

# Behavioral Research and Teaching

## Additive Versus Systemic Perspectives on Reform: A Case Study of Multi-Age Programs

Jerry Marr  
Gerald Tindal, Ph.D.  
Nancy McCullum  
Martin J. Kaufman, Ph.D.  
Paul Goldman, Ph.D.

Research, Consultation, and Teaching Program  
College of Education, University of Oregon, Eugene, Oregon

RR18

Published by:  
Research, Consultation, and Teaching Program  
Behavioral Research and Teaching  
College of Education  
University of Oregon

Staff:  
Gerald Tindal, Program Director  
Gretchen Matis, Editor

Copyright ©1996 University of Oregon. All rights reserved. This publication, or parts thereof, may not be used or reproduced in any manner without written permission. For information, write Research, Consultation, and Teaching Program, 5262 University of Oregon, Eugene, OR 97403-5262.

Marr, Jerry; Tindal, Gerald; McCullum, Nancy; Kaufman, Martin J.; Goldman, Paul  
*Additive Versus Systemic Perspectives on Reform: A Case Study of Multi-Age Programs*  
Research Report 18

Cover design: Gretchen Matis

*Abstract*

*Trends in inclusion are examined from legal, academic, and teacher perspectives. A review of the literature on inclusion identifies legal mandates and current definitions. Research into schools' efforts to implement inclusion suggests a bifurcated perspective in teachers' orientations to the concept: Most conceptualize inclusion from the point of view of an additive model rather than from a systemic model. The two models are presented in terms of how teachers perceive certain attributes of inclusion (grouping, explanation of behavior, resources needed, administrative structure, feasibility, and expectations and goals). Excerpts of teacher interviews from case studies illustrate themes surrounding inclusion's duality and the issues this entails.*

## Introduction

Public education in a democratic society is no small task, especially if it is truly to implement the values of that society and transmit them to the next generation. As Americans increasingly acknowledge their own cultural and developmental diversity, movements emerge to enhance the possibility of every citizen's full participation. In public education, such movements have been encapsulated in the concept of "inclusion." As a social philosophy (Roach, 1995; Ferguson, 1995), inclusion mixes democratic ideals with pedagogical pragmatism. In other words, recognizing that participation in society requires a sense of membership, the problem becomes one of creating educational contexts that enhance the chances of participation for all individuals. It's an extraordinarily complex task, as indeed are most democratic activities.

The purpose of this paper is to examine recent trends in the development of the concept of inclusion, both legal and academic, and relate these to efforts to assess how teachers conceptualize and practice inclusion in primary education. A bifurcated model is introduced that depicts two different, but complementary, orientations to inclusion (additive and systemic). We believe that educators tend to orient their thinking towards primarily one side of this model, to the near exclusion of the other. We argue, however, that true inclusion requires a reintegration of the two halves, which would result in a conceptualization of inclusion as more than a simple admixture of students with differing abilities, but one in which a mediation is practiced—the systemic implementation of adaptive strategies by the classroom teacher.

## Perspectives and Trends

Yell (1995) defines inclusion generally as an effort "to merge special or regular education and to include children with disabilities fully in the 'mainstream' of education" (p. 389). While a practical definition has not been entirely agreed upon

among special educators (Fuchs & Fuchs, 1994), Congress and the courts have established that Americans with disabilities should be included as much as possible in the life of the nation, including—indeed, essential to full participation—its educational life (Putnam, Spiegel, & Bruininks, 1995; Yell, 1995). Over the past 10 years, a body of case law has emerged that reconciles two major provisions of the Individuals with Disabilities Act (IDEA): the mandate to provide a “free appropriate public education” (FAPE) and the preference to do so in the “least restrictive environment” (LRE). The court cases struck a middle ground:

Students have a presumptive right to an education in an integrated setting, and only when the severity of the disability is such that an appropriate education cannot be achieved despite good-faith efforts to retain the child in such placements are placements in segregated settings appropriate. (Yell, 1995, p. 402)

Although case law stipulates that “good-faith efforts” be made to retain students in integrated educational settings, when that mandate is in conflict with the mandate for appropriate education, “the mainstreaming mandate becomes secondary to the appropriate education mandate” (Yell, 1995, p. 393). Yell (1995) offers a list of principles drawn from the court decisions that may be used as a general guideline for striking a balance between these two mandates:

- Determination of the LRE must be based on the individual needs of the child.
- Good-faith efforts must be made to keep students in integrated settings.
- A complete continuum of alternative placements must be available to the extent needed to special education students in the school district.
- In making LRE decisions, the needs of the students’ peers should be considered.
- When students are placed in more restrictive settings, they must be integrated to the maximum extent appropriate.

- Schools bear the burden of proof in defending placement decisions. (pp. 400-401)

For our purposes, the key question becomes, what constitutes a “good-faith effort”? Inclusion does not mean simply a cohabitation of variously-abled individuals in the same room. Indeed, we assert that this approach can be as much a hindrance to full inclusion, in the larger sense of fuller participation in society, as a help.

Ferguson (1995), for example, reflects upon her experiences as a special education researcher and as the parent of a severely disabled son. First, she notes that “focus on the right to access did not provide clear direction for achieving learning outcomes” (1995, p. 283). In other words, recognition of the needs of an individual to belong, on a quotidian basis, to a group of fellow learners and the subsequent “mainstreaming” of that individual into a classroom did not necessarily result in the individual’s full membership in the group nor enhancement of his potentials. In fact, she found that

... even when (special needs) students were assigned to general education classrooms and spent most (or even all) of their time there with various kinds of special education supports—their participation often fell short of the kind of social and learning membership that most proponents of inclusion envision...Even to casual observers, some students seemed set apart—immediately recognizable as different—not so much because of any particular impairment or disability but because of what they were doing, with whom, and how. (p. 284)

While IDEA requires that children with disabilities be educated with children who are not disabled, “to the maximum extent appropriate,” it does allow for

special classes, separate schooling, or other removal of children with disabilities from the regular education environment only when the nature of severity of the disability is such that education in regular classes with the use of supplementary aids and services cannot be achieved satisfactorily (20 U.S.C. § 1412(5)(B)).

This broadens the concept of inclusion. It implies that inclusion entails a more complex set of criteria. As Ferguson (1995) states, inclusion is best viewed as a

process of meshing general and special education reform initiatives and strategies in order to achieve a unified system of public education that incorporates all children and youths as active, fully participating members of the school community; that views diversity as the norm; and that ensures a high-quality education for each student by providing meaningful curriculum, effective teaching, and necessary supports for each student. (p. 286)

Applying a modified forecasting technique first used to predict technological trends in the defense industry, Putnam et al. (1995) surveyed 37 educators who were considered leaders in their field. They identified future trends in education that are consistent with Ferguson's view of fuller participation:

- The movement toward increasing inclusion will occur.
- The belief will prevail that people with disabilities have a right to participate in inclusive environments.
- Students with mild disabilities will be educated in general classrooms.
- Teachers will increase their use of instructional approaches such as cooperative learning and instructional technology.
- Researchers will focus on matching instructional needs with learner characteristics. (p. 553)

If indeed the trend is to view diversity as the "norm," then we should ask, in the normal classroom, what steps do teachers take to accommodate diversity, to include their special-needs students in the academic life of the group? Do teachers strive to accommodate their students, leading to implementation of resources based on students' individual needs? Is inclusion really taking place as a result of teachers' "good-faith efforts," or is it just that we have bodies present under the same roof, each conforming to some minimum threshold of readiness?

#### Contrasting But Complementary Models

These questions reflect a certain imbalance of perspectives on inclusion that does not serve the pragmatics of its practice well. Interviews with teachers suggest

that approaches to inclusion tend to be weighted towards one of two orientations, or models, which we identify as additive and systemic.

### Additive Model

The *additive* model simply means that, in the inclusive setting, classroom teachers tend to focus on external explanations of student behavior and external support systems to redress problems; furthermore, when they attempt to address student needs, remediation supports are assembled in an additive fashion. For example, explanations for low performance are attributed to such things as difficult home life, lack of special education services, and so forth. Solutions tend to focus on supports such as pull-out programs, special education instructors coming into the classroom, parent volunteers, etc. Supports are laminated one on top of the other like the layers of an onion with no systemic integration among them.

