Developing Membership in the Education of Deaf and Hard-of-Hearing Students in Inclusive Settings

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This article discusses the importance of membership in the inclusive education of deaf/hard-of-hearing (D/HH) students. Membership refers to being an integral part of the classroom and school communities. Membership is a key philosophical concept in inclusion that may influence how classroom teachers and teachers of D/HH students share their expertise and how they work with students and each other. Membership can be contrasted with “visitorship.” When programs treat D/HH students as visitors, these students face greater barriers to obtaining a quality education in classes with hearing students. A social constructivist perspective of learning and teaching that requires students in the classroom to interact with one another and the teacher may best promote learning and is consistent with a focus on membership. We suggest that inclusion is possible, but to sustain students as full members of their classes and school, programs must go beyond placement and communication access issues. To facilitate membership, inclusive programs must carefully address teacher attitudes, teacher roles and relationships, student knowledge and curriculum, structural barriers, extracurricular activities, community relationships, and parental support.

Inclusion of deaf/hard-of-hearing (D/HH) students in public schools is one of the more controversial topics in the field. Many authors, when writing about inclusion, have focused on D/HH students’ access to classroom communication (Innes, 1994; McCartney, 1994; Ramsey, 1997). Without access, inclusion is impossible, but communication access alone is not sufficient for effective inclusion. An effective inclusion program requires an examination of issues that either promote or hinder membership in the school and classroom community. The term “community” implies a sense of belongingness and personal relatedness (Osterman, 2000). Membership in the school community implies that all students and teachers are accepted and valued by the school and that their unique needs are met within the classroom and school community. It is this issue of membership and the means of promoting membership that marks successful inclusion. School and classroom membership and the means of promoting such membership in public schools is our focus here.

Mainstreaming of D/HH student in public schools was given an impetus in the 1970s by the language in PL 94–142 that required students with and without disabilities to be educated together to the maximum extent appropriate, with removal justified only when satisfactory educational results could not be achieved. Students were to be educated in the least restrictive environment on a continuum of services that ranged from those designated the most restrictive (home schooling, residential programs) to least restrictive (placement in general education classrooms). In practice, mainstreaming resulted in a large percentage of D/HH students being educated in public schools, although not necessarily in general education classrooms. Holden-Pitt and Diaz (1998) report that in 1977, although 46% of D/HH students attended public schools, only 34% attended general education classrooms for part-time or full-time instruction.

In the 1980s, the Regular Education Initiative provided the impetus to inclusion. Policy makers expressed
concern that having two separate systems of education (special education and general education) was not effectively serving students with disabilities, and calls were made to develop a single system of education that would serve all students (Reynolds, Wang, & Walberg, 1987). Reformers suggested that all students be educated in general education classrooms in their neighborhood schools with appropriate special education services being provided within the classroom (Biklen, Lehr, Searl, & Taylor, 1987; Wang & Walberg, 1988).

In both mainstreaming and inclusion, the emphasis is frequently on the physical placement of disabled and nondisabled students in the same educational setting, with the assumption that placements in such settings will allow students with disabilities to make academic progress, have normal experiences, and develop meaningful social experiences (Guralnick, 1999, 2001; Wang & Walberg, 1988). From a perspective of placement, inclusive programs are those in which all or most of the education of the student is in the regular classroom (Stinson & Antia, 1999). This is in contrast to programs in which students are in special classes for all or most of their education. Unfortunately, physical placement alone is not sufficient for any of these expectations to be met (Antia, 1982, 1985; Carlberg & Kavale, 1980).

In this article, inclusion is seen as a philosophical concept, based on full citizenship or membership in the community (Bunch, 1994). The concept of inclusion can be associated with certain perspectives on teaching and learning and with pragmatic educational issues. Conceptual views associated with inclusion may influence how classroom teachers and teachers of D/HH share their expertise, the degree to which they take ownership of students, how they work with students and with each other, and the students with whom they choose to work. These conceptual views also influence the manner in which school personnel connect with parents and the Deaf community and the kind of support they receive from them in return. Thus, key philosophical concepts around inclusion affect pragmatic decisions of administrators, teachers, and parents that, in turn, affect students’ educational programs.

The first part of this article contrasts the key conceptual differences between “visitorship” and membership and the implications for inclusive programs. Here, membership means being part of classroom and school communities. As a member, the student is “in” the group, as opposed to being out of it. The second part discusses perspectives on teaching and learning and the extent that they promote membership. The third section addresses pragmatic issues that inclusive programs must consider to develop membership for teachers, students, and the community.

Visitorship Versus Membership and Inclusive Programs

Staff and students at schools treat D/HH students who are placed in regular classes as visitors or as members. When they treat these students as visitors, these students face greater barriers in obtaining a quality education. In practice, there is no real dividing line between concepts of “visitorship” and “membership”; they might more productively be examined as two ends of a continuum. Programs function more toward one end of the continuum than the other. Also, the extent that programs promote membership or visitorship depends on pragmatic considerations, as well as the program’s stated philosophy and the extent that it places students in regular classes.

