

Rehabilitative Issues in the Bilingual Education of Deaf Children

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In 1989, Johnson, Liddell, and Erting published a working paper entitled "Unlocking the curriculum: principles for achieving access in deaf education." The dissemination of this document has rekindled nationwide discussions of which communication approach best meets the educational, vocational, and social needs of the deaf person. This article identifies, defines, and discusses the issues in the document and the challenges that they present to professionals who work with deaf children and their families. Research is suggested with emphasis on establishing a data-base of communication development in deaf children.

Historically, the education of deaf children is marked by shifts in the approach to communication which best meets academic needs (Lou, 1988; Quigley & Paul, 1984). The perceived need for change in communication approach has been the result of reports of poor reading and writing skills of deaf high school graduates (Commission on Education of the Deaf, 1988; Quigley & Paul, 1984; Trybus & Karchmer, 1977). Following the introduction of various communication approaches, controversy has occurred between those professionals espousing oral approaches and those supporting the use of manual approaches (Lou, 1988; Moores, 1987). To date, there is a lack of sufficient controlled data-based studies demonstrating the superiority of one communication approach over another (Luetke-Stahlman, 1990; Moores, 1990).

Presently, educators of the deaf remain unsatisfied with current educational achievement scores which have not shown significant improvement since scores were first reported (Moores, 1990), despite: (a) increased knowledge of the characteristics of deaf learners, (b) increased development and use of technology to aid deaf learners, and (c) development of curricula written specifically for the deaf learner. As in the past, current changes in the education of deaf children have resulted in controversy centered around the communication approach. However, the current controversy has two added dimensions: first, the oral-manual controversy is now also an ASL (American Sign Language) vs. manually coded English controversy; and second, there is a focus on the social and cultural needs

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and rights of children and adults who are deaf. The debate came to the forefront following the dissemination of the working paper, "Unlocking the curriculum: principles for achieving access in deaf education" (Johnson, Liddell, & Erting, 1989). The authors propose that ASL should be the primary language of deaf children.

The purpose of this article is to identify key issues, questions, and challenges to the rehabilitative audiologist and other professionals in response to "Unlocking the curriculum." Specifically, the issues which will directly affect intervention strategies will be examined.

THEMES

Johnson et al. (1989) have applied principles and models of *bilingual* education to create a model educational program for deaf children. The authors propose two reasons for the academic problems of deaf children: (a) lack of access to the curriculum due to the problems in the communication practices of the students' teachers, and (b) low expectations of educators of the deaf. Citing the results of studies of English language competency and academic success of deaf children who have acquired ASL naturally, the authors conclude that language systems which code English in a manual or oral form do not result in competence in English.

The bilingual/bicultural model (Crawford, 1989) program prescribes that ASL should be considered as the first language of all deaf children, and as such, should be used as early as possible in educational and life experiences. English would be taught as a second language after native competence in ASL has been achieved using a transition model of bilingualism; i.e., "the child's minority language (ASL) is typically employed in the initial stages only (first few elementary grades) to allow the efficient assimilation of curriculum content while the majority language (English) is being learned" (Quigley & Paul, 1984, p. 173). Johnson et al. (1989) suggest that ASL be used exclusively to deliver the content of the curriculum and for interpersonal communication in the classroom. Written English, supplemented with explanation in ASL, would be used as the medium of instruction in English. Although contrasts between ASL and English would be utilized, both languages would be kept separate in communication and the curriculum. Pairing of deaf and hearing teachers is proposed throughout the educational experiences of deaf children. Day care, provided by deaf adults with parents assisting, is seen as a necessary component of the program. Parents would be taught ASL and "specific techniques of reasonable and effective interaction with deaf children" (Johnson et al., 1989, p. 22).

The authors of the document also emphasize the low expectation levels teachers of the deaf have for their deaf students. Johnson et al. (1989) feel that teachers of the deaf "expect that deaf children cannot perform as well as hearing children" (p. 12). Low achievement levels can then become self-fulfilling prophecies. The authors highlight the need for educators of the deaf to *depathologize* deafness. Rather than seeing deafness as something to be fixed or remediated through intervention strategies, professionals should work to make educational, vocational, and social experiences accessible for deaf children and adults.

