Topics of Discussion:

1. Introduction to Active Learning and Dr. Lilli Nielsen

2. Functional Scheme Overview

3. Five Phases of Educational Treatment

4. Dynamic Learning Cycle

5. Disharmonious Learning

6. Considerations for Active Learning

7. Active Learning Materials

8. Developing Classroom Activities & Environments
These are not the only “10 Basic Principles” but they give a good idea of what Active Learning is about. The role of the adult is a facilitator, providing the environment, making sure toys are accessible to the learner's hands and feet, and not involved in the act of playing until the end or invited.

1. Every One Can Learn

Lilli has met a very few learners that could not learn – they were dying. Unless impacted by survival, every child and older learner can learn. It is up to the parent, therapist or educator to keep finding the right situation/environment with enough support, responsiveness and interest to engage the learner.

2. Active Learning is Hands Off

Challenged learners often act passive and are treated as passive (everything is done for them). Active Learning involves creating supportive and responsive environments that are tuned to entice a learner to become active. When Lilli realized that blind and disabled learners often resisted any “guided hands” approach, she set about to create environments and situations that would increase a learner's inclination to explore on their own. This means the “teacher” must disengage and not talk nor prompt until the activity is concluded. Kids learn through repetition (see #8) - don't interrupt them.

3. Auditory and Tactile Primacy

Learners with vision impairments and neurological deficits rely upon hearing as a primary sense. Vision tends to be secondary, owing to control and processing difficulties. Tactile sense is also a prominent sense.

4. Responsive Environment, Short Sessions

The environment should provide excellent auditory and tactile feedback (not just stimulation). Use of the Resonance Board provides key vibratory input. The Essef Board provides optimal reaction to leg movements. The Little Room provides a warm inviting echo and exploration chamber. As Lilli says, “if the child cannot go to the room, the room must come to the child.” Many short sessions are better than one long one, especially when first using an environment.

5. Mix Variety and Constancy, Provide Comparisons

As anyone does, a learner benefits from moderated variety. That is, don’t change everything every time, but provide enough variation so that the environment has interest. Also, provide “alike but different” objects to invite comparison. Cycling through a large inventory of objects/toys allows for a rich, constantly interesting environment. Change some of the objects whenever the learner shows habituation to the objects available.
6. Work up to Weight Bearing

Given the discomfort of bearing weight, provide support until the learner has some control, and slowly increase the weight load. The Support Bench and HOPSA Dress are used to control weight on the legs. Start with no weight, toes barely touching.

7. Emotional Development Involves Mastery

It’s that smile of accomplishing something, doing something to their environment, rather than the environment doing it to them that fosters a critical step in emotional development. Related to the Active vs. Passive learning, that “see what I can do” smile is a crucial goal.

8. Learning is by Repetition – Allow to fail

Kids learn by repetition. They must do something over and over to invoke memory and get the variations to make sense. Therefore, allowing them to have negative results without intervention (e.g. without moving an object into their hand as they miss on a reach) is as important as not interrupting with any cheerleading.

9. Talk and Reward at the End of Play

At the end of play is the time for the adult input, the language and commentary to describe what the learner was doing, and to positively reinforce their activity. Point at and jiggle the objects and talk about what they did. Ask questions and use short sentences. When a learner is ready and can engage in turn-taking games, then a new level has been achieved.

10. Limit Input, Wait for Response

As a general principle, remember that neurologically impacted learners usually need more time to take in, process and assemble a response. If you ask a question, remain quiet as long as possible before asking something again, and try not to supply their answer without some sign. This is always subject to judgment, as after a while the question may be forgotten. Repeat using the exact same words, so additional processing to understand new input is not needed.

Can be found at: www.lilliworks.com
Active Learning Materials

**Ingredients for a Successful Active Learning Classroom:**

- Appealing materials
- Opportunities for meaningful experiences
- Choices for students
- Communication for students
- Teacher support

**Choosing Materials:**

- **Materials:** Real, true to life, concrete objects that students may use and have contact with in everyday situations.
- **Textures, Shapes, & Size:** Variety is important for exploration, comparing/contrasting, and for visual/auditory/tactile discrimination.
- **Function:** Objects that are lying around the house and not in use may be just what are needed in the classroom.

**Remember:** These objects are educational tools that encourage interaction and growth at the student’s current developmental level. They give the students the opportunity to explore and gain knowledge from the world around them.

