



Supporting College Students with Learning Disabilities: The Person, Environment, and Salient Tasks

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First Annual Sandra Edwards Colloquium
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University of Florida



Objectives

1. Identify supports meaningful to college student with learning disabilities.
2. Recognize impacts of legislative differences driving delivery of academic accommodations for students with disabilities in the K-12 and post-secondary educational settings.
3. Reflect on ways that occupational therapists can support academically successful students with learning disabilities in the transition to the college student role



Students with Disabilities

- 11% of undergraduate students have a disability¹
- Average of 1,325 students with disabilities registered with the DRC during 5-year period of 2009-2014
 - equates to 2.6% of total UF student population
 - ~ 52,000 UF students → 10% = 5200
- Students with LD
 - ½ rate (21%) attendance at 4 year college versus general population (40%); 2x rate attendance at 2-year college²
 - College completion rates: 41% (LD) versus 52% in general population²
 - 11% of Students with LD report disability to college/university³

1. <https://nces.ed.gov/fastfacts/display.asp?id=60> retrieved Aug. 11, 2016

2. Cortiella, Candace and Horowitz, Sheldon H. *The State of Learning Disabilities: Facts, Trends and Emerging Issues*. New York: National Center for Learning Disabilities, 2014.

3. NLTS-2, 2011 : http://www.nlts2.org/data_tables/tables/14/np5S5i_K8g_YNfrm.html retrieved August 11, 2016

Tough Transitions to College

Differences in legal rights

- **IDEA:** Individuals with Disabilities Education Act
- **ADA:** Americans with Disabilities Act

Who responsible for:

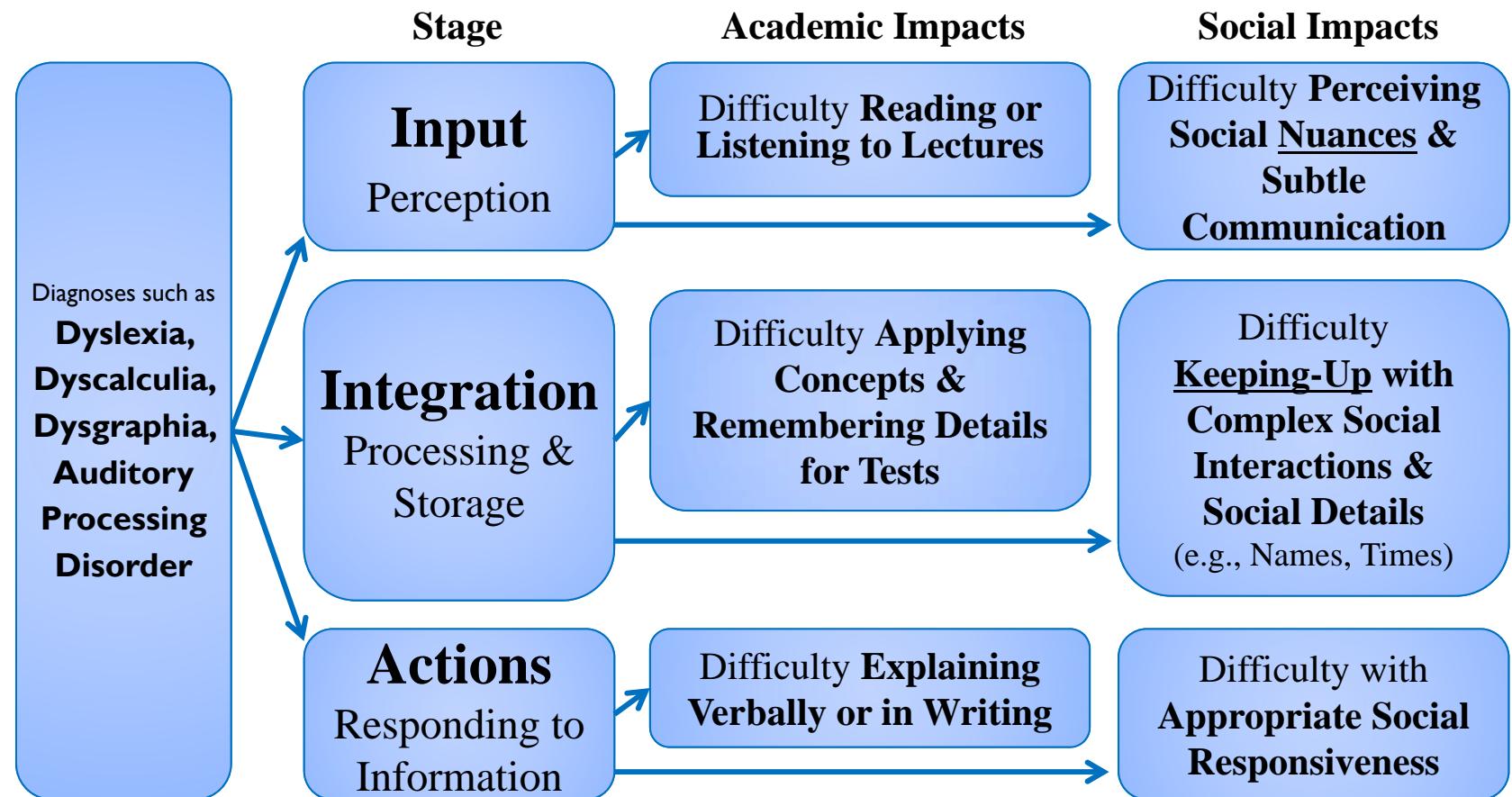
1. Identifying & documenting a need
2. Initiating service delivery
3. Ensuring services result in academic progression
4. Advocacy



OT Focus for Young Adults with LD

Identify areas of strengths & weaknesses
In performing activities/occupations
And, analyze the tasks that need to
be performed per individual's
Current roles and
Future desired roles

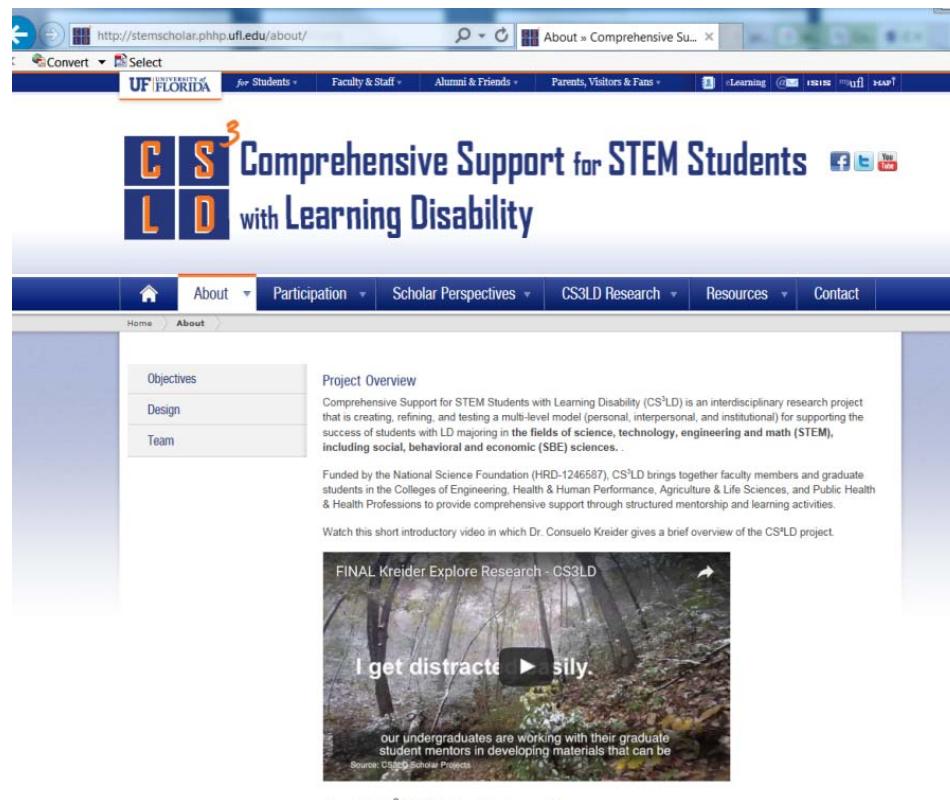
LD Impacts Related to Stages of Information Processing





