On the way to somewhere…

Opening doors for students with visual impairments and other disabilities

Jane N. Erin, Ph.D.
The University of Arizona by way of Pittsburgh

Doors, like opportunities, are not all the same…

Some are formidable….Some are far from perfect

Some are closed and locked, while others shed light on the destination

And others lead to still more doors…

When one door closes, another opens; but we often look so long and so regretfully upon the closed door that we do not see the one which has opened for us.
Alexander Graham Bell

.

- Families of people with multiple and visual disabilities know this better than most of us do….

Christy describes her daughter's early development (Video describing how she realized that her daughter had other disabilities in addition to visual impairment.)

In the 1970's, the doors of schools for blind children began to open for students with multiple disabilities

Before that time, most schools for blind children did not include students with multiple disabilities. Students with severe disabilities were often institutionalized or kept at home with no education.

Vision of students who were not in educational settings was rarely evaluated because

- Accurate tests were unavailable.
- Services in VI were not deemed appropriate if they could not speak, read, or write.

In 1975, The Education for all Handicapped Children Act was passed.

- Students with severe disabilities began to receive educational services.
- More residential schools took on the role of serving MDVI students as VI students shifted to public schools.
- The population of VI students included more nonreaders and students whose goals were not academic.

Many TVIs needed to learn new skills. 51% of

TVIs considered themselves unprepared to teach students with multiple disabilities. (Erin, 1986).

Professionals in visual impairment had different perspectives about services.

CON: “But I never learned how to teach those children. . . And besides, they’ll never be independent.”

PRO: “But every child deserves the chance to learn and to reach her potential, even if they will always need supervision.”

Is education successful even if a child will never hold a job as an adult?

Many students learn to open their own doors, with emphasis on these areas.

- **Increasing independence:** *Helping or hovering, prompting, or waiting*
- **From communication to literacy:** Using symbols to connect
- **Leisure activities:** Building on student preferences
- **Socialization:** Participating in families and communities
- **Transition:** Planning for the years after school

1. Increasing independence through **patient teaching**: Helping but not hovering, prompting, and waiting.

Learning begins with actions of the learner.

For the child to learn more, we must often do less for her.

A classic study: Effects of contingent and noncontingent vision stimulation on visual fixation in multiply handicapped children

(Utley, Duncan, Strain, & Scanlon, 1983)

Children with multiple disabilities looked at interesting visual stimuli longer when their gaze activated movement or light.

Classic strategies in patient teaching

Jan van Dijk

Children with disabilities learn by…

Developing security and attachment

Establishing near/distance senses (Co-active movement)

Structuring the world (Motor activities and routines)

Developing natural communication (reach, push away)

Lilli Nielsen

- **Offering:** Adult offers objects but does not intervene.
- **Imitation:** Adult imitates child and invites child to imitate.
- **Interaction:** Turn-taking
- **Sharing the work:** Adult arranges and encourages structured tasks
- **Consequence:** Adults shows consequences in the way the world works.

http://**www.tsbvi.edu/resources/**

The concept of the Little Room

http://en.wikipedia.org/wiki/File:Jimmylittleroom2.jpg

Patient teaching means slowing down!

- Speak less
- Speak more slowly
- If the child does not respond, wait a little longer
- Use the least prompt
- Ask yourself, “Does the child need me here to do this task?”

Make sure the learner knows that **he** has made something happen

- If you are feeding a child, give a bite only when he looks at the spoon or makes a voice sound.
- If you are trying to get a child to walk faster and he likes music, play a song on your iphone when he starts moving forward.
- If you want him to make eye contact and he likes to move in his wheelchair, move him whenever he looks at you.

A few of AFB's *19 ways to step back*

(Poster from the American Foundation for the Blind)

- Sit on your hands for a whole task while you practice giving verbal instead of touch cues. Hands off the hands!

- If you need touch cues, try hand-under-hand instead of hand-over-hand. This gives students much more choice.

- Sit further away. If you've been within arm's reach, sit just within earshot. If you've been sitting just within earshot, sit across the room.

- Commit to no intervention for a whole activity. Take data instead. Things might not fall apart as much as you had expected.

- Assign student learning partners and sighted guides.

Are you using the least prompt needed with your students?

The goal is for the child to begin and complete the activity without prompting.

