64TH CONFERENCE ON EXCEPTIONAL CHILDREN

WORKING TOGETHER TO ACHIEVE STUDENT SUCCESS

"Wiggle Time"

Interdisciplinary Inclusion

Services for PreK & Beyond

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Objectives:

- Analyze current evidence findings on inclusion practices for PT, OT & SLPs.
- Analyze current evidence findings on interdisciplinary practices in the classroom.
- Introduce you to a classroom model at DPS
- Break out groups

Rationale for this presentation

- Common commitment
  - Serve the student
  - Functional participation
- Education mandates that we work collaboratively
  - Understand each discipline
  - Respect the roles and contributions of each discipline

"Therapy isn't tennis lessons"

"It's funny to think about how therapy has been provided much like tennis lessons in the past. A student works with a professional for an hour each week on specific skills. The hour of instruction is up to the professional, but practice between the lessons is the student's responsibility. Tennis lessons alone will not make someone a better player. It's the practice between the lessons that makes a difference" (McWilliam & Scott, 2003).

Definitions:

- One-on-one direct /pullout intervention
  - A student is separated from his/her peers
  - Pullout only model
    - Therapists don't get to see classroom performance
    - Teachers don't see intervention used

Although therapy that is provided in-class may be considered integrated, location is just one of several factors that determines the "integratedness" of therapy. Other dimensions of therapy include (a) presence of peers, (b) context of intervention, (c) initiation, (d) functionality of skills, and (e) consultation. Manipulation of these variables determines how segregated or integrated the therapy is.

MODEL	LOCATION	THERAPY FOCUS	CONTEXT	PEERS	TEACHER'S ROLE
Individual pull-out	Therapy room or other space apart from the class	Directly and exclusively on child functioning, usually on greatest area of need	Can vary from drill to work to play-based intervention, determined by therapist	Not present	To provide informatic before therapy and receive information after therapy session
Small group pull-out	Therapy room or other space apart from the class	Directly on functioning of child(ren) with special needs; some attention to children without special needs, if present	Can vary from group to drill to play-based intervention, determined by therapist	One to six peers present, all or some of whom may have special needs	To provide informatic before therapy and receive information after therapy session to schedule group session, to decide with therapist which peers will participate
One-on-one in classroom	Classroom, often apart from other children	Directly and exclusively on child functioning, usually on greatest area of need	Therapist or child-initiated, unrelated to concurrent classroom activity	In classroom but not involved in therapy	To conduct activities and play with other children, keep childre from disrupting therapy; rarely to watch therapy session, to provide information before therapy and receive information after therapy session
Group Activity	Classroom, small or large group	On all children in group and on peer interactions, with emphasis on meeting special needs of one or more children	Therapist or child-initiated, may be planned with teacher	All or some children in group have special needs	When small group, tc conduct activities anc play with other children; if possible, t watch or participate i therapist's group. When large group, to watch or participate i group activity. To participate in planni large and possibly small-group activity

SERVICE DELIVERY MODELS (From McWilliam, R.A. (1995). Integration of therapy and consultative special education: A continuum of early intervention. *Infants and Young Children*, 7 (4), 29-38.)

Multi vs. Interdisciplinary

- Multidisciplinary
  - Work in parallel
  - Independent goals
  - Separates the child's function into domains
- Interdisciplinary
  - Disciplines that ***collaborate*** through
    - joint planning
    - decision-making
    - goal-setting

Generalizability of skills

- The ability to apply what has been learned in one context to other contexts
  - PT
  - OT
  - SLP
  - Academics

Inclusion

- "The action or state of including or of being included within a group or structure." (OxfordDictionary.com)
- **In education**
  - not just for students with special **educational** needs

Integrated Therapy

- "The coordination of therapy or consultative special education within the ongoing routine of the classroom."
  (Integrated Therapy www.vanderbiltchildrens.com)
- Specialists provide services by:
  - Consulting with the teaching staff
  - Combination of direct, monitor, and consultative services
  - "Individualized within routines"
  - Not taking the child out
  - Not isolating the child from the ongoing activity
- Very young children
  - unlikely to learn skills through short periodic (e.g., weekly) sessions
  - Can learn from ongoing intervention from teachers and parents
- Natural setting to practice functional skills

Embedding Intervention

- Embed: “implant (an idea or feeling) within something else so it becomes an ingrained or essential characteristic of it.” (oxforddictionary.com)
- Intervention
  - Curriculum
  - Context
  - Routine-based
  - In the student’s setting
- Planning/collaborating between teachers & service providers

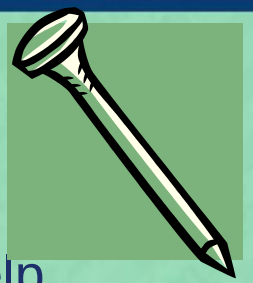
Are Embedding & Integration the same?