<http://stemscholar.phhp.ufl.edu/>

COMPREHENSIVE SUPPORT FOR STEM STUDENTS WITH LEARNING DISABILITIES (CS³LD)



The screenshot shows the homepage of the CS³LD website. At the top, there's a navigation bar with links for Students, Faculty & Staff, Alumni & Friends, Parents, Visitors & Fans, Learning, and a search bar. Below the navigation is a large logo consisting of four squares arranged in a 2x2 grid, with 'C' and 'S' in the top row and 'L' and 'D' in the bottom row. To the right of the logo, the text "Comprehensive Support for STEM Students with Learning Disability" is displayed. Below this, there's a "Project Overview" section with links for Objectives, Design, and Team. A paragraph describes the project as an interdisciplinary research effort to support students with learning disabilities in STEM fields. There's also a link to a video featuring Dr. Consuelo Kreider. At the bottom, a quote from her video is shown: "I get distracted easily." and "our undergraduates are working with their graduate student mentors in developing materials that can be".

http://stemscholar.phhp.ufl.edu/about/

UF UNIVERSITY OF FLORIDA

for Students Faculty & Staff Alumni & Friends Parents, Visitors & Fans Learning @ufl ufl MAP

CS³LD Comprehensive Support for STEM Students with Learning Disability

About Participation Scholar Perspectives CS3LD Research Resources Contact

Objectives Project Overview

Design

Team

Comprehensive Support for STEM Students with Learning Disability (CS³LD) is an interdisciplinary research project that is creating, refining, and testing a multi-level model (personal, interpersonal, and institutional) for supporting the success of students with LD majoring in the fields of science, technology, engineering and math (STEM), including social, behavioral and economic (SBE) sciences.

Funded by the National Science Foundation (HRD-1246587), CS³LD brings together faculty members and graduate students in the Colleges of Engineering, Health & Human Performance, Agriculture & Life Sciences, and Public Health & Health Professions to provide comprehensive support through structured mentorship and learning activities.

Watch this short introductory video in which Dr. Consuelo Kreider gives a brief overview of the CS³LD project.

FINAL Kreider Explore Research - CS3LD

I get distracted easily.

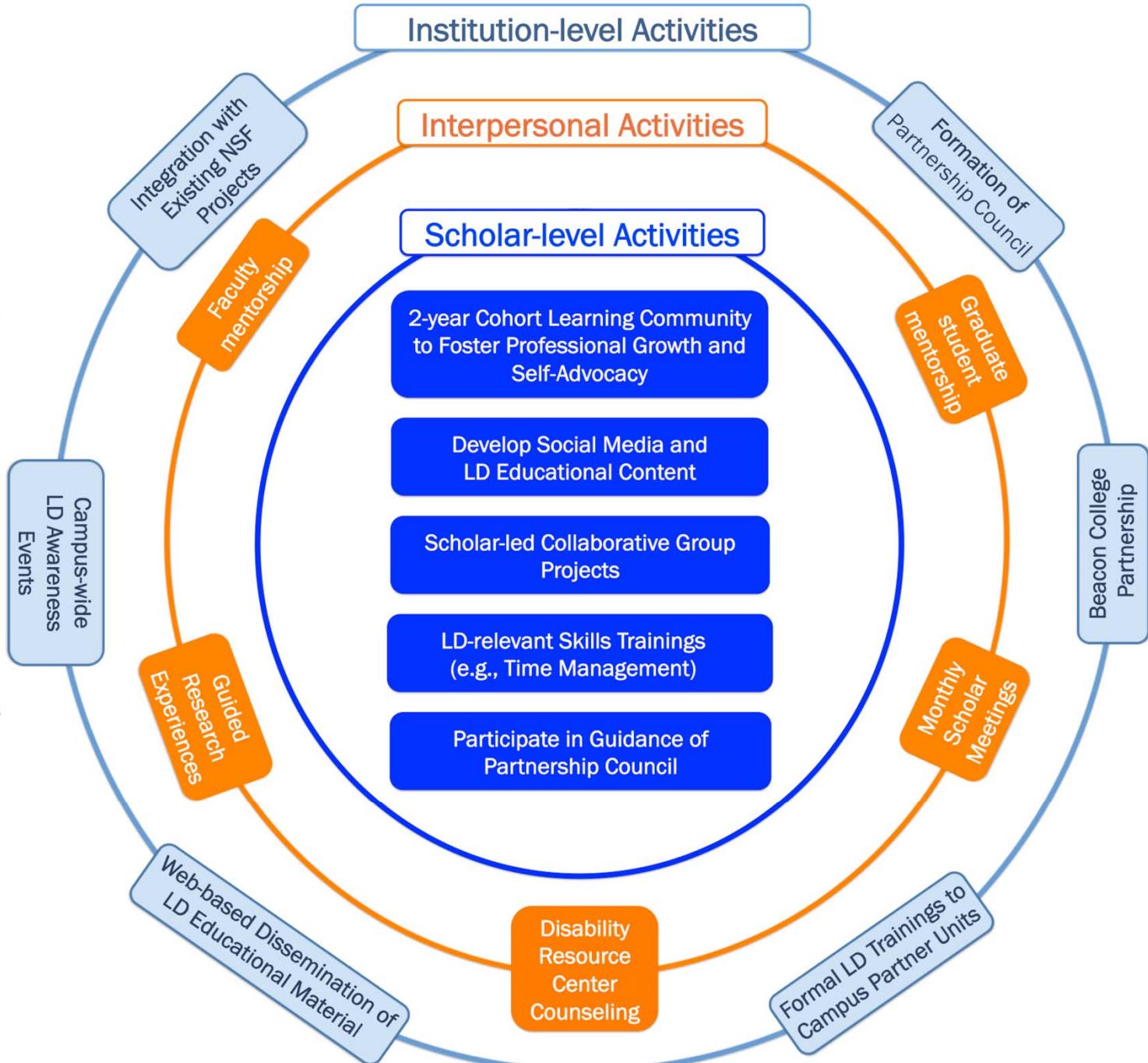
our undergraduates are working with their graduate student mentors in developing materials that can be

Source: CS3LD Scholar Projects

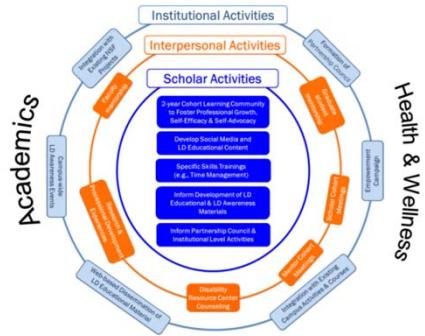
Also visit CS³LD Objectives, Design, and Team.