**Suggestions of objects to use:**

- Plastic plates
- Plastic subs and saucers
- Hair brushes and combs of all sizes and shapes
- Scrub brushes of all sizes, shapes, and textures
- Drinking cups (different sizes/shapes)
- Containers with screw tops (different sizes)
- Containers with press-on lids (different sizes)
- Toothbrushes
- Sunglasses (plastic)
- Keys
- Bags made of cloth, canvas, and leather w/ different closures
- Balls of all sizes and materials
- Spoons, teaspoons, 3 teaspoons tied together elastic
- Measuring cups (metal and plastic)
- Mixing bowls (metal and plastic of all sizes)
- Measuring spoons, kitchen spoons (wood and plastic)
- Buttons (large, small, round, oblong)
- Bells
- Rubber bands (small, large, thin, thick)
- Small and large balls of wood, rubber, cotton, tennis
- Wooden/Plastic blocks of all sizes
• Belt with buckle
• Beads
• Musical instruments
• Mylar/pompoms
• Rolling pin
• Drinking straws
• Dried peas, beans, and rice
• Various kinds of caps, hats, gloves
• All different kinds, types, and sizes of shoes
• Metal, plastic, wood trays
• Spatulas

Additional Materials to have available:
• PVC pipe & fittings
• Peg board
• Elastic
• Material of all shapes/sizes/textures
Considerations for an ALC Student’s Daily Environments

- A student meets many adults on a daily basis through school, therapies, doctors, nurses, caregivers.
- It can be difficult to achieve close relationships and promote self-identity
- The staff & caregivers must agree to use the same approach for routines as much as possible.
- The staff at school must:
  o inform each other about the student’s reactions
  o share ideas for activities
  o Organize the day so that every student can spend 1:1 time with an adults consistently

Anxiety

- A massive anxiety cannot be removed by demands or requests to do what you are afraid of.
- Loud sounds, over prompting, forcing participation, and placing items to close (depending on a student’s toleration) can increase anxiety.
- It is of no use to tell a special needs student that he/she should not be afraid of what he/she is afraid of. Doing so will only reinforce the student’s resistance.

Just Jump!

- Compare a student’s anxiety to someone demanding that you jump out a 4th story window.
  o I would be afraid of doing so
  o If someone tried to grasp me, persuade me to do so – I would use all of my energy to avoid that person and to avoid jumping.
  o While using my energy to resist, I would be unable to learn anything at all

Come On – Just Jump!

- When the demanding person left, I would be afraid that the person would return
- The more often someone tried to get me to jump, the more time I would spend being afraid that person would return, trying to persuade me to jump.
- As time goes by, I may be afraid throughout the day and unable to think of anything else.
- I would be unable to concentrate on anything other than to be afraid.

Stereotyped Behavior

- Stereotyped behavior must be RESPECTED as a part of a student’s personality. It is who they are! (Self-identity)
- It can occur for several reasons:
  o Lack of opportunity to move to the next developmental level
  o As a form of communication/protest
- Requests or demands to stop the stereotyped behavior means that the student is requested to alter his/her personality immediately.

Self-Identity

- The student’s ability to perceive him/herself as distinguished from the outside world.
- The development of self-identity is the process of imitation.
- From an early age, students learn to initiate self-activity, imitate and interact with their world
- A student cannot imitate if there is nothing to imitate.
- It is important that people around a student demonstrate their own sense of self-identity
Summary

- It is important to develop a student’s self-identity
- This can be achieved by developing a student’s emotional level as well as their intellectual level
- Using the appropriate Phase of Educational Treatment is vital to a student’s overall development
- Every student needs time during the day to play with an adult 1:1
Educational Programming

- What will you do when you are together with a student?
- What sort of environment for self-activity will you provide for the student?
- If a student is not given the opportunity to be active on his/her own – the student will learn that he/she cannot be active without an adult.
- If you train and train without giving a student the opportunity to verify his/her own activity – he or she will acquire the disability of “learned helplessness.”

Active Learning or Passive Participation?

- Is participation enough?
- Is tolerance of an activity enough?
- Do we respect a student’s right to refuse to participate?
- Do we accept a student for who they are?
- Do we create daily programming that encourages ACTIVE LEARNING or is passive participation enough?

Equipment & Positioning

- What are the student’s needs for positioning & safety?
- Have you consulted your PT, OT, VI, AI and RN staff as appropriate for the individual student?

Presentation:

It is imperative that the students always have objects near them, not just two or three objects, but two or three dozen objects. This way each time the students attempt to reach for something, they have some success. The goal is to engage each student in exploration and creativity.

Active Learning Environments & Curriculum Connections:

Resonance Board

The Resonance Board vibrates with every movement the student makes. Additionally, when objects are dropped on the board, the students receive unique auditory feedback. Twenty to forty objects should be placed on the board around the student. May be placed under a “Little Room” or under the “HOPSA Dress”.

Object Center

Object centers can be put together with mats from PT or your school gym. Find objects of different textures, which require a different way of grasping and/or make different sounds for exploration. Household objects are the best, like cans or different sizes of containers with lids. So are water bottles with beans or rice in them. Students can participate in making these objects. A favorite object is a bundle of straws with a rubber band around them. Depending on your student needs twenty to forty objects should be available in the center.

Students can be alone in the block center but it is an excellent opportunity to encourage socializing among students. Students can share objects, observe peers playing, or enjoy parallel play. Students can also be encouraged to imitate actions or offered choices depending on their needs.
The Ball Pit
The ball pit provides an environment that envelops the students with tactile, visual, and auditory stimuli. The balls and the pit itself support the student’s body. The objects encourage exploration as well as the opportunity to compare and contrast textures and sounds. It has been observed that, when multiple students are in the ball pit, their attention turns to each other and not the objects. This is wonderful social interaction.

