 years

• Listened to two 3 minute narrative audio samples in English and in Spanish of a SE bilingual child with confirmed stuttering and bilingual child who had no present or prior concern about stuttering.

• 12 of 14 accurately identified the bilingual child who stutters as presenting with stuttering

• AND 13 of 14 mis-identified the bilingual child who does not stutter as also presenting with stuttering

• As expected, clinicians were accurate in identifying stuttering in bilingual SE children who stutter.

• But, preliminary data suggest most provided false positive diagnoses of stuttering in bilingual children who do not stutter.

• Thus, there appears to be an increased risk of false positive identification unless the clinician is knowledgeable about bilingualism and stuttering...

What factors contribute to this increased risk of false positive identification of stuttering?
• Per self-report, frequency AND types of disfluencies influenced identification of stuttering in the typically fluent bilingual children...the types reported were whole word reps and part word reps.

• Pilot data confirm clinicians apply what we use to differentiate monolingual English-speaking children who do and do not stutter in their assessment of bilingual children.

What *is* considered to be typical speech disfluencies across bilingual speakers of different languages?
Behaviors that overlap with stuttering

<table>
<thead>
<tr>
<th>Maze Type</th>
<th>Description</th>
<th>Examples</th>
</tr>
</thead>
<tbody>
<tr>
<td>Lexical Revision</td>
<td>Correction of overt word choice errors, to add or delete lexical information.</td>
<td>His (frog) dog also came along. (La rana mayor) la rana bebé.</td>
</tr>
<tr>
<td>Grammatical Revision</td>
<td>Correction of overt grammatical errors.</td>
<td>He was wearing the jar (in) on his head. La rana (brincaron) brincó.</td>
</tr>
<tr>
<td>Phonological Revision</td>
<td>Correction of phonological errors.</td>
<td>Squeak went the (saxolone) saxophone. No le (agad*) agradó mucho.</td>
</tr>
<tr>
<td>Filled Pause</td>
<td>Non-linguistic vocalizations that occur at the beginning of utterances or between words.</td>
<td>(Um) what is this? La rana trató de (ah) tomar la leche.</td>
</tr>
<tr>
<td>Repetition</td>
<td>Sound, part-word, whole-word, or phrase repetition.</td>
<td>And (they) they were looking. El búho (lo) lo persiguió.</td>
</tr>
</tbody>
</table>

CRITICAL OVERLAP

Adapted from Bedore et al. 2006

Byrd (2017)
Do these **typical** speech disfluencies occur at rates that are comparable in speakers of different languages?
To explore this, we identified frequencies and types of disfluencies considered to be stuttering and nonstuttering-like in narrative samples of 18 bilingual Spanish-English children who were typically fluent.

We also assessed whether the disfluent speech differs depending on language dominance and/or language produced.

Method: Participants

- 18 Mexican-American kindergarteners from central Texas

- No history of speech and/or language diagnosis or therapy

- No present or prior history of parent or teacher concern about child’s fluency

- No present or prior history of parent or teacher concern about any other speech and/or language impairment

Method: Participants

• Dominance: Input/Output + Ability

• Parent report and teacher report regarding the child’s language input and output on hour-by-hour basis (Gutiérrez-Clellen & Kreiter, 2003; Restrepo, 1998).

• Completed Bilingual English Spanish Assessment (BESA) (Peña et al., 2017).
Method: Participants

• **Balanced bilinguals (BB)** - uses Spanish and English 40-60%
  • 6 (3 males, 3 females), age 5;6 – 6;7

• **Spanish dominant (BSD)** - uses Spanish 61-80%
  • 6 (3 males, 3 females), age 5;6 – 6;7

• **English dominant (BED)** - uses English 61-80%
  • 6 (3 males, 3 females), age 5;6 – 6;7

Method: Data Collection

• Task: two narratives - tell & retell
  • each language on different days w/in 4 weeks
  • one of four wordless picture books

• Each disfluency was coded for specific type of disfluency, category of disfluency: stuttering-like versus nonstuttering-like, number of iterations, rhythm, presence/absence of tension

* See Bedore, Peña, Ho, & Gillam (2010) for more info re: sampling procedures
Clinical Application: Frequency

• Percent syllables stuttered and total disfluencies exceeded monolingual guidelines for stuttering for all participants.

• Bilingual speakers may be more likely to experience an increased level of linguistic uncertainty which could overtly result in an increased production of disfluent speech.