Academics

Health



3 Goals of CS³LD



- **Personal**

- Create mechanisms for CS³LD scholar engagement designed to foster self-advocacy, self-efficacy, and increased campus connection.

- **Interpersonal**

- Create multi-disciplinary mentorship teams for each CS³LD scholar that will improve mentoring and professional enculturation to STEM disciplines for students with LD.

- **Institutional**

- Create a campus-wide network of health and STEM faculty, staff, graduate students, and academic units knowledgeable and coordinated in facilitating success of undergraduate STEM students with LD.



Our Challenge

- Can we operationalize this model of holistic supports at a large institution
 - In a coordinated way across the multiple levels
 - In ways that are acceptable and valuable to both
 - University stakeholders
 - Students needing the supports



Method

- **Continuous Improvement Model**
- 52 undergrads with LD/AD
- 4 Scholar cohorts; 4 semesters each
 - Monthly group meetings w/ team
 - Didactic topic – education & health/wellness
 - Experience sharing
 - Strategy sharing
 - Bimonthly one-to-one mentorship
 - Semester LD/self-advocacy project
 - Semester meeting w DRC counselor
 - Identify a health mentor

Acco

Health

Scholar Group Meetings:

- **Knowledge**: LD-related topics
- **Peer Influences**: Peers share strategies & collaborate to create potential solutions
- **Vicarious Learning**: Peers share experiences & lessons learned
- **Role modeling**: Older group members model strategies/solutions for newer members



Academics

Health



I to I Mentorship:

- **Vicarious Learning:** Mentors share experiences
- **Role modeling:** Mentors model successful strategies
- Mentors help identify undergraduate's personal strengths
- Guide self-advocacy project development

Academics

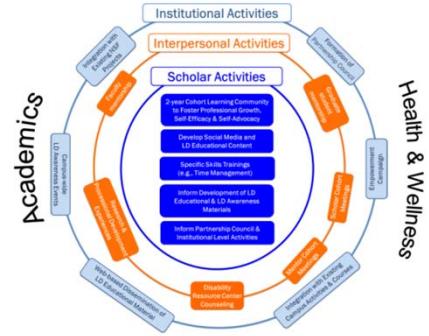
Health



CS3LD = Socio-Ecological Model

- Partnership Council
- Campus LD/AD & Disability Training & Awareness Events
- New Student Group
- Public Relations Campaign

CS³LD Activities



- Personal: Undergraduate Group Trainings: self-advocacy; understanding symptoms & capacities; time & stress management

Person

Tasks

Environment

- Institutional: Faculty & Administrators → Institutionalization of awareness & UDL training



Tasks

CS³LD Activities

Environment

- Interpersonal: Mentors →
 - Talking LD
 - Professional enculturation: helping understand the reality of their field – guided discovery
 - Social support: acknowledging their hard work
 - Empowerment mentor: instilling confidence to make decisions





What our undergraduates with LD have told us

- **THE PERSON**

Scholars' Perceptions of Strategies for Self-Advocacy

Mastery of Experiences		Social Persuasion	
Fall 2013	Spring 2014	Fall 2013	Spring 2014
Not efficient	Make lists of even simple things	People don't understand	Provide education
Do things too fast	Take breaks	Can't express myself	Practice speaking
Misplace things	Keep track	Don't raise my hand	Ask questions
Can't concentrate	Focus on what I am good at	Don't like to talk about it	Talk to professors
Can't multi-task	Use a planner	Disrespectful	Be positive
Procrastinate	Finish easy things first	People can't identify	Show them how our brains work
Can't comprehend	Read aloud	Shut down	Don't be afraid

- Themes of students' initial perception of mastery of experiences and social persuasion trended from problem statements to strategies for improved performance.

MEANINGFUL DISCUSSION TOPICS

Neurology of LD/AD

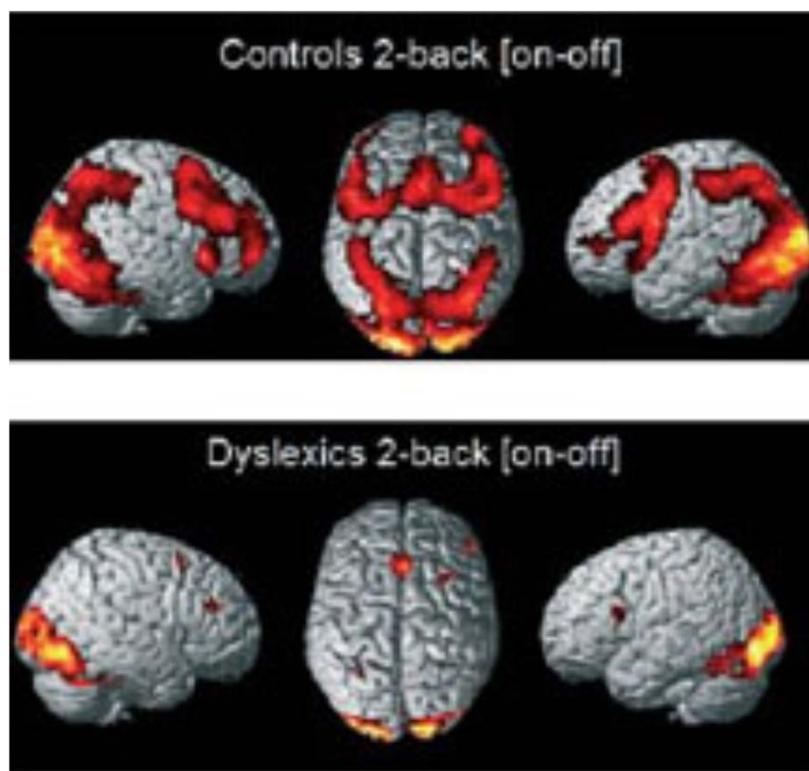
Cognitive Styles Common to LD/AD^{1,2}

1. Big Picture Thinking (Interconnected Reasoning)
2. Dynamic Reasoning
3. Narrative Reasoning
4. 3-Dimensional Spatial Reasoning

1. Eide, B. L., Eide, F. F. (2011) *The Dyslexic Advantage: Unlocking the Hidden Potential of the Dyslexic Brain*. Plume: New York.
2. <http://www.dyslexicadvantage.org/mind-strengths-in-dyslexia-what-are-they/>

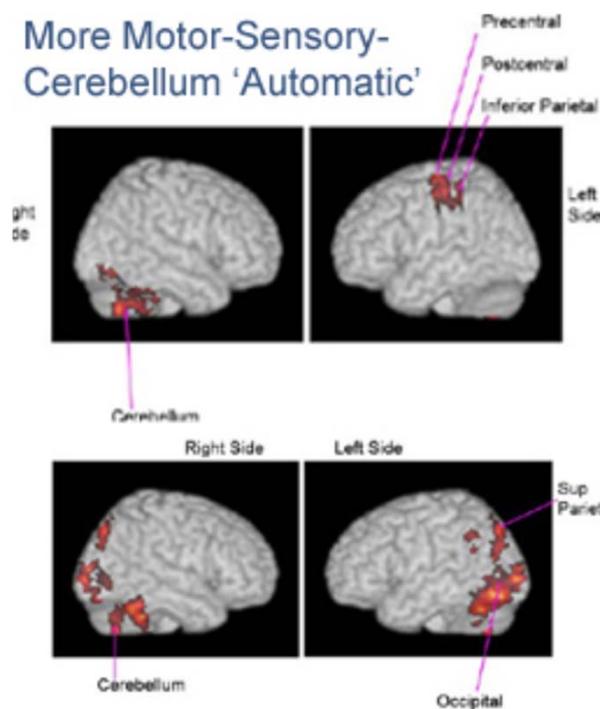
Neural Differences

- Dyslexia: ↓ Language Center activation



Beneventi et al., Int J Neurisci, 2010

- Dysgraphia (writing)