When a D/HH student is a visitor to the regular classroom, education professionals assume that the student’s needs are sufficiently different from those of the other students that they are best met by teachers of D/HH (McCartney, 1994; Polowe-Aldersley, 1994). The D/HH student’s primary placement is the resource room or special education classroom; he or she needs to qualify to enter the general education classroom by virtue of his or her level of academic achievement and social maturity (Moores & Kluwin, 1986). The student’s visits to the regular classroom are scheduled and controlled by the general education classroom teacher and the teacher of D/HH. The schedule and expectations of the teacher in the regular classroom are influenced by the demands of the regular educational curriculum. In order to visit the classroom, the student has to conform to a specific set of expectations. Some of these expectations are behavioral expectations for all students within that classroom. Others are curricular expectations; the D/HH student is expected to be able to perform at the level at which the curriculum is presented without many adaptations (Chorost, 1988).
These behavioral and curricular expectations are determined by the classroom teacher and monitored by the teacher of D/HH. Special help may be provided by the teacher of D/HH to assist the student to meet these expectations. If the D/HH student cannot meet the expectations, the student is often required to return to the special education classroom (McCartney, 1984).

When the teacher of D/HH is a visitor to the classroom, her primary task during visits is to monitor the behavior and work of the D/HH student. She may also give information to, and receive information from, the classroom teacher. These information exchanges center around the D/HH student and help the teacher of D/HH to determine whether the student is meeting the classroom expectations or whether he or she needs additional help to succeed.

The teacher of D/HH visiting the classroom is assumed to have a specific and unique area of expertise, that is, knowledge of D/HH students. Consequently, one of the primary responsibilities of the teacher of D/HH is to educate the classroom teacher about her area of expertise using a consultation model where the classroom teacher receives advice from the specialist teacher of D/HH about changes that will benefit the D/HH student (Luckner, 1991; Pugach & Johnson, 1989). The teacher of D/HH may request that the classroom teacher make changes in the manner in which instruction is commonly delivered; for example, she may request that the classroom teacher stop walking around the room when giving instructions to the class because of the difficulty this might pose for the D/HH student. If the classroom teacher does not, or cannot, accept or implement the expert advice, the D/HH student returns to the resource or special education classroom, on the request of either the classroom teacher or the teacher of D/HH.

Visits to the regular classroom by both students and teachers can be seen as disruptive to the routine of the classroom by the classroom teacher (Antia, 1999; Giangreco, Dennis, Cloninger, Edelman, & Schattman, 1993; Wood, 1998). Visitors typically enter the classroom without the knowledge of what has occurred previously. As a result, they may misinterpret the current situation and behave or interact inappropriately. The D/HH student may not have a correct assignment ready because he or she has not been present for the entire explanation of how the assignment needs to be completed. A visiting teacher of D/HH can be in the school or the classroom only for a specified time during which she desires to communicate with the classroom teacher, despite the difficulty this may pose for the classroom teacher’s schedule. Furthermore, the infrequent participation of the teacher of D/HH in the regular classroom (because of her caseload or schedule) means that she may obtain a fragmented view of the instruction that occurs. As a result, she may make decisions about pull-out tutoring or instruction that are inappropriate or uncoordinated with the instruction in the classroom (Antia, 1999).

Parents of the D/HH students and members of the Deaf community who participate in the classroom may also take the role of visitors to the school. In this role, they are considered a source of support specifically to the D/HH students and not to the school community at large. School administrators are frequently responsible for monitoring the visits of the D/HH student, the teacher of D/HH, and other support personnel to the general education classroom; they ensure that these visits are not cumbersome and do not disrupt the lives and work of the classroom teachers and other students. They may also control the access to extracurricular activities by the D/HH students. Since the D/HH students are perceived as visitors, not members of the school, administrators may not see it as a priority to provide them with transportation or interpreters for extracurricular activities.

In programs that promote membership, in contrast, school personnel act under the assumption that the D/HH student is a full member of the classroom with rights and responsibilities identical to those of the other students; thus, the practices of the classroom must accommodate him, as well as other students in the class (Bassett et al., 1996). The D/HH student’s instructional needs are seen as different from those of some students and similar to others. He may be different from other students because he is the only one who must have a sign language interpreter, but similar to other students in that he benefits from clear and frequent visual presentations of curricular material.

Membership generally implies full-time rather than part-time participation in the classroom, but we, in contrast to some (Tucker, 1989), do not believe that full-
time placement is synonymous with inclusion, nor is full-time placement in the regular classroom a sufficient condition for membership. A school culture that strongly promotes inclusion, and that has a shared vision of inclusion of all students among all staff members, can promote perceptions of membership despite part-time placement in general education classrooms. On the other hand, the attitudes of, and relationships among, educational professionals and among students themselves can be such that membership is elusive no matter how much time the D/HH student spends in the general education classroom (Lieber et al., 2000).

The relationship between the extent of placement and membership may depend, in part, on the educational level of the school, whether it is elementary, middle, secondary, or postsecondary. Consistent, extensive time in the regular classroom may be more important for facilitating membership of the D/HH student at the elementary level, where all students stay together, than at higher educational levels. More regular presence in the regular classroom means more familiarity and more opportunities for relationships. Because students in elementary classes are typically always together, this familiarity may be particularly significant. A D/HH elementary student who is in the regular class only part of the time may be more likely to be perceived as a visitor than one who is always in the class, although this also depends on other factors such as the degree of collaboration between the regular classroom and D/HH teachers. Extent of placement may be less important at the middle school and higher levels because students move from class to class and classmates change to some extent for all students. In these circumstances, familiarity is probably a less important determinant of whether the D/HH student is a member or a visitor.

