

What can we learn from first-year DHH college students?

Agenda

1. Background
2. Pilot Study
3. Review of NTID's Summer Education Transition Program
4. Goals and Importance
5. What We Learned
6. How do this inform transition?
7. Workshop
8. Questions & Answers

Background

- Deaf and hard of hearing (DHH) students are enrolling in college in higher numbers than in the past
 - Graduation rates continue to lag behind their hearing peers (Garberoglio, Palmer, & Cawthon, 2019; Newman et al., 2011)
- More than half of DHH students enrolled in college are obtaining an associate's degree (Garberoglio, et al., 2019)

Background

- 57% of DHH college students must enroll in remedial English courses indicating that some DHH students are underprepared for college-level work (Garberoglio, et al., 2019)
 - Approximately 30-50% of DHH readers are not reading at a level equivalent to their age or years of schooling (Easterbrooks & Beal-Alvarez, 2012)
- Reading level is a predictor of the level of degree (associates, bachelors, etc.) DHH students will attain (Cuculick & Kelly, 2003)

Pilot Study

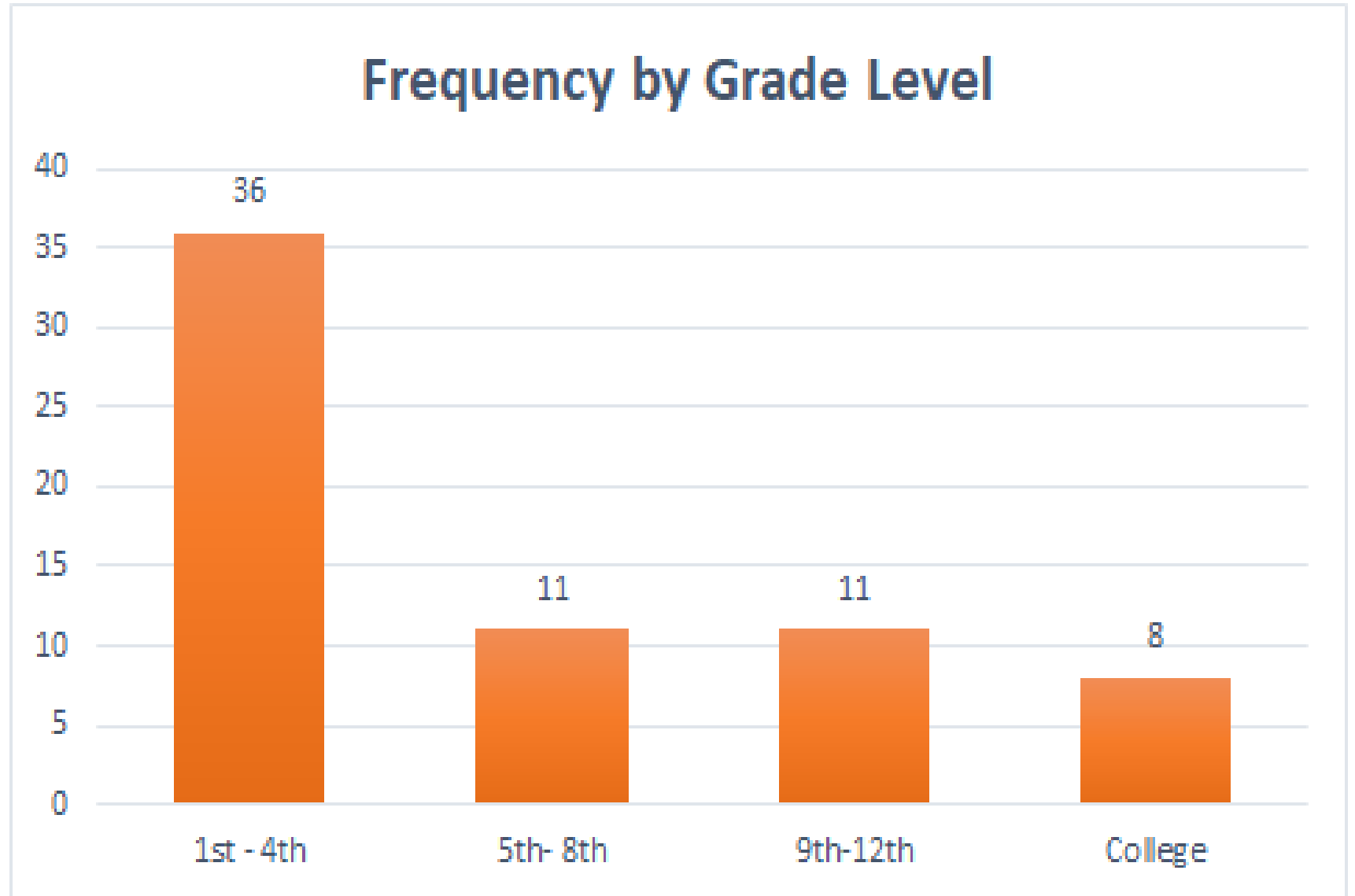
- Goal: Discover what the skills were of first-year DHH students at RIT/NTID
- Who was invited to participate?