Good
Writers

Poor
Writers

More Visual Monitoring

Richards et al., 2011

Big Picture Thinking aka Interconnected Reasoning



- Easily sees relationships of similarities or association/causation
- Strong conceptual ability in uniting disparate information into a single global view (i.e., gist)

Dynamic Reasoning



- Intuits solutions, then works backwards to check potential path(s) to solution
 - Slower, more difficult discernment of path(s)

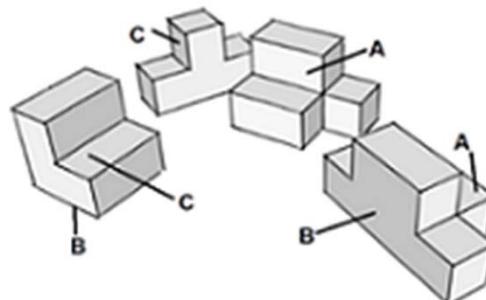
Narrative Reasoning

- Tendency to use stories to recall the past, understand the present and imagine the future



3-D Spatial Reasoning

- Enables reasoning about:
 - The shape, size, motion, position of objects in the physical world
- Spatially gifted → verbally challenged
 - Arduous process of putting thoughts into words

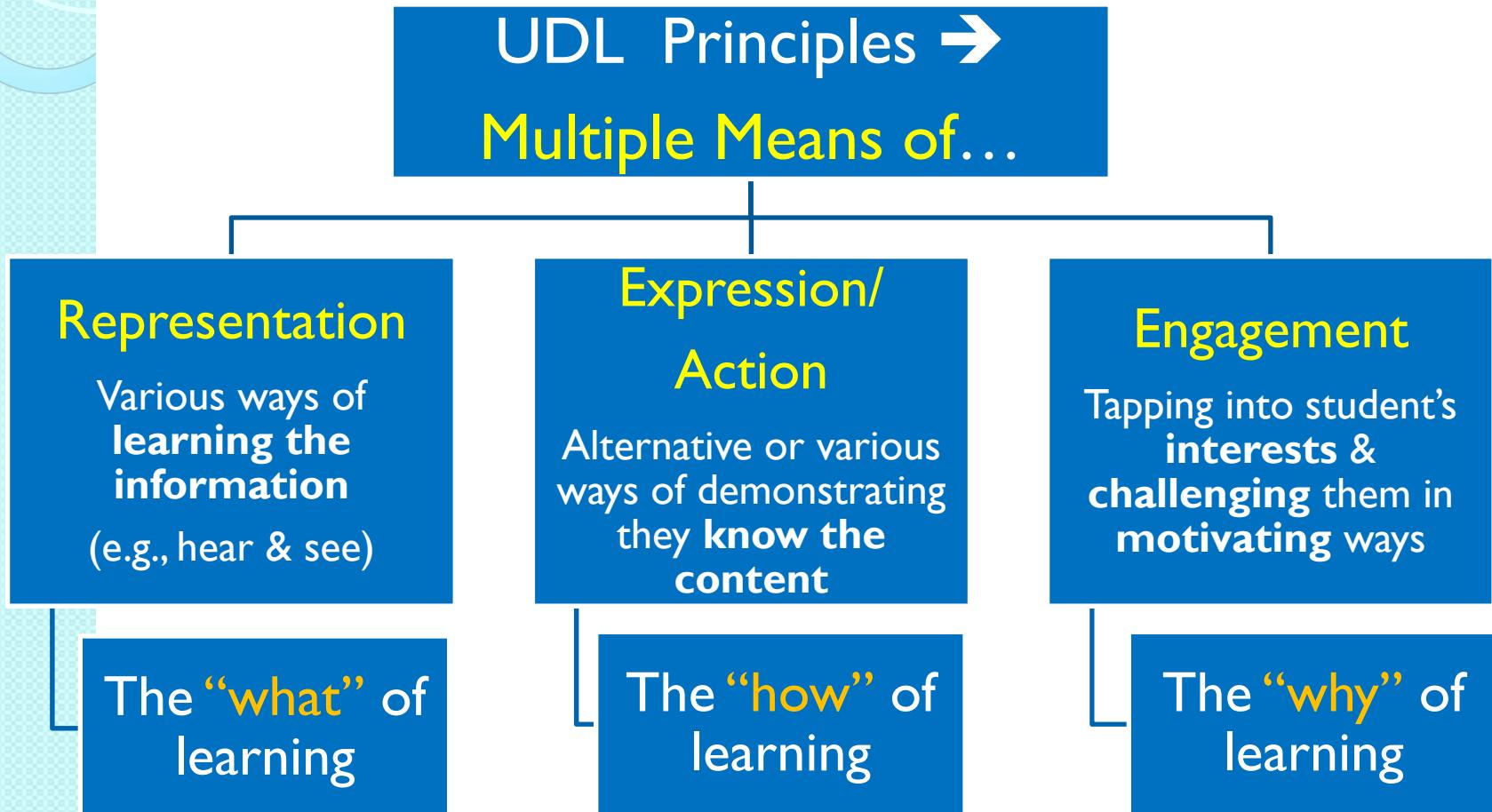


Raising Awareness About LD – with whom?

1. Teachers
2. Academic Advisors
3. Student Service Providers
 - Tutoring Center, Writing Center, Student Health
4. Classmates

• **THE ENVIRONMENT**

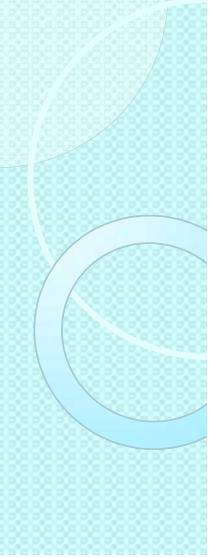
I) Instructors - What is UDL?



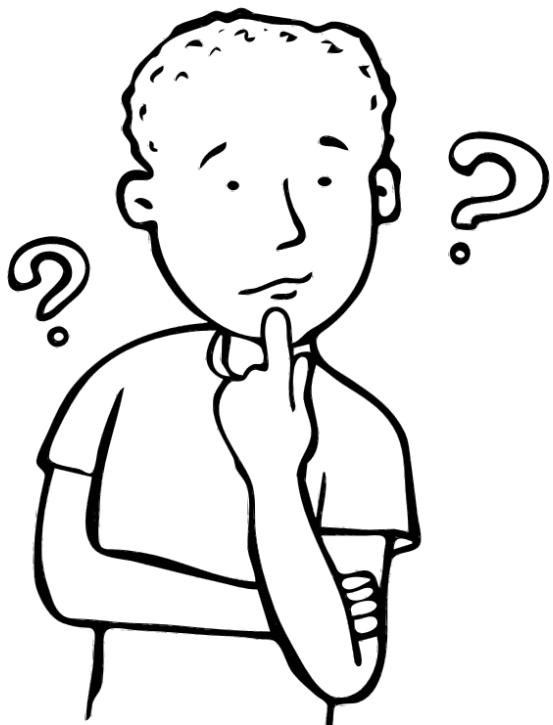
Multiple means of representation: The “what” of learning