The concept of membership in an inclusive school and classroom extends to the teachers, administrators, and community (Lieber et al., 2000). The classroom teacher and the teacher of D/HH need to be equal members of the classroom and the school (Pugach & Johnson, 1989). The operation of equal professional membership is most clearly demonstrated in a team-teaching situation. As with the students, however, membership does not necessarily require that both teachers be physically present in the classroom at all times. It does mean that the classroom teacher and teacher of D/HH view themselves, together, as responsible for the success of all the students in the classroom.

Administrative support of the concept of membership is a key to success (Lee & Antia, 1992). In an inclusive school with desirable educational practices, administrators see themselves as facilitating participatory membership in the classroom and the school rather than controlling visitors. Riehl (2000), in a review of the role of principals in creating an inclusive school culture, suggests that principals can create one by treating students as individuals rather than as representatives of a social group, by appreciating the cultural knowledge that each student brings to school, and by creating a caring and cooperative environment among teachers, students, and families. When administrators promote and support school and community networking, they both model and develop an inclusive school environment. Because each student is a valued member of the school, it is possible to justify the use of resources to benefit the D/HH students as well as the other students in the school. The administrator nurtures relationships between staff members by providing important resources of time and stability. Administrators create a culture where parents of D/HH students and the Deaf community are involved in the life of the school and offer their expertise to all students, as do other parents and other communities.

Perspectives on Teaching and Learning

An important conceptual issue in thinking about quality education in the regular classroom pertains to perspectives on teaching and learning. Recently there has been a shift in perspectives regarding the teaching and learning processes in the classroom. A newer, more socially oriented perspective seems more consistent with quality education and membership in the regular classroom than earlier perspectives. Shuell (1996) describes three theoretical perspectives regarding teaching and learning: behavioral, cognitive, and social constructivist. The behavioral perspective places the greatest emphasis on the student as an individual learner. In this perspective, the manner in which the class environment is structured affects learning, but little attention is given to how group interactions shape learning. This perspective focuses on the acquisition of facts, skills, and concepts through drill and practices. There is an emphasis on in-
individualized training, in which materials are organized for optimal acquisition (Greeno, Collins, & Resnick, 1996). The student is a passive recipient of information who listens carefully, follows directions, and completes work on a schedule (Shuell, 1996). Instructional methods and learning activities in traditional classes largely reflect this view (Greeno et al., 1996). Examples of this approach are Gagne’s (1965) work on task analysis and Rummelhart, Hinton, and Williams’s (1986) and Suppes and Morningstar’s (1972) work on programmed instruction that teaches specific thinking skills, such as solving certain mathematical word problems.

The cognitive perspective places somewhat less emphasis on learning as an individual activity and recognizes that interaction with others contributes to learning. According to this perspective, learning involves active construction and restructuring of prior knowledge. Through diverse processes, the student connects new knowledge to what he or she already knows. The processes for constructing the conceptual understanding (i.e., schemata) and strengthening general strategies include problem solving and reasoning. According to this perspective, for true understanding to occur, students must carry out deep cognitive processing to develop new abstract representations (Greeno et al., 1996; Resnick, 1987; Shuell, 1996). Work within the cognitive perspective includes Flavell, Green, and Flavell’s (1986) demonstration of the importance of intuitive conceptual understanding, Greeno and Simon’s (1989) research on how problem solving reflects one’s own thinking, Brown and Campione’s (1981) study of meta-cognitive processes, and Newell’s (1990) computer software for teaching problem solving.

The social constructivist perspective, which encompasses much of the newest thinking, gives the most attention to the role of social interaction in learning of the three perspectives. As with the cognitive perspective, the social constructivist perspective holds that social interaction contributes to learning. The social constructivist perspective emphasizes that students construct much of their knowledge directly from their social experiences. Therefore, it is important that the student develop skills to participate and learn as a member of a community. These skills include formulating questions for inquiry and evaluating alternative answers in a social context. In addition, the social constructivist perspective places relatively more weight on the affective connotations of the learning experience—students learn to positively or negatively participate in the learning community, which, in part, determines success of the learning experience (Greeno et al., 1996; Shuell, 1996). According to social constructivism, the social context in which learning occurs has an important bearing on what is learned; that is, learning is, to a considerable extent, context-dependent (Resnick, Levine, & Teasley, 1991). Applications of social constructivism in instruction include cooperative learning (e.g., Aaronson, Blaney, Stephan, Sikes, & Snapp, 1978; Sharan & Sharan, 1994), apprenticeship approaches (Lave & Wenger, 1991), and discussion/inquiry methods of mathematics learning (Cobb, Wood, & Yackel, 1990).

The social constructivist perspective seems more consistent with quality education in the regular classroom than the behavioral, and to a lesser degree, the cognitive perspective. Due to its view that learning takes place in a community or social context, the social constructivist perspective emphasizes the importance of the student as a fully accepted member of the classroom who participates successfully in the various activities. Behavioral and cognitive perspectives devote little, or no, attention to how learning takes place in the classroom community, or the extent to which students are full members of the classroom. Consequently, educators of D/HH students who follow these two perspectives may not use sufficient social strategies or provide adequate social support for effective learning.