QUESTIONS AND ISSUES

The implementation of this model will have a significant impact on the education of and intervention with deaf children and their families. The document and the responses

which have followed its dissemination (Hatfield & Humes, 1990; Luetke-Stahlman, 1990; Moores, 1990) have raised issues concerning its feasibility, effectiveness, and research-supported base. A discussion of several of these issues will follow:

1. Can bilingual education models of instruction be applied when two different languages are represented in two different modalities?

The proposed educational program is based on a model used in general education for hearing children who have a primary language other than English. These children, unlike deaf children, are learning two auditory-verbal languages (bilingual, unimodal). Deaf children would be learning a visual-gestural language and then the written form of an auditory-verbal language (bilingual, bimodal). There is limited research to support the use of such a model.

2. What is the effect of the transition from a language with a visual-gestural modality base to another language with an auditory-verbal base?

As language is learned, children code it (i.e., set up short term memory to aid perception and production) in some form; visual, or spoken. In the case of a deaf person, coding may be in a signed form or in some combination of forms. Conrad (1979) and Lichenstein (1984) found that reading skills of deaf young adults were positively correlated to speech recoding. The authors suggested that this may have been because speech recoding may better represent the grammatical structure of English than can sign or visual coding. Although visual and sign coding may suffice for vocabulary development, there has been limited research on the use of information coded in a visual form for learning an auditory-verbal language (Moores, 1990). Neville (1977) found that if the auditory cortex is not used for the learning of spoken language, it may be committed abilities other than language. Thus, the ASL-dominant deaf child may have difficulties learning English through the written mode because of the coding differences and the resultant reallocation of cortical resources.

3. Can competency in English be developed through writing?

Johnson et al. (1989) suggest that learning English will be done primarily through the written mode. Their rationale stems from three principles: (a) "acquisition of written language is not dependent on oral language; (b) written language teaching can be initiated at about one year of age; and (c) written language is easier to learn than oral language" (Suzuki & Notoya, 1984, p. 10). Johnson et al. (1989) suggest that oral language be developed after competence in receiving and expressing the language in the written form has been achieved. They support these ideas by citing the results of a study of the acquisition of written and oral language of 6 deaf children from infancy to age 6. However, more research is needed to support young children's acquisition of competency in a second language exclusively through the written form.

4. What curriculum will be used in the classroom?

Johnson et al. (1989) suggest that the curriculum be presented in ASL. However, curricula written in ASL are not available. Curricula to be used in the proposed model would be in English and would need to be translated into ASL. Further, the learning sequences and strategies in English-dominant curricula are not necessarily appropriate for ASL-dominant deaf children. The data used to support the educational practices suggested by Johnson et al. (1989) were taken mainly from results of studies of bilingual educational programs for hearing children. The effectiveness of these programs has not been proven conclusively (Crawford, 1989). Until results of longitudinal research with deaf children are definitive, efficacy of the use of ASL to present English-based curricula will remain unknown.

Johnson et al. (1989) recommend that English learning would begin in the first grade. But, near native first language competence is necessary for the child to keep up in subject matter and maintain normal cognitive development (Cummins, 1981). If the deaf child has not achieved near native competence in ASL s/he is in first grade, the teaching of English will be delayed. The effects of the lack of native competence in English are seen in the academic achievement of many deaf children now. Will the effects be the same for the deaf child if the teaching of English is delayed? If English teaching is initiated prior to the development of ASL to near native competence, will bilingual interference, i.e., the influence of one language on another, result (Tervoort, 1978)? Will interference be a factor as the deaf child makes the transition from ASL to English?

5. How do deaf persons learn American Sign Language?

Research on the development of American Sign Language in deaf children has left some questions unanswered. Much of what is known about ASL has been derived from the study of deaf adults. But, ASL may not have been the first language of these adults (Paul & Quigley, 1990). Retrospective descriptions of ASL development reported by deaf parents in single subject case studies have been cited in support of the use of ASL as the native language of deaf children. However, research is needed on the process of English learning in deaf children whose primary language is American Sign Language. Until more controlled studies of the language development (ASL and English as a second language) of deaf children exposed to only ASL are completed, the sequence and stimulation techniques proposed in the model cannot not be assumed to be valid.