Self-reported as deaf or hard of hearing

First-year student at RIT/NTID

Willing to come for two separate sessions of assessment

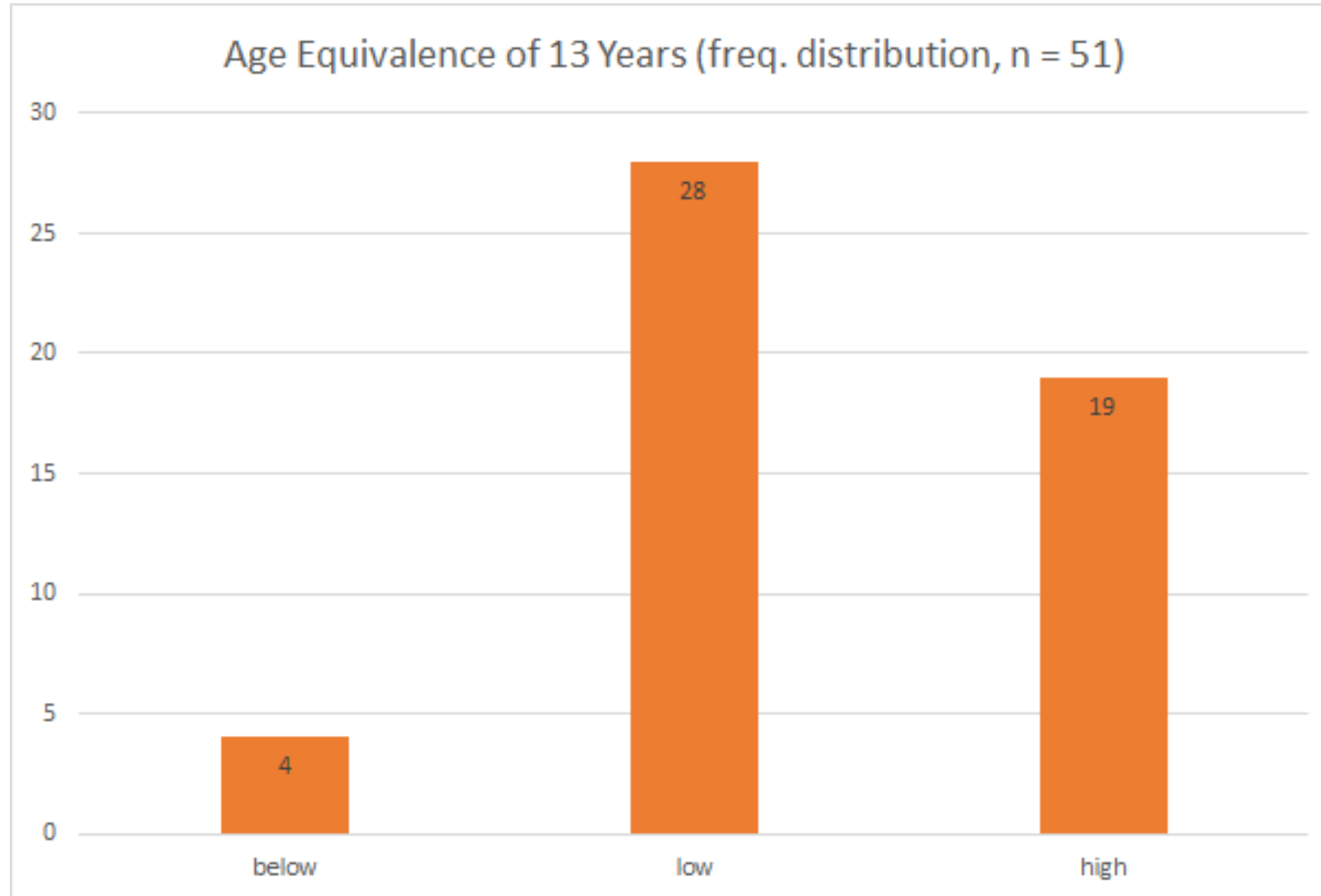
Skills of First-year DHH Students



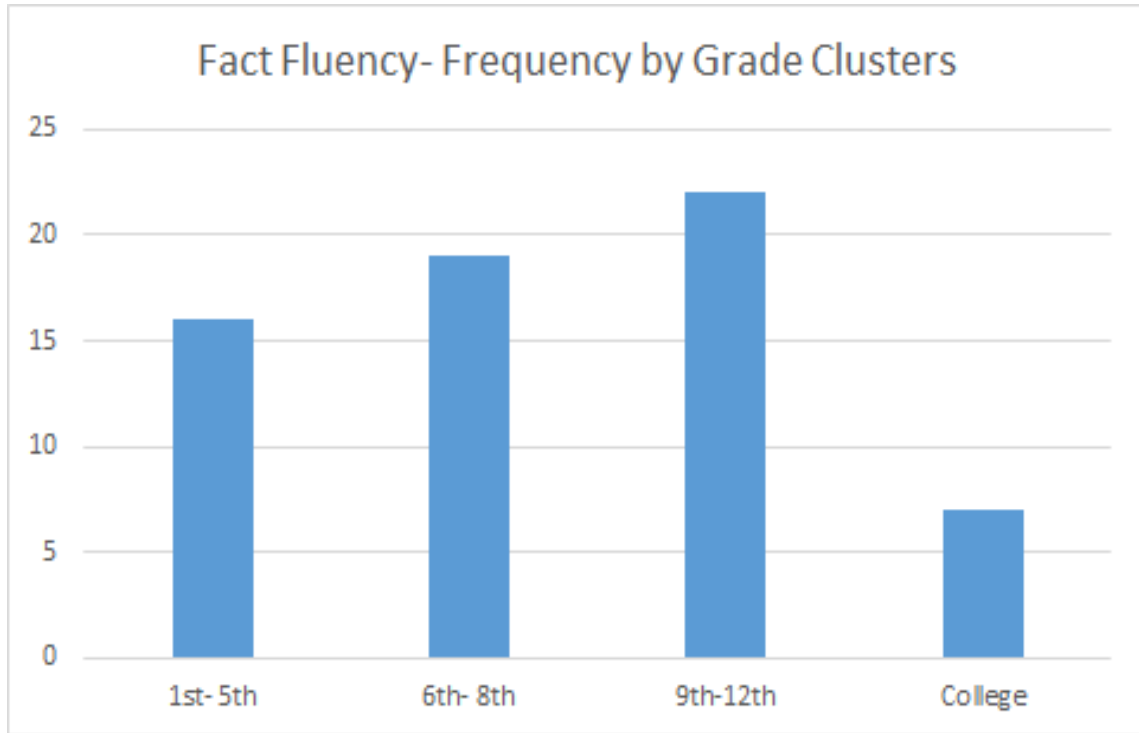
Woodcock Johnson
III- Passage
