Integration of therapy and consultative special education: A continuum in early intervention

Six dimensions of consultative services are described as varying along a continuum from totally segregated to fully integrated: location, presence of other children, adult–child initiations, goal functionality, context of intervention, and consultant's role. Along with the dimensions, a continuum of consultative models is presented: one-on-one pull-out, small-group pull-out, one-on-one in the classroom, group activity, individual within routine, and consultation. Data on the reported use of integrated versus isolated treatment models are discussed, as well as data on practitioners' preferences. Conclusions focus on demystifying therapy, the movement toward integrated therapy, the importance of viewing models along a continuum, and the challenges involved in changing ways of providing therapy. Key words: *consultation, early childhood special education, early intervention, integrated therapy*

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THERAPISTS AND OTHER consultants provide services that can range from totally segregated to fully integrated. Six dimensions of service delivery can be measured along a continuum from integrated to segregated[1]: location, involvement of other children, routines, adult–child initiations, goal functionality, and consultant's role (see Table 1). The location dimension—where services occur—is the most visible dimension when considering integrated therapy. Therapy and instruction services occurring in the classroom and on the playground appear more integrated than do services occurring outside the classroom. But it is possible to pull a child out and still collaborate with the teacher on goals. Similarly, it is possible to go into a classroom and provide isolated therapy to a child. We shall first present the six dimensions of consultative services, followed by a proposed taxonomy of service delivery models.

For this article, *therapy* will include not only occupational therapy (OT), physical therapy (PT), and speech-language pathology (SLP) but also

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Table 1. Continuum from segregated to integrated dimensions of service delivery

Dimension	Segregated	⇔	Integrated
Location of therapy	All therapy activities are provided in a separate room away from the child's classroom.	Therapy activities are divided between in-class and out-of-class settings.	All therapy activities are provided in the child's classroom.
Involvement of other children during therapy	Other children are never involved during therapy.	Other children are sometimes involved during therapy.	Other children are always involved during therapy.
Context of therapy	All therapy is provided apart from ongoing classroom routines and activities.	Therapy is sometimes provided as part of ongoing classroom routines and activities.	All therapy is provided as part of ongoing classroom routines and activities.
Therapist's initiations	Therapists always initiate activities in therapy.	Therapists sometimes initiate and sometimes respond in therapy.	Therapists always elaborate on the child's initiations in therapy.
Goals of therapy	All therapy goals address developmental prerequisites that may not be immediately useful for the child.	Therapy goals address either prerequisite or immediately useful behaviors.	All therapy goals address behaviors that are immediately useful for the child.
Therapist's role	Your only role is to provide direct therapy to the child.	Your role is divided between direct therapy to the child and collaboration with the teacher and family.	Your only role is to collaborate with the child's teacher and family.

early childhood special education (ECSE) provided by someone other than the classroom teacher. *Therapist* will be used to refer to a service provider other than the child's regular teachers or classroom assistants, such as a specialist or a consultant. *Goals* will refer to behavioral outcomes or intervention targets. (*Behavior* and *behavioral* are used in their technical operant sense, not as synonyms for "inappropriate behavior" or "noncompliance.") *Other children* refers to classroom peers, whether with disabilities or without disabilities. *Pull-out* refers to out-of-class services, where the child is removed from the regular learning environment. The term *integrated* is used in the sense of coordinating therapy and education. It should not be confused with "inclusion," which refers to mixing children with disabilities and children without disabilities. Service integration can occur in any kind of setting, from totally self-contained to inclusive; the issue is that therapy can be integrated into everyday classroom activities, whatever the type of classroom.

DIMENSIONS OF CONSULTATIVE SERVICES

The literature suggests that service delivery to children in center-based programs has at least six dimensions: (1) where therapy is provided, (2) whether more than one child is involved, (3) what intervention style is used, (4) the purpose of the goals, (5) activities used, and (6) how the therapist's role is seen.

Location

Direct services to children can be provided either in class or out of class. In-class services consist of working with a child in any location where the majority of other children are present, so it can include the playground, going for a walk, or a cafeteria as well as the classroom itself. The critical

aspects are that the classroom staff and other children are present and normal places are used. In contrast, out-of-class services consist of working with a child in a location where the other children and the classroom staff are not present. Usually, this location would be a therapy room, but could include places such as the playground, the stairwell, or the cafeteria if those places are *not* being used at the time of therapy by the other children. Out-of-class or pull-out services can include a few other children, when services are provided apart from the majority of the class and the classroom staff.