- Embedded intervention emphasizes:
  - Value of children's self-initiated, naturalistic, and contextualized interactions throughout the day (Kaderavak & Justice 2004).
  - Role of adults as *facilitators* of children's learning
  - Influence of social interactions and child–adult relationships on children's development
  - Direct instruction or clinician-directed therapeutic interventions are NOT used for skill development in embedded approaches (Watson, Layton, Pierce, & Abraham, 1994).

- Integrated therapy:
  - Occurs in the natural settings where practice is needed
  - Communication and collaboration greatly increased due to proximity
  - Continuous assessment of student needs in a variety of school environments
  - Students do not miss valuable instruction time (Muskegon Public Schools Website)

Perspectives on Embedded Intervention

- Embedding Intervention & Integrating Therapy – A Team Approach – Partnerships for Inclusion – Frank Porter Graham Child Development Institute – UNC-CH 2009



Teacher's Perspective:

- Aware of what children are working on & what strategies will help them achieve their goals
- Given multiple opportunities to observe interventions & learn strategies with modeling
- Generalization of skills in classroom, throughout the school day with different instructors
- Provides needed repetition and consistency for students
- Demystifies the therapy room as magic
- Increases the therapist's visibility
- Classroom team work together as a more cohesive team
- Higher level of service is provided
- Informs transition decisions
- Generates strategies for all students

Therapist's Perspective:

- More opportunities to:
  - Share knowledge with team
  - Receive information about the child's functioning in daily routines
  - Observe practices in the child's natural environment – suggestions more relevant
- Learn from teachers who know the child:
  - interests, friends and reactions to different approaches
  - whole-student perspective
- Help identify, develop, and generalize skills into functional activities throughout the day
- Problem solve on the spot
- Identify ways to modify and adapt the environment
  - Target functional skills
  - Reduce equipment requirements
- Better evaluation of student
  - Better knowledge of the student and his/her progress
- Develop educational strategies & increased knowledge of general curriculum

Therapist perspectives cont.

- Students generalize with different staff
- More coaching on proper techniques
- All members of the team
  - identify problems
  - contribute possible solutions
  - single focus
- Better relationship and understanding among staff
- Collaboration on challenges and sharing of successes
- Increases role/professional identity
- Grows repertoire of skills

Parent's Perspective:

- Use of consistent models
- Work together as a team
- Reinforcing and continuous repetition of goals
- Strategies developed for children using a large wealth of knowledge, experience, and resources
- Encouragement of parent involvement
- Reassessing and adapting programs to achieve positive results
- Doesn't feel like therapy but a natural flow of daily activities/routines.
- Builds positive relationships with the child
- Better relationship with the specialists
- Ideas and views are validated

Child's Perspective:

- New skills
  - Learned in a context in which they will use them
  - Child's preferred activities
  - Do not need to transfer from therapy context to natural environment
  - Multiple opportunities to practice throughout the day in many contexts
- Supports classroom membership
- Increases involvement in school culture
- Focuses on child's independence and engagement.
- Follow the child's lead
  - Not imposing teacher/therapist's plan on child)
  - Motivation through activities child enjoys for teaching/intervention
- Peers as models
- Engagement of the child more likely
- Minimizes hallway transition time
- **Students get more services!!!**
  - More intervention and practice
  - Intervention occurs between specialist's visits

Participation-based Therapy for Children with Disabilities

Palisano (2012)

- ICF Model for rehab outcomes
  - Home & community participation
- Optimal participation is the dynamic interaction of
  - determinants (attributes of the child, family, and environment)
  - dimensions (physical, social, and self engagement)
- Participation-based PT & OT
  - Real-life experiences enable children to learn new activities
  - Develop skills
  - Empowerment of families to advocate for full inclusion and integration of their child in society

Effects of Group-Based Versus Individualized-Based Exercise Training on Motor Performance in Children with DCD: A Randomized Controlled Pilot Study

Hung (2010)

- Subjects:
  - 23 children
  - Diagnosis of DCD
  - Mean age: 8 y.o.
- Results:
  - Group-based training produced similar gains in motor performance to individual-based training.

Comparison of Individual and Group/Consultation Treatment Methods for Preschool Children with Developmental Delays

Davies (1999)

- Subjects:
  - 18 PreK students classified as DD
- Intervention:
  - Individual/direct therapy OR
  - Group/consultation occupational therapy
- Results:
  - Both demonstrated significant increases in fine & gross motor skills
  - No significant differences between treatment methods

Comparison of two methods of service delivery for students with learning disabilities.