Water Play
Water play is a wonderful opportunity for students to use their feet to explore objects. Rarely do we give students opportunities to take off their shoes, socks, AFOs, SMOs, etc., so this is often an entirely new sensation for the student. It also gives students a different kind of experience in water; hopefully allowing them to be more comfortable in grooming and other independent living experiences that involve water.

Essef Board
The Essef board is similar to a springboard. It is highly responsive to the student’s pressure. The board provides opportunities to enhance the student’s equilibrium, balance, and movement experiences. Students should always be supervised when using the board.

We found that our students so preferred that Essef board that we returned the mini-trampoline to PT. Students sit or stand on the board or it can be placed under their feet while they are sitting in a chair.

HOPSA Dress
The HOPSA Dress safely provides vertical orientation and support without the legs bearing weight. It provides the student with great feedback and the opportunity to improve motor control. It can be used in conjunction with the resonance and Essef boards. The harness can be suspended from the ceiling or a lift system.

Wait Board (Scratch Board)
The Wait Board provides a student with purposeful, rich, tactile activity that encourages a student to their hands for exploration. The board has different objects and textures attached for the students to explore. These items can be based around a topic/focus of classroom discussion or items used in a routine of daily living the student may begin participating in. A Wait Board is a great independent strategy to help keep students engaged in exploration at times that a teacher may be instructing 1:1 with another student.

The Little Room
The Little Room provides a warm, resonant, rich, and safe place for independent learning to take place without adult verbal input. Objects chosen must match the learner’s level of development and preferences. The side panels have interesting patterns, textures, and objects. Objects are also hung from the top to encourage visual, tactual, and auditory exploration and learning.
The Dynamic Learning Circle:

Stage 1: A student becomes aware & interested in:
- His/her own motor or sensory activities
- The objects and activities in the environment
- People in the environment – their social & communication activities

Stage 2: A student becomes curious & interested which leads to:
- Repetition of his/her own activity
- Establishing memories of his/her own activity
- Experimentation, exploration, and comparison with objects
- Imitation of the activity of others
- Responding to verbal/non-verbal communication of others
- Initiating activity
- Sharing his/her experiences with others

Stage 3: A student completes learning with an activity
- An activity is repeated to such a level that it becomes part of the student’s every day actions and patterns.
- An activity or action becomes familiar enough that it presents no more challenges to the student.

Stage 4: A student becomes ready for new challenges which leads to awareness and interest if:
- The student is given opportunities to experience new motor/sensory activities
- The student is given opportunities to experience new actions of others
- The challenges offered are within a student’s developmental level
- Other people have taken an interest in the student’s past activities
- Student accomplishments must be celebrated at this level. Do not tell students not to “mouth” objects if that is where they are developmentally, they are learning and it is exciting to them to explore new objects in this way. Monitor for safety and be excited for them.

When is a Skill a Skill?
- A skill is only a true skill when it has become a part of a student’s personality.
- Meaning the person is able to make up his/her mind whether or not he/she wants to perform the skill, and whether or not he/she find it important to use the skill.
- If a skill is used to please the teacher or even worse to get the teacher to stop asking, demanding or prompting about performance of the skill – then the student may avoid this performance as often as possible, never doing so from his/her own initiative - maybe it just reminds the student of an unpleasant time of training and teaching.
**Disharmonious Learning**

- Occurs where there is a break in the dynamic learning cycle.
- This can occur at any of the four stages.

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**Stage 1: A student is not aware and interested in his/her own motor & sensory activities:**

- Position the objects or activities so that student’s position or movement will cause a motor or sensory experience
- Position the student appropriately so that the student can become aware of his/her own motor & sensory activity
  - Remove restricting equipment (Can’t move hand or foot to explore with splints, restrictive seating – Work with campus PT/OT to develop ways for students to be out equipment for learning activities as much as possible)
  - Provide perceptual aids
- Change the objects and activities in the environment
  - so that they provide appropriate feedback
  - reflect appropriate developmental level of the student
  - Reflect the student’s motivation at the time of the activity

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**Stage 1: A student is not aware of objects and activities in the environment.**

- Position the objects or activities so that student is aware of their existence
- Position the student appropriately so that the student can become aware of objects or activities in the environment
- Change the objects and activities in the environment
  - so that they provide appropriate feedback
  - reflect appropriate developmental level of the student
  - Reflect the student’s motivation at the time of the activity

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**Stage 1: A student is not aware of people in the environment – their social/communication activities.**

- Provide time daily for a student to interact one on one with an adult at his/her emotional level
- Provide time daily for a student to interact with other student at his/her emotional level
- Respond appropriately to movement as communication
- Always provide appropriate communication at the appropriate developmental level of the student
- Provide social/communication activities at appropriate times throughout the day
Stage 2: A student becomes curious but it does not lead to repetition of his/her own activity or does not lead to establishing memories of his/her own activity.