• Expect to see significantly higher rates of speech disfluencies in the output of typically fluent bilingual speakers.

Results: Disfluency Type

• Monosyllabic word repetitions.
  • Main contributor to frequency being higher than 3% for majority of the participants.
  • Consider whether monosyllabic word repetition is an instance of stuttering.

• Sound and syllable repetitions.
  • Produced by all participants.
  • Consider whether these should be consider exclusively indicative of stuttering.
Clinical Application: Disfluency Type

- Inaudible/audible sound prolongations.

- None of the children produced inaudible or audible prolongations.

- Supports the classic notion of this type of speech disfluency as a harbinger of stuttering (Conture, 2001).
Clinical Application: Timing and Tension

• No atypical tension across the production of disfluencies.

• No atypical rhythm in the iterations of the disfluencies produced.

• Consider the timing and tension of the disfluencies produced as that may prove to be more discriminating.

Clinical Application: Iterations

• Mean number of iterations of 3 or higher is indicative of stuttering in monolingual English speakers (e.g., Pellowski & Conture, 2002).

• Mean number of iterations produced in present study was 4 to 6 depending on the speech disfluency type that was repeated.

• Be cautious when interpreting mean number iterations as mean may be markedly higher than mean in monolingual English speakers.

Byrd (2017)
Clinical Application: Language Dominance

• The 6 balanced, the 6 English dominant, and the 6 Spanish dominant bilinguals did not differ significantly in their rates of stuttering-like, nonstuttering-like, and total speech disfluencies.

• Inconsistent dominance criteria across previous studies may have compromised interpretation of role of dominance in stuttered speech.

• Dominance within a language may not be as critical to typical disfluency as the nature of the language being spoken.

• Sampling client’s more or less dominant language only would not be the appropriate diagnostic choice.

Clinical Application: Language Produced

• Regardless of dominance, produced significantly more stuttering-like speech disfluencies when speaking Spanish than English.

• More speech disfluencies in Spanish than in English may be due to differences such as word order being significantly more restricted in English than Spanish, and the gender plus plural variations in Spanish that do not exist in English.

• Complete analyses in each language the person speaks, as disfluent speech may vary distinctly depending on language produced.

Clinical Application: Parent/Self Concern

• Parents did not express concern about their children’s speech disfluency despite the high frequencies of disfluencies produced

• Children also did not express concern

• Additional research is needed but the threshold for parent concern may be significantly higher or perhaps, factors other than frequency may contribute.

Byrd (2015)
What do we presently know about the disfluent speech of bilingual children who do not stutter that informs differential diagnosis?

Perhaps, monolingual guidelines should be reconsidered...

(e.g., Byrd, Gkalitsiou, & Hampton, under review)
Should parents defer exposing their child to a second language until after age 5, particularly if the child is showing signs of stuttering?

Byrd (2017)
• >50% of the world’s population is bilingual and this number is rapidly increasing – for many, second language is not a choice, it is a necessity.

• If we are going to suggest to parents, etc., that there is a risk, there needs to be irrefutable evidence to support that suggestion because the implications for the bilingual child (and his/her family) are significant.

Byrd (2017)
• There are preliminary data to suggest increased risk of false positive diagnosis of stuttering in typically fluent bilingual children, and in children who present with deficits in their language development (Byrd et al. 2015a, 2015b, 2016, in prep).

• But there are no data to support a delay would be of benefit, rather there are significant data to suggest a cognitive advantage.
Are there additional populations who may be at risk for false positive diagnosis of stuttering?

Byrd (2017)
• Late talkers, language impaired children, children with ASD produce frequencies and types of disfluencies considered to be stuttering in monolingual English speakers.

• AND children who have markedly high and/or low language skills

• Research is needed to determine what behaviors overlap and what behaviors distinguish these highly disfluent speakers with speakers who stutter

(e.g., Bedore et al., 2006; Belfi-Lopes et al., 2014; Bernstein Ratner, 2000; Boscolo, Bernstein Ratner & Rescorla, 2002; Finneran, Leonard & Miller, 2009; Guo, Tomblin, & Samelson; Hall & Burgess, 2000; Hall, Yamashita & Aram, 1993; Hietella & Spillers, 2005; Hodge, Rescorla & Bernstein Ratner, 1999; Lake et al., 2011; Moto & Haskill, 2008; Paul et al. 2005; Plexico et al. 2010; Scaler Scott et al., 2014; Scaler Scott et al., 2006; Shriberg et al., 2001; Sisskin, 2006)

Byrd (2017)
To sum up...