6. How valid are the results of the studies of the achievement of deaf children of deaf parents?

Johnson et al. (1989), like others before them, base the use of bilingualism in the education of deaf children on the findings of research completed with deaf children of deaf parents (Quigley & Paul, 1984). Moores (1990) finds the review contained in the document has been misrepresented by Johnson et al. (1989). The findings of other studies of the achievement of deaf children of deaf parents are influenced by two problems that are inherent in using this population to justify use of ASL as the primary language with deaf children. First, because the studies were retrospective, parents were reporting the language form that was used with their children 10-15 years prior to the time of the studies. There was no complete assurance as to the type and amount of linguistic input in the home. Some children may have had bimodal exposure to language; i.e. English spoken simultaneously with signing (Collins-Ahlgren, 1974; Schlesinger & Meadow, 1972). Second, the argument for early use of ASL is based on the superiority of academic performance of the deaf children of deaf parents as compared with deaf children with hearing parents. "It is difficult to separate the effect of early language knowledge from the contribution of social and environmental differences to subsequent linguistic and academic performance" (Curtiss, 1989, p. 295). The advantage may be "knowing any language over knowing no language during the pre-school years" not which language is known: ASL or English.

7. What degree of sign competency will be required of hearing parents and how will they achieve it?

There is no doubt as to the primacy of the role of parents and communication within the home environment in the language development of the child (Quigley & Kretschmer, 1982). Johnson et al. (1989) recognize this role with the inclusion of a program of family support. However, deaf educators will attest to the gap between the parents' signing ability and the child's as the child gains competency in signing regardless of which sign

system the parents have chosen to use in the home (Quigley & Paul, 1984). The bilingual model proposed assumes that parents will be willing and able to learn and use ASL with the competence needed to communicate effectively and fully with their deaf child. If parents are currently not developing competence in using a manually-coded English sign system, what lead the authors to believe that fluent, complete, continuous ASL usage will be a more realistic goal?

8. What will be the relationship between deaf children and their hearing parents?

Will the relationship between parent and deaf child be negatively affected by the lack of effective communication in the home? Will the parents feel separated from their child because of the child's "extensive daily contact with native users of the language" (Johnson et al., 1989, p. 21)? What will be the effect of the proposed support system on the current efforts of professionals to empower and build self-esteem of parents of deaf children? Will deaf children "reject their hearing families to become deaf" (Greenberg, 1990)?

9. When will deaf children listen and to what?

Individualized speech and auditory training are a part of the suggested program. Amplification will be fitted at the "appropriate time" (Johnson et al., 1989, p. 17). The authors caution that "hearing should not be the primary channel through which a deaf child receives linguistic input." Maximum use of residual hearing requires not only "training" but also stimulation (Boothroyd, 1988; Erber, 1982; Ling & Ling, 1978). Because ASL is not spoken, will deaf children receive sufficient auditory based language stimulation?

10. Is there a critical period for learning spoken English?

Training in receptive and expressive spoken English is to be initiated after competence in literacy (reading and writing of English) has been achieved. Is there a critical or optimal period for the development of speech skills as suggested by Ling (1988) and Curtiss (1989)? Will the lack of one-to-one correspondence between phoneme and grapheme present difficulties in using the written form of English to teach speech (Ling, 1976)?

11. Do deaf persons represent a homogenous group in terms of their communication needs and potential?

The only recognition of the heterogeneity of the deaf population expressed by the authors is their suggestion that speech and auditory training be individualized. Degree and type of hearing loss are not always predictive of level of competence in speech or English language skills of deaf children (Ling, 1976). The proposed model ignores this and commits all parents and all young deaf children to one language and one mode. What will happen with deaf children who have the ability to learn spoken language? Will there be a variety of options available to parents? What is the economic and emotional feasibility of adding another option for parents?

12. What will be the effect on the English language and socialization skills of deaf children within the hearing community?

The authors suggest that "mainstreaming of deaf children from hearing families is entirely inappropriate" (Johnson et al., 1989, p. 19). They recommend self-contained classes and ASL competency in early childhood to aid the deaf child's development of self-concept. However, these actions may further isolate him/her from hearing peers and family. Due to his/her language differences and his/her educational isolation, the deaf child may fail to gain sufficient exposure to the sociocultural skills required by hearing individuals. Nowhere in the document is the issue of the English-language socialization of the deaf child discussed, except in the context of the deaf culture.