Comprehension
Subtest
 $n = 64$

Skills of First-year DHH Students

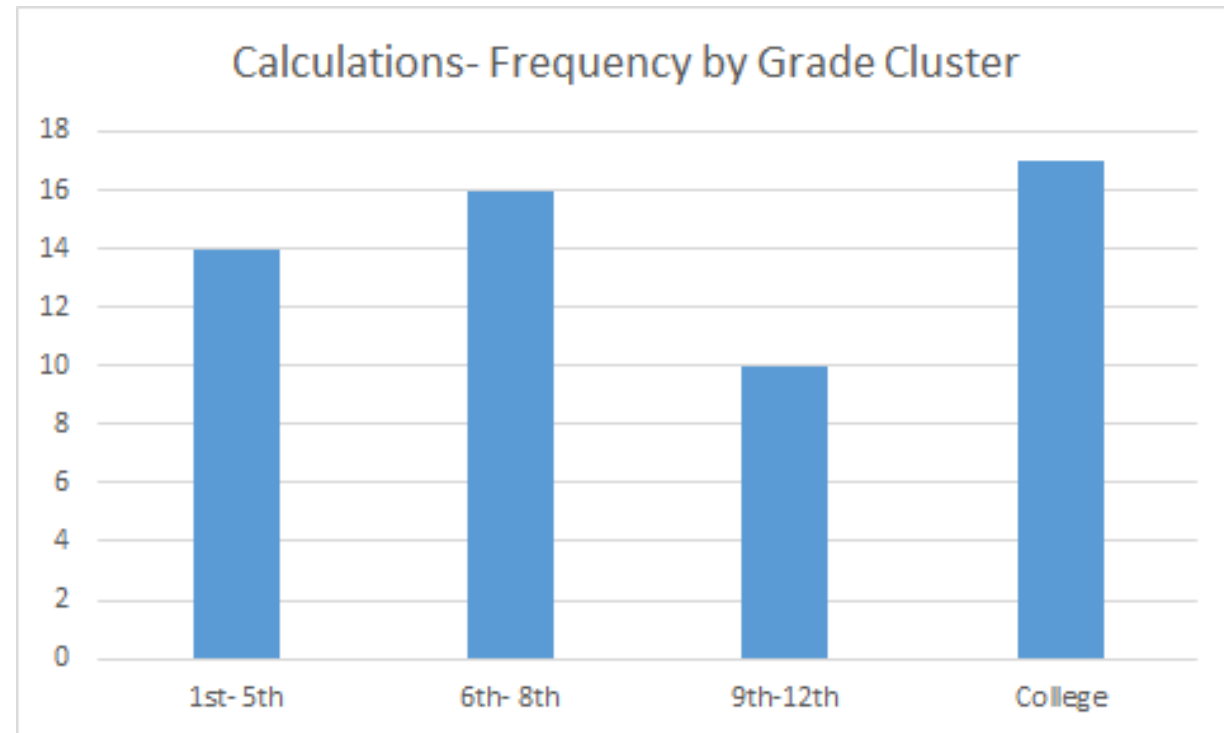
American Sign Language- Receptive Skills Test



Skills of First-year DHH Students



$n = 64$



$n = 57$

What can we do to better support our first year students?