• Bilingual SE speakers who do not stutter produce disfluent speech at a rate that would indicate stuttering in monolingual English speakers.

• Monolingual guidelines should not be used to determine diagnosis, prevalence, risk, etc., in bilinguals.

• Atypical rate and rhythm, parent and/or self concern appear to be critical considerations

Byrd (2017)
To sum up...

• Collect samples in both languages rather than sampling specific to dominance as the nature of the language being produced may prove to distinctly disrupt disfluency.

• Consider the constellation of factors that contribute to the participant’s bilingualism and provide this information in detail, require it in your reviews.
To sum up...

• Continued exploration of typical versus atypical fluency in both languages of bilingual speakers as well as speakers with high and delayed linguistics abilities will inform theoretical constructs as well as diagnostic considerations for speakers of one or more languages.

• Need to consider limitations in the sample size, variability in the type and amount of samples collect, age of participants, bilingualism, single sample versus longitudinal exploration.

Byrd (2017)
How can we improve our understanding of the diagnostic markers of stuttering?

Byrd (2017)
Select examples of related research in progress

• Identification and analysis of typical disfluencies in bilingual and multilingual speakers of other languages over time.

• Examination of the speech behaviors that do and do not overlap across monolingual, bilingual and multilinguals who stutter and those who are typically fluent and those who have DLD (e.g., Taliancich-Klinger, Byrd, & Bedore, 2015).

• Assessment of tension as a reliable and valid measure of stuttered speech (e.g., Byrd et al., in preparation)

• Loci of stuttering as related to syntactic and grammatical elements of the speaker’s output (e.g., Gkalitsiou, Byrd, & Bedore, in press).

• Parent concern as a reliable diagnostic marker for monolingual as compared to bilingual multilingual speakers.

Byrd (2017)
Talent show surprise
Overview of therapy session topics

• Please note that the targets and specific activities related to this presentation are in the following:
Why should overall communication be targeted in stuttering therapy?
Requirements increase risk for failure

Excellent communication should not be operationally defined by fluency...
How is communication excellence measured?

Byrd (2017)
8 Core Competencies (National Communication Association)

• 1) chooses and narrows topic appropriately for the audience and occasion
• 2) communicates the thesis/specific purpose in a manner appropriate for the audience and occasion
• 3) provides supporting material [including electronic and non-electronic presentational aids] appropriate for the audience and occasion
• 4) uses an organizational pattern appropriate to the topic, audience, occasion and purpose
• 5) uses language appropriate to the audience and occasion
• 6) uses vocal variety in rate, pitch, and intensity (volume) to heighten and maintain interest appropriate to the audience and occasion
• 7) uses articulation, pronunciation and grammar appropriate to audience and occasion
• 8) uses physical behaviors that support the verbal message

Byrd (2017)
• **EXCELLENT**
  
  The speaker has exceptional articulation, pronunciation, and grammar.
  
  [That is, the speaker exhibits exceptional fluency, properly formed sounds which enhance the message, and no pronunciation or grammatical errors.]

• **SATISFACTORY**
  
  The speaker has acceptable articulation, with few pronunciation or grammatical errors.
  
  [That is, most sounds are properly formed, only 1-2 vocalized disfluencies, and a few minor errors in pronunciation and grammar.]

• **UNSATISFACTORY**
  
  The speaker fails to use acceptable articulation, pronunciation, and grammar.
  
  [That is, disfluencies interfere with the message, and frequent errors in pronunciation and grammar make it difficult for the audience to understand the message.]
Does stuttering compromise communication excellence?

Byrd (2017)
It can, at least, temporarily...

- If the speaker or his/her listeners are ignorant to factors (aside from fluency) that define communication competence

- **BUT** what if they learn to modify their stuttering **AND** master the other competencies...

- *...they are no longer as concerned about fluency when evaluating competence AND their listeners are not either...* (Byrd et al. under review)
The client will improve his/her overall communicative excellence as demonstrated by achieving ratings in the “exceeds expectations range” as assigned by self, peer and clinician in each of the identified core competencies...