An additional difference in theoretical perspectives pertains to the role of the teacher in facilitating learning (Shuell, 1996). The behavioral perspective considers the teacher as the primary source of knowledge and as the manager of students’ learning. Effective teaching involves providing clear goals, ensuring that there is an appropriate sequence of materials for the students, and providing appropriate feedback and reinforcement. The cognitive perspective views the teacher as the one whose primary role is to create situations that will challenge students to extend their intuitive knowledge and to apply this knowledge to understand more complex situations. As in the behaviorist perspective, the teacher-student relationship, rather than the student-student one, is the basis for learning. The teacher arranges learning materials, guides students through them, and
evaluates their progress (Greeno et al., 1996; Shuell, 1996). The social constructivist perspective views the teacher as a creator of opportunities for learning in a social context. Although the teacher oversees the learning activities of the classroom and has a number of areas of expertise, he or she is a co-participant in the classroom. This means the teacher is not the only source of knowledge and that an important role is facilitation of the social construction of knowledge. Often the teacher listens to the students and carefully considers their socially constructed understandings. Members of the class, students and teacher, share their expertise (Shuell, 1996). Thus, when the class includes a teacher of the D/HH and/or an interpreter, they legitimately share their expertise with the whole class. The interpreter, for example, may regularly teach sign language to all members of the class, and the teacher of the D/HH may work with reading groups that include more students than those who are D/HH.

Consideration of the relation of the different perspectives of teaching and learning to classroom membership points to some significant challenges in enabling the D/HH student to become fully engaged in the learning community of the regular classroom. A social constructivist perspective suggests that supporting communication access may be more difficult than does a behavioral or a cognitive perspective. D/HH students may more easily follow an interpreter when the teacher either lectures or leads a classroom discussion. When students do much of their learning in work groups, there are the challenges of following discussions in which there is rapid turn taking, and the lag-time of the interpreter may hinder participation of the D/HH student (Stinson & Antia, 1999; Stinson & Liu, 1999; Stinson, Liu, Saur, & Long, 1996). In addition, for the D/HH student to become engaged in the learning community, there must be appropriate group learning activities and good relationships with peers. When the regular classroom teacher and the teacher of D/HH students work closely together, appropriate learning activities may more frequently occur. When hearing and D/HH students are knowledgeable about hearing loss and its implications for hearing-D/HH relationships and when all students feel supported by the school community, better peer relationships and better learning may occur.

Pragmatic Issues

The belief that inclusion involves membership is not, of course, sufficient to promote membership. School personnel must pay attention to, and act on, specific pragmatic issues. We have divided these issues into four major areas: teacher issues, student issues, administrative and structural issues, and community issues. Teacher issues are those aspects of teacher behavior that affect membership of both teachers and students within the classroom. Student issues include student knowledge and skills that promote membership on the part of students and the means that teachers might use to achieve such knowledge and skills. Administrative and structural issues include aspects of schooling that are the domain of administrators who control resources of time and money. Finally, community issues involve the Deaf community and parents.

Teacher Issues

Teacher issues that influence membership of both teachers and students within the classroom include teacher attitudes and teacher roles and responsibilities.

Teacher Attitudes. Teacher attitudes are an important component in promoting membership and sense of belonging for all students in the classroom and, consequently, a key component in successful inclusion practice. Two aspects of teacher attitudes that appear to be key for inclusion are teachers’ expectations and teachers’ ownership of students.

Expectations. The expectations of both the teacher of D/HH and the classroom teacher can result in the teachers’ isolating, ignoring, or overprotecting D/HH students. Teachers of D/HH often have low academic and behavioral expectations of their D/HH students because of their lack of familiarity with same-age hearing students (Jimenez-Sanchez & Antia, 1999). Gaustad (1999) found that after collaboratively teaching an integrated unit with D/HH and hearing students, teachers of the D/HH students reported that they had underestimated their students’ potential and that the D/HH students consistently exceeded their initial expectations. They also commented that they (the teachers) interceded “too often and too much,” a teacher behavior...
that results in separating D/HH students from their peers and makes D/HH students unnecessarily dependent on the teacher. In resource rooms and self-contained classrooms, there is usually a small teacher-student ratio and, consequently, high levels of teacher intercession and control that can encourage in students an attitude of learned helplessness and teacher dependence (Antia, 1982; Eisenberger, Conti-D’Antonio, & Bertrando, 2000; Kennedy, Bruininks, & Kennedy, 1976). Kreimeyer, Crooke, Drye, Egbert, and Klein (2000), in a study of a coenrolled inclusive classroom, reported that teachers of D/HH needed to release their assumptions that “deaf students should be taught in small groups, that they needed simplified texts, that they (can) not keep up with their hearing peers academically.”

General education classroom teachers tend not to be attached to students with disabilities and often do not know what to do about them (Cook, Tankersley, & Cook, 2000). They might have low academic and behavioral expectations for D/HH students because they see them as “special” and consequently may ignore misbehavior and missed homework. They also may not hold the D/HH student accountable for content knowledge and academic skills that they expect of their other students and of which the D/HH student is capable. At the same time, regular classroom teachers may have erroneous expectations regarding D/HH students’ auditory and visual capabilities; for example, they may expect the D/HH student to give simultaneous visual attention to two tasks (Stinson & Liu, 1999). Because of lack of knowledge of the effects of mild and moderate hearing loss, they may have particular difficulty setting realistic expectations for class participation of hard-of-hearing students whose auditory functioning might vary with the noise and activity level of the class (Ross, Brackett, & Maxon, 1982).