Summer Transition Education Program (STP) Goals

- Improve college-readiness for underprepared deaf students
- Provide students with information about their strengths and areas of improvement on specific skills
- Improve retention of students who are underprepared for direct admissions to an NTID academic program
- Gather data on the incoming populations of students to inform placement decisions, academic planning, and curricula



Overall Program Design

Target Group: Students with ACT composite score of 15 or lower

- 60 met criteria
- 31 registered
- 20 enrolled
 - From 17 different states and Canada
 - 62% from schools for the deaf
 - 38% from mainstream programs

Instructional Ratios: 10 students, 1 teacher of the deaf, and 1 graduate assistant (from MSSE program)

Groupings: Mixed ability level groupings (2 groups)

Overall Program Design

- **Instructional Time:**

- 6 hours/day of formal instruction (small groups and 1:1 as needed)
- Educational and social wrap-around activities on evenings and weekend

- **Planned Instruction (group and individual):**

- American Sign Language
- English - Reading and Writing Skills
- Math
- College Readiness, Academic Maturity, and Study Skills workshops

- **Counseling:** Entrance/exit academic counseling and advising

- **Incentive:** Chromebooks and Summer Vestibule Program offset for successful completion

Overall Program Design

- **Evenings and weekends** educational activities and field trips
 - Susan B. Anthony House
 - Mt. Hope Cemetery
- **24/7 supervision** with residential staff and instructional staff
 - 3 Program Assistants, 1 Resident Coordinator, 2 Resident Advisors
- **Daily check-in** that allowed the student to get support from a director or a counselor
 - 2 on-staff counselors
 - Educational Psychologist
 - School Counselor

Overall Program Design

- Workshops and Presentations from various campus partners:
 - Substance and Alcohol Intervention Services for the Deaf
 - Counseling and Psychological Services
 - Public Safety
 - Athletics
 - Library
 - Student Health Center
 - Gym Facilities
 - Financial literacy provided by Mike Kane (Business Department)
 - NTID Counseling department
 - Career Exploration Studies Department
 - Communication Studies and Services

Weekly Schedule Example

Monday		Tuesday		Wednesday		Thursday		Friday	
8:15 AM	English 8:15-10:10	8:15 AM	ASL- 8:15-10:10	8:15 AM	English- 8:15-10:10	8:15 AM	ASL 8:15-10:10	8:15 AM	English 8:15-10:10
8:30 AM									
8:45 AM									
9:00 AM									
9:15 AM									
9:30 AM									
9:45 AM									
10:00 AM									
10:15 AM	Break 10:10-10:30	10:15 AM	Break 10:10-10:30	10:15 AM	Break 10:10-10:30	10:15 AM	Break 10:10 - 10:30	10:15 AM	Break 10:10 - 10:30
10:30 AM	ASL 10:30-12	10:30 AM	Math 10:30-11:45	10:30 AM	ASL 10:30-11:45	10:30 AM	Math 10:30-12	10:30 AM	ASL 10:30-12
10:45 AM									
11:00 AM									
11:15 AM									
11:30 AM									
11:45 AM									
12:00 PM	Lunch 12-1	12:00 PM	Lunch	12:00 PM	Lunch	12:00 PM	Lunch 12-1	12:00 PM	Lunch 12-1
12:15 PM									
12:30 PM									
12:45 PM									
1:00 PM	Study Skills 1-1:45	1:00 PM	Susan Chapel - What Matters to You?, 1:00-2:30 p.m., KGH-A055	1:00 PM	Susan Chapel - Resiliency 1:00-2:30 p.m., KGH-A055	1:00 PM	Math 1-1:30	1:00 PM	ASL 1-1:30
1:15 PM									
1:30 PM	Walk to KCG	1:30 PM		1:30 PM		1:30 PM	English 1:30-3:20	1:30 PM	Math 1:30-2:15
1:45 PM									
2:00 PM	Skip Flanagan 2:00-3:00 p.m., Kate Gleason Hall (KGH)-A055	2:00 PM		2:00 PM		2:00 PM			
2:15 PM									
2:30 PM		2:30 PM	Walk to Rosica	2:30 PM	Walk to Rosica	2:30 PM		2:30 PM	Library Tour 2:30-3:30
2:45 PM		2:45 PM	Math until 3:00 (wrap up)	2:45 PM	ASL until 3:00 (wrap up)	2:45 PM		2:45 PM	
3:00 PM	Walk to Rosica	3:00 PM		3:00 PM		3:00 PM		3:00 PM	
3:15 PM	Math 3:15-4:45	3:15 PM	English 3:00-4:45	3:15 PM	Math 3:00-4:45	3:15 PM	3:40-4:45 Study Skills	3:15 PM	Small Group Reflection
3:30 PM									
3:45 PM									
4:00 PM									
4:15 PM									
4:30 PM									
4:45 PM									
4:45 PM									