This is not to suggest that additive supports should not be part of the classroom teacher's range of options for adapting programs to the special needs of an included student. Clearly, additive supports represent essential services and strategies for attaining meaningful inclusion. But, in an additive model of inclusion, they tend to be seen as ends in themselves, rather than means to ends—those ends being the accommodation of diversity in service to academic achievement and the enhancement of an individual's membership in the social sphere, of which the regular classroom is a significant example.

The additive model seems to be derived from the group-oriented approach to education: There is a minimum threshold of readiness each student in the classroom must cross in order to benefit from the curriculum. An array of additive resources is brought to bear upon the student who does not meet the minimum criteria. For example, a child identified as "autistic" is placed in a regular education classroom. He responds to direction by becoming upset and disruptive. At a loss as



to what to do, the teacher at first allows the student to wander around the classroom while the rest of the class goes about its business. Trying very hard to include the student, the teacher brings in an aide to sit with him during reading group.

Discovering the student is interested in computers, the teacher allows him to spend most of his time in front of the only computer in the classroom. The teacher feels this is neither the best use of the computer nor of the student's time, but it seems to allow the student to remain in the classroom. Building on this, the teacher tries various schemes centered on the computer to teach the student to read.

Meanwhile the class must acquire another computer because the student is using the first one most of the time and is unwilling to share it. The teacher tries other strategies, like juggling aide schedules so that the student also receives help in math; the student is taken into the hall to learn new material. A Chapter 1 teacher works with him on reading. The regular education teacher finds that it helps to explain things very carefully to the student individually and keep to a rather rigid schedule, giving the student ample warning of any variation so as not to upset him. He reports some progress both behaviorally and academically, explaining that it has been achieved by trial and error.

In this scenario, inclusion under the additive model is heuristic, piecemeal, unsystemic, and unplanned. Teachers try what works, hoping to fit the unfit into prefabricated slots. When a new student arrives, the process begins all over again; there is no systemic learning.

### Systemic Model

In conceptualizing how an individual gains full membership in the sphere of inclusion, teachers may take a contrasting view to the additive model, which we call a *systemic* model. Under the systemic model of inclusion, the teacher identifies explanations of and supports for student performance based on a systemic feedback loop composed of two principal and interacting elements—the teacher and the

student. It is this relationship that drives the formulation of adaptive strategies. Student needs are interpreted within the teacher's individual capacity to develop and integrate prosthetics and resources to include the student; in terms of adaptational focus, all other elements are secondary to this basic interchange. While additive supports may be based on external resources, they are brought in as part of the teacher adapting his or her own techniques to the learning needs of the included student. Or, adaptive practices may call for adjustments in administrative roles and structures to enhance them; nevertheless, these resources are framed within the teacher's unique role with the student. Rather than relying on additive supports alone to support a student, as if to give the appearance of "fitting in" with the group by use of social and technical prostheses, systematic adaptations emerge around the student's role as a unique and full member of the learning group and the teacher's role as mediator of and advocate for that membership.

#### Efficacy and Locus of Control

What is being addressed here is a teacher's efficacy or sense of who controls and who can improve the student's chances for learning. Extensive research into the construct of "perceived control" indicates that "it is a robust predictor of people's behavior, emotion, motivation, performance, and success and failure in many domains of life" (Skinner, 1995, p. 3). The more an individual perceives that he or she has significant control over the outcome of a situation or process, the more likely the outcome will be successful and the process less stressful. For example, Lunenburg and Cadavid (1992) found that teachers who believe that they personally can motivate students to do better, experience less job burnout than teachers who take a more custodial approach to their jobs and who believe they cannot affect student performance.

In our configuration, the additive model reflects an external locus of control, and the systemic model reflects an internal locus of control. We do not consider an

individual's sense of control to be a feature of personality, but, rather, it reflects a set of beliefs based on experience and is capable of being altered by new experience (Skinner, 1995). We hold the view that, while additive and systemic models of inclusion are logically and ideologically disjunctive, pragmatically speaking, they are complementary. In other words, the locus of control may be conceived of as a floating point, at times centering on external relationships and at other times centering on the student-teacher relationship.

#### Other Attributes of Additive and Systemic Models of Inclusion

Figure 1 illustrates the additive and systemic models in the establishment of an inclusive domain, characterized as a "sphere of inclusion," within which all individuals share a sense of membership, participation, and achievement. These remaining attributes all fit within the general locus of control, which extends its influence over all of them. Depending upon which model the teacher uses, numerous attributes of inclusion (the five listed here are not exhaustive) take on different, contrasting significance.

---

Insert Figure 1 about here

---

Thus, grouping orientation/focus, under the additive model, centers on the needs and potentials of the group, while under the systemic model, it centers on the needs and potentials of the individual student in relation to that teacher. For example, with 25-30 students in a classroom, teachers are often forced to make changes in programs as a function of resources available rather than resources needed, with the least damage done to the group serving as the criterion for consideration.

Likewise, resources needed to achieve full inclusion are identified under the additive model as supports which change the student's behavior, while, under the systemic model, they are supports that change teacher's behavior and methods and, as a consequence, result in changed student behavior. For example, under the additive model, a teacher might call for the introduction of an aide who can read Braille to help a blind student, while, under the systemic model, a teacher might call for Braille reading lessons for herself.

Administrative structure demarcates the decision-making system, lines of responsibility among staff, and schedules for coordinating programs. Under an additive model the structure provides singular channels with limited input from teachers, little feedback to inform the system, and limited recourse to change; furthermore, administrative activities are organized independently of classroom activities. In contrast, in a systemic model, input arrives from multiple sources, provides information useful in making formative evaluations, and results in continuous improvement; the administrative structure is interconnected and coordinated within the school.

Goals and expectations make up the last attribute of the model, which we consider as an extension of the locus of control. Within and across classrooms, teachers begin with specific outcomes and expectations in mind; they count on certain structures and routines to be in the service of these outcomes. For example, academic and social outcomes often provide the overall framework within which teachers focus their work and expect students to perform; additionally, an implicit assumption is frequently made that these goals and expectations are similar across teachers. Yet, in the additive model, such goals and expectations simply co-exist with little integration across teachers and programs while in the systemic model, common, team-based goals and expectations come to the fore. In general, we assert that under the additive model, expectations of and goals for a student are more

socially and affectively oriented, while, under the systemic model they are more academically and cognitively oriented. Ostensibly, under either model, expectations and goals may cover both social and academic dimensions, but in practice, under the additive model, social goals seem more “doable,” less complicated. Adaptations are introduced until something is found that works. On the other hand, academic goals and expectations under the systemic model may seem more daunting, because they are necessarily longer range, less negotiable, and require greater planning.

Finally, feasibility, though presenting a desirable characteristic for any model of inclusion, is the last attribute of the model. It simply reflects the realm of possibility in making immediate changes that continue to build. In an additive model, the changes may be immediate, but rarely build; yet, they are generally feasible. In a systemic model, the changes may not be immediate, but they build, yielding a sustainable end state quite different from the initial state. Although inclusion may be considered difficult to those using the additive model, it seems more feasible, if short term, because the goals are proximate—to maintain the student in the regular classroom. On the other hand, under the systemic model, inclusion seems less feasible and more complicated because the goals are more long term—to teach skills and concepts and to establish the student as an integral, participatory member of the group.

We assemble these five attributes to both anchor them to the literature and study them within the context of an inclusion program incorporating Developmentally Appropriate Practices (DAP). See Figure 1 for a depiction of all five attributes. In our review of previous work, we focus on the findings and ideas related to the five attributes of the additive-systemic models we have presented; not all of them are equally represented in this literature, however. Then we describe the methods we used to interview teachers from which our taxonomy was developed.