Involvement of other children

Therapy can be provided with other children involved or not involved in the activity. Involvement of other children can include other children's watching, playing with the same or similar objects, or directly interacting with the focal child(ren). When other children are not present or involved, they are some distance from the focal child (perhaps even in a different room), usually playing with different materials, and are dissuaded by adults from "interfering." Out-of-class therapy is most often provided with other children absent. In-class therapy can involve other children or not. The more integrated the in-class therapy, the more likely other children are to be involved.

Context of therapy

Therapy can be provided in the context of classroom routines or irrespective of classroom routines, as Bricker and Veltman[2] have described. Pull-out therapy is never conducted within classroom routines. Out-of-class therapy can address behaviors or abilities useful in classroom routines. Other out-of-class therapy is designed to build foundational skills that theoretically help the child to participate in classroom (and home) routines (see section on goal functionality). In-class therapy can take place in the context of ongoing routines, when the therapist joins the child in an activity. The therapist and teacher might plan to have the therapist conduct a group activity, in which case the group activity becomes a classroom "routine." In-class therapy can, however, be segregated from routines, when the therapist takes the child aside and works on activities bearing no relation to what the other children and staff are doing.

Intervention style

Out-of-class therapy is usually associated with remedial treatment and special education, which in turn tend to be associated with more directive styles of intervention.[3,4] In contrast, in-class therapy tends to be more associated with a comprehensive early childhood approach, with more responsive, rather than directive, intervention.[5] These associations are violated at times, with out-of-class practitioners practicing responsive approaches and in-class practitioners practicing directive approaches. Nevertheless, the intervention style is an important aspect of consultative services. The therapist who is more directive with children is likely to be, for the teacher, a less effective consultant in the classroom. Providing directives to the child is not as likely to fit into classroom routines as is responding to the child's cues. Although therapy location might not predict intervention style very accurately, intervention style might predict the success of the therapist's collaborativeness.

Goal functionality

A critical but controversial issue is the extent to which therapists work on "functional" skills. One controversy arises because of the reluctance of therapists to admit working on nonfunctional skills. Another controversy arises because functional skills are regarded by some constructivists as too narrow and behavioral; they fear children will be taught isolated skills that do not contribute to overall development. The principal issue with integrated therapy, as discussed by McWilliam,[6] is the extent to which the therapist addresses skills that children *need* to participate in everyday routines—skills that they need in order to be engaged. Some therapists address children's deficits by working on *foundations*; these are generally be-

haviors that theoretically prepare a child for more successful functioning. The emphasis is on preparation rather than immediate utility.

Sensory integration practices are a good example of foundational therapy. By exposure to various forms of stimulation (proprioceptive, tactile, kinesthetic), children's neural activity level theoretically increases. This increase has been reported to improve motor planning, coordination, verbal behavior, and even cognitive performance.[7] Although occupational therapists are often well trained in sensory integration approaches, other disciplines also have their own inventories of foundational or prerequisite skills (eg, pointing before the use of communication boards [SLP], crawling before walking [PT], sorting before almost anything [ECSE]). The controversy is not whether certain skills are prerequisite to others in development (eg, object permanence before searching behavior), but whether the focus of therapy should be on immediately necessary skills or skills that theoretically prepare children for subsequent performance.

The extent to which out-of-class therapy is used is positively correlated with the extent to which prerequisite or foundational skills are addressed.[1] Nevertheless, it is possible for therapists to concentrate on these types of skills in the classroom. For example, one therapist involved in our research went into "Elaine's" classroom and swung her around playfully and bounced her on her (the therapist's) knees. Almost the entire session was comprised of these and similar activities. The therapist's suggestions to the teaching staff were to do similar activities before requiring Elaine to participate in activities requiring concentration. She also had "Matthew" chew gum for the first 5 minutes of therapy and then engaged him in conversation or cognitive games. The oral-motor stimulation was designed to "rev him up" and "organize his sensory input." In contrast, more behavioral therapists might address specific skills that have been identified as necessary for engagement; they can work on functional skills either in the classroom (where presumably the skills are needed) or in a pull-out session. Some therapists think out-of-class therapy helps distractible children initially acquire new abilities. They also suggest that skill transfer to the classroom is best achieved through in-class therapy.