- Offer enough time to repeat independent activity (minutes, hours, days, months, years)
- Provide activities or equipment that allows for repetition
- Limit interruptions to learning

Stage 2: A student does not experiment, explore and compare with objects

- Offer multiples of objects
- Offer a variety of objects
- Offer objects that are graspable
- Offer objects that reflect a student’s appropriate developmental level of function
- Offer objects that provide appropriate feedback
- Offer objects that are motivating at the appropriate time.
- Stage 2: A student does not imitate the activity of others
- Provide time daily for a student to interact one on one with an adult at his/her emotional level and using the appropriate phase of educational treatment
- Provide time daily for a student to interact with other student at his/her emotional level and using the appropriate phase of educational treatment

Stage 2: A student does not respond to verbal/non-verbal communication of others – or share his/her experiences with others

- Wait for communication responses from a student – verbal/non-verbal
- Limit interruptions to communication experiences
- Respond appropriately to communication from a student (verbal/non-verbal)
- Respect the communication from a student (verbal/non-verbal)
- Offer developmentally appropriate communication experiences for student

Stage 2: A student does not initiate activity.

- **WAIT! Allow enough time for a student to initiate activity.**
- Provide activities and equipment that allow for independent activity.
- Do not provide hand over hand.
- Provide developmentally appropriate activities.
- Provide the right activity at the right time – when it is motivating for the student
- Allow a student to learn cause and effect – if a student doesn’t do something – nothing happens.

Stage 3: A student does not complete the learning of an activity so that it becomes part of the student’s every day actions and patterns.

- Provide activities that motivate a student so that he/she wants to engage in the activity.
- Provide more opportunity to participate in the activity.
- Limit the prompting (verbal/physical) to engage in the activity
- Vary the opportunities to practice the skill with other objects, in other environments, etc.

Stage 3: The student does not complete the learning with an activity so that the activity becomes so familiar that it presents no more challenges to the student.

- Allow the student more opportunity to learn from the activity
- Allow the student more experiences to use the activity in multiple environments.
Stage 4: The student has completed learning and is ready for new challenges but new learning has stopped

<table>
<thead>
<tr>
<th>Cause</th>
<th>Effect</th>
<th>Intervention</th>
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<tbody>
<tr>
<td>General lack of challenges</td>
<td>Experiences are too alike</td>
<td>Offer new challenges in accordance with student’s developmental level</td>
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<tr>
<td>New challenges are too difficult</td>
<td>Lack of success</td>
<td>Adapt the challenges to student’s level of development.</td>
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<tr>
<td>Disability hinders success with new challenges</td>
<td>Too many catastrophes or fiascoes</td>
<td>Facilitate the student’s learning equipment and techniques</td>
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<tr>
<td>Anxiety and insecurity</td>
<td>Lack of curiosity, lack of exploration and rigidity</td>
<td>Let the student play according to his/her level of emotional development and use the appropriate phase of educational treatment</td>
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<td>Inappropriate expectations (too high or too low)</td>
<td>Lack of feeling of acceptance</td>
<td>Use a learning program based on a proper level of assessment of the student.</td>
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<tr>
<td>Restriction of movement</td>
<td>Lack of opportunity to learn and move. Lack of cognitive development.</td>
<td>Remove the restrictions.</td>
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<tr>
<td>Stress (caused by over exaggerated training or by irrelevant or uninteresting requests)</td>
<td>Permanent harm to the already established memory. Lack of time for learning by self. Stereotypical activity characterized by self-defiance, unwilling to participate by smiling, screaming, biting, etc.</td>
<td>Stop over-exaggerated training and expose the student to relevant and interesting learning environments</td>
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<tr>
<td>Distraction (caused by disturbance of the student’s concentration on an activity)</td>
<td>Lack of opportunity to finish the activity the student has started. The learner forgets the goal he/she wanted, does not achieve sufficient success to learn, and does not establish memories for recognition, association and motor planning. The result is the student acts more studentish than necessary.</td>
<td>Observe the student carefully so that he/she is disturbed only when it is very necessary.</td>
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Functional Skills Assessment & Learning Reassessment Levels: 0-48 months
Developed by: Dr. Lilli Nielsen

(Information contained in his handout was adapted from a presentation by: Patty Orbrutz, Director of Penrickton Center for the Blind in Michigan)

**Functional Scheme: Purpose**
- To assist educational staff in assessing a student’s developing skills as well as create appropriate learning experiences for each student.