### An Analysis of the Professional Literature from Additive and Systemic Views

In a series of studies to assess the likelihood of success of students with disabilities in the regular classroom, Jeanne Schumm and colleagues surveyed teachers and students at all levels of public education (for a complete review of those studies, see Schumm & Vaughn, 1995). Brief reviews of those studies that included elementary teachers in interview components are presented below. Most of the issues they investigate focus on the latter three attributes of our model (administrative structure, goals and expectations, and feasibility); few studies have specifically addressed issues of grouping and resources needed, though such considerations may be subsumed in these other ones. The reviews illustrate the bifurcated perspectives presented here and provide a point of comparison with our own interviews of elementary school teachers regarding their efforts at inclusion.

### What We Know About the Five Attributes in Practice

Ideally, grouping and arranging the requisite resources is rationally based and empirically evaluated. Inclusion is accomplished according to systematic adaptations planned in advance, monitored, and evaluated in the tradition of special education research. For example, a case study of three teachers (one elementary, one middle, and one high school) (Schumm, Vaughn, & Leavell, 1994) indicated that assessment of feasibility of inclusion increased when a planning tool (The Planning Pyramid) was utilized in conjunction with existing planning and instructional routines. Thus, the more systematic the planning for inclusion, the less daunting the task becomes.

Inclusion implies focusing on individual needs, as opposed to group needs. This difference in focus, say Zigmond and Baker (1995), is one that distinguishes special education from regular education:

Regardless of how well prepared a general educator is, the focus of general education practice is on *the group*: managing instruction for a large group of students, managing behavior within a large group of students, designing assessments suitable for a large

group, and so forth. The special educator's focus has always been, and should continue to be, on *the individual*, providing unique and response-contingent instruction, teaching socially appropriate behavior, designing tailored assessments that are both diagnostic and summative, and so forth. (p. 249-250)

This point is underscored by an in-depth study of four elementary school teachers by McDowell and Rothlein (1993). They used a combination of both quantitative and qualitative measures—the Extended Classroom Scale, focus group interviews, questionnaires, teacher interviews, and videotapes of the teachers at work—to investigate teachers' grouping, planning, and adaptations for students with learning disabilities mainstreamed into their regular education classrooms. McDowell and Rothlein found that the four teachers shared certain characteristics: They had established goals for their included students as well as the means and materials for achieving those goals; their instructional plans were adaptable to the varying needs of individual students; and each teacher expressed genuine attitudes of concern for each student. This study simply offers a glimpse of how teaching looks under the systemic model: planful, adaptable, and integrated.

An administratively interconnected effort was presented by Vaughn and Schumm (1993). They documented the efforts of a large suburban elementary school to "restructure its special education delivery model." Twenty-eight regular education teachers and two special education teachers participated in the study, as well as 1200 students and two administrators. A variety of data sources, such as the Classroom Climate Scale, researchers' journals, and teacher interviews, yielded the following broad thematic findings: (a) for inclusion to work, teachers, students, and parents must believe that structural changes will be effective; (b) the school must develop a formal statement on inclusion; and (c) teachers "are most concerned about students with behavior disorders."

Later, Vaughn, Schumm, Jallad, Slusher, and Saumell (1994) interviewed 74 teachers, 26 of whom were elementary teachers, to discern their perceptions of inclusion, particularly in relation to their goals and expectations. They found that

the teachers expressed strong negative attitudes about inclusion and felt that those who make decisions for inclusion are out of touch with such realities as large class size, small resource availability, and poor teacher preparation. Here, the sense of teachers was that administrators were out of touch with classroom realities and unrealistic in their expectations of teachers to implement change.

Using a series of focus-group interviews, Schumm and Vaughn (1991) canvassed 93 teachers, 25 of whom were elementary teachers. The investigators wanted to know how these general education teachers estimated the desirability and feasibility of adaptations for mainstreamed students in their classrooms. They found that adaptations were generally regarded as “more desirable than feasible” (Schumm & Vaughn, 1995, p. 170). Not surprisingly, adaptations requiring little individualized planning, instruction, or modification of classroom environment were viewed as most feasible. The more individualized the adaptation, the less feasible it was considered. Moreover, those adaptations requiring the most changes in planning, curriculum, and evaluation were rated as least desirable.<sup>1</sup>

Similarly, in an assessment of the skills and practices of 60 teachers (20 of whom were elementary teachers) in planning for the mainstreaming of students identified as learning disabled, Schumm and her colleagues (Schumm, Vaughn, Gordon, & Rothlein, 1994) reported that

even when teachers deem adaptations as valuable and are perceived as skilled in making these adaptations, the “feasibility” of actually implementing the adaptations is often prohibitive (cited in Schumm & Vaughan, 1995, p. 171).

It appears that even when volition and a sense of capability are high, a sense of feasibility can still be low. Even so, some outcomes may seem more feasible than others, depending upon which model teachers are operating under—additive or systemic.

---

<sup>1</sup>These findings were consistent across grade levels.



As an illustration of both goals and expectations, consider a survey by Schumm and Vaughn (1992) involving 775 teachers, 256 of whom were elementary-level instructors. In this formal survey<sup>2</sup> the researchers examined both the “perceptions and feelings” of teachers toward planning for mainstreaming students and teachers’ actual planning practices (as reported in the survey). They found that the level of emotional or behavioral problems among mainstreamed students was inversely proportional to the teachers’ willingness to have them in their classrooms. While teachers were “somewhat willing” to engage in interactive planning with students, “they were less willing to make preplanning adaptations concerning curriculum or tests and to postplan new objectives based on student performance.” Teachers cited logistical rather than theoretical obstacles to such adaptations—budget and time constraints, class size, and “problems with emotionally handicapped students” (Schumm & Vaughn, 1995, p. 170). Interestingly, the investigators reported that elementary teachers expressed greater willingness to make planning adaptations than did middle and high school teachers.

#### Summary of Practice Implications

Based on these and other studies, Schumm and Vaughn (1995) identify several broad hindrances to teacher readiness for inclusion: lack of preparedness, lack of human resources (special education teachers, reading resource specialists, etc.), and lack of systematic planning tailored to individual students. They conclude that

Although many classroom teachers across grade levels and settings are concerned with meeting the educational and social needs of students with disabilities, they are not ready. (p. 172)

---

<sup>2</sup>*Teacher Planning for Mainstreamed Students Survey*

The overall message from these studies seems to be that inclusion is often considered with little or no attention to the pragmatics of adaptation. In other words, while inclusion may be a good idea whose time has come, both philosophically and legally, the tools for its implementation—systematic and individualized adaptive procedures—remain on the conceptual drawing board, roughly sketched at best. This situation is reflected in the conclusions of Zigmond and Baker (1995), who examined five sites across the country in which full-time mainstreaming models were being practiced. Based on their own assessment of these programs and the responses to their findings by other investigators (see *The Journal of Special Education*, 29(2), 1995), they identified several “implications” for policy and teacher education that would enhance successful inclusion. These include, first, the embellishment of special education resources: “Additional resources will allow for the provision of directed, intensive, remedial instruction in an alternative venue” (1995, p. 247). Second, there should be a recognition that “inclusion is fundamentally not a reform of special education but a reform of the mainstream” (1995, pp. 247-248).

Zigmond and Baker see successful inclusion taking shape as a sort of “mainstreaming” of the special education model—research-based approaches consistently applied to individual student needs. They report that the “special education” they see in inclusive classes tends to conform to the group-oriented approach, rather than serving as a model for general education, so that individual needs are being addressed on a piecemeal, unplanned basis, “reactive, not proactive” (1995, p. 248).

We are seeing in research on inclusion a clear will to action, but a lack of means to that action. Gersten and Woodward (1990) use the term “reality principle” to describe the need for translation of research on effective teaching into sets of strategies teachers can apply within the framework and details of everyday classroom life. Schumm and Vaughn (1992) point out discrepancies between ends

and means—inclusion is seen as “desirable” but “unfeasible.” Likewise, Zigmond and Baker (1995) report a haphazard, confused approach to inclusion, inconsistent, and driven by contingencies other than individual student needs. As one of their reviewers points out (Gerber, 1995), for example, goals for meeting individual student needs are set “in terms of maintenance of classroom placement rather than in terms of individually tailored learning opportunity,” (p. 188), while resources are allocated according to contingencies not directly related to individual needs, but to such things as numbers of teachers or classrooms to be served.