Byrd (2017)
### Competency 6: Uses nonverbal behaviors that support the verbal message

**6a)** Did they manage to suppress any distracting physical mannerisms—fidgeting, playing in a distracting manner with objects, rocking back and forth, etc. (Note: Behaviours secondary to stuttering do not apply to this rating)

**6b)** Did they use appropriate and meaningful gestures to emphasize point and sustain and/or direct the audience's attention?

**6c)** Did they appear self-confident and assured; at ease with the material they were using and their own ability to understand and present it?

**6d)** Did they manage to smile occasionally at the audience rather than appearing tense or morose and/or apparently uninterested or unapproachable?

**6e)** Did they connect with the audience via eye contact and gestures rather than stare fixedly at their notes or any location other than audience?

<table>
<thead>
<tr>
<th>Self Rating</th>
<th>Clinician Rating</th>
<th>Peer Rating</th>
</tr>
</thead>
<tbody>
<tr>
<td>Exceeds expectations, no further focused practice is needed</td>
<td>Meets expectations, but additional practice is needed to transition to highest level of competency</td>
<td>Needs continued focused practice to meet expectations</td>
</tr>
</tbody>
</table>

LSI Full Form

LSI conversation form presently being piloted

Byrd (2017)
Additional competencies to consider when targeting communication effectiveness in persons who stutter

Byrd (2017)
What do we know about the benefit of voluntary stuttering?

Byrd (2017)
What do clients typically do/say when you ask them to voluntary stutter?

Byrd (2017)
How do clients typically produce a voluntary stutter?
Voluntary Stuttering
Byrd, Gkalitsiou, Donaher, & Stergiou, 2015

The majority of respondents reported that their initial feelings towards VS were uncomfortable and too emotionally and physically difficult to use regularly. These feelings of discomfort and perceptions of difficulty dissipated for nearly half of the respondents subsequent to initial use. Suggesting that the act of engaging in VS is a critical first step to understanding the potential benefits and to promoting future use.

The perceived benefits of VS are associated with the type of VS produced and the location of where it was used.

- Reduced their fear
- Reduced their avoidance
- Made them think differently about their speech
- Boosted their confidence
- Decreased the physical tension
- Had positive, long-term impact on stuttering severity
- Helped them to stutter less
- Improved their overall quality of life.
- Was an important part of speech therapy
- Was a good self-disclosure technique
- Helped to make the listener feel more comfortable
- Should continue to be used post-therapy.

Respondents who produced VS that more closely matched their real stutters were more likely to report VS.

Respondents who used VS outside the therapy room were more likely to report VS.

Byrd (2017)
Key points to remember...

• Voluntary stuttering should be produced in a manner that is as close to the client’s real stutter as is possible

• Voluntary stuttering should be practiced outside of the clinic environment

Byrd, Gkalitsiou, Donaher, & Stergiou, 2015
When you ask your client to self-disclose their stuttering, what do they typically say?
Why is there a need to self disclose stuttering?
Origin of Stuttering Stereotype

How you perceive you would feel as the speaker if you were a person who stutters

How you feel as the listener as you are actively listening to someone who stutters

Desensitization: Self Disclosure

• What is it?
  • Child chooses to openly acknowledges own stuttering to listeners

• Why use it?
  • Allows the child to take control of the situation
  • It promotes openness about using techniques
  • Helps listeners know what to expect
  • Informs listeners what the client wants them to do

• When to use it?
  • Like other tools, it should occur in a hierarchy (e.g., family, friends, group therapy, teachers/co-workers)

Manuscript in press suggests a non-apologetic acknowledgement can lead to more positive experience for speaker and listener (Byrd et al. 2017)

Katelyn self-disclosure

Dustin

Byrd (2017)
Overview of therapy session topics

• Icebreaker presentation
• Informal meet and greet
• How To/Informational presentation
• Selling/Persuasive presentation
• Panel Interview/Science Fair
• Formal meet and greet
• Tabling info session – Advocacy
• Open mic
• Inspirational presentation
• Celebration of Communication Excellence
What I wish people knew about stuttering...

It isn’t just shy people that stutter

What I wish people knew about stuttering...

Stuttering can vary from person to person.

Some people stutter more in certain situations than others.

Stuttering doesn't always sound the same.

Byrd (2017)
What I wish people knew about stuttering...

1. There are different kinds of stuttering.
2. It is important not to interrupt people who stutter.

Byrd (2017)
What I wish people knew about stuttering...

That there are strategies to help them.
What I wish people knew about stuttering...

- It isn't just shy people who stutter. That's the stereotype. That, or you only stutter when you're nervous. I myself am energetic and outgoing but I still stutter.