Palisano (1989)

- Subjects:
  - 34 students in special education classrooms
  - Average age 7 y.o.
- Intervention: emphasize sensory integration
  - Therapist directed group: combo of large & small group
    - OT twice a week for 6 months – 1 large group, 1 small group (2 students)
  - Consultation group: large group therapy & teacher-led follow-up sessions
    - OT once a week for 6 months in a large group
    - Therapist also consulted with teacher 30 min each week and provided monthly follow up lesson plans
    - Students performed follow up activities 3 times a week

Comparison of two methods cont.

- Results:
  - Each method was effective
  - Therapist group improved more in visual-perceptual skills
- Discussion:
  - Individualize service delivery:
    - Based on student progress
    - Therapy needs of each group
    - Teacher satisfaction
    - Utilization of available resources

Team Collaborative Practices Between Teachers and Occupational Therapists

Barnes (2001)

- Survey of Teachers
  - Collaboration with OTs
    - On goal writing
    - Monitoring and treatment within the classroom
- Pros:
  - Improved skill levels of students
  - Improved perception of OTs contributing to the improved skill levels of students
- Cons:
  - Difficult to schedule meetings and time to meet

Use of Groups in Pediatric Physical Therapy: Survey of Current Practices

LaForme Fiss A, Effgen S. (2007)

- Questionnaires mailed randomly to 500 APTA pediatric members
  - 285 Respondents (57%)
  - Only 41.4% of whom used groups
- Results:
  - Majority of respondents do not use group intervention
  - More years of practice slightly more likely to use groups
  - Group size between 2-4
  - Most common diagnosis seen in group – DD
  - Task specific and developmental activities worked on
  - Exercise and Recreational Activities also noted
  - Perceived Effectiveness were variable

Use of Groups cont.

- Motor Learning opportunities for expanded practice
- Positive social aspects of intervention
  - Modeling
  - Motivation
- Limitations with group intervention
  - Low level of reimbursement
  - Lack of individual attention
  - Down time with taking turns within the group
  - Space constraints
- Further Research is important & necessary

Effects of Group Motor Skill Intervention on 5- to 6-YO Children with DCD

Pless et al. (2000)

- Subjects: children with DCD diagnosis
  - Experimental group, n=17
  - Control group, n=20
- Intervention:
  - 1x/week for 10 weeks
- Results:
  - No significant differences between groups on the Movement ABC motor test or checklist before or after intervention

Effects of Group cont.

- It is important that when children are learning a motor skill:
  - Want to learn the task
  - Understand what to learn
  - Guided to a successful accomplishment
- Children with motor difficulties may:
  - lack the motivation to learn,
  - the understanding of what is to be learned
  - or the ability and opportunity to practice
- Children with more severe motor difficulties would benefit from more specific and individualized intervention.
- Moderate to mild motor difficulties did benefit from group intervention.

Intensive Motor Skills Training Program Combining Group and Individual Sessions for Children with Cerebral Palsy

Storvold (2010)

- Subjects:
  - 6 children
  - Ages 3-11 y.o.
  - GMFCS levels I-IV
- Intervention:
  - Multidisciplinary, intensive goal directed functional therapy
  - 6 weeks with alternating group and individual training
  - 5 days a week
- Teacher, OT, PT

Intensive Motor Skills cont.

- Groups were led by different teachers or the PTs or OTs
- E.g. music teacher would compose a new movement song with the goals of the children in mind
- During group, adults would provide guidance techniques according to the needs of the child
- Results:
  - High attendance
  - High level of goal attainment
  - Positive gains on standardized tests
  - Positive parent feedback
- It is possible for children to successfully work towards their individual goals with children of varying ages, skill levels, and goal areas are different.

Collaboration Between Team Members in Inclusive Educational Settings

Nochajski (2001)

- Semi-structured Interview
  - Collaboration in their school setting
- N=51
  - OTs, PTs, SLPs, Regular Educators, Special Educators
  - 5 school districts in Western New York
- Collaboration is mutually beneficial for students and team members but implementation is problematic
- Definition and Practice of collaboration is variable and frequently not practiced correctly.
- Lack of time
  - greater problem for related service providers than for special and regular educators

Speech Language Pathologists' and Teachers Perceptions of Classroom-Based Interventions

Beck & Dennis (1997)

- Surveys sent to Speech Pathologists and teachers regarding the advantages and disadvantages of classroom based intervention
- Although this model was reported by both groups as being most effective, both reported using the one teach/one drift model most frequently.
- Both groups listed planning time and the inability to target specific speech-language goals as primary disadvantages
- Data collection and classroom management were also areas of concern, particularly by the Speech-Language Pathologists.