Beginning of STEP

- Students' average instructional reading level was about grade 2.5 with a standard deviation of 1.7.
- Students' average math calculation level was grade 7.2 with a standard deviation of 1.97.

Assessment the STP Scholars Completed

English Language Arts	American Sign Language	Math	Social/Emotional and Executive Functioning
Woodcock Johnson III- Passage Comprehension	ASL- Receptive Skills Test	Woodcock Johnson III- Fact Fluency	Learning Executive and Attention Functioning Scale (LEAF)
Peabody Picture Vocabulary Test (PPVT)	Self-Ratings of Sign Language Proficiency	Woodcock Johnson III- Calculations	Loci of Control
Degrees of Reading Power (DRP) for Adults	5,1,U Expressive Task	MyLab- Algebra**	Emotional Regulation Questionnaire
Lexile Scores (reading levels)**	ASL-Comprehension Test	MyLab- Arithmetic**	Self-efficacy Questionnaire
Comprehension of Written Grammar			
MyLab- Reading and Writing Skills**			<i>** indicated curriculum-based measure</i>

Significant Difference- 95% Confidence Interval

No Significant Difference

Math Fact Fluency – Pretest (M=70.3, SD=18.43) and Post-test (M=82.5, SD=17.88), **t(19)= 3.98 p = 0.001.**

ASL-RST

Math Skills**
SD=3.54), **t(18)=**

ASL-RST

Calculations
SD=2.44), **t(19)=**

Comprehension

Reading Skill
SD=5.91), **t(19)=**

Fluency

Degrees of Freedom
test (M=23.35, SD=10.37), **t(19)=2.63 p = 0.016.**



Writing Skills **-Pretest (M=1.5, SD=5.64) and Post-test (M=20.95, SD=4.96), **t(19)=3.09 p = 0.006.**

**** denotes curriculum-based measure**

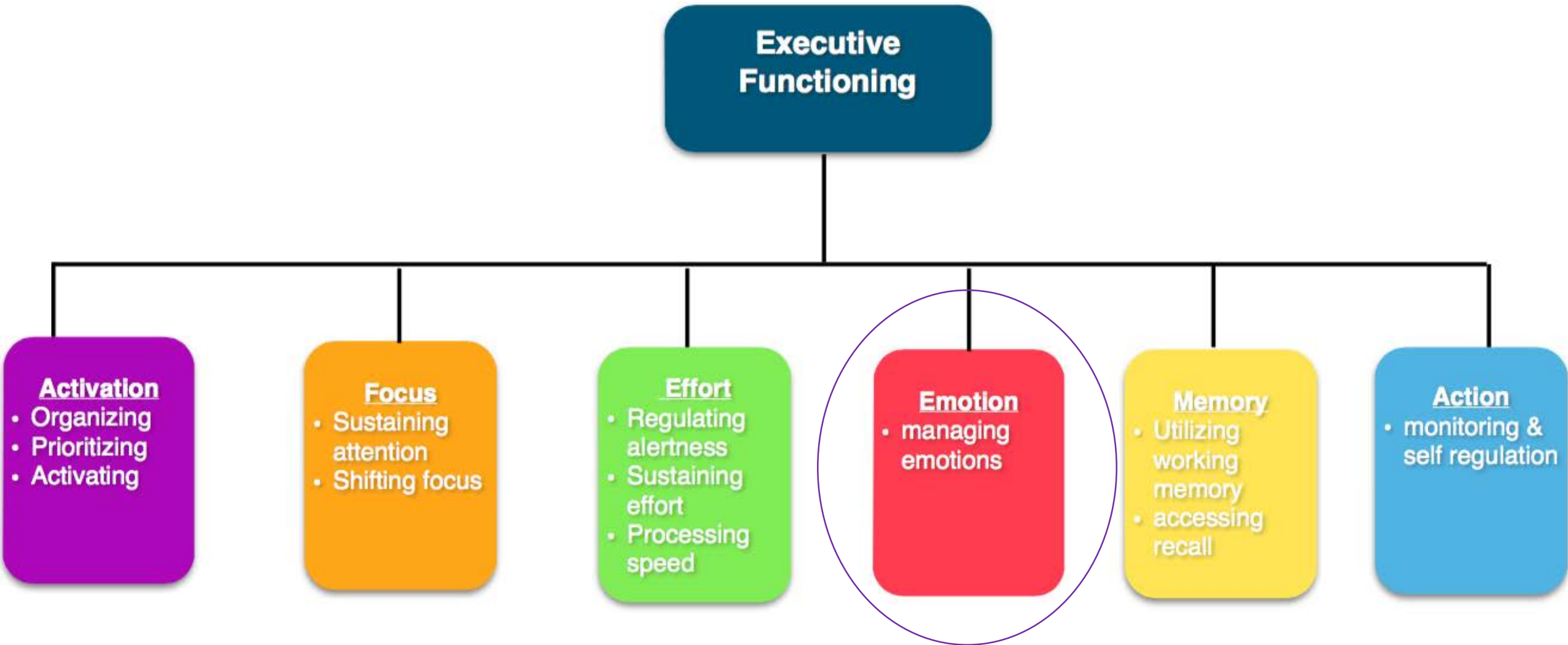
What was more pressing....