**Functional Scheme Divided into 20 Functional Fields**
1. Gross motor
2. Fine motor
3. Mouth movements
4. Visual perception
5. Auditory perception
6. Haptic-tactile perception
7. Smell & taste
8. Spatial Relations
9. Object Perception
10. Language: Non-verbal
11. Language: Verbal
12. Comprehension of language
13. Social Perception
14. Emotional Perception
15. Perception through Play & Activity
16. Developmentally Impeding functions
17. Toileting Skills
18. Undressing & Dressing
19. Personal Hygiene
20. Eating Skills

**Emotional Level:**
Levels given in Phases 1-5 are taken from the milestones of the “Emotional Perception” portion of Dr. Nielsen’s Functional Scheme Assessment. (See Handout)
0-3 month Level of Development

- Marked by student’s movements becoming more intentional
- Increased awareness of tactile, visual, auditory, gustatory, and olfactory experiences
- Awareness of events is reinforced through repetition
- Perception is based on student’s own activities with his/her body as well as objects in the surroundings
- Student gains motor-perceptual development only when he/she stays in environments that provide feedback from perceptual modalities
- Activities experimental in nature promote psycho-social development

0-3 Month Level Special Needs Student

- It can be a long process just to find the learning environment that will be motivating to the student to become active.
- The student may have been a passive recipient of impressions for a long time (months or years)
- It is important to refrain from interrupting learning (talking, showing, entertaining, guiding hands/feet, showing how to move)
- Silently observe movement performed by the student intended or unintended
- Be sure that the learning environment is established to give meaningful feedback on the student’s movements

3-6 Month Level of Development

- Scratching surfaces – promotes ability to perform varied finger movements, acquires muscle strength and knowledge of how to use it selectively
- Playing with own fingers – interlacing, fiddling, using hands in coordinated patterns, midline, rotate wrists
- Pushing objects – learns effect from pushing, whether auditory, tactile or visual or combination of modalities
- Grasping and letting go – combine ability of grasping with using established muscle strength which allows for lifting heavy objects and to hold new objects
- Banging with clenched fist on surfaces and own head
- Visually tracking objects swinging to/fro within reach.
- Acquiring control of head movements, lifting head from side to side while in prone as well as in a vertical position
- Bracing feet against everything within reach of the feet – achieving muscle strength and haptic perceptual skills that will later enable the student to bear weight of his/her own body.
- Mouthing fingers and objects
  - Develops mouth motor ability to move food around in mouth, mix food with salvia
  - Prerequisite for performing babbling, and later for expressing words and sentences
- Developing varied ways of signaling people in his/her environment and so be able to express wishes, needs, well-being, disappointment, pain
  - Starting to communicate is dependent on a student getting a relevant reply to his/her signal
  - For student with special needs it is important to wait for a student’s signal, or else being together with the student can be described as more ENTERTAINMENT than as INTERACTION

3-6 Month Level Special Needs Student

- Must be exposed to a wide variety of learning environments. If not, the student can be so easily habituated that the student is no longer motivated to be active and so the learning is arrested.
- Before being moved from one activity to another it is important for the adult to take time to talk to the student about the activity he/she has just performed. In this way you can be assured the student knows something about the activity, and so give the student the opportunity to learn to understand language.
- Must be active in prone position over the support bench.
  - To promote achievements in the ability to sit unsupported
  - To development the ability to coordinate arm and leg movement
- Use of a wedge hinders a student from being able to use arms and legs simultaneously, and so from developing the muscle strength for the ability to sit unsupported, as well as the ability to stand, balance and walk.
6-9 Month Level of Development

- Rolling on the floor – struggling to stay on hands and knees, sitting and lying repeatedly
  - Coordination of arm and leg movements
  - Control over his/her movements
  - Improves muscle strength
  - Prepare for learning to stand and balance
- Moving an object from hand to hand
- Banging with one hand on the object held in the other hand
- Reaching for and letting go of objects, picking them up and then repeating the series of actions
- Using tongue, lips, gums for exploring objects
  - Continuing development of mouth motor skills
  - Pre-requisite for putting food into mouth
- Banging on objects and surfaces with open hand.
  - If given different objects and surfaces to bang with, this will enhance the student’s awareness of the effects of his/her actions, and thus influence cognitive development
- Using banging activity to contact the person carrying him/her
- Reaching toward another person or in other ways to signal to be held
- Experimenting with using his/her voice in different ways and wanting to present the acquired skill to an adult without actually wanting to communicate
- Achieving spatial relations, first with reaching in a lying or sitting position, later by crawling, or shuffling around in the surroundings
- Crawling after thrown objects
- A student unable to crawl has need for a position board to limit the risk of arrest of development in understanding spatial relations
9-12 Month Level of Development