Early Language Intervention: A Comparison of Classroom and Individual Treatment

Wilcox et al. (1991)

- Compared lexical acquisition for preschool children in two settings: classroom-based and home settings
- 20 preschool children with language delays
- Provided speech therapy 2 x per for a total of 24 sessions
- Intervention used: *Interactive modeling* (establishing joint attention, following child's lead, modeling words corresponding with child's interest, and expanding utterances with semantically related words (expansions). If a child labeled an item, incorrectly the SLP provided the correct label. Children were never asked to label an item or imitate a production.

Results

- When treatment data was the only consideration, classroom-based was found to be as effective as individual treatment
- Additionally, the children in the classroom-based treatment group demonstrated better generalization (increased number of spontaneous productions of targeted words used in the home setting.
- Children who were less cognitively mature, based on pretesting, derived the greatest benefit from the interactive modeling in the classroom-based condition

Why?

- Naturalistic training environments may better generalize to untrained environments
- Children in the classroom-based intervention participated in a variety of preschool activities, providing them with opportunites to observe and use linguistic targets that are not available in the home setting.
- Routine and structure are embedded in the classroom. Scripts and routines may facilitate language growth
- Greater variety of conversational partners in the classroom and peer models

Implications

- Classroom based intervention is likely to result in greater productive use of lexical items in a child's home setting (greater generalization).
- When possible, lexical training should be conducted within a classroom environment in such a way that language goals are fully integrated with instructional goals (e.g. "Wiggle Time").
- Greater lexical gains may be associated with a greater diversity of conversational partners, diversity of activities, and activities embedded in routine.
- Progress should be monitored across a variety of settings for a more accurate picture
- Children with less mature cognitive abilities may benefit the most from this type of treatment.

A comparison of Service Delivery Models: Effects on Curricular Vocabulary Skills in the School Setting

Throneburg et al. (2000)

- 12 classrooms-177 children enrolled in Kindergarten through third grade at two different elementary schools
- The children in the three sets of grades (K-3) were exposed to different speech-language service delivery models (collaborative, classroom-based, and traditional)
- Children who qualified for speech/language services (identified and tested within six months of the study) were included

Service Delivery Models

- ***Collaborative***: The SLP and classroom teachers collaborated to plan intervention and activities to target vocabulary words from the curriculum.
  - Collaborative lessons were conducted in the classroom and instruction was shared by all individuals.
  - Five words targeted minimally each session, for a total of more than 60 words over the course of the semester
  - Classroom teacher continued to target vocabulary and concepts throughout other lessons during the week
  - Children who received speech-language services minimally received one small group or individual 15 minute pull out session per week for the SLP to target and document progress

Service Delivery Models (continued)

Classroom Based (Teacher-SLP Independent):

-Children received classroom based intervention from the SLP without collaboration with the teacher

-Classroom teachers taught curricular goals for the classes independently

-Children who received speech-language services minimally received one small group or individual 15 minute pull out session per week for the SLP to target and document progress

Traditional Setting (SLP Pull-Out):

-Children seen in small groups or individually in the speech room averaging 50 minutes weekly

Results

- Children with speech-language deficits in the ***collaborative setting*** made ***substantially greater gains*** than the other two service delivery conditions

- Similar curricular vocabulary gains were made in the in the pull out condition and classroom based condition (teacher and SLP working independently

.

Score/Setting Total Test Scores	Pretest M	SD	Posttest M	SD	Test Gain M	SD
Collaboration (N = 6 groups)	28.79	8.14	48.75	7.46	**19.96**	5.91
Classroom-based(N = 6 groups	27.11	3.61	39.30	3.18	**12.19**	5.78
Pull-out (N = 6 groups)	32.47	10.12	45.72	11.57	**13.25**	3.90
Response Level Scores						
Collaboration (N = 6 groups)	1.44	0.41	2.44	0.37	**1.00**	0.30
Classroom-based(N = 6 groups	1.36	0.18	1.97	0.16	**0.61**	0.29
Pull-out (N = 6 groups)	1.62	0.51	2.29	0.58	**0.66**	0.19

Group means and standard deviations for vocabulary test total scores and response level scores for subjects who qualified for speech or language services

Results

- Children who *did not qualify for speech and language services* also made greater gains in the collaborative treatment condition

Score/Setting Total Test Scores	Pretest M	 SD	Posttest M	 SD	Test Gain M	 SD
Collaboration (N = 6 groups)	39.5	4.50	51.07	4.36	**19.96**	5.91
Classroom-based(N = 6 groups	38.08	5.31	48.46	4.01	**12.19**	5.78
Pull-out (N = 6 groups)	39.15	6.28	43.53	6.39	**13.25**	3.90
Response Level Scores						
Collaboration (N = 6 groups)	1.98	0.23	2.55	0.22	**0.58**	0.12
Classroom-based(N = 6 groups	1.90	0.27	2.42	0.20	**0.52**	0.08
Pull-out (N = 6 groups)	1.96	0.31	2.18	0.31	**0.22**	0.02

Group means and standard deviations for vocabulary test total scores and response level scores for subjects who *did not qualify* for speech or language services

Why?