1. Natural cue (LEAST RESTRICTIVE)
2. Visual/Tactile/Auditory Prompt
3. Gestural
4. Verbal (Direct and Indirect)
5. Modeling
6. Physical
7. Physical Guidance (MOST RESTRICTIVE)

Physical guidance

*Physical guidance usually **not** necessary unless there is a safety concern. (Physical correction of behavior is not a prompt!)*

Physical learning and guidance

- Hand over hand

- Hand under hand

Future Reflections, 2004

- Modeling (Visual or physical)

- Verbal prompt

Direct: *"Pick up the cup"*

Indirect: *"Do you want to get a drink?"*

Gestural prompt

- *Pointing, waving toward object*

Dominick and the never ending hand washing

dominic2.wmv

Object prompts: For most tasks, the goal is for children to use context.

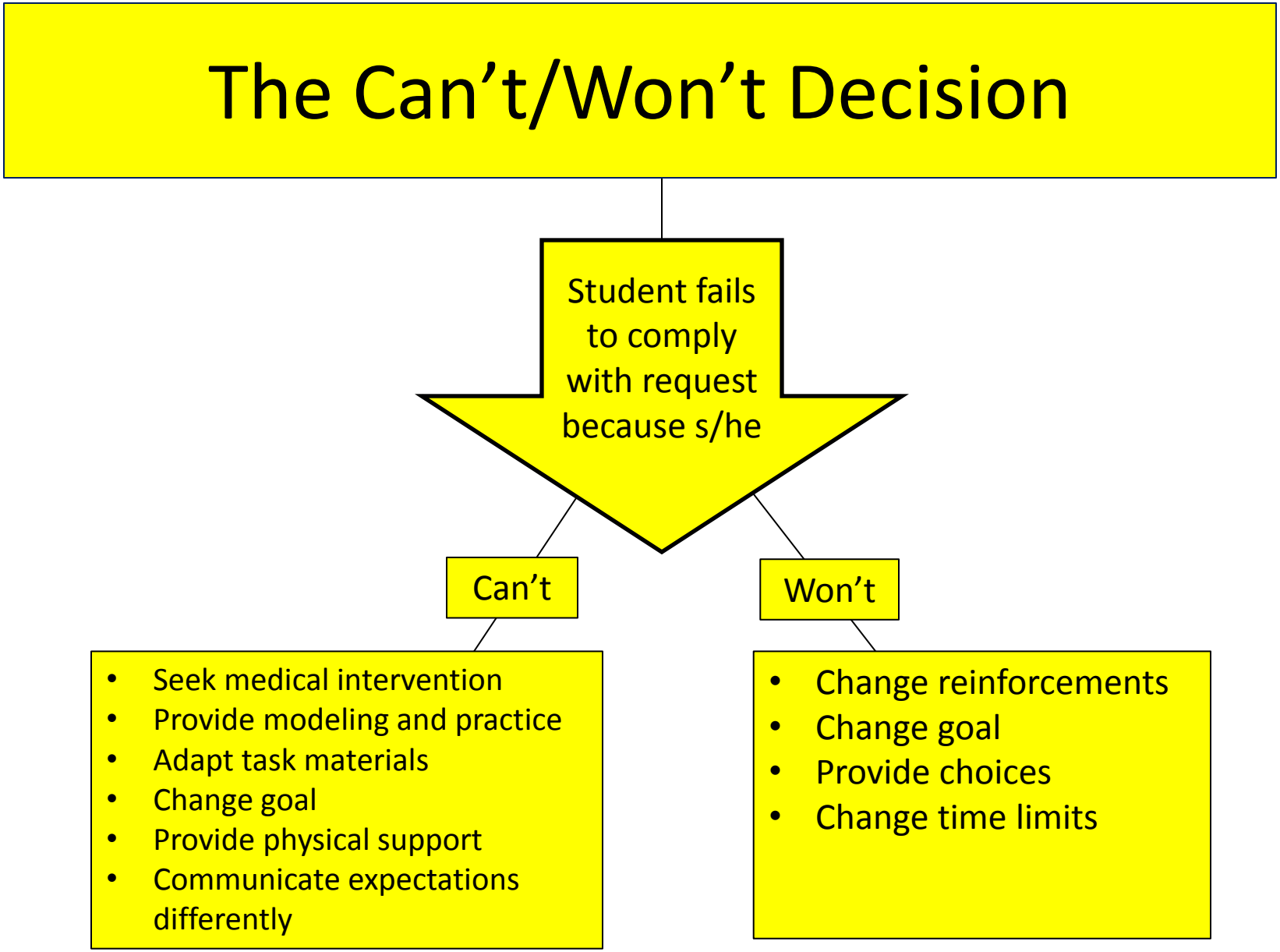
- Visual/tactile/auditory:

Add something to make the object noticeable

- Objects suggest the task to be done.

http://www.transfigurationofourlord.org/wp-content/uploads/2008/10/table-setting1.jpg

The Can't/Won't Decision



Helping or hovering?