Again, the practical relationship between additive and systemic models of inclusion is more complementary than disjunctive. Both perspectives can contribute to successful inclusion. But the tendency has been to rely most heavily on the additive model. Orientation to inclusion must entail the systemic model as well: inclusion based on systematic adaptation, the missing element in discussions of inclusion and the reason why we are not yet prepared, despite our most earnest intentions, to fulfill the mandates of LRE and FAPE. Excerpts from our own teacher interviews (presented below) illustrate this tendency toward an additive model of inclusion and echo many of the themes presented above.

#### Method

A sampling of elementary teacher interviews from our own research on nongraded primary classrooms illustrates the conventional orientation towards an additive model. Most discussion of inclusion takes place outside of the context of systemic adaptation, offers additive attributions for managing programs, and calls for additive supports to improve student performance. Examples illustrating these points follow a short description of the subjects and the interview structure.

Only general education teachers were interviewed for this study; they were either part of an early primary (seven teachers of kindergarten-first grade) or late primary team (six teachers of second and third grades). Both programs were

supported by the same four specialists: one self-contained teacher for severe behavior disorders, two resource teachers for students with learning disabilities, and one speech-language specialist. In the early primary program, teachers averaged more than 6 years in the school, and more than 8 years in the district; teachers in the late primary program averaged more than 8 years in the school and nearly 14 years in the district. They all were certified elementary teachers, with one teacher also holding a special education and secondary education certificate. Teachers from both groups had received their bachelor's degrees in 1977 (early) or 1973 (late); they had received additional professional credits from workshops and conferences, with the teachers in the early primary program accruing nearly 50 credits and teachers in the late program accruing 60 credits. Teachers in the early primary program had slightly more years of K-1 elementary school experience (nearly 6 years) than did teachers in the late primary program (just over 4 years); in contrast, the late primary program teachers had more experience in Grades 2-3 elementary experience (nearly 10 years vs. 8 years, respectively).

At the end of the 1993-94 school year, semistructured interviews were conducted with the teachers regarding their efforts at inclusion and adaptation in nongraded primary classrooms. All interviews were tape recorded and transcribed. Each teacher was asked to respond to two general questions regarding two at-risk students with whom they had been working in their classrooms. Question One was designed to elicit responses concerning inclusion, while Question Two was designed to elicit responses concerning adaptation. The interviews were semistructured in the sense that an interview guide was used rather than a list of questions. Teachers were allowed to respond in an open-ended way, using the interview guides as "maps" leading to their insights regarding the students with whom they had worked. The interview guide is presented in Figure 2.

---

Insert Figure 2 about here

---

---

Insert Table 1 about here

---

### Results

The contrast between the two models is made especially clear in the basic defining difference, “Explanation of Behavior,” as it gives rise to additive versus systemic responses (see Table 1). Under the additive model, the teacher looks beyond the dynamics of the student’s classroom behavior to identify a dysfunctional home or factors within their life as the cause of the behavior. This example highlights the fact that in some cases it is impossible not to look beyond the classroom environment for causes of inappropriate behavior and poor performance. However, as the next example illustrates, there is an alternative response. Under the systemic model, the teacher talks about the value of communicating with the student to learn about the “cause and effects of his behavior.” She recounts a strategy worked out between the two of them to help him control his behavior, regardless of its cause. The systemic model may serve as sufficient explanation to formulate an appropriate strategy for accommodating a student.

#### Illustrations of Attributes

Table 1 presents quotations, excerpted from teacher interviews, that illustrate the five attributes introduced in Figure 1. For each attribute we present comments that typify each of two models—the additive and the systemic model. Where an illustration could not be found for an attribute, we have provided sample statements in italics. These are not quotations, but represent the kind of statements we would expect given a particular perspective. The point is to highlight differences between the two models. However, the two models can and often do complement

each other in practice, and this becomes evident as we look at the broad themes teachers address in their interviews. But, it is important to first distinguish the two models by way of example, before trying to examine them in an overlay.

In the first category, "Grouping Orientation/Focus," under the additive model, attempts are made to find a classroom niche, both physically and socially, into which the special-needs student might fit. In contrast, we see under the systemic model that the focus is on the special-needs individual as attempts are made to recognize his particular difficulties in a group setting. The group, under the teacher's guidance, practices a strategy that not only accommodates the special-needs individual, but serves the interests of all. This pair of illustrations is not intended to cast favor upon one model over the other. While the systemic strategy may have been more successful, such anecdotal comments do not establish this. We can certainly imagine that the student in the former illustration could have found a suitable niche in the group, or that some later contingency made this strategy more successful than it seems to have been, based on the teacher's comments. Again, our intention is to illustrate the differences between these two perspectives.

A clear contrast is also illustrated in the second category, "Resources Needed." Under the additive model, the teacher identifies resources external to the regular classroom that have been drawn upon to accommodate special-needs students. Under the systemic model, the teacher identifies steps she has taken to modify her own teaching to accommodate special-needs students in her classroom.

Likewise, under "Administrative Structure," there is a contrast between a structure organized within the school (systemic model) and a situation in which it is evident that educational structuring is independent within a school.

In the category of "Expectations and Goals," the contrast is between an additive perspective that identifies social and affective goals as the primary aim of inclusion—goals that are more short term and that precede any academic goals—

and a systemic perspective that identifies academic and cognitive goals as the primary aim of inclusion—goals that are more long term.

These contrasts underscore the differences in perception of “Feasibility” illustrated by teacher comments. While both teachers talk about the need for one-on-one attention for a particular student, the attitude implicit in the comment under the systemic model is that the teacher is making adjustments to her own teaching behaviors, which are more time consuming and therefore less feasible than the teacher who takes the perspective of an additive model. Her comments reflect adjustments (“parent volunteers sit next to him while I’m instructing...”), which provide an adaptation that is more readily available and therefore more feasible.

Overall, teachers’ comments reflect a tendency to use an additive model to evaluate efforts at inclusion. Nevertheless, in the following section we shall point out instances where these two models overlap and complement one other.

#### Broad Themes

A review of our teacher interviews yields several themes running across categories of teacher, classroom, and grade level. Taken as a whole, teacher comments reflect the complementarity of the two models. For example, the first theme reflects a systemic orientation, while the second and third reflect an additive orientation. The fourth theme reflects a combination of the two. These themes (in italics) are extrapolated from teachers’ own comments. Statements found in Table 1 are included in these thematic sections.

1. *A teacher’s understanding of a student’s academic capabilities and emotional needs, based on personal acquaintance, is crucial to the student’s progress in school (systemic model).* That is, the teacher, as the central character in the student’s academic life—a broker of educational resources—must know and understand the student as an individual. This understanding influences how they group students and arrange for resources to meet the needs of individual students.



In general, a systemic perspective is apparent in the comments below in which the personal interaction of the teacher and the students lie at the heart of adaptations made (each comment representing a different teacher and student):

T needs a very firm and kind teacher...T needs to have a quiet, undistracting place to work in the classroom.

T...very bright child with some extraordinary behavioral problems. I've had him for 2 years...that's been very supportive in his learning...it gives him structure to his life, which he needs a lot of.

...you need to get to know him to see what he's capable of...

...will butt heads with a rigid teacher...they need to offer him options, stick to their plans...if anything goes awry, he gets very upset...will blow his whole day...everything has to be laid out...he can't have anything change...even his desk position in the room can't change...when they move desks around, he chooses to have his stay in the same spot.

...a teacher who is willing to take time with him and talk about cause and effects of his behavior -catch his eye-he takes silent signals much better than vocal ones (i.e., if she wants him to stop using a loud voice, she squeezes her lips shut with her fingers...he'll look at her and do the same).

strong music and dance skills...always with the beat...always clapping, standing up and moving body...saw her at school play...was so keyed in, on task, so involved in play that was not cognizant of anything going around her...was up on her knees, leaning forward, moving body, clapping, doing hand signs that she saw the kids doing...