- The sharing between the SLP and classroom teacher allowed for the exchange of ideas and release from traditional roles
- The teachers provided input about curricular vocabulary and goals, assuring academic relevance
- The SLP provided information regarding the student's communication needs to increase success in the classroom
- The teachers at the collaborative school incorporated many carryover activities throughout the week.

Clinical Implications

- Collaboration may be the most effective service delivery model for vocabulary instruction with children in Kindergarten through third grade

- Collaboration and communication play an integral role in a successful intervention plan.

Effectiveness of a Collaborative Consultation Approach to Basic Concept Instruction With Kindergarten Children

Ellis et al. (1995)

- Looked at knowledge of basic concepts in Kindergarten children following a collaborative consultation model of service delivery by the classroom teacher, P.E teacher, and SLP
- 40 children from two Kindergarten classrooms in an inner city classroom assigned to the experimental group or the control group
- Children were given the Boehm Test of Early Concepts (BTBC-R) at the beginning of intervention
- Classroom teacher and P.E teacher generated a list of target concepts they would both provide weekly instruction on

- SLP met with both teachers simultaneously at the beginning of the intervention and provided a calendar with one concept to target each week. Also met with each teacher on a weekly basis for 15 minutes
- Intervention was directed at the target concepts for 8 consecutive weeks
  - 30 minutes of concept instruction from classroom teacher
  - Additional 20 minutes later in the week presenting a concept story and other activities suggested by the SLP.
  - Concept was mentioned in incidental instruction and students were asked to complete a worksheet on the concept at the end of each week
  - Physical education teacher emphasized the concept during the 30 minute physical education period
  - Children in the control group received the regular Kindergarten curriculum

Results

- Children in the experimental group scored significantly higher on the posttest than the children in the control group
  - Experimental group mean post-test score: 6.74
  - Control Group means post-test score: 4.52
  - Children in the experimental group did not score significantly higher on the 41 non target concepts and post-test scores were similar for these items

Implications

- Demonstrates basic concept instruction increases basic concept knowledge
- Demonstrates the effectiveness of working as a collaborative team
- Demonstrates the feasibility of conducting treatment collaboratively

Facilitating Language Development for Inner-City Children: Experimental Evaluation of a Collaborative, Classroom Based Intervention

Hadley et al. (2000)

- Study explored effectiveness of a collaborative, classroom-based model in enhancing the development of vocabulary and phonological skills in Kindergarten and first-grade children
- 4 classrooms participated; 2 in each group (one kindergarten only and one kindergarten-first-grade classroom)
- Experimental group included a collaborative model consisting of three components

  1) Professional education

  2) Joint curriculum planning

  3) Use of naturalistic language facilitation techniques to implement the language enhanced curriculum

- SLP spent 2.5 days per week in the classroom
- Teachers and SLP educated each other, worked together, and supported one another
  - SLP shared information regarding language development, naturalistic language facilitation, and phonological awareness
  - SLP and teacher chose 20 vocabulary words at the beginning of each week's thematic unit to target. Words were incorporated stories, songs, math activities, art, and small and large group activities
  - Two pairs of letter sound associations were highlighted weekly (e.g. which letter makes the "mmm" sound) and written letter was displayed
  - SLP led 25 minute center all children rotated though once weekly to work on phonological awareness activities
  - Phonological awareness were incorporated into incidental teaching opportunities and classroom activities (e.g. rhyming names during roll call, sorting show and tell items by beginning letter)

Results

Vocabulary Measures

- Children were tested at the beginning and end of intervention using the PPVT, EVT, and three phonological awareness tasks
- Children in the experimental group scored significantly higher on both the PPVT-III and the EVT (Children in the experimental group on average demonstrated average adjusted gains of 12 and 15 standard score points. Control group= 5-7 points)

Phonological Awareness Measures

- Measures of rhyme, beginning sound awareness, and letter-sound association were administered at pretest
- No difference was apparent on measure of rhyme
- Significant differences on measures of beginning sounds awareness and letter-sound association
- Experimental group score significantly better on a “deleting” sounds task. This skill was never targeted and suggests generalization to a novel task
- These results consistent in both Native English teachers and nonnative speakers