- Crawling around on the floor, pulling self to standing, practicing balance
- Walking sideways while holding onto furniture
- Putting index finger into all available small holes, picking up small objects
- Manipulating objects – sucking and mouthing everything
  - Provides information concerning touch, sound and taste of objects
  - Sighted student gains visual information but must also experience tactile and auditory qualities of an object in order to have best opportunity to achieve an early concept of an object
- Manipulation of objects leads to hand rotation, differentiation of mouth motor skills, and new experiments of other activities that can be performed with objects available.
- Banging on everything with some object in the student’s hand (this promotes the ability to use a tool for a specific purpose.)
- Separating toys, pouring from containers, placing objects in specific spots (this promotes the development of the ability to play constructively)
- Using newly acquired ability to babble for communication
- Experimenting with vocalization without actually wanting to communicate
- Further understanding of spatial relations
  - Objects have a certain position in relation to the student
  - Conscious placing of objects on certain spots within reach
  - Newly achieved ability to crawl allows for wider environment to explore
- Initiation of hiding games using objects – learning that objects still exist although they are no longer visible
- Performing simple functions of daily living
  - Taking off hat, putting food in mouth, washing stomach
  - Learning to be independent already starts by the time a student reaches 9 months of age
- A student that does not receive the opportunity to participate in daily living skills or to participate in games at this stage of development can develop learned helplessness
  - Established a student who expects others to take care of him/her
  - Established a student who can throw a tantrum
  - Established a student who will be dependent on others
- Prior to this stage, the student has taken it for granted that adults around him/her will meet his/her basic needs for food, warmth, sleep, clothing, bathing and emotional attention.
- At 9 months – the student starts to respond to emotional attention.
- The student established strong attachments to a few individuals
- The student reacts with uneasiness or anxiety when left with people he/she considers strangers.
- The student wants to stay with persons he/she considers necessary for his/her emotional development
- The student is rehearsing affective bonding and is eager to imitate the adult.
- The student is motivated to play in such an experimental way that he/she achieves object concept and commences to develop self-identification.
- This time frame is frequently called “separation anxiety” and is sometime referred as a behavior that should be suppressed.

9-12 Month Special Needs Student

- A student may be “forced” to spend time with strangers.
- Being exposed to strangers or being required to behave socially to strangers too often during this period could impede a student’s established emotional attachment to his/her parents.
- If a student is taken care of by a great number of individuals, the student will be presented with a great number of different strategies of caring approaches that the student will have neither the capacity nor sufficient energy to become familiar with any of them.
- Consequently none of these people will serve as a person for the student to rehearse affective bonding or with whom he/she can establish an emotional attachment.
- The student does not achieve the satisfaction and security necessary for further emotional and cognitive development.
- In schools, residential centers, etc. it is necessary for the student to have 2 or 3 permanent teachers only on whom the student can rehearse affective bonding.
  - These teachers should be with the student during lessons
  - The number of extra staff or therapists should be limited
  - Having 2-3 teachers ensures the student’s world does not collapse if one teacher should leave
12-15 Month Level of Development

- Crawling up onto sofas or chairs
- Walking. The student often walking chooses walking over crawling, he/she will walk a short distance then crawl the rest of the way.
- A special needs student who has learned to bear his own weight may take a few steps and then sit – because he/she is unable to go further. He may give up the goal because he/she doesn’t have the energy for walking or crawling or because he/she has never learned to crawl.
- Eating using fingers and a spoon alternately.
- Drinking from a cup.
  - The student should be given plates and cups to play with.
  - The student will gain object concept and understanding of position.
  - This will allow the student to grasp the items, but also to replace it on the table
- Playing banging games by using an object.
- Banging on everything gives an auditory comparison and is of great importance to a student’s development to talk.
- A visually impaired student at this stage should be given a stick or cane when going for a walk, but should not be given instruction on how to use it properly – as the student should be developing his/her own strategies during play.
- Playing with big objects while sitting on the floor.
  - Enhances student’s muscle strength
  - Improve arm movements with muscle strength
  - Enhance balance skills
  - Improve concept of size and weight of objects
- Building tents
  - As soon as they are built, will take down then rebuild
- Playing with quantities – using his/her body
  - Kicking rhythmically
  - Clapping
  - Banging on objects or surfaces
  - Repeating babbling sequences
  - Putting two/three objects in one hand
- Putting into and pouring from containers
  - Prepare for concepts of full, empty, no space for anymore
  - Enhance spatial relations concepts of – putting next to each other, in front of, etc.
- Placing objects on top of each other.
  - Most student are interested in knocking over stacks that are built, but he/she imitates stacking.
  - Most student will put a big object on a small one, or put a lid on a pot filled with objects – but will then immediately remove the lid.
  - Student starts to control whether the object exists – which is important for object permanence
- The visually impaired student does not learn by covering an object – but by placing an object in a certain spot, doing something else, and then searching in order to prove that the object is still where he/she placed it.
- Exploring, examining, comparing and discovering new ways to do familiar activities. This enhances confidence and gives the student a feeling of mastery.
  - The student is less dependent on others
  - Self-identification is enhanced
  - Emotional development is stronger
- Uses one word sentences to express needs and wishes.
- Understands the relationship between words and actions
- The adult must learn to distinguish between when the student has the intention of communication and when the student is experimenting with his vocalizations
- Inviting an adult to play rough and tumble games
  - It is important the adult learn to wait for the student to initiate the next step in the game
  - If the adult awaits, the student can use all his/her energy to initiate.
  - But if the adult encourages or persuades – then the student must listen and initiate
  - Maybe the student would like to initiate another activity
- Drawing at the level of scribbling on paper
- Improving eye hand coordination
- He/she crawls to and looks at other student, listens to, but doesn’t make physical contact
- Developed appropriate attachments to adults
15-18 Month Level of Development

- Climbing up and down on sofa, climbing over obstacles and underneath furniture, going up and down stairs with a few steps
  - The student has increased control over his gross movements.
  - The older a student is when he commences to walk, the longer time it will take to achieve full control over his/her movements and to acquire stability and balance.