What happens when adults are present too often?

http://clouducation.wordpress.com/2012/02/22/

When an adult stays too close to a child in the general classroom….

- Peers are discouraged from interacting
- Other adults (including classroom teacher) don't interact with the student
- Other students are sometimes distracted by interactions between the student and paraprofessional
- Students become dependent on the supervising adults

(Giangreco, Edleman, Luiselli, and MacFarland, 1997; Giangreco & Doyle, 2002)

2. From communication to literacy: It's not just about reading….

Presymbolic: Students do not use or understand words, signs, or pictures

1. Use of touch signals (before moving, changing, etc.)
2. Consistent routines, with real objects associated with routine.
3. Pleasurable routines associated with pauses for responses (e.g., bouncing, singing)
4. Play activities where student creates a result (toy piano, switch toys, resonance boards, strings of noisy beads)
5. Basic calendars with real objects

Students Who Do not Have Clear Cause-Effect Behavior…

- Learn from regular routines with consistent sensory cues
- Should receive a response for *ANY* behavior (e.g., vocalizing, extending arms and legs) ANY ACTION SHOULD GET AN IMMEDIATE RESULT!
- May learn best from multisensory experiences (e.g., pairing a visual experience with an auditory experience)

Yet adults often miss communication signals with children with severe disabilities…

- In a case study of a deafblind child, over 16 hours of filming, the teacher and child interacted only 2% of the time.
- The child missed 67% of communication initiatives by the teacher
- The teacher missed 63% of the child's initiatives

(Vervloed, Van Dijk, Knoors, & Van Dijk, 2006)

Communication

TVI contributes expertise in use of object symbols, calendars, tactile symbol systems, Braille

Object symbols:

Begin with REAL objects during events

Move to REAL objects with delayed association

Move to PARTIAL objects with delayed association

Calendar systems….not exactly communication

- *Time piece* calendars break up time
- *Activity calendars* add structure to an activity
- *Choice calendars* allow selection of activities

http://distance.tsbvi.edu/communication/calendars/index.html

Tangible symbols can be concrete or abstract

- Tangible Symbol Systems, designs to Learn (Rowland and Schweigert)

- http://www.designtolearn.com/pages/whatts.html

Symbols are preserved and permanent, but signs and gestures are portable!

Please

Bridges to reading…. Abstract symbols that connect to events and objects.

TSBVI

Symbols must be related to the child's world.

Photo courtesy of Dr. Stephanie MacFarland

Literacy symbols must be seen or touched often.

The first meaningful symbols relate to the learner's experience.

http://media.photobucket.com/image/braille+experience+book+/cherrihardcastle/016.jpg

Language learning for visually impaired students with other disabilities begins with…

- Consistent routines that are experienced from beginning to end
- Symbols that a child can perceive (touch, sound, pictures)
- Physical participation associated with communication
- Preferred experiences associated with communication

harry_speech_clipped.wmv

For students who do not read and write, information access means…

- Getting meaning from auditory information
- Requesting information and assistance
- Using a preservable symbol system for identification, labeling
- Using speech and/or symbol systems for entertainment

- Q: When is the right time to start including braille in the student's environment?
- Answer: Today.

- (But that doesn't mean it's the right time to **teach** braille.)

I-M-Able (Wormsley): A meaning-based approach to reading

The learner must understand what reading means.

Reading does NOT begin with the alphabet!

Appropriate for any age.

Dr. Diane Wormsley's IMABLE: Individualized Meaning-centered Approach to Braille Literacy

The myth: Students who cannot understand phonics and sound/symbol relationships cannot learn to read in braille.

The fact: Whole word meaning is more important and more motivating than sound units at the early levels. Students learn to read through words, not letters and sounds.

Students choose their own words

Haley's word list

People: Mommy, Uncle Ben, Kaitlyn, Di-Di

Daily routine: Breakfast, bus, brush teeth, wash hands, lunch box, backpack, Sunday, O&M, cafeteria, binkie, football

Work activities: Clothes in the hamper, clean up

From Wormsley, D. (2009). *Braille literacy: A functional approach designed for non-traditional learners.* American Foundation for the Blind workshop, Atlanta, GA.

Which words should students begin reading?

- KEY word or words
- Meaningful word
- Highly motivating word
- Manipulate for confusability of braille characters (after first word selected)
- Try not to have first two words start with a similar letter or configuration
- Wherever possible student/client should choose the first few words.

- From Wormsley, D. (2009). *Braille literacy: A functional approach designed for non-traditional learners.* American Foundation for the Blind workshop, Atlanta, GA.