Discussion

- Classroom based collaboration between classroom teachers and Speech-Language Pathologists holds promise as a highly effective means of facilitating vocabulary development and phonological awareness
- The authors acknowledge that 2.5 days per week of SLP intervention may not be realistic
- Teachers became more comfortable with enhancement activities and language facilitation techniques, thus making it possible to reduce the time the SLP spends in the classroom.
- In this district, the hope was to develop an effective classroom based collaborative model that could be scaled back in intensity once the approach was validated
- The authors recognize that financial support for this type of model, but stress that the role of the SLP in this scenario is *to enhance the language abilities of all children* who are at risk for academic failure instead of *providing services to those identified with disabilities.*

Classroom-Based Assessment of a Collaborative Intervention Program with Kindergarten and First-Grade Students

Farber, J.G., & Klein, E. R. (1999)

- 552 children from 12 classrooms in 6 different elementary schools in Philadelphia
- Treatment Group 1 (T group 1): One K class and one first-grade class in each of the 6 different schools. Received teacher-therapist intervention three times per week (2.25 hours) the entire school year
- Treatment group 2 (T group 2) Students that were randomly selected from each control class (Left their control class and participated in therapist-teacher intervention with T1 students
- Control Group (C): Intact classes each with one consistent teacher

- Measures included subtests of the MAGIC Language Test and Teacher Questionnaire of Student Language Abilities (performance of test classified children into high-low achievement groups)
- Intervention involved each SLP and classroom teacher providing therapist-teacher intervention for 2.25 hours weekly
- Teacher and SLP worked together to
  - implement listening and writing centers, involve children in authentic speaking and literacy tasks, integrate language into reading and writing activities, expand levels of critical thinking, and SLP provided summary and follow up activities for teacher
  - Teachers became more aware of various methods of eliciting higher levels of critical thinking

Results

- The children in the experimental group preformed significantly better than children in the control group
- 60% of children in the T1 group and 29% of children in the T2 group changed from “below the mean” to “above the mean” over the course of the program compared to 22% of children in the control group.
- Additionally, both the teacher and SLP reported feeling energized by the weekly collaboration, sharing or resources and workload, and co-teaching model

Implications

- Suggests that the SLP working in an educational setting can bring his or her clinical skills into the classroom as well as the therapy room.
- “Although there is a place in schools for traditional therapy, the language needs of students necessitate collaboration in the classroom.”

Opportunities for Young Children to Make Choices in a Model Interdisciplinary and Inclusive Preschool Program

Jolivette (2009)

- Subjects: 42 children in 2 inclusive PreK classrooms (2-3 y.o.)
- Team members: Teacher, TAs, OT, PT, SLP
- 804 observed choices
  - Choices
    - rate, type, presentation method, location in the classroom, discipline of the staff member providing the choice
- Opportunities for choice-making, for children with and without disabilities, are an integral part of an inclusive preschool setting.

Integrated Inclusion Benefits

- Intervention in a child's natural setting promotes greater generalization
- Peer modeling
- Intrinsic motivation
- Routine & structure of a classroom
- Modeling techniques for other specialists and staff
- Debunking the therapy room "myth"
- Awareness of all goals, needs, and strategies
- Promotes TRUE collaboration between all professionals
- Progress monitoring across activities

Benefits cont.

- Staff observe and learn to follow strategies with the child when the therapist isn't there.
- The related service provider becomes part of the instructional team.
- Collaborative consultation
  - therapists and staff exchange ideas and support each other
- Therapists can see carryover of skills by staff.
- Prepare a student for higher independence in the future
- Members of the interdisciplinary team learn about their colleagues roles and gain respect for each other's roles and work together more

Integrated Inclusion Cons

- Time and planning
- Initially can have resistance from parents, teachers, and colleagues
- Could be less individualized
- Billing management
- Progress monitoring

Benefits of Team Collaboration

- Shared knowledge and expertise between specialists and staff
- Segmenting of the child diminished/more holistic approach to the child's learning
- Specialists taking on shared roles and responsibilities
- Increased opportunities for skill building

What is Interdisciplinary Inclusion?

Wiggle Time!

What is Wiggle Time?