- A special needs student who, for example, is twelve years old when he learns to walk unsupported needs many opportunities to perform gross motor activities.

- If these opportunities are not available, there is a risk that the student will be so habituated to the few available activities that these are no longer challenging to him, resulting in lack of progress or even regression of his gross motor development

- Separating objects – an initial stage of joining objects together
  - If a student does not have enough objects to separate, he/she will turn to the adult to have the parts assembled again – so that the student can separate them again.

- A special needs student needs many more and different objects to separate than a non-disabled student
  - The student may stop separating objects or start to repeat whatever limited activity is available (thus becoming engaged in stereotypical activity)

- Imitating the adult’s activities
- Putting objects together that do not require much accuracy
- Using skills performed previously in new ways
- Listening intently to other student crying or babbling, and maybe imitating a student’s crying
- Inviting guests to participate in give and take games.
18-24 Month Level of Development

- Jumping on both soft and hard materials, walking up and down stairs with several steps.
- Tests strength when running – pushing boxes, pulling carts or garden hose, lifting boxes that are too heavy
- Moves objects around in a room or from one room to another. Building tents using furniture or rugs.
- Participation in domestic work – by participating the student becomes a part of the daily routine and he/she gains sense of being an independent person who can function both alone and with other people
- Practices planning next activity – places toys in different spots in the house, moves them from place to place with determined look
- Special needs student have difficulty becoming the one who helps. Adults must be aware of the necessity of finding activities adapted to the student’s ability, so that the student can be seen as one who helps.
- Undressing
- Role playing – feeding a doll, cooking
- Special needs student may be observed performing movements belonging to a role playing game – even if the objects involved in the game are not present. Such pantomime movements can be wrongly misinterpreted as meaningless or unvaried (stereotyped)
- Exploring and experimenting – thus increased problem solving.
- While a student is trying to solve a problem, he/she should be given enough time for doing so. The student should also be allowed his/her own experiences of both the appropriate and the inappropriate ways of solving the problem.
- For the student with special needs, it can take up to an hour to solve a problem. If the adult helps the student, the student is cheated
  - Out of the experience of problem solving
  - Out of the experience of feeling pride or mastery which follows having solved a problem to his/her own satisfaction
- Exploring and experimenting – provide stronger object concepts and concepts of events
  - Naming objects
  - Words as symbols – emotions, objects
  - The mere ability to utter words is meaningless unless a student can participate in the event, achieve object concept regarding a specific object, or have a certain feeling about the event.
  - Without the above mention – speech becomes echolalia
- Sharing an experience with other people, as well as protesting about untimely interference or interruption of the student’s activity.
- Watching and listening to other student, but also moving close to the student and touching or probably hugging or kissing the student. It is also typical to pull hair, bang on the student, poke fingers in eyes. At 22 months, the student will become interest in the other student’s toys, and steal them.
24-30 Month Level of Development

- Running and jumping. Experiment with speed of running & jump over stone or rocks. Experiment with balance – stand on one foot, balance on curbs, try all things on playground.
- Experiment with numbers of items, concepts of full, empty, big, heavy, colors.
- The special needs student is dependent on others to obtain containers of varying objects, but also to allow the student to make his/her own choices.
- The more a student at this level of development is allowed to make his/her own choices, and to make up his/her own mind about what to do with available objects the better is the basis for developing self-identification and for becoming an independent person.
- Experimenting with scissors and crayons.
- Experimenting with using a knife.
- The student is very inquisitive – will leave what he/she is doing to check out a sound, or what other people are doing.
- Playing with words. Uses short sentences.
- Establishes friendships with visiting relatives.
- Likes to sit next to other student. Occasionally imitate one another, but if they have enough objects will play next to one another.
- Very attached to place where he/she lives. Becomes shy when visiting unfamiliar places or meeting unfamiliar people.
- Can be easily emotionally affected by having to leave not only parents or people he/she is attached to, but places where he/she normally stays.

30-36 Month Level of Development

- Improved gross motor skills - crawling up slopes, dunes, playground equipment.
- Improved fine motor skills – putting small objects in holes, making representational drawings
- Improved language – increased number of words, understand 50-70% of what he/she is told
- Able to share toys.
- Can become quite angry when not allowed to get things on his/her own
- Has a need to share experiences and discoveries with adults.