Create a braille-rich environment

From Wormsley, D. (2009). Braille literacy: A functional approach designed for non-traditional learners. American Foundation for the Blind workshop, Atlanta, GA.

Include words in experiential books… *Brittany's hair book*

From Wormsley, D. (2009). Braille literacy: A functional approach designed for non-traditional learners. American Foundation for the Blind workshop, Atlanta, GA.

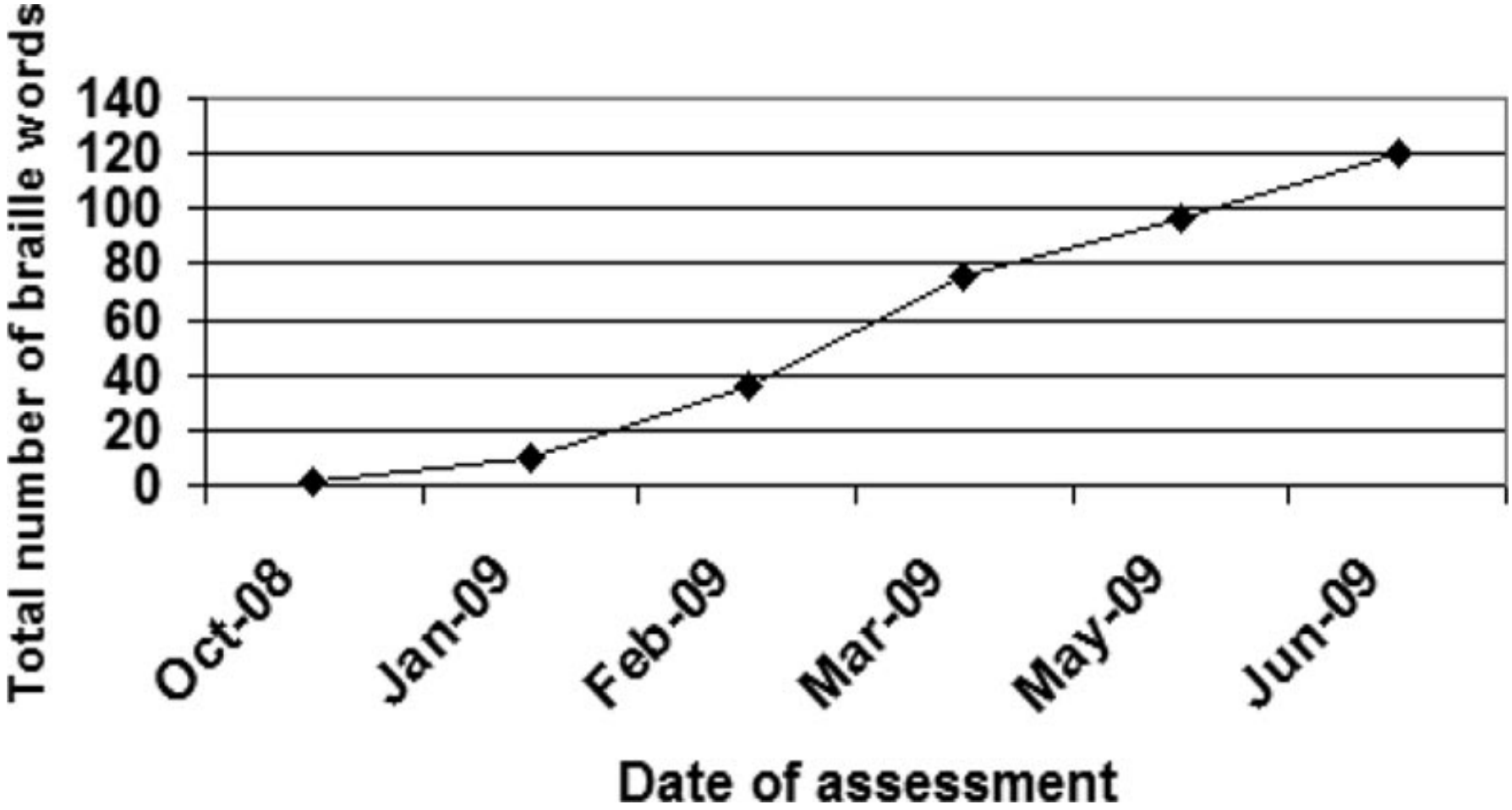
INTERVENTION: Sarah learns to recognize her favorite words

Sarah's Story (Campbell, 2011)

- 11 years old
- had been learning the braille alphabet and whole-letter words for more than two years
- scrubbed letters and had difficulty tracking

Sarah's first chose Chris Brown, SpongeBob, pizza, and music. Later she added tattoo, colonoscopy, and Lady Gaga!