- For me personally, stuttering makes me anxious that people won't like or accept me.

- Stuttering looks and sounds different in other people.
What I wish people knew about stuttering...

• Anxiety doesn’t cause stuttering
What I wish people knew about stuttering...

Stuttering is like an exotic accent.
What I wish people knew about stuttering...

As a person who stutters, I really appreciate it when a person that I talk to patiently listens without interrupting. It makes me feel that I am worth listening to and that there are those who care about me.
What I wish people knew about stuttering...

I wish that more non-stutterers will learn that stuttering—like autism—is on a spectrum, so people who stutter may be on the lower end of the spectrum, near the middle, or on the more severe end of the spectrum. This increased knowledge can benefit people like me who are considered “covert stutterers” because non-stutterers are often confused when I stutter or may not even fully believe me when I tell them I stutter. Just because I don’t match the image that many non-stutterers have of stutterers does not mean that I am not a member of the group of millions of stutterers out there.

Byrd (2017)
What I wish people knew about stuttering...

Stuttering does not mean in confidence

Stutterers can like public speaking

Byrd (2017)
What I wish people knew about stuttering...

Just because someone stutters doesn’t mean that they are less intelligent.

Byrd (2017)
What I wish people knew about stuttering...

- Nerves does not cause stuttering.
- Tickling a baby does not cause stuttering.
- A baby looking at its reflection does not cause stuttering.

Do not believe superstitions.

Byrd (2017)
What I wish people knew about stuttering...

One fact about stuttering is that you have to be patient with the person who is stuttering.
What I wish people knew about stuttering...

Stuttering is not CAUSED by nervousness or anxiety; it is neurophysiological in nature.

People who stutter can be excellent communicators.

Byrd (2017)
Sam, age 9...

- First therapy session
Sam, age 9

- Fourth session

Byrd (2016)
Sam, age 9

• Example of power of peer feedback

Byrd (2016)
Additional examples

Preschool presentation

School-age presentation

Adolescent presentation

Adult presentation

Preschool tabling and open mic

Preschool 2 tabling and open mic

School age tabling and open mic

Adult tabling and open mic

Byrd (2016)
I can tell you really smart.

Read a great.

Really great.

Great presentation.

Very smooth.

The book is very exciting.

Pronunciation.

Needs work.

25 points.

Needs guidance from the teacher.

Student was unable to answer some questions.

Teacher was able to answer some questions.

Needs more.

15 points.

Evaluation (Total: 30 points)
Final step...pay it forward...

- Receipt of Certification of Communication Excellence and formal role as a mentor in Pay It Forward Peer Program.

- *In helping others, they continue to advance their own skills...*
Select examples of research in progress related to evidence based practice

- Influence of paying it forward on relapse

- Influence of enhancement of communication effectiveness on quality of life measures and speech fluency for speakers of all ages

- Influence of communication effectiveness on listener perception of speaker’s stuttering as well as personality and confidence traits

- Simulated training in evidence based practice for stuttering (STEPS)

Byrd (2017)
Learn more about our efforts...

• Visit our website
  • http://moody.utexas.edu/stuttering

• Find and Like us on Facebook
  • Michael and Tami Lang Stuttering Institute
    • https://www.facebook.com/utstuttering/
Courtney Byrd, PhD, CCC-SLP

Associate Professor, Department of Communication Sciences and Disorders

Founding Director, Michael and Tami Lang Stuttering Institute

Principal Investigator, Dr. Jennifer and Emanuel Bodner Developmental Stuttering Laboratory
General Overview

• Intensive program for children who stutter that targets

  • Confidence in ability to make friends
  • Resilience
  • Communication excellence
  • Positive communication attitude
  • Leadership skills
  • Reduced impact of stuttering on overall quality of life

Byrd (2017)

“\textit{I would have given my life to attend a program like this when I was a child. Because of Camp Dream. Speak. Live. my son will never know the struggles I did.}” -Stephen Washington, Jr.
Target 1

Increase the child who stutters’ perception of his or her ability to make friends.
Target 1 - Rationale

Children who experience genuine, lasting friendships in preschool and early school age years are significantly less likely to...

*have difficulties with perceptions of self.*
*face social isolation.*

For those children who have not experienced friendships in these early years...

*feelings of insecurity and social inhibition are more likely to develop.*

Byrd (2017)
Target 1 – Method 1

Peer relationships in both children and adults are fostered through dance.