- “can you explain this in a different way?”
- “Recapping at the end of class...”
 - “...just a real quick recap”
- “..he just talks, I draw what he says.”
- “leave it on the board just a little bit longer”





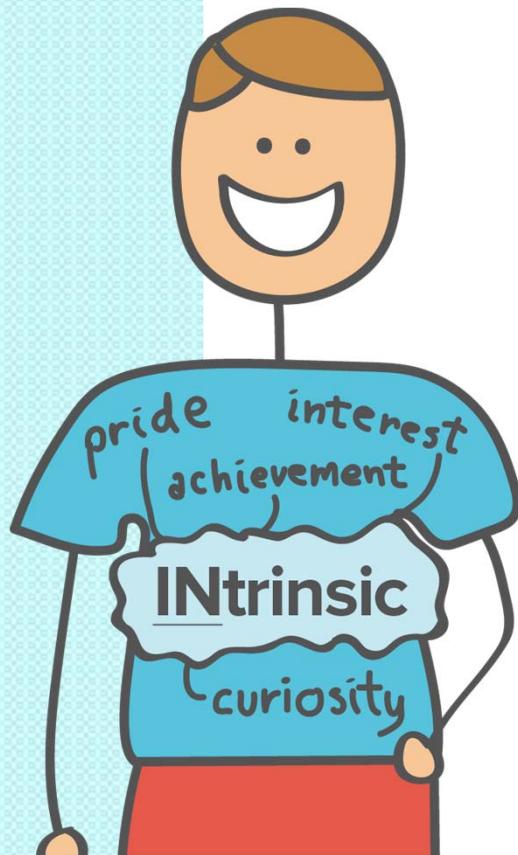
Multiple means of expression: The “how” of learning



- “Please bear with me...It takes me longer to understand”
 - “Studying takes longer, taking my exams takes longer...”
- “Clear directions, in the right order...and all parts of the instructions in one place”
- “...looking around when I took my tests and getting accused of cheating when I wasn't. I need a small testing environment...”



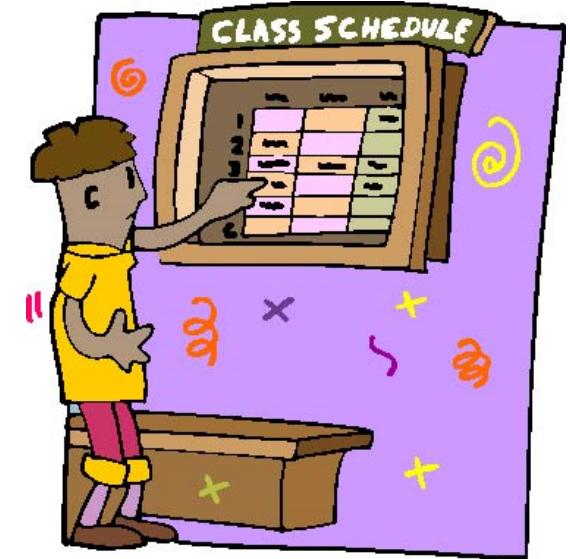
Multiple means of engagement: The “why” of learning



- “...not a copout or an excuse”
- “I thought I wasn’t good enough for UF”
- “I tended to just blame it on myself for being stupid”
- “I never procrastinate. I don’t trust myself. I do it early.”
 - Course calendar very important

2) Academic Advisors – Course Counselors

- Temporal Sequencing
- Poor time management
 - Strategic class picking
- Visual learning
 - Visual Rubric
 - Course mapped out visually instead of with language





Self-advocacy... but for what?

- **SALIENT TASKS**



Concerns - In a Nutshell

- Academic Misunderstanding
 - "...you're just playing the disability card... oh you're just not trying hard enough and I'm trying, like a lot"
- Different Learning Styles
 - "...no one knows how hard it is to accommodate me having a learning disability because we all learn in different ways"
- Health/Wellness
 - "ADHD can contribute... and that of course affects my overall health...without consistent medication and then when I'm down I don't want to exercise."

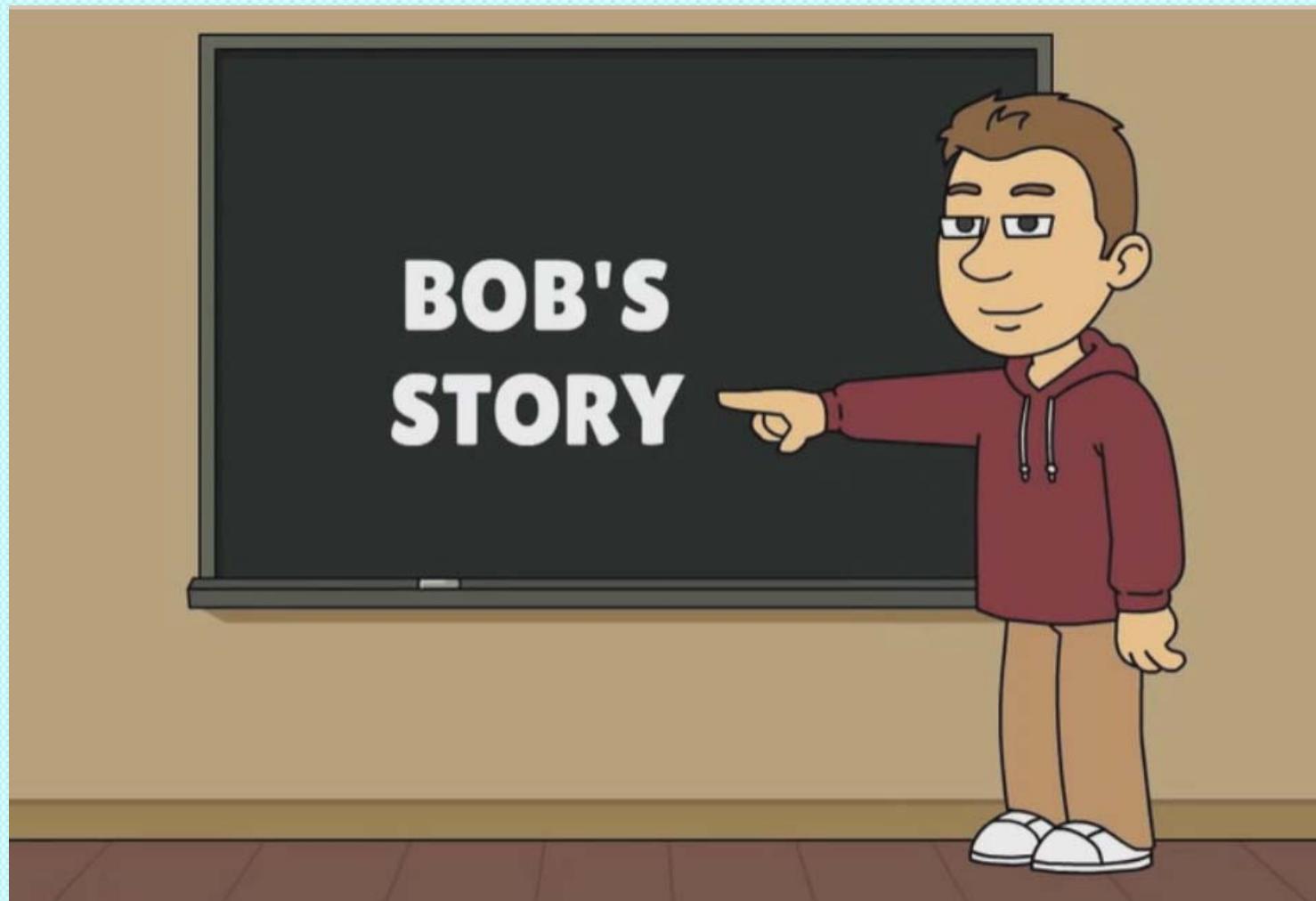


Scholar Projects

Common themes from the projects:

- “living with LD”
- “overcoming an LD”
- “advantages to LD”
- The campus Disability Resource Center
- “seeking help for LD”
- accommodations
- “being judged for having LD”

Bob's Story – Living with LD



CS³LD



Forest of Personal Perceptions

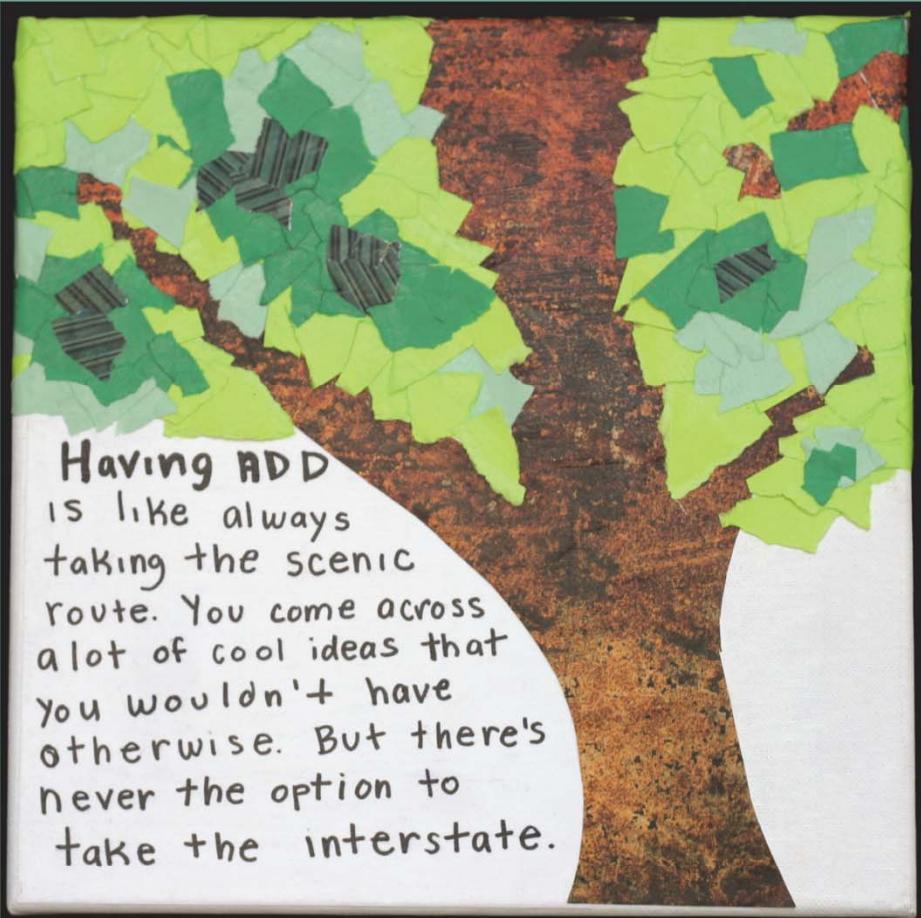
"Sometimes I get moments where I feel really confident and I feel like I am breaking out of the trees and really the light is coming through the trees and it's almost like an opening because the sun is beautiful, and I want to reach out to it, but sometimes I get pulled back"

—Artist with a learning disability



This artwork was created by a student with a learning disability from the University of Florida and the Comprehensive Support for STEM Students with Learning Disability (CS³LD) project, which is supported by the National Science Foundation under grant HRD-1246587.
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Having ADD
is like always
taking the scenic
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The Scenic Route

"Having ADD is like always taking the scenic route. You come across a lot of cool ideas that you wouldn't have otherwise, but there's never the option to take the interstate."

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Normality

“When we see each other, we should realize that there is something different in all of us. We should not fear the difference. We should embrace it, and educate others so that there will be no difference.”

– Artist with a learning disability

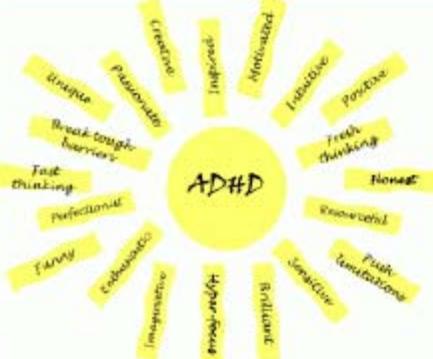


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Advantages

- Most people who have ADHD have tons of energy. This can be good because they can put this energy into playing games and playing sports.
- Having ADHD also lets you focus really well on things you love, this means that you could be better at picking up details that other people would miss.
- Thinking outside the box is also something that people with ADHD are good at. You are able to look at problems differently and find new ways to fix them because your brain works differently.



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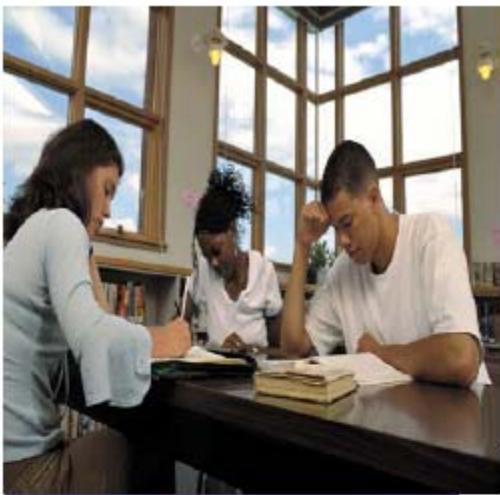
ADHD is a common brain disorder that causes the brain to work differently than the average persons' brain.



This brochure was made by a postsecondary student with a learning disability as part of the CSLD project. This material is based upon work supported by the National Science Foundation under Grant No. HRD-1246587. Any opinions, findings, and conclusions or recommendations expressed in this material are those of the author(s) and do not necessarily reflect the views of the National Science Foundation.



ADHD Success
for Kids



Quotes From Famous Individuals with Learning Challenges:

“Continuous effort- not strength or intelligence – is the key to unlocking your potential.”

Winston Churchill

“All the adversity I’ve had in my life all my troubles and obstacles, have strengthened me....”

Walt Disney

“I have not failed, I’ve just found 10,000 ways that don’t work.”

Thomas Edison

Questions?