Teacher expectations can have a negative effect on the academic performance of students by communicating to students that they are not expected to fully participate in classroom activities or to succeed at the academic activities in which they participate. In contrast, high (and realistic) expectations can result in teachers making appropriate academic demands on students and also taking responsibility for adjusting the environment to allow the D/HH student to participate fully in classroom activities.

Ownership. Ownership of the D/HH student by the general education teacher is important to promoting full membership in the inclusive classroom. Classroom teachers who take ownership of the D/HH student in their classroom believe that they have the primary responsibility for all students in their classroom (Antia, 1999). This has been noted in studies at both the elementary and postsecondary level (Foster, Snell, & Long, 1999) and presumably applies to other educational levels as well. Successful inclusion programs, therefore, must promote ownership of all students by the classroom teacher (Giangreco et al., 1993; Schnorr, 1990). However, in order for the classroom teacher to assume ownership, the teacher of D/HH has to relinquish some ownership of the D/HH student and trust the classroom teacher’s knowledge and decisions about the student’s capabilities. The struggle for ownership of special education students in regular classrooms has been documented by several researchers. Wood (1998) reported that that general education teachers did not take responsibility for special education students’ individual educational goals, while special education teachers wanted to assume more responsibility for the academic agenda for the special education students.

The teachers of D/HH students need to give up the narrow focus on their own students and take on the broader task of assuming ownership of the hearing as well as D/HH students (Gaustad, 1999). A complaint of regular classroom teachers is that the teacher of D/HH students views the entire classroom only through the perspective of the (often single) D/HH student (Antia & Stinson, 1999). Teachers of D/HH students must recognize that hearing students also have difficulty with some of the curricular content being presented in the classroom and not assume that the D/HH student is the only one having problems. If teachers of D/HH students are to effectively adapt strategies and materials for classroom teachers, they must consider the effect of these modifications on the entire group of students, D/HH and hearing. Regular classroom teachers are willing to make modifications that benefit all students but will balk at making modifications that take time and
effort but benefit only a few students (Giangreco et al., 1993). There is evidence that the modifications made initially for the benefit of the D/HH students can benefit hearing students as well. Classroom teachers have reported that the visual cues given by interpreters sustained interest of all students in storybook reading (Antia, 1998). Increased wait time and decreased teacher talk that occurred as a result of simultaneous communication benefited both hearing and D/HH elementary students (Kreimeyer et al., 2000). The benefits of wait-time and other strategies that may be beneficial to both D/HH and hearing students have also been noted at the postsecondary level (Foster & Holcomb, 1990). Promoting ownership of all the students by the teacher of D/HH and the classroom teacher is difficult and involves revision of the roles and responsibilities of both teachers.

**Teacher Roles and Responsibilities.** Successful inclusion requires a major rethinking of the roles and responsibilities between general and special educators (Evans, Townsend, Duchnowski, & Hocutt, 1996). Typically, when special educators and general educators work together, the special educator assumes the role of a consultant expert sharing information about the special needs child with the classroom teacher (Pugach & Johnson, 1989). Frequently, contradictory perceptions exist regarding the role of the teacher of D/HH by supervisors, regular classroom teachers, and teachers of D/HH themselves. Supervisors may see their role as being primarily consultative, or primarily pull-out direct instruction. Regular classroom teachers may see the teacher of D/HH only as a resource to themselves or a tutor to the D/HH student (Antia, 1999). If these contradictory role perceptions are not addressed, there is little chance for successful inclusion.

In successful inclusion, both the general education teacher and the special educator assume the roles of equal collaborators (Jimenez-Sanchez & Antia, 1999; Wood, 1998). A collaborative relationship is based on a respect for each teacher’s unique and shared areas of expertise. Special educators and general education teachers share three areas of expertise: pedagogical, curricular and disability-specific. Pedagogical expertise includes lesson planning, methods of adapting materials to ensure visual access, and specific instructional strategies. Curricular expertise includes content knowledge (e.g., in math, science, social studies) and grade level curriculum. Disability specific expertise (for teachers of D/HH) includes skill in sign language, knowledge of classroom acoustics, or knowledge of Deaf culture. Each teacher will have some knowledge in one or more of these areas. Some of the knowledge in each area will be common to both teachers; other knowledge will be unique to one teacher. To successfully include students, the teachers must use their combined expertise to meet the needs of all students.

Collaboration can most easily occur in team teaching models such as co-teaching or co-enrollment programs (Kirchner, 1994; Luckner, 1999). However, collaboration can also occur when the teacher of D/HH pulls out the D/HH student for specific help. While expert tutoring can be very effective in helping students “catch up” in content areas where they have deficiencies (Lepper, Drake, & O’Donnell-Johnson, 1997), such tutoring by the teacher of D/HH is likely effective only through collaborative planning with the classroom teacher. A variation in collaboration occurs at the postsecondary level in some programs, such as that at the Rochester Institute of Technology. Specialists in the education of D/HH students in these programs support D/HH students who take classes in which primarily hearing students are enrolled. These support specialists also have specific expertise, such as in information technology, and regularly teach hearing students as well as those who are D/HH.