By the end of the year, Sarah could read more than 100 words. She had created and read 20 books.



JVIB, March, 2011

3. Leisure activities…
Building on student preferences

How is play different for a child who is blind?

Less

- exploration of surroundings and objects;
- spontaneous play;
- imitation of parent
- play with stuffed animals or animism
- play centered on peers rather than adults.
- Symbolic play
- Aggressive play

More solitary play

(Hughes, Dote-Kwan, & Dolendo, 1998)

Language and Play in Students with Multiple Disabilities and Blindness (Pizzo & Bruce, 2010).

- Researchers administered Play Assessment Scale to 11 students with multiple disabilities and deafblindness
- Students followed developmental sequence, with more difficulty at advanced symbolic level (dolls; imaginative play with substituted objects)
- There was a strong link between communication and play

To be a leisure activity, it must be chosen by the student.

Deciding what is fun. If the student cannot tell you with words, he may tell you in other ways.

- What does he reach toward or avoid?
  - Soft, solid, bumpy, crinkly, materials
  - Multiple small items
  - Noisy toys or actions

- Does he show pleasure at bouncing, rolling, running, twirling?

Does she enjoy physical contact, increased or decreased communication?
Does she like being in small closed places?
Does he like bright or flashing lights, or rapid visual movement?
What games or activities done by others her age might be appealing to your student?

In a study of person-centered planning teams, staff reports did not always match actual responses of individuals

(Reid, Everson, & Green, 1999).

One person's plan indicated that he liked "anything social." But when holding hands with a staff member and receiving a hug were assessed, holding hands was approached 77% of the time and receiving a hug only 43%, with avoidance on 27% of the trials.

We tend to generalize observed behaviors!

Once identified, preferred experiences can be built into age appropriate activities.

Arndt, Lieberman, & Pucci (2004) studied what communication was needed for deafblind indviduals to participate in sports and recreation.

"Over the course of the week Holly developed signals to give John information during biking. Those included a tap on the shoulder before slowing, touching the side of the shoulder when approaching a turn, choosing the side the turn was toward. Signs for "more" and "finish" were not possible given the fact that Holly needed to steer with both hands and John held his handlebars or seat with both hands."

Recommendations for communication during physical activities

Make time to explore the environment and equipment;

Ensure that the individual or people who are familiar with the individual are consulted

Distinguish between discrete and continuous skill

Recreation and leisure: Instruction **

Facilitation of opportunities through…

- Family involvement
- Organizations for people with visual impairments
- Mentoring and speakers with expertise
- Direct instruction integrated with academic goals
- Community opportunities with appropriate adaptations

4. Social skills
Teaching through daily routines

These routines establish or maintain relationships.

They are intrinsically pleasurable to participants.