Who to Contact:

If you have any questions or concerns regarding learning disabilities and services available you can contact the University of Florida’s Disability Resource Center (DRC)

Website: <https://www.dso.ufl.edu/drc/>

Phone Number: (352)-392-8565

Address: 001 Reid Hall
PO Box 114085
1316 Museum Rd
Gainesville, FL 32611



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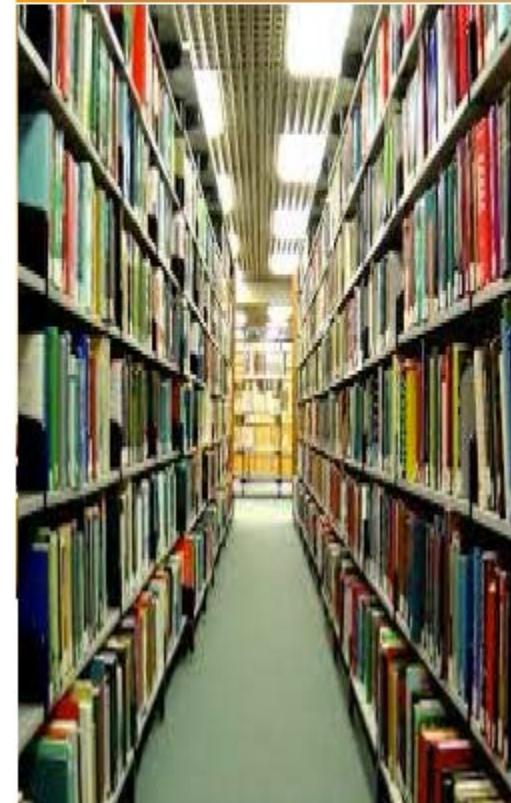


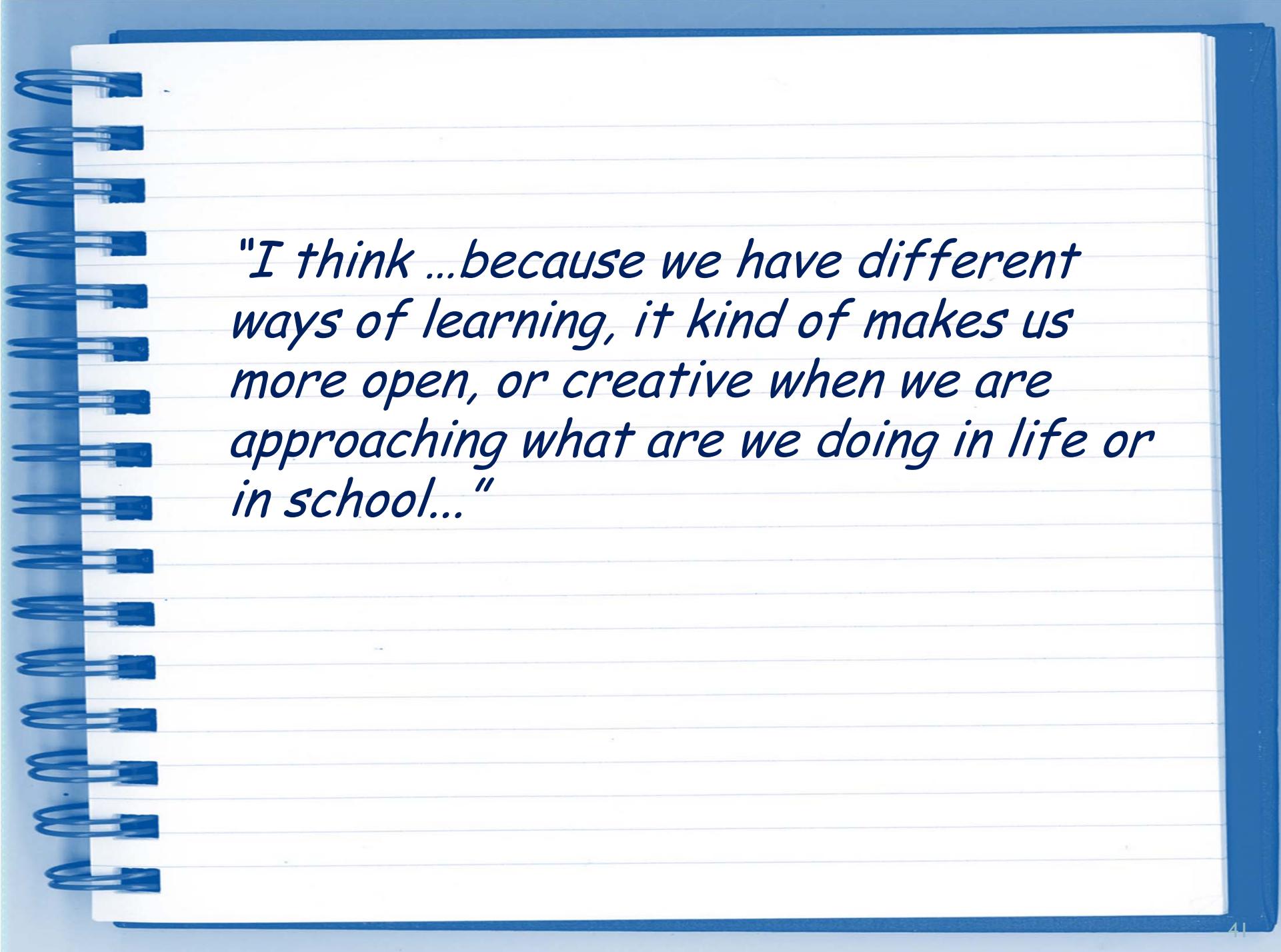
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Learning Disabilities at the University Level