- Many of the barriers to college readiness were related to non-academic issues:
 - Lacking family support
 - Other languages used in the home
 - Needing support for health concerns (mental and physical)
 - Needing guidance for everyday things (haircuts, bus tickets)
 - Lacking some soft-skills
 - Needing audiological/technological support
 - “Last chance” mentality
 - Relationship issues related to:
 - Not understanding each other
 - Not understanding each other’s intentions

Self-efficacy, Executive Functioning, and Emotional Regulation

- Emotional regulation strategies improve self-efficacy
- What is self-efficacy?
 - “People with problems generally know exactly what actions are needed to do the things they want to do. Knowing what to do is not enough. People also need to be confident about their ability to carry out the desired behavior. This perceived ability to produce a desired action is what Bandura (1997) terms *self-efficacy*.”
- Low levels of self-efficacy were predictive of long-term depression





- As a student becomes more emotional, their executive functioning skills deteriorate

Non-academic Measures

- **Self-Efficacy Questionnaire for Children (SEQ-C)**

- 21 items that measured one's perceptions of their self efficacy in 3 ways:
 - Social self-efficacy (ability to relate and get along with other peers)
 - Emotional self-efficacy (ability to regulate unpleasant emotions)
 - Academic self-efficacy (ability to succeed in school and display appropriate learning behaviors).
- Each subscale had 7 items
- 5-point Likert-type scale (*1 = not at all to 5 = very well*)

- **Learning, Executive, and Attention Functioning (LEAF)**

- Teen version
- Measurement of executive functioning and related learning skills

Non-academic Measures

- **Emotion Regulation Questionnaire (ERQ)**

- 10-items that measured the tendency to regulate emotion in 2 ways:
 - Cognitive Reappraisal
 - Expressive Suppression
- 7-point Likert-type scale [*1 (strongly disagree) to 7 (strongly agree)*]

- **Locus of Control Inventory for Postsecondary DHH Students**

- 23 Likert-type items [*1 (strongly disagree) to 5 (strongly agree)*]
- 11 measured externality; 5 measured internality; 7 filler items.
- Externality and internality scores were based on the sums for each sub-category

Sample of Self-Efficacy Questionnaire for Children (SEQ-C; Muris, 2001)

Self-Efficacy Questionnaire for Children (SEQ-C)

1	2	3	4	5
Not at all				Very well

1. How well can you get teachers to help you when you get stuck on schoolwork?
2. How well can you express your opinions when other classmates disagree with you?
3. How well do you succeed in cheering yourself up when an unpleasant event has happened?
4. How well can you study when there are other interesting things to do?
5. How well do you succeed in becoming calm again when you are very scared?
6. How well can you become friends with other children?
7. How well can you study a chapter for a test?

Sample of Learning, Executive, and Attention Functioning (LEAF) scale- Teen version

Learning, Executive, and Academic Functioning LEAF

The following items are rated on the Likert scale below:

Never	Sometimes	Often	Very Often
0	1	2	3

Comprehension and Conceptual Learning

I have problems understanding things that are said/signed to me.

I have problems understanding long conversations or explanations.

I have problems understanding things I read.

I don't "get the point" of what is being said/signed.

I don't understand new classroom information.

Factual Memory

I have problems memorizing information.

I don't remember facts well.

I have a bad memory.

I forget things that I have just learned.

I remember the main idea of what I read or is told to me but forget details.

Sample of Emotion Regulation Questionnaire (ERQ)

EMOTION REGULATION QUESTIONNAIRE (ERQ)

Reference: Gross, J.J., & John, O.P. (2003). Individual differences in two emotion regulation processes: Implications for affect, relationships, and well-being. *Journal of Personality and Social Psychology*, 85, 348-362.