Therapist's role

The traditional role of the therapist has been to provide hands-on treatment that only a licensed, certified, or registered practitioner is "qualified" to provide. Therapists, on the other hand, have traditionally gathered information through observation or interview and told front-line workers how to do the job more efficiently or efficaciously. Both roles recognize the expertise of the therapist or consultant; the extent to which they recognize the expertise of the consultee (teachers, parents) is questionable. Later, we will review the nature of modern collaboration between therapists and teachers. For now, we might acknowledge that therapists' behaviors can range from the direct, hands-on approach to the consultative approach. Out-of-class therapists clearly adopt the direct, hands-on approach, but this approach can also be used to varying degrees in the classroom. Opportunities for consultation are obviously greater when the therapist provides services in the classroom, but therapists can also incorporate consultation into out-of-class therapy. For example, they can address goals the teacher has identified and they can report back after therapy.

In a study involving children randomly assigned to either in-class or out-of-class therapy, where formal consultation time was controlled, teachers and therapists engaged in unscheduled consultation four times as often for in-class children as for out-of-class children.[8] Unscheduled consultation did not include time spent talking during scheduled therapy time (ie, during in-class therapy).

We can see, then, that each dimension of service delivery can range from segregated to integrated and that the dimensions constitute different domains of therapist behavior. An individual therapist, for example, might provide integrated services in terms of the involvement of other children, goal functionality, and location, while providing segre-

gated services in terms of consultation, fitting into classroom routines, and initiations. This categorization of the therapist's functions helps us to understand the complexity of providing services and allows us to develop a profile of the therapist. Table 1 can be used for self-assessment by therapists, for analyzing therapists' styles by teachers and administrators, and for evaluating trainees by faculty.

It should be noted that the extent to which a therapist provides integrated services in any of the six dimensions is likely to be based on the particular situation. In a recent study, we found that practitioners perceive that integrated services were predicted by (a) the discipline of the therapist, (b) the types of techniques used and the particular goals addressed, (c) the family's preference for in- versus out-of-class, and (d) the characteristics of the child.[9] The age of the therapist and the characteristics of his or her caseload were poor predictors.

The location dimension has received increasing attention in the literature and in early intervention conferences. Studies have been conducted on the relative merits of in-class versus out-of-class therapy.[10–15] In general, children's acquisition and generalization of skills is marginally better with in-class services. One of our studies,[13] however, isolated the location dimension. We taught problem-solving tasks in the classroom with peers variably involved and in a pull-out, one-on-one setting; we did *not* consult with the teacher at all; and we primarily used adult initiations. There were no differences in children's rate of learning or transfer of the skills. It thus appears to be more than a simple location issue. Working collaboratively with the teacher in therapy or instruction and weaving the therapy or instruction into everyday routines might be the most critical aspects of service delivery.[12,14]

In order to guide practitioners on possible roles for the therapist, we have gone beyond the simple in- versus out-of-class distinction. Instead, a continuum of service delivery models is presented, ranging from the most segregated to the most integrated. The next section describes how the continuum can be applied in service delivery and how it can be used to change approaches to therapy.

CONTINUUM OF CONSULTATIVE MODELS

A number of terms have been used to describe models of providing therapy and instruction services: Holzhauser-Peters and Husemann[16] have used *direct, classroom*, or *consultation*; McCormick and Goldman[17] have used *multidisciplinary, interdisciplinary*, or *transdisciplinary*; Jenkins and Heinen[18] have used *pull-out, in-class*, or *integrated*; the American Speech-Language-Hearing Association[19] has used *consultation, itinerant, resource room*, or *self-contained*; Cole et al[10] have used *in-class* or *out-of-class*; and Norris and Hoffman[20] have used *classroom-based* or *direct*. Clearly, models of service delivery have been an issue of considerable discussion in the literature, even though comparative research is scarce.[21]

What does the therapist do when he or she plans to provide services to a child, teacher, or classroom? Table 2 shows six models, ranging from *individual pull-out* as the most segregated model to *collaboration* as the most integrated. In our research at the Frank Porter Graham Child Development Center, we have found that, although therapists might use more than one approach (individual pull-out, group pull-out, one-on-one in classroom, group activity, individual within routines, collaboration) during their scheduled session, usually a single approach constitutes the majority of session time.[22]

Application of the continuum

Although therapists value the freedom to use whatever approach seems warranted at any given time, they also acknowledge the importance of collaborating with classroom staff and responding to family preference.[9,12,14] In practice, we have found that individual children's teams do not discuss therapy approaches very often[23]; therapist autonomy supercedes collaboration. The continuum can, however, help teams collaborate. It can be used at Individualized Family Service Plan (IFSP) and Individual Education Plan (IEP) meetings to decide on the primary course of therapy, allowing the therapist some latitude in the extent to which approaches other than the primary one will