- Interdisciplinary
  - SLP, OT, PT, Teacher, Teacher assistant
- Circle Time/large group structure
- Address the goals of the participating students
- Support the NC Foundations for Early Learning and Development
- Strong repetition of activities

Billing

- Initial unbillable time for planning
- Supplemental therapy time is billable
- When individually facilitating a student's activity it is billable individually

Testimonies

- PreK teacher
- OT
- SLP
- PT
- Child

Activity Example

Preposition Game:
On the Bus

Activity Breakdown for PreK Foundations by Domains

	Approaches to Play and Learning
Preposition Game: On the Bus	APL-1: Show interest in a growing range of topics, ideas and tasks; Show pleasure in new skills and what they have done; Watch what others are doing and often try to participate APL-2: Communicate what they want to do or know using gestures, facial expressions or words. APL-3: Engage in make believe play with imaginary objects APL-4: Use materials or actions to represent experiences in a novel way APL-5: Accept new challenges when offered APL-8: Child maintains attention and focus

	Emotional & Social Development
Preposition Game: On the Bus	ESD-1: Express a sense of belonging to a group; Use their own name ESD-2: Try new activity and attempt new challenges

	Health and Physical Development
Preposition Game: On the Bus	Goal HPD-2: Develop strength and stamina; Transition from active to quiet activities; Participate in simple games & other structured motor activities that enhance physical fitness (songs with movement)

	Language Development & Communication
Preposition Game: On the Bus	LDC-6: Combine 2 and 3 words LDC-7: Show they understand many new vocabulary words and a variety of concepts (big & little, in & out) LDC-8: Recognize and name some letters of the alphabet , especially those of their own name (LetterLand Curriculum)

	Cognitive Development
Preposition Game: On the Bus	CD-2: Introduce ideas or actions in play based on previous knowledge or experience (Current book – *Seals on the Bus*); Choose objects to represent something else with similar features during play; Imitate behaviors that they have seen in the past or other places CD-5: Show awareness of different rhythms as they make music or participate in music activities CD-12: Show they understand positions in space by using position words during play and by following direction from an adult

Group related Benefits

Camden et al. (2012)

- **G**ang. Being with peers breaks isolation and motivates children. Contributes to well being.
- **R**espond to the needs of a greater number of children. Could help improve service accessibility.
- **O**bservation. (Specialists) observe other (specialists). Children observe their peers. Facilitates sharing and learning.
- **U**tilization of a service delivery model integrating different intervention methods.
- **P**articipation. Groups create opportunities for practice and facilitate achievement of objectives relating to social participation.
- **S**uccess. Children develop new skills and perform new tasks. Successes increase their self-esteem.

References

- Barnes KJ, Turner KD. Team Collaborative Practices Between Teachers and Occupational Therapists. *American Journal of Occupational Therapy*, Jan-Feb 2001; 55, 83-89.
- Beck, A. R., & Dennis, A., (1997). Speech-Language Pathologists' and Teacher's Perceptions of Classroom-Based Interventions. *Language, Speech, and Hearing Services in the Schools,* 28, 146-152.
- Camden C, Tetreault S, Swaine B. Increasing Use of Group Interventions in a Pediatric Rehabilitation Program: Perceptions of Administrators, Therapists, and Parents. *Physical & Occupational Therapy in Pediatrics, 2012;* 32(2): 120-135.
- Davies PL, Gavin WJ. Comparison of Individual and Group/Consultation Treatment Methods for Preschool Children with Developmental Delays. *The American Journal of Occupational Therapy*, February 1999, 48(2): 155-161.
- Effgen, S. K., Chiarello, L., & Milbourne, S. (2007). Updated competencies for physical therapists working in schools. *Pediatric Physical Therapy*, 19, 266-274.
- Ellis, L., Schlaudecker, C., & Regimbal, C. (1995). Effectiveness of a Collaborative Approach to Basic Concept Instruction with Kindergarten Children. *Language, Speech, and Hearing Services in the Schools,* 26, 69-72.
- Farber, J. G., & Klein, E. R., (1999). Classroom-Based assessment of a collaborative intervention program with kindergarten and first-grade students. *Language, Speech, and Hearing Services in the Schools,* 30, 83-91.
- Friend, M. Myths and Misunderstandings about Professional Collaboration. *Remedial and Special Education*, May/June 2000; 21, 130 – 132.