I tried to read as much as I could about attention deficit (disorder) so I could understand where he's coming from...tried to make classroom fairly structured—K-1 is very open-ended, but did things very consistently...did things around T's behavior.

...if you could have seen him 2 years ago, you wouldn't believe he's the same person...talks a lot...does what you ask him to do...doesn't touch and hurt the kids like he used to...has a close bond with his teacher...having a teacher who can relate to him has probably helped him improve.

Z. needs someone to understand where he's coming from (his family background...not very supportive...gets most of his care and nurturing at school).

JJ is a delightful young man and his teacher really wants success for him. JJ responds to people who care.

2. *Teachers' explanations of student behavior tend to be externally focused (additive model).* Often, in interviews, teachers used what they had learned from

parents<sup>3</sup> about a student's home life to interpret broadly that student's behavior at school:

T needs a very firm and kind teacher ...he has been badly spoiled at home...used to having a tantrum and getting his way.

R tends to be aggressive especially when things are hard at home...comes from a difficult home environment...when things aren't going well at home, shows his anger a lot.

While a teacher may have spoken with certainty about a child's home life, information about home life had to be considered interpretive, that is, extrapolated from in-class behavior and secondary sources; we were unable to check its validity based on the case study materials. Moreover, teacher assessment of home life is not the sort of information that normally is communicated to a parent. Statements such as the above appear only in confidential interview situations, not on progress reports. The parent, therefore, never learns of the teachers' interpretation.

Some interview statements combined direct knowledge and interpretation:

T is attention deficit, hyperactive with a large anger problem.  
...goes to counseling...so does his mother...she's a lot of the problem, but also is trying to solve the problem.

He has a deplorable family life...best thing would be to get him out of that situation. He's filthy...the mother blames everyone else for anything that happens to him...came this morning and said his mother was in the hospital, she's sick...she wanted to die so she overdosed on pills...example of environment he lives in.

By and large, the content of direct informal communication between parents and teachers regarding special needs students was negative.

Another form of interpretive communication in teacher interviews we term "projective"—a generalized assessment of the student's behavioral trajectory:

H will fade in a really strict, structured environment...if funneled early into a vocational program, she'd be successful...she's the kid that I project is going to get

---

<sup>3</sup>Presumably the information comes from parents, but not necessarily. It is not clear what the source of information is regarding students' home life, and, as in the second example, one might suspect that it comes from elsewhere—perhaps from the student, a school colleague, volunteer, or from the teacher's own conjecture.

pregnant in 10th grade and drop out of school...not academic and don't think she ever will be.

One striking aspect of these interviews is that "anger" was often given as the cause of disruptive or aggressive behavior among the children studied, particularly the boys.

...have an older student come in to listen to him read because not practicing at home...well liked by other kids in classroom...tends to be aggressive especially when things are hard at home...comes from a difficult home environment...when things aren't going well at home, shows his anger a lot.

Very little support is available for him...has a real problem behaviorally...has a chip on his shoulder...ready for someone to nudge it, and when they do, he has both fists and his mouth flying... would be nice to have a counseling program...people like JJ need to be able to talk to someone immediately when a problem arises.

3. *Teachers lack the personal resources necessary to serve students with special needs effectively (additive model).* This theme speaks to larger issues of adequate funding and the capabilities of human resources, echoed in the research on inclusion, and thus addresses the need for adaptation at the broader social/political level. These excerpts indicate some very specific indicators of such needs:

Adjustments: a smaller classroom, where teacher could work with her one on one a lot more often...classroom volunteers helping her...early primary is supposed to make adjustments for each child. I don't feel like I've gotten any support anywhere...don't know any other kinds of resources we could get...she needs a developmental structure where she can do what she wants...she needs dance and music—that would be her strong point...this school doesn't have that as far as I know.

...feel the way we address her skill level is fine...we've met that need, but don't have any resources to deal with her behavioral problems...only resource available outside the classroom is options program...to qualify for that, parents of the child need to have a medical card...she doesn't have one, so there are no resources...only two district psychologists...don't have time or resources to effectively deal with her...she needs serious, consistent, on-going counseling that interfaces with her family...I don't see that happening in the future.

...would have been helpful to have a classroom aide in reading...ideally it would help to have an extra classified person help out... try to get parent volunteers in...had some parent volunteers but didn't work out because they were inconsistent...only came in one day per week...need to have someone come in every day...

4. *Resources needed for inclusion primarily were identified as external to the student-teacher relationship, but also reflected a combination of systemic and*

*additive perspectives*. Teachers (and observers) occasionally reported attempts of teachers to adapt their methods to individual students (systemic model). However, most reports of, and suggestions for, inclusion involved not the teacher directly, but peers and volunteers, Title 1, or resource room support. Below are examples of teachers using systemic as well as additive models in their efforts at inclusion (indicated by italics):

*(additive model)*: In kindergarten and first grade E lived in office...wasn't capable of staying in the classroom and allowing teacher to teach and kids to learn ...last year put in her classroom...university had a special ed grant...chose four or five kids from (our school) to participate in a project ...comes across as being really sharp...but there are huge holes in his basic skills...this year was ready to be shipped off to child center ...wanted to keep him in the classroom...asked if she could have an aide because he has a transition time that's really bad...

*(systemic model)*: I would alter (my) writing teaching ...instead of guiding students all through the year, I would teach in different modes...

*(systemic model)*: ...N is a very time-consuming child—receives a lot of one-on-one time with his teacher, in order to keep his emotions under control so he can get his work done she challenges him with a timer...make it fun. *(additive model)*: An older buddy to work with N would be good.

*(additive model)*: M served in resource room for reading, math, and writing...he'll be getting some behavioral management counseling through options(.) *(systemic model)*: M and his teacher have a pretty good rapport...otherwise would probably be in a self-contained classroom ...she or another student works with him individually on things he has problems on...usually problem solving...she serves him in math instead of him being in resource room Adjustments: *(additive model)*: Will have to be picked up by options for counseling and learn how to be a friend to other kids...NW worked with him on safe touch *(systemic model)*: ...needs a teacher who is willing to take time with him and talk about cause and effects of his behavior...catch his eye...

*(systemic model)*: In the fall he didn't want to participate with everyone else and would wander off...having him want to be with the group is a real incentive...I worked that out with the resource teacher. He and a small group of kids work on an incentive/point system with the principal earning special rewards for the whole class...important that they earn rewards for their peers so that they can feel like they're part of the group instead of just feeling special and different...he's well liked...his best friend is my TAG student...they're inseparable ...they gain a lot from each other...T shows him how to do things...needs a guide to start doing a task quickly...if he could be with T, would do just fine *(additive model)*: doing fine in Chapter...will continue to need those services, and speech and language services... G is not very strong...would have been helpful to have a classroom aide in reading...tried grouping kids with similar problems together, but they just fed off each other, not productive...found heterogeneous groups of kids are more productive...ideally it would help to have an extra classified person help out try to get parent volunteers in...had some parent volunteers but didn't work out because they were inconsistent...only came in

one day per week...need to have someone come in every day...thought about having some other kids come down and work with G...

One final interview excerpt illustrates the complementarity of perspectives (systemic plus additive model). This was a case in which the teacher reported attempts to work with a student individually (systemic model) but also the help she enlisted of other students in the classroom (additive model):

Adjustments: if teacher has time available to help HH individually, she does; if she does not have time and students are finishing their work and are willing to work with her, then they do; that's pretty successful; if they can't help, they let the teacher know that HH needs help.

While this may not be interpreted strictly as full inclusion, in the sense that the student is participating in a group activity in which all students are working toward some academic goal, it could be argued that the larger goal of involvement of a special-needs student in the shared academic life of the classroom is being addressed. The question remains, however, are the student's educational needs being met in this instance?

5. While there is evidence of complementarity of the two models, *generally, teachers tended to rely on instructional adaptations by individuals other than themselves to address student needs (additive model)*. This strategy for adaptation tends to place the student in a position of exclusion:

H is getting speech and resource help...can't think of what more we can do other than get her a one-on-one tutor all day long—if no one is helping her or standing over her, she simply doesn't work.