Table 2. Continuum of six consultative models

Model	Location	Therapy focus	Context	Peers	Teacher's role
Individual pull-out	Therapy room or other place apart from the regular class	Directly and exclusively on child functioning, usually on areas of greatest need	Can vary from drill work to play-based intervention, determined by therapist	Not involved	To provide information before therapy and receive information after therapy
Small group pull-out	Therapy room or other place apart from the regular class	Directly on functioning by child(ren) with special needs; some attention to children without special needs, if present	Can vary from group to drill work to play-based intervention, determined by therapist	1–6 peers involved; all or some of whom might have special needs	To provide information before therapy and receive information after therapy. To schedule group session. To decide with therapist which peers will participate
1:1 in classroom	Classroom,* often apart from other children	Directly and exclusively on child functioning usually on areas of greatest need	Therapist- or child-initiated, unrelated to concurrent classroom activity	In classroom but not involved in therapy	To conduct activities/play with other children, keep children from disrupting therapy. Rarely, to watch therapy session. To provide information before therapy and receive information after therapy
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, to conduct activities/play with other children; if possible, to watch/participate in therapist's group. When large group, to watch/participate in group activity. To participate in planning large and possibly small group activity
Individual during routine	Classroom, wherever focal child is	Directly but not exclusively on the focal child	Ongoing classroom routines, which includes structured activities, self-help, free play, & outside. Mostly child-initiated	Usually involved	To plan & conduct activity (including free play) including focal child; to observe therapist's interactions with child. To provide information before therapy; to exchange information with therapist after routine
Collaboration	In or out of classroom	Teacher, as related to the needs of the child; can vary from expert to collegial model	Therapist- or teacher-initiated concerns, priorities, recommendations	Involved if occurring in class; not involved if occurring out of class	To exchange information and expertise with therapist, to help plan future therapy sessions, to give and receive feedback, to foster partnership with therapist

*"Classroom" includes any regular play area, such as the playground.

be used. Discussion of therapy approaches at these planning meetings is one way of demystifying therapy for teachers and families.

The second application of the continuum is in monitoring service delivery. Whether it is administrators, teachers, parents, or therapists themselves who want to keep track of how services are provided, the continuum provides a simple way of categorizing therapy approaches. For research purposes, we printed out each child's goals and the list of six therapy models on a single sheet of paper.[23] At the end of each therapy session, the therapist checked the goals addressed during the session and model used for the majority of the session. This allowed us to determine (a) whether the planned approach was followed; (b) what type(s) of approach(es) each child tended to receive, within and across therapy disciplines (OT, PT, SLP); and (c) what type(s) of approach(es) each therapist tended to use. We also found that, by adding a space for comments beside each goal, therapists could use the sheet to communicate with families about how the therapy session went.

Any use of the continuum is likely to raise awareness of integrated therapy. Most teachers and therapists have been aware, to some extent, of these different ways of providing therapy, but clinical judgment about which approaches to use usually resides in therapists alone. Even therapists have found the display of approaches along a continuum, with the different implications for roles vis à vis the teacher and classroom routines, revealing. It has potential utility, then, for promoting change toward a more integrated approach.

Using the continuum to change approaches

We have found that, although practitioners used a number of models, over time we could identify a pattern for each therapist.[22–23] Almost every therapist uses one of the models more than the others. For many, individual pull-out is the most common, whereas some spend most of their time in individual-within-routines. Getting a therapist to move from individual pull-out to individual-within-routines might be too radical a shift. Change is more likely to occur incrementally, so the continuum can be used to plan each step; success is more likely if the therapist moves from individual pull-out to small group pull-out.

What keeps a therapist using the same model? This is probably best explained by the decision making that occurs with individual children. Practitioners will work with a child in the favored model and, as the child makes improvements, they will then shift to other interventions, using the same model. Thus, the occupational therapist who works with a child using, for example, the separate in-class model to teach an inferior pincer grasp, will then go on to tackle a fine pincer grasp, still using the separate in-class model. One way of using the continuum is to take a horizontal approach with children: as they make improvements in the first model the therapist chooses, move the location of therapy to the next higher model. This planned approach to change allows the therapist to make decisions based on the individual child's needs. Changing in this manner acknowledges the difficulties adults have in shifting approaches. For the children, it does not make much difference: there is no evidence that one approach is more effective, in terms of child outcomes, than another.[10,13–15,22,24] The reason for making the change to more integrated approaches is to improve collaboration, knowledge, and skills of all the professionals (eg, classroom teachers, therapists) working with the child.