Dancing facilitates the desire to connect with others.

Matthew: breakdancing
Group breakdancing

Byrd (2017)
Target 1 – Method 2

Sharing personal journeys with others and advice for their peers specific to how they can manage the situation if they should ever face it, can also facilitate bonding.

Byrd (2017)
Most difficult time talking

Byrd (2017)
Target 1 – Method 3

Children are also required to share the thoughts and feelings of their peer – a requirement that leads to deeper, more meaningful understanding and respect for each other’s perspectives – a necessary step to establish positive peer relationships.

Byrd (2017)
Target 1 – Method 4

Children also participate in team oriented activities such as glow bowling, complex designing and building of innovative crafts, as well as problem solving where across all tasks the goal is to support the success of the team as a whole.

Byrd (2017)
Target 1 – Method 4
Target 1 – Method 4
Target 1 – Method 4
Target 1 – Method 5

Peers write messages on each peer’s poster – instructed to specify in their message what makes that person *special*.

Present poster to entire camp.

Also share with family and keep poster is a reminder of their friends, they are not alone, and the many different ways in which they are special.

Byrd (2017)
Target 2

Increase understanding and ability to effectively navigate bullying and teasing.

Byrd (2017)
Target 2 - Rationale

Children can better navigate bullying and teasing when they are knowledgeable with regard to what these types of exchanges are, why they occur, and what they can do if it happens to them.

Byrd (2017)
Target 2 – Method 1

Motivational speaker partnered with a child friendly mascot engage the children in a variety of games designed to educate them about what bullying and teasing is, how to identify when it is happening, and how to best address this type of situation.

- Kazoo on bullying
Target 2 – Method 2

• Through one on one as well as small and large group discussions the children are also asked to brainstorm ways in which they can share about their own stuttering that feel empowering versus embarrassing.

Will: sharing about camp and the lack of bullies at the camp

Stephen sharing how he wont let stuttering stop him

Byrd (2017)
Target 3

Increase resiliency.
Target 3 - Rationale

*Improvisation training is a key strategy to developing and strengthening resilience.*

Through improvisation, children who stutter can learn that though they cannot anticipate every possible stuttering moment, but they can feel confident in their ability to respond in a variety of ways, all of which can lead to a successful communicative exchange.
Target 3 – Method 1

Children engaged in formal improv training and were provided multiple opportunities to participate in improv activities.
Target 3 – Rationale

The relationship between resilience and positive emotional thinking is moderated by negative thoughts.

It is not enough for the child to recognize the negative self talk, s/he also needs to learn how to replace those thoughts with positive self talk.
Target 3 - Method

Children engage in creative action activities wherein they visualize their dreams and the steps to take to make those dreams come true.

Byrd (2017)
Children are also provided multiple opportunities to share about themselves and their speech in a pointedly positive manner.

For example, instead of asking the child whether or not he or she loves their speech, the children are prompted to complete sentences such as, “I love my speech because...” and “I am special because...”

- Asa: I am special because...
- Asa: I love my speech because...
Target 3 - Method

At the end of each day participants are provided with a “Wow of the Day” document that describes a moment in which the child excelled with regard to his or her communication attitude, peer to peer interaction, and leadership.

A photograph is included to serve as reminder of each day and participants are asked to reflect and share about this moment with their families.
Target 4

Increase advocacy on behalf of others and self.
Target 4 - Rationale

The act of helping someone else to cope with the same behavior for which you have struggled results in increased self-esteem, a deeper connection to the community who would be in need of your help, and also increases self-advocacy.

Through helping others, children are more likely to acquire a more profound understanding of their own challenges and how to best navigate similar challenges in the future.

Byrd (2017)
Target 4 - Rationale

Research related to the influence of role models on perception of self and future achievement suggest positive effects particularly when the role model has navigated a comparable path whether it be race, gender, intellectual disability, etc.

The more a person can see success reflected in others who have faced similar challenges, the more positively they will view their own potential.

Byrd (2017)
Target 4 - Method

Participants are assigned to “pay it forward” peer groups wherein they are instructed to share about their most challenging and rewarding experiences with their speech and impart advice for navigating life without allowing stuttering to significantly compromise their daily thoughts, feelings and actions.

Byrd (2017)
Target 4 - Method

Children are asked to share what message they would most like for other children and adults to learn about stuttering.