Adjustments: She might need a different kind of environment ...my class is not an ideal setting for hyperactive students...JT might need a more structured setting...does better in the afternoon when it's more structured and there are fewer kids but still has problems.

...went on to late primary with his friend R...needs a guide to start doing a task quickly...if he could be with R, would do just fine...doing fine in Chapter...will continue to need those services, and speech and language services.

...thought about having some other kids come down and work with G...his parents are willing to come in to help out, but they know he'd only be worse when they're there.

...academically JJ needs assistance...has been tested...currently served by the resource program in reading, spelling, and writing...is serviced in math, but math is not as low as other areas...the learning support he's receiving has made a total difference in his

attitude when in the regular classroom...he is willing to try and willing to work with the teacher.

B does best when someone sits next to him reminding him to focus...needs more one-on-one support. I have parent volunteers sit next to him while I'm instructing...he's verbal...talks to the adult about what he's doing...this would work better than a pull-out situation...is not low enough to be served in resource room...solution is more personnel...more one-on-one.

6. *Individual instruction, whether by teacher, peer, or educational specialist, is the most common adaptive strategy (additive model).* Again, this theme reflects the tendency to apply adaptive strategies that do not include the student in the larger academic group:

...need to take him one on one just to explain to him what needs to be done...I try to buddy him up with other kids...they've worked pretty well with him...

...J sits next to teacher during math so constant feedback can be given to him...or is paired with a peer tutor who can help him.

...have an older student come in to listen to him read because not practicing at home...in the curriculum we use individual instruction in reading so he can move at his own pace...we do the same in math.

...tasks that need to be completed or solutions worksheets can be really hard for him...usually sits by someone who can help him, so usually able to complete them.

...did a lot better on tasks when worked one on one with tester than I thought...teacher will need to have a lot of one on one for him with assistant help or parent volunteer.

...his best friend is my TAG student...they're inseparable...they gain a lot from each other...R helped M a lot...M also gave R self-esteem...M has benefited from that relationship...follows R's lead...peer tutoring has helped M a lot...R shows him how to do things.

teacher offers her individual help in math ...has students tutoring her at times.

7. *Inappropriate social behavior interferes with academic performance (additive model) and frequently becomes the major goal of instruction and the source of expectations.* While this observation seems obvious, the abundance of descriptions of such interference makes the point thematic, and again, it echoes the concerns of regular education teachers in other research (Schumm & Vaughn, 1995):

...has a real problem behaviorally...has a chip on his shoulder...ready for someone to nudge it, and when they do, he has both fists and his mouth flying...missed many recesses because of his behavior.

really sweet disposition...always pleasant...doesn't offend kids, but doesn't fit in... performing poorly in all academic areas...may be the lowest child in the classroom...performs poor in terms of being appropriate in the classroom...can't focus her attention...don't think it's an attention deficit pattern... for example, when we're talking about spaceships, H does not raise her hand, but blurts out "That flower's pink, Miss B, that flower's pink!" enthusiastic but on a different track most of time...very disruptive because of that...doesn't get that its inappropriate to blurt things out...has need to always have something tactile going on...she rubs my legs or has to be touching something...that need has to be addressed, but not sure how to effectively address it in the regular classroom.

...when in a circle of children listening to a story...he pulls away to a corner, playing with something in his hands...mostly does whatever he wants to do.

T repeated kindergarten...major problem with angry outbursts, destroying school property...when angry is very excessive...excessive in all his emotions...screams and yells at top of his lungs or folds into your arms sobbing.

(R is) very uncooperative...doesn't like to follow directions...refuses to sit with or interact with any of the children. I try to change the seating periodically to see if she will work with any other groups of children which she does not do voluntarily.

S does not need academic support; he's very bright, but (teacher is) concerned about his behavior...at first was really cooperative, but got a couple of new kids in who have problems focusing, and they sit next to S...since then, she has seen a change in him... lives in a small white mobile home...a lot of people, not much room... recently his brother in second grade was suspended from school for fighting... has seen a difference in how S acts since his brother was kicked out of school... before, S used to help out with problem solving in class...The support he has includes supervising playground, communicating with open lines, listening to his side of the story, talking through it with him, trying to agree on what happened...he has potential to have good social skills, has good reasoning skills... if he was in a group of kids with adequate social skills, S would be a leader, but if in a group that is impatient or have lower social skills, S would have a hard time... hard to say what direction he'll go in fourth grade.

8. *Teachers interpret patterns of poor performance and negative behavior in context of the student's home life (additive model).* This might be considered a sub-theme of the basic distinction between an additive and systemic view (*Teachers' explanations of student behavior tend to be externally focused*), and illustrations of it may be found there. However, the frequency and detail with which classroom behavior is attributed to home life makes it thematic in and of itself. One more illustration underscores this theme:

H does not do the reading at night because her mother works nights and her older sister doesn't have much time to watch her...so she doesn't make progress like she should

...absence ...is a very big problem for her...H's mother works two jobs, and is extremely tired when she comes home...difficult for her to make sure H gets on the bus...if she misses the bus, she calls her grandma...grandma picks her up and takes her home instead of to school.

This example also illustrates an image teachers convey as being primary analysts of students' conditions and needs (systemic model). While this seems to be an appropriate role, our case study materials concur with the other research, suggesting that teachers have not received the preservice or inservice training needed to serve effectively in such a role. They lack, by their own accounts, the necessary resources to serve special-needs students, and also lack regular means of communication with parents on an informal level and with other educators on a formal level. This is represented in Figure 1 under the additive model—"Independent" Administrative Structure. More interconnected structures would seem necessary to enable teachers to adapt their methods and programs to individual student needs. While our interview material indicates a tendency on the part of regular education teachers to adopt the additive model of inclusion, it is clear from this material that attributes of inclusion can be, and often are, drawn from both perspectives.

### Discussion

In this paper, we identified two different models for supporting students with disabilities and those at risk of failure in the classroom: (a) an additive model, in which teachers direct but do not "own" the process; and (b) a systemic model, in which teachers produce the process as full owners of all components. We described these two models by reference to five components and then used transcribed quotes to illustrate each component. Citing a series of broad themes, we pointed out that the two models can, should be, and occasionally are complementarily applied. But, we noted a general tendency of teachers to orient their approaches to inclusion to the additive model, with a basic external locus of control. Our interview findings are



consistent with the emerging literature on inclusion, in which special educators appear to be undergoing a significant shift in their roles and responsibilities (Putnam et al., 1995; Schumm & Vaughn, 1995). This shift has an impact not only on who we serve, but on where and how students are served; ultimately, it is likely to affect the impact of that service.

In much of the teacher perception literature reported by Schumm, Vaughn, and colleagues, general education teachers express many concerns with their training and skill in supporting students with disabilities in the classroom (Schumm & Vaughn, 1992, 1995; Schumm et al., 1994; Vaughn et al., 1994). Clearly the sentiment is for inclusion; yet, without adequate supports, the likelihood of success is limited. In our interviews, many of the teachers' responses reflect a general qualification of this potential for success. At times, the "explanations" appear more directed at the family than the students, but the net effect is still an abdication of responsibility, possibly as a result of two systems—general education and special education—serving the same students. And, by referencing the students' behavior (or family) as the primary impetus for subsequent problems, teachers are both abdicating responsibility and directing the search process for an intervention outward. The problem is less the explanation than the search for an intervention to mediate the problem.

For example, many students exhibit highly negative behaviors that have little known relationship to events in the classroom. Thus, when a student acts angrily during an otherwise well-conducted activity and disrupts the classroom, the teacher is at a loss, due to lack of training, to explain the behavior in terms of his or her own classroom management strategies. Rather, the teacher may refer to a "personality" problem of the child. While such an explanation may be reasonable—even enlightening—a natural result of it is to ignore other possibilities that may be within the teacher's ability to control. The classroom routine is not questioned in

terms of the role it plays in either reinforcing or maintaining the student's negative behavior. While the teacher is looking to the stimulus for explaining the behavior, the most powerful explanation (the consequence of the behavior) is being neglected. In the end, then, others become involved in the intervention because no immediate connection exists to focus the relationship between the student and the teacher's behavior. Strategies to change behavior become additive, layering more support into the schedule and activities, rather than fundamentally rearranging the very nature of the schedules and activities.