36-42 Month Level of Development

- Experimenting with high speed – bicycling, swinging, running, kicking. Jumping on one foot.
- Experimenting with any tool – if given 20 pencils, will try every one.
- Role playing using miniatures.
- Building tents – bringing toys into tents
- Improvements in speech – wants to know every object, person, function
- Understands simple short instructions – if related to things he/she already knows
- The student trusts most people, so much so that the student will follow or walk away with any person who talks kindly.
- Insists on doing things him/herself – dressing, spreading butter on toast
- Likes to participate in domestic work, going shopping

42-48 Month Level of Development

- Uses all the skills achieved during former periods in new connections – while playing constructively alone or together with other student. Changes between fine and gross motor activity throughout the day.
- Beginning to understand there is a future.
- Playing with miniatures, role playing, copying others or television programs.
- Participation in group activities, visiting neighbors, playing with young student in group, chatting with adults.
- Doesn’t need a nap, but is close to falling asleep during the last meal of the day.
- Willingness to listen to instructions, and follow instructions – but tasks must be simple. The student will leave the unfinished task if it is too time consuming.
Phase I – Offering

- Absolutely no demands are placed on the student at all. The only request from the teacher is that they be allowed to play near the student. The proximity may differ depending on the student.

- Purpose
  - To promote trust between the student and adult
  - To observe the student’s reactions to events in their environment
  - To learn what the student likes/dislikes
  - To begin observing the way a student communicates (similar to Every Move Counts Observations), using this information to begin assessing emotional level.
  - To introduce self-activity

- Reminders:
  - Teaching above the cognitive/emotional level can lead to negative social interaction which can cause the student not to trust staff.
  - Consider allowing students to sit or lay on the floor at any age, if this is position that allows them play more comfortably/freely. Consult the OT/PT/Nurse as appropriate for the student to ensure positioning/safety/heath concerns are addressed before placing the student on the floor or removing splints, etc. You may see the student moving/interacting in ways that they may not be able to if in a chair/table situation.
  - Students should always have a choice to participate, if they make any indication that they do not want anyone in their space, then staff needs to respect it.
  - Understanding that staff cannot always accept a “no” from student for participation in medical tasks, bathrooming, positioning, etc that need to occur, we will accept a “no” for instructional tasks presented at a Phase 1 level.
  - Consider any observed “decline” communications and determine if it was a response to the play occurring near the student, sound in the environment, etc to determine if the session needs to be continued, modified, or stopped.
Phase II - Imitation

- **Purpose:**
  - To increase the student’s interest in activities nearby
  - To increase the student’s ability to initiate
  - To increase the student’s belief in him/herself
  - To introduce activities and movements not as yet performed by the student

- **Start by imitating the student’s activity, even if this is stereotypical.**

- **Reminders:**
  - If you see negative behaviors begin to develop, go back to Phase 1 – Offering.
  - Meet the student where they are, not where you want them to be.
    - Example: If a student is safely “head banging” an object, try placing an object between the student’s head and the banging object, then begin moving it away from their head slowly over time. Also hanging objects in close proximity to the students head for them to reach, then offering gradually lower.
  - A student can’t participate if they do not have unrestricted movement. The goal is to give the interaction and the opportunity to initiate. Work with your campus PT and OT on positioning and accessing activities for each individual student.

**The Goals of Offering & Imitation**

- To help the student to trust the adult and to help him/her to believe in him/herself.
- To give the student the opportunity to achieve new abilities so that he/she has more with which he/she can contribute during the next phase.
- After assessing the student’s emotional level, develop a plan for instruction. Consider the emotional level and plan activities that may be appropriate for a child at that level.
Phase III - Interaction

- Purpose:
  - To help the student learn dependency on one or several people
  - To help the student initiate interactions
  - To enhance the student’s development of self-identity
  - To give the student the basis for social development

Phases I, II, & III

- Phases I, II, and III establish a student’s emotional development.
- This is done by establishing an exchange and balance between:
  - interaction and self-activity
  - Dependence and independence

Phase IV – Sharing the Work

- Purpose:
  - To increase the student’s experience of success
  - To involve the student in new social relationships
  - To increase the student’s interest in acquiring new abilities
- The aim is to give the student the opportunity to learn dependence and interdependence; that to be one who does something does not necessarily mean that one has to do everything, or do everything perfectly.

Phase V - Consequence

- This can be introduced once a student has an emotional development of approximately 2 years of age.
- Purpose:
  - To help the student to endure meeting demands
  - To help the student endure changes in life
  - To help the student feel self-confident – which is fundamental to make your own decisions about your life
  - To establish a sense of responsibility
Dr. Lilli Nielsen & Active Learning

- Dr. Nielsen began developing Active Learning strategies for students who were blind.
- Growing up in Denmark with 4 siblings who were visually impaired gave her a perspective on development for individuals with visual impairments and multiple disabilities.
- She has written several books as well as developed equipment, many of which we will talk about today.
- [www.lilliworks.com](http://www.lilliworks.com) – Sole source for her books and equipment
- Always remember that these items were written several years ago and in Denmark so some of the language used is different from those terms and phrases that we typically use with our staff and parents.

Active Learning in a Diverse Self-Contained Classroom:

- Students learn through exploration, examination, and interactions with their environment.
- Our target population of students typically have significant, multiple impairments, but not always visual impairments.
- As teachers, it is our job to design activities that actively engage our students and encourage their participation and independence.
- Our students are developmentally 0-48 months with scattered skills in areas of development. Our students may be ambulatory or non-ambulatory. Students may have