- Hadley PA, Simmerman A, Long M, Luna M. Facilitating Language Development for Inner-City Children: Experimental Evaluation of Collaborative, Classroom-Based Intervention. *Language, Speech, and Hearing Services in the Schools*, 2000; 31, 280-295.
- Handout – "Embedding Intervention & Integrating Therapy: A Team Approach – Partnerships for Inclusion – Frank Porter Graham Child Development Institute – UNC-CH 2009.
- Hung W, Pang M. Effects of Group-Based Versus Individualized-Based Exercise Training on Motor Performance in Children with Developmental Coordination Disorder: A Randomized Controlled Pilot Study. *Journal of Rehabilitative Medicine*, 2010; 42, 122-128.
- Jolivette K, McCormick K, McLaren E, Steed EA. Opportunities for Young Children to Make Choices in a Model Interdisciplinary and Inclusive Preschool Program. *Infants and Young Children*, Oct-Dec 2009; 22(4):279-289.
- Justice K, Kaderavak J. Embedded–Explicit Emergent Literacy Intervention I: Background and Description of Approach. *Language, Speech, and Hearing Services in the Schools,* 2004; 35, 205-211.
- LaForme Fiss AC, Effgen SK. Use of Groups in Pediatric Physical Therapy: Survey of Current Practices. *Pediatric Physical Therapy*, 2007; 19(2):154-159.
- McWilliam RA. Early Intervention in Natural Environments: A Five-Component Model. http://www.siskin.org/downloads/EINE__-_A_Five-Component_Model.pdf
- McWilliam RA. Integration of therapy and consultative special education: A continuum of early intervention. *Infants and Young Children*, 1995; 7(4), 29-38.
- National Individualizing Preschool Inclusion Project - Integrating Therapy Into the Classroom; www.individulaizinginclusion.us; August 2003.
- Nochajski SM. Collaboration Between Team Members in Inclusive Educational Settings. *Occupational Therapy in Health Care,* 2001; 15(3/4): 101-112.

- North Carolina Department of Public Instruction, North Carolina *Foundations for Early Learning and Development*. 2013
- Palisano RJ. Comparison of two methods of service delivery for students with learning disabilities. *Pediatric Physical and Occupational Therapy*, 1989; 9(3):79-100.
- Palisano RJ, et al. Participation-based therapy for children with physical disabilities. *Disabilities & Rehabilitation*, 2012; 34(12): 1041-1052.
- Pless M, Carlsson M, Sundelin C, Persson K. Effects of Group Motor Skill Intervention on Five- to Six-Year Old Children with Developmental Coordination Disorder. *Pediatric Physical Therapy,* 2000; 12, 183-189.
- The Preschool Network – Network News; http://cdd.unm.edu/ecspd/psn; May 2008 Volume 7, Issue 3.
- Storvold GV, Jahnsen R. Intensive Motor Skills Training Program Combining Group and Individual Sessions for Children with Cerebral Palsy. *Pediatric Physical Therapy,* 2010; 22: 150-160.
- Throneburg RN, Calvert LK, Sturm JJ, Paramboukas AA, & Paul PJ. A comparison of service delivery models: Effects of curricular vocabulary skills in the school setting. *American Journal of Speech-Language Pathology,* 2000; 9, 10-20.
- U.S. Department of Education, Office of Special Education and Rehabilitative Services. Field-Initiated Research Project. “Integrated versus isolated services in early intervention.” (PIs: Donald B. Bailey, Jr., R.A. McWilliam).
- Wilcox MJ, Caswell SB. Early language intervention: A Comparison of Classroom and Individual Treatment. *American Journal of Speech-Language Pathology*, 1991; 1, 49-60.

Activity Breakdown for PreK Foundations by Domains

	Approaches to Play & Learning	Emotional & Social Development	Health & Physical Development	Language Development & Communication	Cognitive Development
Preposition Game: On the Bus	APL-1: Show interest in a growing range of topics, ideas and tasks; Show pleasure in new skills and what they have done; Watch what others are doing and often try to participate	ESD-1: Express a sense of belonging to a group; Use their own name	HPD-2: Develop strength and stamina; Transition from active to quiet activities; Participate in simple games & other structured motor activities that enhance physical fitness (songs with movement)	LDC-6: Combine 2 and 3 words	CD-2: Introduce ideas or actions in play based on previous knowledge or experience (Current book – Seals on the Bus); Choose objects to represent something else with similar features during play; Imitate behaviors that they have seen in the past or other places
	APL-2: Communicate what they want to do or know using gestures, facial expressions or words.	ESD-2: Try new activity and attempt new challenges		LDC-7: Show they understand many new vocabulary words and a variety of concepts (big & little, in & out)	CD-5: Show awareness of different rhythms as they make music or participate in music activities
	APL-3: Engage in make believe play with imaginary objects			LDC-8: Recognize and name some letters of the alphabet, especially those of their own name (LetterLand Curriculum)	CD-12: Show they understand positions in space by using position words during play and by following direction from an adult
	APL-4: Use materials or actions to represent experiences in a novel way				
	APL-5: Accept new challenges when offered				
	APL-8: Child maintains attention and focus				

Wiggle Time: Interdisciplinary Inclusion Services for PreK & Beyond – Andrews B, Scales M. (2014)

	Approaches to Play & Learning	Emotional & Social Development	Health & Physical Development	Language Development & Communication	Cognitive Development

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	Approaches to Play & Learning	Emotional & Social Development	Health & Physical Development	Language Development & Communication	Cognitive Development