Examples: singing a song with others, playing football, dancing, having guests

Participating with families and communities

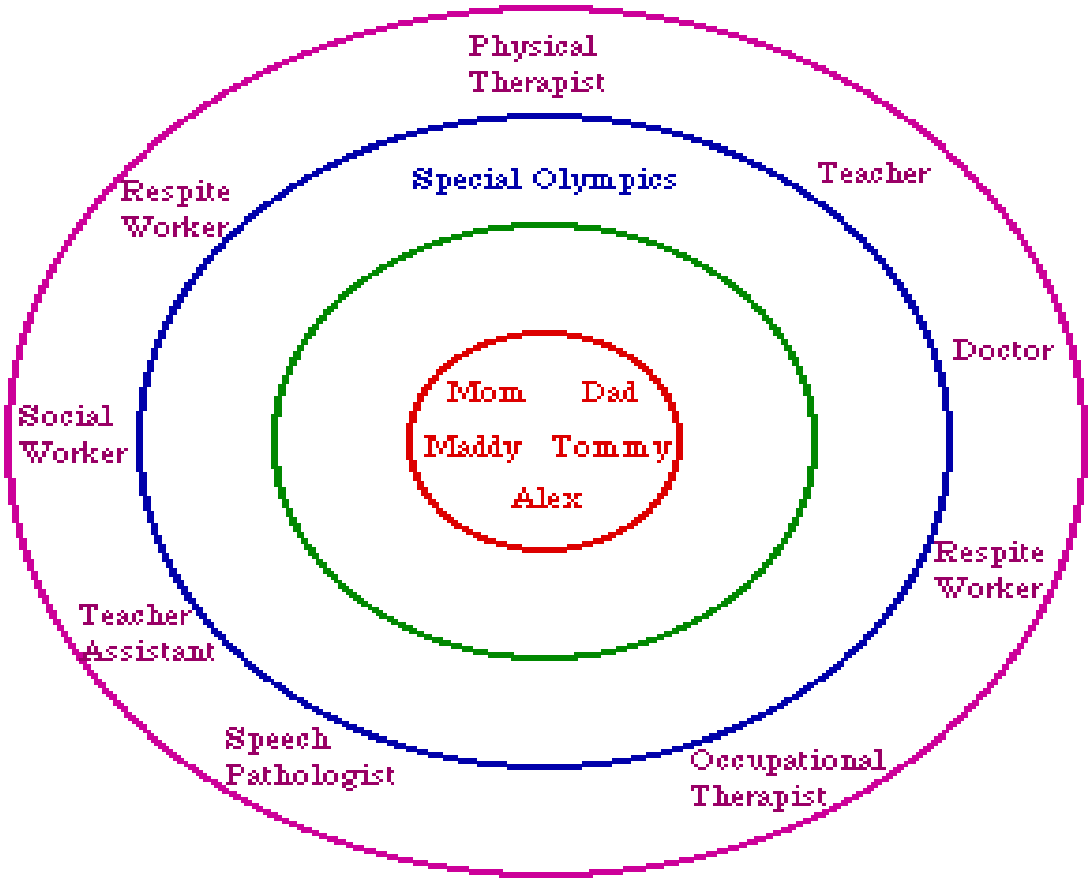
Teach through daily routines

- Greet teacher each morning
- Take turns talking at table
- Thank cashier at store
- Before leaving home, check on a picture list in the bathroom
  - Hair combing
  - Tooth brushing
  - Clothing buttoned and zipped

Children with multiple disabilities can participate in classroom activities with their peers

- From *Focused On: Importance and Need* video by Sacks and Wolffe (American Foundation for the Blind).
- ..\..\..\..\My Documents\My Videos\importance_and_need_for_social_skills.avi.mpg

Gather friends and family to create a Circle of Friends (Falvey, 2002, in Sacks & Wolffe, 2006).



http://pbiscompendium.ssd.k12.mo.us/ResourcesSchools/SSD/Inclusion/peer3.gif

D’Allura (2002) emphasized cooperative learning in her study.

“Positive interdependence”: success for one child involved cooperation by all.

5 children with visual impairments in self-contained class (control group)

4 children with visual impairments and 4 sighted in integrated class (Experimental)

Teachers in integrated class were trained in cooperative learning. In baking a cake, each child had a key ingredient.

BEFORE cooperative learning, both groups of VI students spent less than 5% of time interacting with peers

AFTER cooperative learning, experimental group of VI students increased to 20% interactions.

Special considerations

- Include other reinforcers if social contact is not motivating
- Teach scripted routines
- Teach standard gesture (wave, hand shake, touch on hand or forearm)
- Teach distinction between interactions
  - Public and private
  - Formal and informal

Photo by L. Penny Rosenblum

Basic socialization for children without symbolic language

- Turning toward a speaker or another person
- Smiling or vocalizing in response to a voice
- Using unique greetings for family and familiar people.

For students who don't enjoy social approval or contact (e.g., some with autism)

- Create signals to be used before initiating contact
- Arrange short periods of contact
- Include a preferred experience with socialization…
  - Favorite music during a group game
  - Guide peers to rub hands with lotion

How can you encourage communication from other students?