For inclusion to work, the roles of the general education teachers and teachers of D/HH will need to be fluid and nontraditional. Because of the fluidity of the roles, there is a high probability of frequent misunderstandings between teachers. It is important that roles and responsibilities be made explicit, assumptions about roles be discussed, and roles and responsibilities modified as the situation demands (Antia, 1999; Evans et al., 1996). Antia, in a study of teacher roles and responsibilities in an inclusive classroom at the elementary level, found that classroom teachers assumed several additional responsibilities including adapting instructional objectives, using visual materials and instructional strategies, learning to use interpreters, and learning sign lan...
language. The teacher of D/HH, like other special educators working in inclusive settings, had to coordinate teaching and planning with the general education classroom teacher, coordinate the responsibilities of interpreters and aides, and develop and implement special programs as part of the general education curriculum for all students (e.g., sign language instruction and social skills training). Banks (1994) noted similar coordination at the middle school level in classes with some D/HH students, but primarily hearing students.

**Student Issues**

D/HH students have much in common with their hearing peers. They share basic human needs: for education, for friendship, for self-identity and self-esteem, and for membership in a community (Gaustad, 1999). Studies have shown that negative attitudes exist toward D/HH students both before and after hearing students have contact with them (Cappelli, Daniels, Durieux-Smith, McGrath, & Neuss, 1995; Weisel, 1988). Misconceptions and stereotypical beliefs among hearing students are common (Blood & Blood, 1983). If D/HH students are to become full members of the regular classroom, more than ordinary efforts must be made by teachers and other professional to improve and facilitate the instructional interaction that occurs in classrooms. This involves removing stereotypes about deafness by providing knowledge about deafness, hearing loss, and Deaf culture; arranging, within the instructional setting, purposeful and cooperative activities that provide realistic and productive roles for both hearing and D/HH students; and, finally, providing both hearing and D/HH students with strategies for interacting with one another. These steps are applicable at all educational levels (Antia, 1985, 1994; Foster & Walter, 1992; Gaustad, 1999; Kluwin & Stinson, 1993).

**Knowledge about deafness, hearing loss, and Deaf culture.**

There are several ways to provide hearing students with information about deafness and hearing loss. One common strategy is to provide short-term instruction (usually at the beginning of the school year) that informs hearing students about the facts of hearing loss, the use of hearing aids, and so forth. Such focused instructional units have not been found to be particularly successful in improving interaction between D/HH and hearing students (Vandell, Anderson, Erhardt, & Wilson, 1982). The information provided often focuses on differences between students rather than similarities and often focuses on potential communication problems rather than strategies for solutions (Antia, 1994). In addition, the instruction is unbalanced, because it places the D/HH students in the role of givers of information and the hearing students in the role of receivers of information (Gaustad, 1999). This may work for a while, but the social imbalance is not conductive to equal membership of the two groups in the classroom.

In contrast to this kind of one-time orientation instruction, Gaustad (1997) has developed a curriculum for students that infuses deafness content onto topics already in the prescribed course of study. The curriculum content deals with the misconceptions about the nature and ramifications of hearing loss, sign language, and (often unconscious but real) biases against individuals with disabilities. However, rather than being offered as a single unit of study, the regular curriculum is extended with the addition of these topics. For example, the Grade 4 Language Arts Curriculum contains a focus on biography that is broadened to involve study of famous D/HH people. This infusion feature serves to integrate the additional content more easily into the existing instructional load and simultaneously shows students the relevance of such information to everyday life.

Gaustad (1997) suggests the following steps to implement a deafness curriculum into the classroom: (1) teachers should first identify content area topics into which deafness information can be infused (social studies, science, language curricula may all be good candidates); (2) the general education teachers and the teacher of D/HH can then consult and plan with each other, search texts and other sources of information to determine the appropriate deafness information to be infused; (3) both teachers together determine the sign language and deafness information objectives related to curriculum content that all students (D/HH and hearing) should master; (4) the teachers develop the unit materials and cooperative activities for the deafness topic extensions; (5) the teachers plan for the participation by D/HH persons in the community for portions of the unit.

The advantage of such joint planning and infusion
of topics within the regular curriculum is that both teachers and students are equal participants. Both D/HH and hearing students can identify with the content, as it is not skewed toward information about one group or the other. The general education teacher and teacher of D/HH are both active participants in planning and implementation. Following this model, the teacher of D/HH and the regular classroom teacher can determine appropriate topics and then develop structured cooperative activities related to the topics.

Arranging activities. Several authors have found that cooperative activities can promote interaction and membership within a group. Sustained interaction during cooperative learning experiences over a period of time is essential to promoting classroom membership (Saur, Layne, Hurley, & Opton, 1986). In contrast, as predicted by contact theory (Allport, 1954), casual contact between groups of D/HH and hearing students can increase, rather than decrease prejudice (Weisel, 1988). Cooperative learning activities should be designed so that each learner in the group, D/HH or hearing, has an essential role in promoting the learning of the entire group. Such activities allow for equal participation from all group members and thus promote perceptions of equal membership. Several studies with groups of young D/HH and hearing students have found that well-structured joint activities can increase positive social interaction (Antia & Kreimeyer, 1996, 1997). Cooperative activities provide the motivation and the supportive environment for D/HH and hearing students to communicate with one another.