The following items are rated on the Likert scale below:

Strongly disagree			Neutral			Strongly agree
1			4			7

1. ___ When I want to feel more positive emotion (such as joy or amusement), I change what I'm thinking about.
2. ___ I keep my emotions to myself.
3. ___ When I want to feel less negative emotion (such as sadness or anger), I change what I'm thinking about.
4. ___ When I am feeling positive emotions, I am careful not to express them.
5. ___ When I'm faced with a stressful situation, I make myself think about it in a way that helps me stay calm.
6. ___ I control my emotions by not expressing them.
7. ___ When I want to feel more positive emotion, I change the way I'm thinking about the situation.

Sample of Locus of Control Inventory for Postsecondary DHH Students

A Locus of Control Inventory for Postsecondary Hearing-Impaired Students

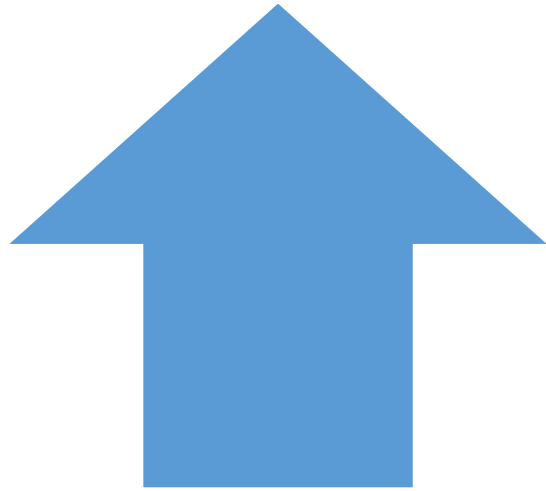
Dowaliby, F. J. (1983). A locus of control inventory for postsecondary hearing-impaired students. *American Annals of the Deaf*, 128(7), 884.

The following items are rated on the Likert scale below:

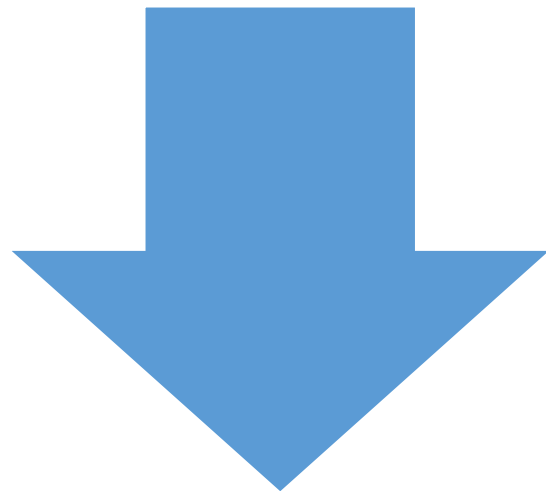
Strongly disagree	Somewhat disagree	Neither agree or disagree	Somewhat agree	Strongly agree
1	2	3	4	5

1. When I think my homework is hard, most of the time it is hard because the teacher gave out hard homework.
2. If my boss fired me, it would probably be because other people did not help enough when I needed help.
3. If I fail a course, it means that my work was not good enough.
4. When I am successful in my job, it is probably because other people did my work.
5. I will be successful in my career if I know important people.
6. When a teacher says that I did not do a good job on my homework that means the teacher does not like me.
7. When I get a bad grade on a test, most of the time, it is because I did not study enough for the test.
8. To get more money at work, a person has to be lucky.
9. When a teacher tells me that my homework is very good, that means that the teacher says that to all the students to make them work harder.
10. When I think my homework is hard, most of the time it is hard because I did not study enough before I tried to do the homework.

What we found...