1. Remnant boxes

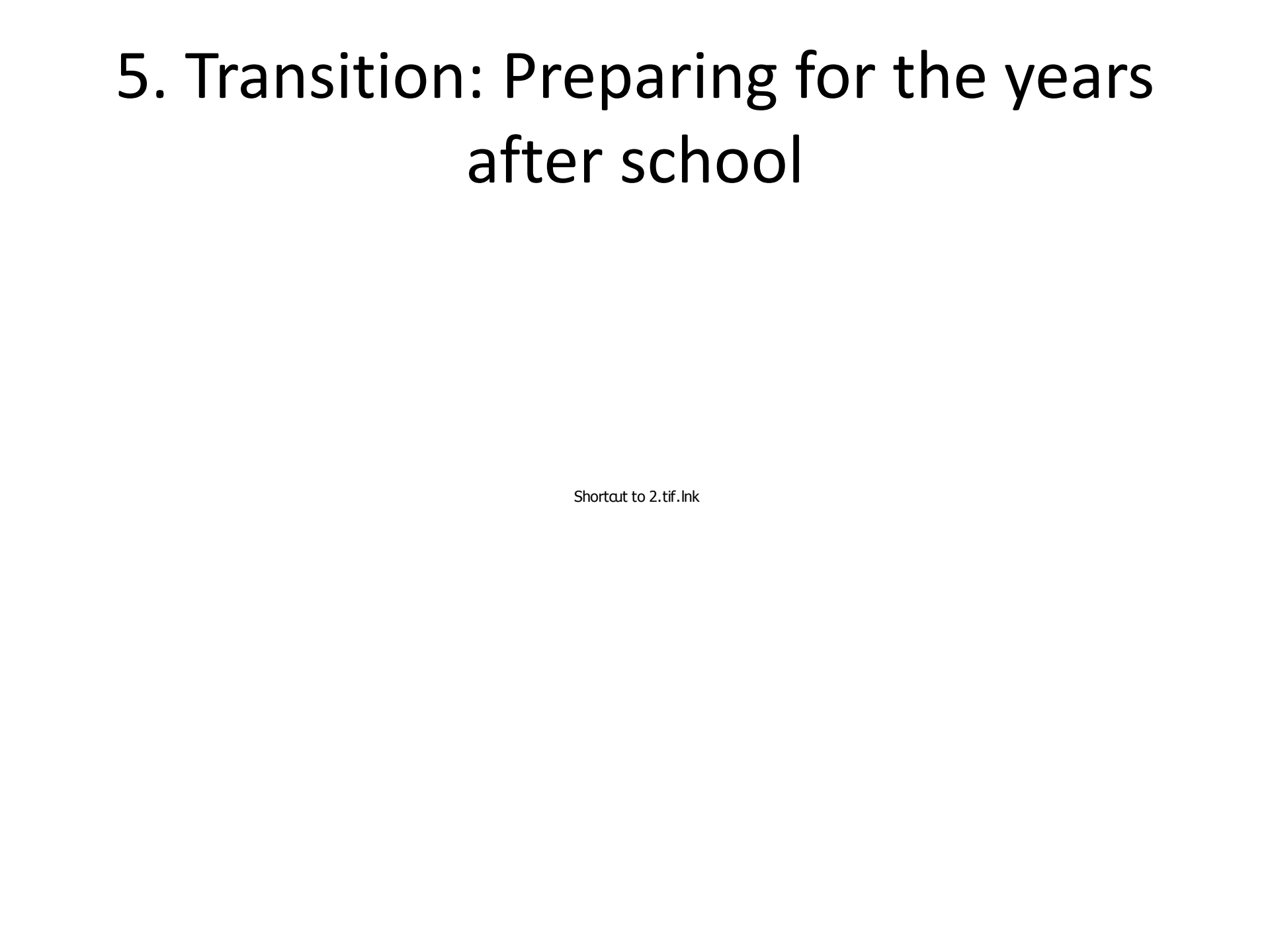
2. Conversational books with photos or
   favorite objects

Let student help in selecting objects

Change and update them regularly

Teaching communication skills to students with severe disabilities, Downing, 2005

5. Transition: Preparing for the years after school

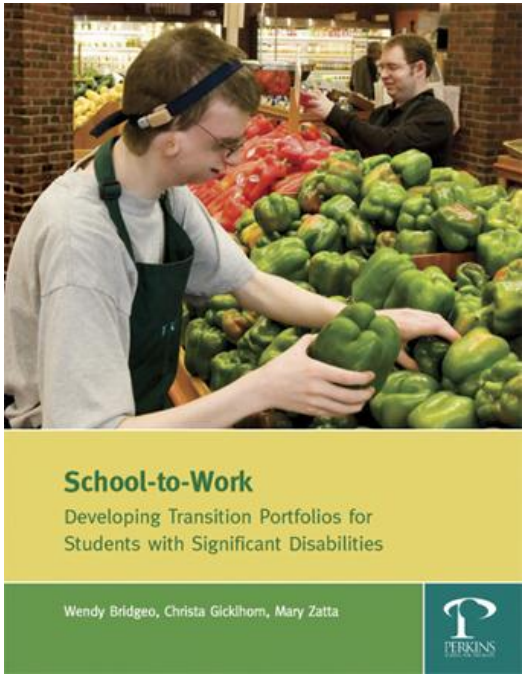


More options in…

- Education
- Work
- Residency and quality of life

Resources…

School to Work: Developing Transitional Portfolios for Students with Significant Disabilities (Bridgeo, Gicklhorn, Zatta, Perkins School for the Blind)



Basic Skills for Community Living

Levack, Hauser, Newton, & Stephenson, TSBVI.