Collaboration does not occur only with the most integrated model. In order for any of the models to be effective, the therapist and the teacher should consult collaboratively. In a study in which we interviewed parents, teachers, and therapists, the teachers whose children were pulled out for therapy were largely unaware of the strategies the therapists employed.[23] Yet the therapists told us they had communicated this information to the teachers. Most daunting of all, however, was the inability on the part of some teachers to tell us even what goals were addressed in therapy. Finding time for collaboration may be one of the greatest challenges to effective therapy, but this is not a challenge for the reason most professionals give. Both

teachers and therapists have reported that therapists cannot fit in time for collaboration because of the tight schedule of hands-on therapy. This assumes that hands-on therapy is more valuable than collaboration; in our research, we have rarely heard a professional say that there is little time for hands-on therapy because of the demands of collaboration! The real challenge might be in finding time when the teacher can leave his or her classroom responsibilities for collaboration time with therapists. Although some useful collaboration can occur in brief exchanges, teachers do need enough release time to have in-depth discussions with their supporting therapists.

ACTUAL USE AND PREFERENCES

To what extent do therapists practice integrated or segregated therapy and what do they consider to be ideal? In a survey of 775 occupational therapists, physical therapists, speech-language pathologists, and special educators (all working with children with disabilities, under 6 years of age, in center-based programs), most therapists reported that they used each model about half the time.[9] Overwhelmingly, they reported more use of integrated therapy than they were currently using as ideal. Special educators used and favored integrated practices more than did the practitioners from the other disciplines, and occupational therapists used and favored integrated practices more than did speech-language pathologists and physical therapists. The implications for program change and personnel development (preservice and inservice training) are that (a) therapists may be receptive to strategies for integrating therapy and (b) disparities between team members from different disciplines may need to be acknowledged.

In another study, we recruited 80 children in seven early intervention programs to participate.[11] The staff in all the programs claimed that both integrated and segregated models were used, with slightly more integrated than segregated therapy occurring. Yet, when we asked therapists to record (using our 6-level continuum) the model they employed, we found that segregated models (ie, individual and group pull-out, segregated in-class) were used for 35% of OT sessions (n = 686), 55% of PT sessions (n = 813), 15% of special education sessions (n = 425), and 52% of SLP sessions (n = 1,928). The pattern of differences between disciplines is therefore similar to the national survey results. Three features of these findings are notable. First, segregated therapy occurred more often than program staff initially thought. Second, differences between disciplines on these self-reports of models actually used are greater than differences between disciplines on the national survey, where the question was, "Which model do you typically use?" Third, program philosophy or management practice might predict the type of model, because in the program using the most integrated model all the disciplines used integrated approaches more than did all the disciplines from the other six programs (children and staff were roughly comparable across the seven programs).

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Early intervention is a venue for the demystification of therapy and other consultative services. A holistic approach to meeting young children's developmental needs calls for the blurring of discipline lines, especially in center-based programs. This approach parallels the emerging unification, but not dissolution, of practices from the traditions of early childhood special education and early childhood education. Related to this unification is the attempt to make inclusive settings more viable for young children with disabilities.

Integrated therapy means a movement toward having the therapist in the classroom, with other children involved, responding to children's cues, helping to develop functional goals, joining in classroom routines, and consulting collaboratively with the teacher. For the teacher, it means creating the opportunities for integrated therapy, such as welcoming the therapist, planning classroom activities with the therapist, trying to incorporate specific interventions into daily routines, articulat-

ing the purpose of classroom activities for all children, and making the time for discussions with therapists.

Although the continuum of six models can be divided into segregated (individual and group pull-out and one-on-one in the classroom) and integrated (group activity, individual within routines, and collaboration) approaches, it will be useful to consider all six options. The continuum can be used (a) to ensure that service delivery models are individualized and (b) to help staff move incrementally from more segregated options toward more integrated options.

Challenges to integrated therapy include the following: (a) some parents want as much direct service as possible, (b) many therapists are unfamiliar with integrated models and classroom operations, (c) some classroom teachers are reluctant to incorporate therapists and their techniques, and (d) third-party reimbursement for consultative services is perceived to be difficult. To meet these challenges, practitioners and researchers will have to (a) explain the benefits to children and society of integrated therapy, (b) provide more training on collaborative therapy and instruction, (c) train and expect teachers to take an active role in hitherto unfamiliar interventions, and (d) provide administrative (including financial) support for integrated therapy. Although we have made progress in studying issues of service delivery, more research in this area is needed. In the same way that we have made progress in responding to families' needs and priorities through "mapping backward from the street level,"[23(p59)] collaboration can begin by individual practitioners' taking responsibility for achieving their self-identified ideal models of service delivery, which research tells us consist of more integrated therapy.

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