At times, this teacher-student relationship may be difficult to establish because of the extreme nature of the student's behavior and the immediacy of the intervention needed, requiring the involvement of others. Yet, at other times, this relationship becomes so routine that roles and relationships among the support services are never really questioned, and the additive model is implemented as a *quid pro quo*.

To be sure, the additive model, with its layering of support services, takes on the appearance of solving problems. It brings resources to the classroom, frequently in the form of other adults. However, the adults often lack sufficient and relevant training. Typically, they are not certified (serving as instructional assistants or parent volunteers); or, if they are certified, they are very expensive (and overly-trained) educational assistants, a role increasingly being objected to by special education professionals. Another problem is that these additional services maintain the group focus while ignoring the individual. In contrast, if help were focused on the individual, then inclusion may present minimal disruption and potentially alter schedules and activities, thus making it less feasible.

The problem with the additive model is that the fundamental nature of the circumstances in which the individual interacts with the group, which may be more important than inclusion itself, is never really addressed. For example, sending a

student to the corner with an instructional assistant solves one problem of providing more one-to-one instruction; it, however, does not provide the student more age-appropriate models for performing (both in how to respond and the correctness of the response). It also fails to provide the teacher with many examples of either the student's potential or their response to the intervention (instead, they have to rely upon second-hand information and what little objective data are collected).

The major advantage of the additive model is the timeliness with which services can be rendered: When a problem arises, an immediate response can be made. When a student acts out in an extreme manner, they can be removed; when a skill problem persists, another adult can be called upon to assist; when a social interaction occurs repeatedly, the group can be rearranged. At the same time, the systemic nature of the interaction between the teachers and the students is never really addressed. The issue is not just the individual but the individual within the group, of which the teacher is the central player. Clearly, general education teachers need to keep the group in mind; yet, without any opportunity to modify the environment to fit the individual within the group, no systemic changes are made.

One of the most significant problems with this entire conception of changing environments with a systemic model is the need for administrative support. Without clear guidelines for defining roles and relationships, teachers are left to their own skills and experience in negotiating and consulting with each other. Instead of a model with consistent and legible guidelines, based on empirical findings for access to establish precedence and predictability, each opportunity to include a student becomes a new and unique experience. And the whole cycle begins again, first looking to the student outside of the group context, for explanations of behavior, leading to an outward search for solutions. This inevitably results in an additive buildup of resources that provide

individual accommodations within the group, but make no changes to the group structure or interactions within the group.

All of this is done with enough expediency and immediacy to appear to be accountable. And without further institutional learning, provided only through appropriately framed administrative structures, the system begets itself. In the end, inclusion is completed with few adaptations oriented to the individual student and independently delivered over time and across individuals. The system endures because it is reinforced by negative contingencies, with negative behaviors of students effectively terminated by removal from the system, and so teachers continue to adhere to it. The illusion of inclusion is maintained, while the realization of it slips by.

## References

Ferguson, D. L. (1995). The real challenge of inclusion: Confessions of a 'rabid inclusionist.' *Phi Delta Kappan*, 75(10), 281-287.

Fuchs, D., & Fuchs, L. S. (1994). Inclusive schools movement and the radicalization of special education reform. *Exceptional Children*, 60, 294-309.

Gerber, M. M. (1995). Inclusion at the high-water mark? Some thoughts on Zigmond and Baker's case studies of inclusive educational programs. *Journal of Special Education*, 29(2), 181-191.

Gersten, R., & Woodward, J. (1990). Rethinking the regular education initiative: Focus on the classroom teacher. *Remedial and Special Education*, 11 (3), 7-16.

Lunenburg, F. C., & Cadavid, V. (1992). Locus of control, pupil ideology, and dimensions of teacher burnout. *Journal of Instructional Psychology*, 19, 13-22.

McDowell, J., & Rothlein, L. (1993). *There is no mystique: It's just good teaching*. Manuscript submitted for publication.

Putnam, J. W., Spiegel, A. N., & Bruininks, R. H. (1995). Future directions in education and inclusion of students with disabilities: A Delphi investigation. *Exceptional Children*, 61(6), 553-576.

Roach, V. (1995). Supporting inclusion: Beyond the rhetoric. *Phi Delta Kappan*, 75 (10), 295-299.

Schumm, J. S., & Vaughn, S. (1992). Planning for mainstreamed special education students: Perceptions of general classroom teachers. *Exceptionality*, 3, 81-98.

Schumm, J. S., & Vaughn, S. (1995). Getting ready for inclusion: Is the stage set? *Learning Disabilities Research & Practice*, 10(3), 169-179.

Schumm, J. S., Vaughn, S., Gordon, J., & Rothlein, L. (1994). General education teachers' beliefs, skills, and practices in planning for mainstreamed students with learning disabilities. *Teacher Education and Special Education*, 17, 22-37.

Schumm, J. S., Vaughn, S., & Leavell, A. (1994). *Curricular planning for inclusive classrooms: Three teachers' journeys*. Manuscript submitted for publication.

Schumm, J. S., Vaughn, S., Haager, D., McDowell, J., Rothlein, L., & Saumell, L. (1995). General education teacher planning: What can students with learning disabilities expect? *Exceptional Children*, 61(4), 335-352.

Skinner, E. A. (1995). *Perceived control, motivation, and coping*. Thousand Oaks, CA: Sage Publications.

Vaughn, S., & Schumm, J. S. (1993). An elementary school restructures for inclusion. Manuscript submitted for publication. Cited in J. S. Schumm and S. Vaughn (1995). Getting ready for inclusion: Is the stage set? Learning Disabilities Research and Practice, 10(3), 169-179.

Vaughn, S., Schumm, J. S., Jallad, B., Slusher, J., & Saumell, L. (1994). *Teachers' views of inclusion: "I'd rather pump gas."* Paper presented at the Annual Meeting of the American Educational Research Association, New Orleans, LA. (ERIC Document Reproduction Service No. ED 370 928).

Yell, M. L. (1995). Least restrictive environment, inclusion, and students with disabilities: A legal analysis. *The Journal of Special Education*, 28(4), 398-404.

Zigmond, N., & Baker, J. M. (1995). Concluding comments: Current and future practices in inclusive schooling. *The Journal of Special Education*, 29(2), 245-250.

Table and Figure Captions

Figure 1. Additive versus systemic models of inclusion depicting bifurcated approaches to five attributes of inclusion.

Figure 2. Teacher semi-structured questionnaire on adaptation and inclusion.

Table 1. Comments from Teacher Interviews Illustrating Additive and Systemic Perspectives on Inclusion

**Additive Model**

Externally based  
(student-family)

Explanation of Behavior

**Attributes**

**Systemic Model**

Internally based  
(teacher-student,  
classroom)