Good news from the National Longitudinal Transition Study

Group 1 (1991) and Group 2 (2005)

(Ferrell, K. , www.afb.org)

- In Group 2, 19% more young adults with multiple disabilities lived with their parents (58% to 77%)
- 25% fewer lived in institutions or facilities (31% to 6%)
- 3% more lived independently (1% to 4%)

Social and employment experiences of students with VI/MD in the NLTS (AFB)

- In Group 1, almost no students participated in community groups or activities
- In Group 2, 13% participated in community groups or activities and 37% volunteered in work activities or community service
- 10% of students in cohort 1 had held a job, compared with 36% in Cohort 2.

Post-secondary educational experiences of students with VI/MD in the NLTS (AFB)

- “Whereas there were too few students in cohort 1 to show involvement in any kind of postsecondary education, in cohort 2, 40% of youth with multiple impairments/deafblindness participated.”

- This included 30% increase in those who attended a technical school.

- http://www.afb.org/=3178

Education:
Project FOCUS

- A model demonstration program designed to support access to University of Arizona's academic offerings and campus life
- Includes students from Tucson Unified School who have intellectual disabilities
- Students attend at least 2 courses a semester for 2 years
- They have instructional supports related to campus life, employment, and overall self-reliance

Ani, a student in Project FOCUS

- Video of Ani responding to question about how college is different from high school.

Residence: Learning to live with others in post-secondary settings

- Making choices about where and with whom to live
- Balancing the needs of all residents
- Describing and referring to visual impairment
- Requesting and declining assistance
- Requesting privacy and knowing when others want privacy

Photo by L. Penny Rosenblum

Dominick, age 22

Lives in a group home for
past three years

Attended specialized school
for school years

Semi-independent in most
basic skills (travel,
dressing, eating)

Dominick communicates through iconic signs and gestures

Abilities

lifting and physical activities

opening doors for others

smiles, laughs, and enjoys favorite people

What do you think a good quality of life for Dominick will be?

"He will be allowed to develop friendships. He will be able to participate in favorite activities as a reward. He will have work, be paid for it, and be able to spend his own money."

Diane Raab, Teacher

A successful instructional program with Mandy

- 31 year old woman who is blind and has moderate cognitive disabilities
- She could not do multi-step tasks without supervision
- Staff thought that food preparation tasks would be most motivating and reinforcing

Continued learning:
31-year-old Many activated a microswitch system and Mp3 player to hear step-by-step directions.

She mastered six tasks of 44-54 steps each through step-by-step instructions delivered by the devices.

(Preparation of drinks, sandwiches, cold pasta dishes, blended drinks)

(Lancioni, Singh, O'Reilly, Sigafoss, and Olivia, 2011).

Adult occupational: Money may NOT be the main goal.

- Independent jobs
- Jobs with guidance by job coach
- Volunteer work
- Structured day activities
- Post secondary education (college attendance and participation)
- Homemaker and family member
- Enclave work with supervision

Convincing potential employers that individuals have the skills they need!

Video from http://www.conklincenter.org/iframes/i-about.html

Video of Christy describing her daughter's adult life

No pessimist ever discovered the secret of the stars or sailed an uncharted land, or opened a new doorway for the human spirit. --Helen Keller

- American Foundation for the Blind, www.afb.org

Practical References on Teaching Students with Multiple Disabilities and Visual Impairments.

Chen, D., & Downing, J. (2006). *Tactile strategies for children who have visual impairments and multiple disabilities: Promoting Communication and Learning Skills.* New York: AFB Press.

Chen, D., & Schachter, P. *Making the most of early communication: Strategies for supporting communication with infants, toddlers, and preschoolers whose multiple disabilities include vision and hearing loss.* (VIDEO). New York: American Foundation for the Blind.

Downing, J. (2005). *Teaching communication skills to students with severe disabilities.* Baltimore: Paul H. Brookes Publishing Company.

Downing, J., Editor. (2008). *Including students with severe and multiple disabilities in typical classrooms.* Baltimore: Paul H. Brookes Publishing Company.

Erin, J. (2004). *When you have a visually impaired student with multiple disabilities in your classroom: A guide for teachers.* New York: AFB Press.

Hagood, L. (1997). Communication - a guide for teaching students with visual and multiple impairments. Austin, TX: Texas School for the Blind and Visually Impaired.

Levack, N., & Smith, M. (1997). *Teaching students with visual and multiple impairments.* Austin, TX: Texas School for the Blind and Visually Impaired.

Roman-Lantzy, C. (2007). *Cortical visual impairment: An approach to assessment and intervention.* New York: AFB Press.

S. Sacks and R. Silberman (Eds.). (1998). *Educating students who have visual impairment with other disabilities* (pp. 3-38). Baltimore: Paul H. Brookes Publishing Company.

Wolffe, K. E. (Ed.). (1999). *Skills for success: A career education handbook for children and adolescents with visual impairments*. New York: AFB Press.