Children video-record their messages and share them with the camp, with the persons in their home environment, and with the world via the Lang Stuttering Institute’s social media.

Byrd (2017)
Advice for talking to someone who stutters

Byrd (2017)
Target 4 – Method

Participants who have had previous therapy are asked to share their opinions about what was most effective versus what was least effective and why they think that might be.

Participants also record the strategies that they previously learned and provide examples of those strategies in action to be used as instructional tools.
Target 4 - Method

Participants participate in campus wide open mic where they go to the most highly foot trafficked area of campus and take turns sharing about stuttering.
Target 4 - Method

Children also participate in campus-wide educational outreach by setting up a table on campus and engaging passersby with educational materials the children themselves have developed specific to stuttering.

Byrd (2017)
Target 5

Increase understanding of the importance of leadership and learn specific ways that they can be a leader to others.

Byrd (2017)
Target 5 - Rationale

When children begin to view themselves as an individual who can be a significant role model to others, their perception of self increases and their drive to help others does as well.

Children who are at risk for low self esteem do not view themselves as leaders, but once they learn the ways in which they can uniquely help others, their self-confidence increases as does their ability to lead.
Target 5 - Method

Every child is educated about the importance of leadership.

What makes a good leader, we acknowledge famous leaders, but our focus is on ways to be every day leaders.

Each child reflects upon his or her own innate leadership skills and shares the ways in which they lead by example.
Target 5 - Method

Our children also reflect upon their aspirations and the leadership role they envision for themselves in the future.

Children also visit with other “every day” leaders in our community to further their understanding of the many ways in which they can be leaders.

Each child selects their goals as leaders for each day of camp and reports on the ways in which they worked towards those leadership goals.

Byrd (2017)
Target 5 - Method

**Everyday leader**

- Role models sharing importance of setting goals for yourself
Target 5 - Method

For every organized activity across the duration of camp, there is a different participant who is awarded the role as the lead emcee of that activity.
Target 5 - Method

Participants were assigned to specific educational outreach leadership groups within the camp and each leadership group had to formally educate one of the visitors to the camp regarding the nature and treatment of stuttering.

Byrd (2017)
Target 6

Increase communication effectiveness.

Byrd (2017)
Target 6

WILL BE COVERED IN DETAIL IN SECOND PART OF TALK TODAY

Byrd (2017)
Target 6 - Method

Each child engaged in communication exchanges of varied difficulty, with the guiding principle of targeting communication excellence.

These exchanges included speaking in front of all of the participants in the program at least two times per day in order to share their thoughts specific to a designated topic, engaging in improvisational communication, and engaging in a variety of extemporaneous speaking activities with select groups of peers as well as in front of the entire cohort of participants.
Target 6 - Method
Target 6 - Method
Target 6 - Method

Byrd (2017)
Target 6 - Method

Byrd (2017)
Target 6 - Method

- Gideon’s talent
Target 6 - Method

• Jaxson’s talent
Target 7

Learn specific strategies for acknowledging stuttering and decreasing discomfort towards stuttering.

Byrd (2017)
Target 7 - Rationale

Provides client with tools to navigate stereotype threat of stuttering.

Reduces negative affective and cognitive correlates.
Target 7- Method

Each child learns why it is important to self-disclose in a non-apologetic manner.

Children are also educated about the value of stuttering on purpose in a manner that is as close to their real stutter as possible.

Each child is provided multiple opportunities to use both strategies.

Daniel: Practicing voluntary stuttering and self-disclosure

Byrd (2017)
Preliminary results

Significantly increases participants’ positive attitudes towards their communication abilities as measured by the Kiddy CAT and the CAT.

Significantly decreases the negative impact of stuttering on participants’ lives as measured by the OASES.

Significantly improves their perception and that of their parents of their ability to make friends as measured by the NIH PROMIS Friendship scale.

Byrd (2017)
Future directions

• One peer reviewed manuscript in press, two additional under review.

• Camp manual presently in press.

• Including campers from across the globe as the more we expand our participation, the more we will be able to further the mission of the Michael and Tami Lang Stuttering Institute.

Byrd (2017)
Learn more about our efforts...

• Visit our website
  • [http://moody.utexas.edu/stuttering](http://moody.utexas.edu/stuttering)

• Find and like us on Facebook
  • Michael and Tami Lang Stuttering Institute
    • [https://www.facebook.com/utstuttering/](https://www.facebook.com/utstuttering/)