Learning interaction strategies. To become members of the classroom, the D/HH and hearing students need to communicate with one another. Thus, both groups of students need to develop the communication skills to interact appropriately with one another. For hearing students, learning sign language is the obvious stumbling block. However, several researchers have reported that, with consistent exposure and motivation to use sign language (for example, in co-enrolled classrooms where several classmates are D/HH), hearing peers have become fluent sign language users (Kluwin & Gonsher, 1994; Luckner, 1999). Some D/HH students might have specific difficulties in initiating and maintaining interactions with peers because of their lack of knowledge of how to initiate interactions with peers (Messenheimer-Young & Kretschmer, 1994), reluctance to enter into interaction with hearing peers (Stinson & Liu, 1999), or the lack of motivation on the part of hearing peers to respond (Vandell & George, 1981).

Therefore, D/HH students have specific knowledge needs. They need to be able to identify and determine their own visual and communicative requirements (which change from environment to environment). Most need to be taught how to take responsibility for how and when to make these needs known to teachers and other students in appropriate ways (Berry, 1992). They may need assertiveness training to be able to initiate interaction with peers and teachers and to combat exclusion. Finally, all students need to be taught social problem-solving strategies, for example, how to detect and alleviate communication problems in unfamiliar communication situations. Because D/HH students are likely to encounter unfamiliar situations more frequently, their need for problem-solving skills may be greater than that of their hearing peers.

Structural Issues

For students and teachers to be members rather than visitors to school, structural issues usually under control of school administrators must also be addressed. These structural issues are, for teachers, time for collaboration and, for students, scheduling and placement stability and access to extracurricular activities.

Teachers: Collaborative time. The most common complaint of all teachers trying to work collaboratively in inclusive environments is the lack of time for communication about students and for joint planning. Typically, special education teachers, including teachers of D/HH students, have large caseloads spread among several teachers. These teachers often report having conversations “on the fly” or briefly “touching base” with classroom teachers (Snell & Janney, 2000). In some cases, teachers of D/HH reported that they relayed messages and communicated with the classroom teacher through the interpreter (Antia, Kreimeyer, & Williams, 1998). Such brief encounters cannot result in a feeling of membership or equal participation or status for the
teacher of D/HH in the regular classroom. In addition, the lack of time to communicate effectively or to observe in the classroom results in special educators misunderstanding the culture of the general education classroom. Consequently, they may suggest teaching accommodations and modifications that are ignored because they are viewed by classroom teachers as unnecessary, disruptive to the classroom, time consuming, or beneficial to only a few students (Antia, 1999; Giangreco et al., 1993; Schumm & Vaughn, 1991). Clearly, collaboration requires time from both the teacher of D/HH and the classroom teacher. When classroom teachers and teachers of D/HH can plan together, they are more likely to be committed to coordinating specific interventions that they implement with students, whether they co-teach within the same classroom or not.

Students: Scheduling. It is desirable for schools to examine procedures such as lunchroom rules and recess schedules in order to increase the frequency and kinds of situations in which D/HH and hearing students mix with each other (Gaustad, 1997). In elementary grades, students occasionally are placed in one regular classroom with one set of peers for math and another classroom with another teacher and peers for science. In some programs, the D/HH students and the hearing students may have separate recess and lunch schedules. In such cases, it is unlikely for contact between students to be more than casual and certainly unlikely that either the D/HH students or the hearing students will see themselves as members of the same social groups.

Students: Stability. Stability of placement is one of the reasons why advocates of full inclusion believe that all children should attend their neighborhood school (Biklen et al., 1987). In some school districts, the D/HH students are moved between schools every few years because of space or other reasons. Such movement between schools is disruptive to the process of becoming a member of the school community. It is easier to build and maintain friendships and for students to develop supportive networks when students have substantial knowledge and experience with each other. Teachers of D/HH working in regular class settings have suggested that student unfamiliarity with each other is a key factor in fearful attitudes, and it encourages separation between D/HH and hearing classmates. Once students in the two groups get to know each other and understand what the needs are for communication and interaction, more positive responses to each other may occur (Stinson & Liu, 1999). Schools where a cohort of students is together for a number of years in multigrade classrooms report substantial gains in interaction and progress by the D/HH students (Kreimeyer et al., 2000). Even if an entire cohort cannot move, keeping together good friends (e.g., D/HH with each other and with hearing peers) when a class cohort moves from one grade level to the next may be helpful.

Students: Extracurricular activities. Extracurricular activities are a major avenue by which students can obtain a sense of belonging to the school community (Griffen, 1997; Kluwin & Stinson, 1993). Being a member of a sports team, a drama club, or another school group provides a sense of belonging more consistently than does the classroom or informal groups in school hallways. The extracurricular setting provides good opportunities for participants to learn about each other and to find characteristics of common appeal that can foster friendship (Karweit, 1983). In order for D/HH students to have access to extracurricular activities, they will need transportation and interpreters.

Transportation to and from extracurricular activities is particularly critical when the D/HH students attend a school that is not near home, which often happens. Special programs for D/HH students tend to draw students from a number of school catchment areas to provide a sufficient nucleus for the program, and this means that most students need to be bused a considerable distance. Thus, if a student wishes to stay after school to participate in an extracurricular activity, special busing arrangements must be made, parents must pick up the student, or the student must have his own transportation, usually traveling a much longer distance than hearing schoolmates. If no arrangements can be made for transportation, students cannot participate in extracurricular activities, regardless of their desires to do so (Kluwin & Stinson, 1993).