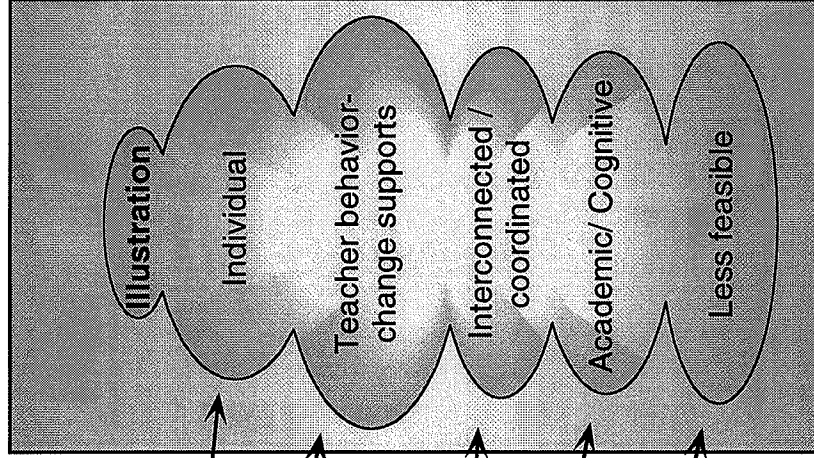
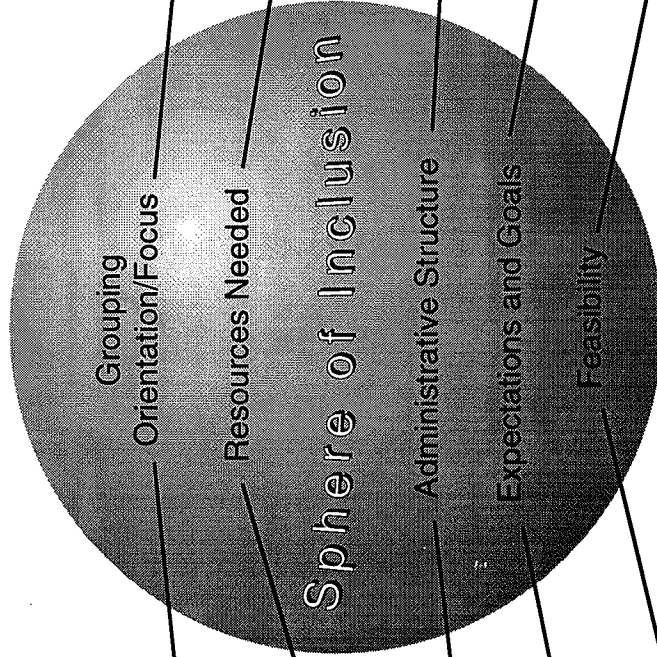
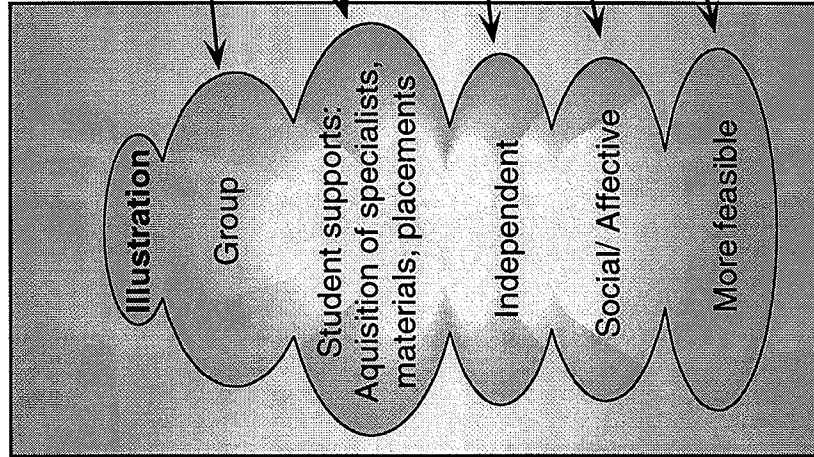




Figure 2. Teacher semi-structured questionnaire on adaptation and inclusion.

*Teacher Interview (with particular reference to Adaptation)*

Here are two students who are at risk or in special education. Look over their responses to answer the following questions FOR EACH STUDENT:

Question 1 (Inclusion):

What kinds of learning and behavioral support does the child need or has the child received to be successfully included in the general education classroom? How close is s/he to others in the classroom? In what areas is s/he performing poorly and how discrepant can this performance be from others and still make the general education classroom appropriate?

Inclusion is the major issue in the first question and is focused on learning and behavioral supports that the child needs to succeed in the classroom with others. The concept is meant to be learner or child defined and may include directions, structures, feedback, and guidance that facilitate proficient performance. The term also implies both a task and social group. To be included may refer to the supports provided by the teacher so the child may complete an activity or response; in contrast, inclusion also implies being part of the group of students in the classroom.

Question 2 (Adaptation):

What kinds of adjustments need to be made or have been made for this student to learn and develop in the general education classroom? What would you have to do (or have you done) and what support would you need from others? Who would that be?

In preparing an answer to the second question, please consider the following kinds of adjustments that may be possible:

Curriculum-The frameworks and skill sequences being presented to students. The curriculum includes coverage of content, both rate of coverage and sequence of content.

Materials and Activities-All books, programs, objects, and interest centers available to the student and/or used with the curriculum or within instruction. Both use and integration are part of materials and activities.

Instructional Methods-All the teacher presentations of basic and social skills; emphasis is on the interactions between teachers and students. Examples include the use of whole language, concept webs, and manipulative math within instructional presentations.

Tasks-Those problems and requests presented to students for completion or solution. All worksheets, activities requiring final products, or assignments can be considered tasks.

Responses-The behavior required by the student to participate in any of the above structures (curriculum, materials-interest centers, instruction, and tasks). The obvious examples are speaking, reading, writing, placing-positioning, moving, etc.

Environment-The setting in which the student is placed to learn; it may be more specific than the classroom and may include position-location within the room or groups in which students are placed or moved.

Assessment-All information collected on students to determine proficiency or skill using either rate or level of performance as the index; both quantitative (counting) or qualitative (judgments) also may be considered in the assessment.

Personnel-The individuals who interact with students during instruction, which may include peers, tutors, cooperative groups, aides, parents, volunteers, and other teachers or specialists.

Behavioral Expectations-The standards and rules-routines of the classroom that form the classroom management system; the term also includes teacher tolerance.

Table 1. Chart of Attributes

<i>Basic Defining Difference Between Models</i>	<b>Additive Model</b>	<b>Systemic Model</b>
<i>Explanation of Behavior</i>	He has a deplorable family life - best thing would be to get him out of that situation. He's filthy - the mother blames everyone else for anything that happens him. ...came this morning and said his mother was in the hospital, she's sick - she wanted to die so she overdosed on pills - example of environment he lives in	...a teacher who is willing to take time with him and talk about cause and effects of his behavior -catch his eye-he takes silent signals much better than vocal ones (i.e., if she wants him to stop using a loud voice, she squeezes her lips shut with her fingers - he'll look at her and do the same).
<b>Attributes of Models</b>		
<b>Grouping Orientation/Focus</b>	(R is) very uncooperative - doesn't like to follow directions - refuses to sit with or interact with any of the children. I try to change the seating periodically to see if she will work with any other groups of children which she does not do voluntarily	In the fall he didn't want to participate with everyone else and would wander off...having him want to be with the group is a real incentive...I work that out with the resource teacher. He and a small group of kids work on an incentive/point system with the principal earning special rewards for the whole class...important that they earn rewards for their peers so that they can feel like they're part of the group instead of just feeling special and different...
<b>Resources Needed</b>	H is getting speech and resource help...can't think of what more we can do other than get her a one-on-one tutor all day long —if no one is helping her or standing over her, she simply doesn't work	I tried to read as much as I could about attention deficit (disorder) so I could understand where he's coming from...tried to make classroom fairly structured—K-1 is very open ended, but did things very consistently...did things around T's behavior  I would alter (my) writing teaching ...instead of guiding students all through the year, I would teach in different modes...
<b>Administrative Structure</b>	I don't feel like I've gotten any support anywhere...don't know any other kinds of resources we could get...she needs a developmental structure where she can do what she wants...she needs dance and music—that would be her strong point...this school doesn't have that as far as I know	<i>In our building, regular and special ed teachers meet regularly to assess where we are with our included students. We go over test scores and IEPs as a team, and we try to identify weaknesses and strengths in our strategies.</i>
<b>Goals and Expectations</b>	S does not need academic support; he's very bright, but (teacher is) concerned about his behavior.	<i>T has started to make significant progress in reading comprehension this winter. We will continue working towards her goal of reading at grade level.</i>
<b>Feasibility</b>	B does best when someone sits next to him reminding him to focus...needs more one-on-one support. I have parent volunteers sit next to him while I'm instructing...he's verbal...talks to the adult about what he's doing...this would work better than a pull-out situation.	...N is a very time-consuming child—receives a lot of one-on-one time with his teacher, in order to keep his emotions under control so he can get his work done she challenges him with a timer - make it fun.