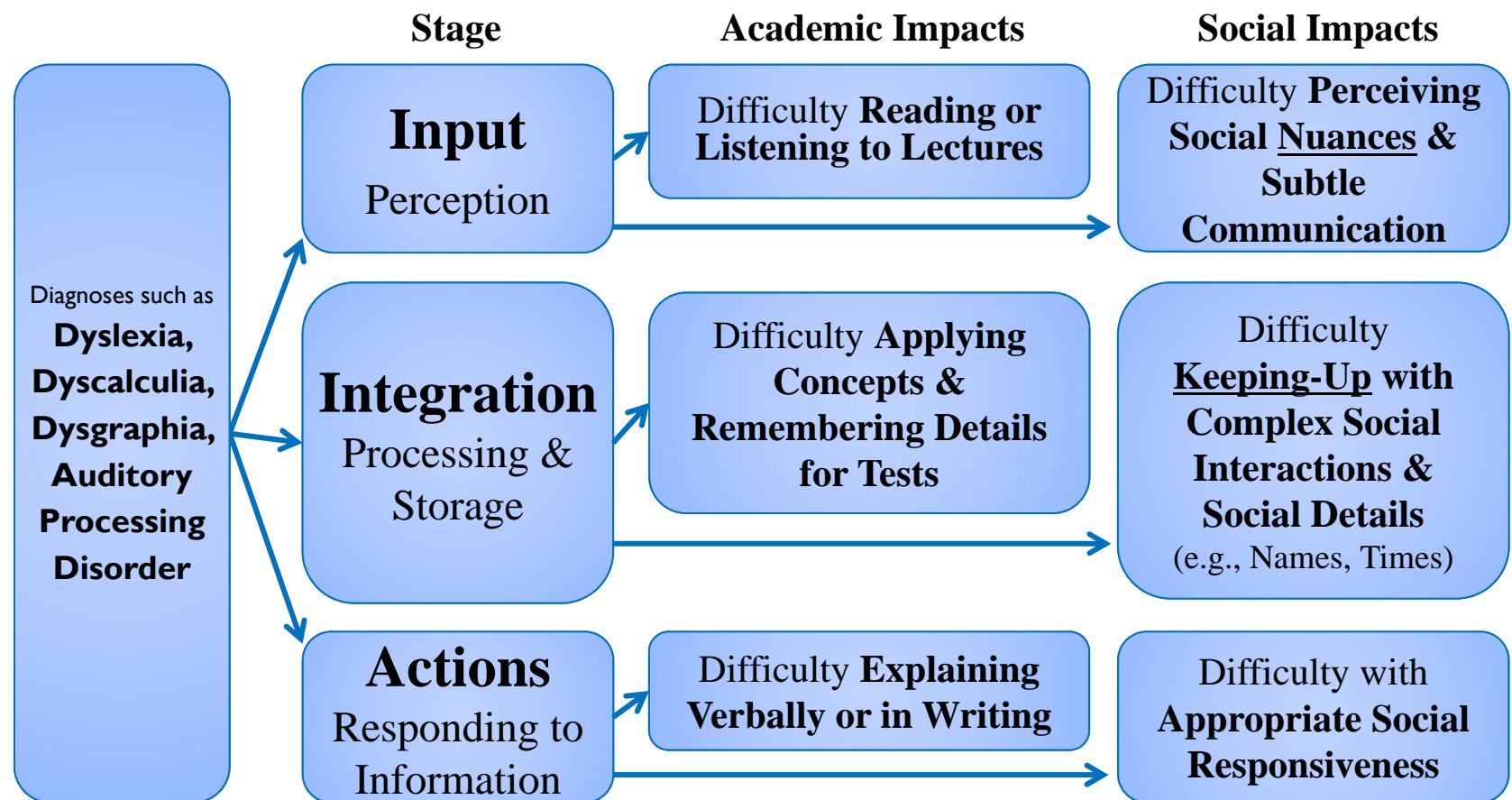
UF UNIVERSITY of FLORIDA



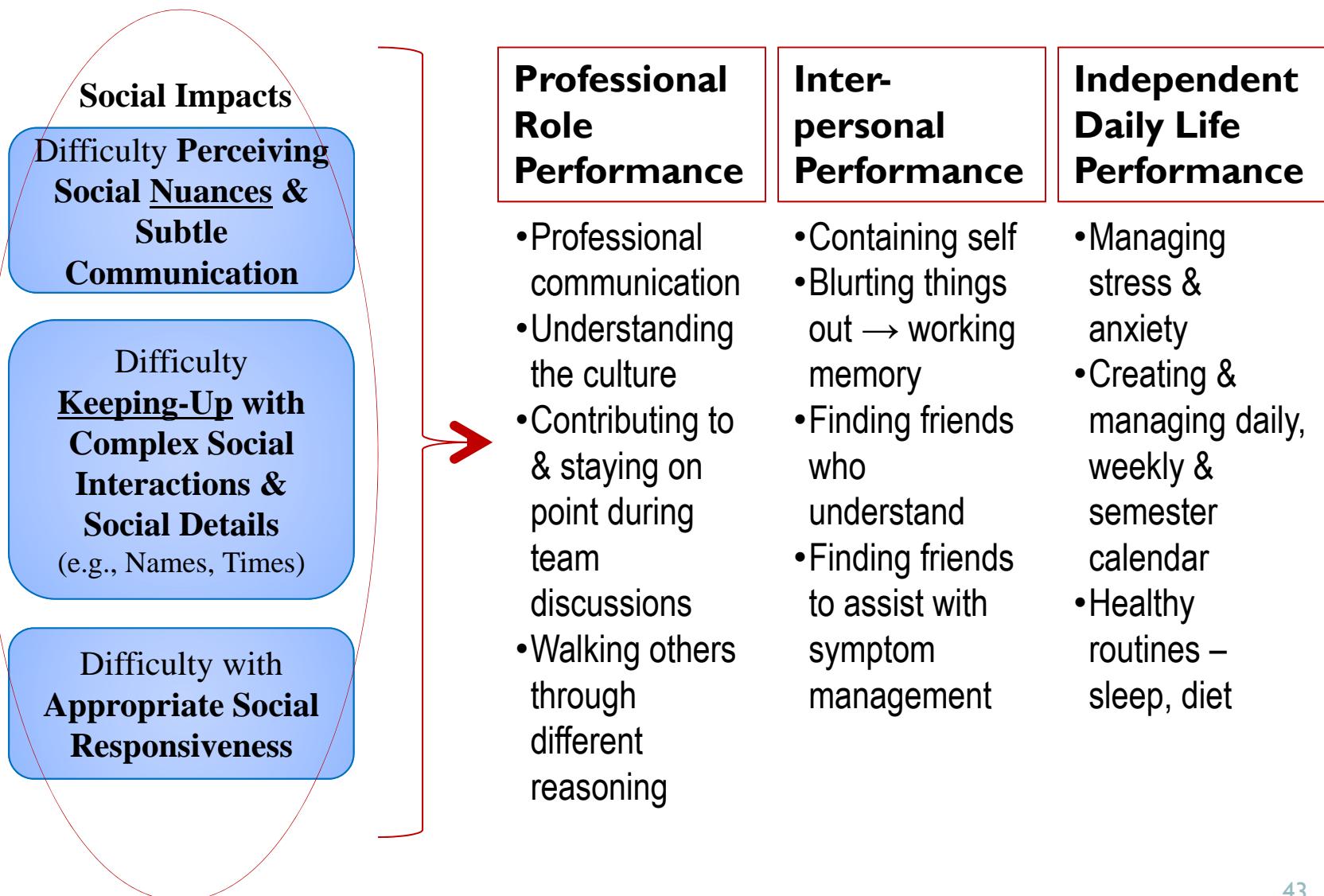


"I think ...because we have different ways of learning, it kind of makes us more open, or creative when we are approaching what are we doing in life or in school..."

RECAP: LD Impacts Related to Stages of Information Processing



Tasks



Take Away: OT Focus for Young Adults with LD in College

Identify areas of strengths & weaknesses

In performing activities/occupations

And, analyze the tasks that need to be performed per individual's

Current roles and

Future desired roles

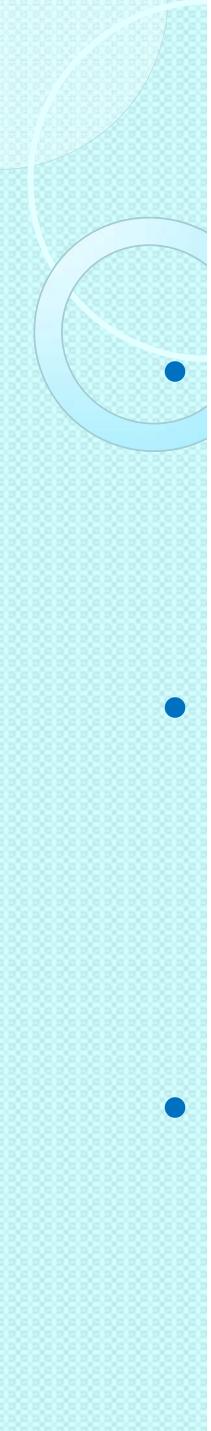
- Big picture/spatial thinking
 - Learning difference
- Creating healthy daily routines
- Organizing time for school, social and professional development
- Effective communication re: LD and needs
- LD advocacy & awareness
- Understanding disability law – part of career prep

It takes a village...

More of our CS3LD team:

- Sue Percival, PhD, Food Science & Human Nutrition
- CY Wu, PhD, Environmental Engineering Sciences
- Mei-Fang Lan, PhD, Counseling & Wellness Center
- Charles Byrd, PhD, Center for Assessment, Strategic Planning, Evaluation and Research
- William Mann, PhD; Anthony Delisle, PhD; Jim Gorske, MEd
- Consuelo Kreider ckreider@ufl.edu





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- K12 HD055929 National Institutes of Health – National Center for Medical and Rehabilitation Research (NICHD) and National Institute for Neurological Disorders & Stroke. The content is solely the responsibility of the authors and does not necessarily represent the official views of the National Institutes of Health.
- NIH/NCATS Clinical and Translational Science Award to the University of Florida ULTR000064 – REDCap