Stinson and Kluwin (1996; also Kluwin & Stinson, 1993) found in their study of high school students that it was important for programs to support students if the students were to be involved in extracurricular activi-
ties. If programs provided extensive use of interpreters for D/HH students who wished to participate in extracurricular activities and provided transportation after these activities, students were more likely to participate. D/HH students may also be more willing to participate if more hearing students know how to sign so that communication is easier. Stinson and Kluwin (1996) found that program efforts seemed to be especially important for developing membership and feelings of belonging for students who fell into the middle communication range; that is, they were not strongly oriented to spoken communication or to American Sign Language (ASL). Stinson and Whitmire (1992) obtained similar results in a study of secondary students in England placed in regular classes.

Community Support

According to Allport (1954), community and institutional norms and support can positively support intergroup relations. For key constituencies such as the Deaf community and parents to support the education of D/HH students, they must also perceive themselves as members of the school community. This means that the Deaf community will need to view both the D/HH and hearing students as part of a school community in which Deaf people may be involved. This also means that public schools must welcome and support individuals from the Deaf community as members of the school community. Recently, the concept of a Deaf culture has become more widely recognized. Deaf people have recognized that they share a common language (ASL), unique ways of communicating, and values that may not be the same as those commonly held by hearing persons (Padden & Humphries, 1988). Recognition and support of Deaf culture is strongest in residential schools, but there has been recognition of its importance in public school programs (Kirchner, 1994; Kluwin & Stinson, 1993).

Exposure to ASL, D/HH adults, and information about the history of Deaf people benefits D/HH students attending regular schools (Lang, 2000). When D/HH students do not have regular exposure to Deaf adults, ASL, D/HH peers, and information about Deaf heritage, students may struggle in establishing an identity that they are comfortable with (Glickman, 1996). Students may undergo internal conflict regarding belonging and membership in Deaf and hearing groups. Regular opportunity to interact with D/HH adults and peers, and information about the history and values of Deaf people, may assist in developing comfort with, and pride in, identity as a Deaf person.

Exposure to ASL and Deaf culture benefits hearing students by adding a new language and new perspectives regarding the people in their community. In an evaluation of a Deaf culture experience at a school, students consistently stated that they appreciated learning ASL and the opportunity to meet Deaf adults. They clearly wanted more such opportunities (Gaustad, 1997). Public schools with D/HH students need to find more ways of including Deaf adults, as members of the regular staff, aides, volunteers, and guest presenters (Kreimeyer et al., 2000). Deaf teachers in public schools serve as links to the Deaf community (Jimenez-Sanchez & Antia, 1999). It is important, however, that Deaf individuals should be granted equal status with hearing individuals within the school community and not be confined to working or interacting only with the D/HH students. Such segregation would negate the idea of full membership within the school community.

The involvement of parents is a critical component to the success of individual students (Afzali-Noumani, 1995) and to the success of a program. It is desirable for parents to support the concept of inclusion and the value of a sense of membership for all students, both D/HH and hearing. We do not know of any research that shows how parental expectations shape programs or know of research on parental perceptions of inclusive programs for D/HH students. However, anecdotal reports suggest that parents can be the most important “movers and shakers” to start and maintain experimental and nontraditional programs. For example, parents have started inclusive coenrolled programs such as TRIPOD in California (Kirchner, 1994). To obtain and maintain parental support, it is important to keep parents involved and informed when schools are planning inclusion program. Schools that do not keep parents involved in the planning process or informed about possible changes in their child’s educational program cannot expect to have the support of parents. Nothing is more disconcerting than springing surprises on the first day of the new school year. Parents will need specific in-
formation about how the program will affect their child. Parents of hearing students need to be reassured that the program is one of addition, not subtraction. That is, adding D/HH students, a teacher of D/HH students, sign language, or a Deaf studies curriculum will enhance the program for all students, not subtract from the time given to hearing students. Parents will need to have opportunities to meet with and interact with the regular classroom teacher and the teacher of D/HH. They will need to see that the teachers are equal partners in an educational team and that they know and teach all the students in the classroom.

Conclusions
A mere mission statement affirming that a school is inclusive does not make it so. For public school programs to be inclusive, they have to promote membership of D/HH students, teachers of D/HH students, the Deaf community, and the parents in the classroom and the school. The social constructionist perspective of learning and teaching requires that students in the classroom actively and regularly interact with one another and with their teacher to construct knowledge. This perspective therefore is most likely to promote classroom membership. To translate belief into practice, however, classroom teachers and teachers of D/HH must actively promote membership of the students through their realistic but high expectations and their ownership of all students. This might require a redefining of traditional roles and a sharing of ownership of both the hearing and D/HH students in the classroom. Teachers will also need to infuse knowledge of deafness, sign language, and hearing loss within the curriculum and be prepared to structure the classroom so that all students have the knowledge, skills, and opportunity to interact with each other to promote learning. Administrators can promote membership by allowing teachers time to collaborate, by not moving D/HH students between schools and classrooms with no regard for stability of their social relationships, and by promoting participation in extracurricular activities by providing interpreting and transportation services. Finally, community support of inclusive programs will require active involvement of the Deaf community and the parent community.

In a quality inclusion program, the goal should be to allow all students, D/HH and hearing, to develop their educational and social potential. Schools can do this by paying determined attention to promoting membership of teachers, students, and the outside community. A quality inclusion program that promotes membership is possible, but requires a serious commitment of resources—it is not for the faint-hearted.

References


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