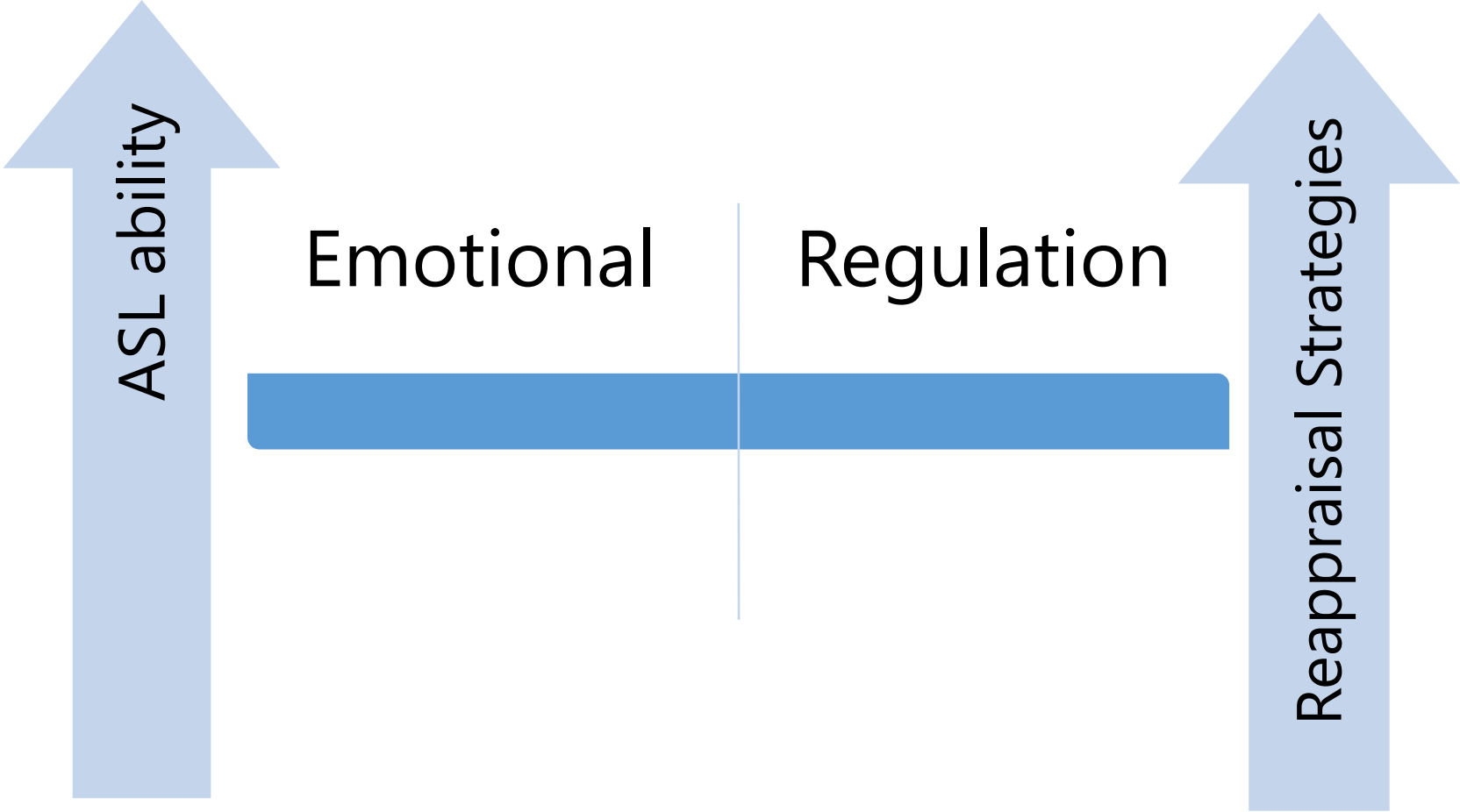


Reading ability



Use of suppression
strategies for
emotional
regulation

What we found...



Before and After the STEP program

The STEP scholars reported:

- Significantly less external loci of control
 - Pretest (M= 35.7, SD=7.13)
 - Post-test (M=32.75, SD=6.44)
 - **t(19)= 2.099, p = 0.049**
- Other measures did not change significantly

Things We Learned

- These students' academic backgrounds are very similar to other accepted students.
- They were NOT more underprepared than students who did not enroll in the program.
- More students could benefit from this program.

What can we do before college?

- Measure
 - Self-efficacy
 - Emotional Regulation
 - Loci of Control
 - Learning, Executive, and Attention Functioning
- Write transition goals to meet these needs.



Types of Transition Goals

- Locus of Control
- Executive Functioning
- Emotional Regulation
- Learning, Executive, and Attention Functioning

Current Transition Goals

- Jason is DHH and wants to become a high school social studies teacher. However, Jason struggles with emotional regulation and behaves in ways that seem inappropriate to the situation. His emotional state can hinder his relationships.

Example of a goal from his transition plan:

By the end of 36 instructional weeks, through participation in the district's teacher mentor program, Jason will write an essay about his expectations for his future career in teaching, including statements of (a) a goal, (b) 3 or more negative aspects of teaching, (c) 3 or more positive aspects of teaching, and (d) the education required to become a teacher with 80% or better mastery.

Current Transition Goals

- Is this goal appropriate or not appropriate?

By the end of 36 instructional weeks, through participation in the district's teacher mentor program, Jason will write an essay about his expectations for his future career in teaching, including statements of (a) a goal, (b) 3 or more negative aspects of teaching, (c) 3 or more positive aspects of teaching, and (d) the education required to become a teacher with 80% or better mastery.

Current Transition Goals

By the end of 36 instructional weeks, through participation in the district's teacher mentor program, Jason will write an essay about his expectations for his future career in teaching, including statements of (a) a goal, (b) 3 or more negative aspects of teaching, (c) 3 or more positive aspects of teaching, and (d) the education required to become a teacher with 80% or better mastery.

A revised, more appropriate goal:

- The student will be able to determine 25 positive and 25 negative aspects of teaching, through research and use of resources, with 90% success over 10 weeks with minimal support by June 2020.

Workshop

- You will be given a student profile.
- As a team, you will look over their results on several measures that we have discussed.
- You will write transition goals for the students based on the outcomes of their measures

Questions?