13. What will the effect of bilingual deaf education classrooms have on the preparation

of teachers of the deaf?

Like education in general, deaf education is facing a teacher shortage. The gap between teachers available and teachers needed is, in part, being bridged by emergency certification of non-education majors or non-degreed persons and the use of the generic education major to teach generic special education classes. The shortage of trained personnel in education is not projected to improve over the next decade. The shortage of deaf teachers of the deaf is already a reality.

The suggested model proposes the use of a deaf and a hearing teacher in the same classroom. Johnson et al. (1989) compensate for the presence of two teachers by suggesting that class size be increased. In addition to the lack of economic feasibility of this goal, with the shortage of teachers, school administrators will be hard-pressed to find personnel, trained or not, certified or not, deaf or hearing.

Is an undergraduate major (4 year degree) going to be able to prepare students with native competence in ASL? If the Master's degree is required for certification, will there be a further decline in numbers of deaf education majors? Where will the deaf professionals and adult role models needed in the proposed program be found?

14. Will current state educational standards and minimal competencies for deaf students need to be revised?

The authors of the document bring the lack of educational standards, accountability, and competencies in deaf education to the forefront of their discussions. They assess part of the blame on the "commitment of the teacher education programs to speech centered educational methodology and the failure of these programs to prepare aspiring teachers to meet the actual communication needs of deaf pupils" (Johnson et al., 1989, p. 12). The authors cite the inclusion in the deaf education teacher preparation curriculum of a "great deal of material" on audiology, speech, psychology of deafness, and spoken English language development." A review of the Council on Education of the Deaf (CED) standards indicates that 10% of course work should be devoted to speech science and audiology, and 40% in the area of language and communication (1985). However, competency levels required for certification in any of the communication approaches are not specified in the standards. A revision of the standards in this area is needed.

REHABILITATIVE CHALLENGES

The document contains many research challenges for professionals involved with deaf children and their families. The questions asked in the previous section need to be answered using data-based, carefully-controlled, well-designed, impartial, longitudinal studies. The goal of this research should not be which communication approach is best for all deaf children, but rather to investigate what meets the needs of each deaf child. Dr. I. King Jordan (1987) stated that "it is premature to say that with the emergence of studies of ASL we now know what will work best in the education of deaf children" (p. 351).

Further, there is a need for review and revision of state and national education and certification standards in the area of education of the deaf to meet the requirements of deaf persons living in a more service-oriented world. Jordan (1987) reminds us of this important statistic: "If methods used for the last one hundred years have been so inappropriate, how is it that more and more deaf individuals in the last twenty-five years have attained academic credentials and professional positions undreamed of only a short time ago?" (p. 352).

Deaf educators, deaf people, state and local organizations, and teacher preparation

programs need to advocate for national certification as a necessity for teachers of the deaf to insure quality in preparation and maintenance of competence in the profession. This will take a united front, unencumbered and unembroidered in the communication approach controversy. The challenge will be to look at what is needed by the deaf person, research how to achieve it, and revise competencies and standards of education. Make it necessary and worthwhile for educators of the deaf to achieve high standards of preparation for themselves and their deaf students.

State educational standards are under scrutiny now as our nation faces reports of how far its children's education lags behind that of children from other countries. Curricula, minimal competencies, and standards for the education of deaf children need to undergo similar scrutiny and revision. State departments of education must insure that expectations for deaf children reflect current and future needs. At the same time, emphasis should be placed on individualized education. The statistics from demographic studies should not be viewed as self-fulfilling prophecies, but as challenges to teachers. At the same time, educators should not strive just for an improvement in scores on achievement tests, but for better preparation of deaf students to live a productive life and earn a living.

Professionals working with deaf children and their families need to be held accountable for what they are doing. They must provide data on the efficacy of the specifiable methods and curricula that they are using, without adding to a mountain of paper work. Parents, teachers, administrators, and support personnel should all be held accountable.

If amplification, auditory training, and speech training are to continue, professionals need to demonstrate the efficacy of such intervention. Training in the reception and expression of English needs to be carried out using controlled methods based on the needs and abilities of individual deaf children. Teachers and professionals need to reflect an attitude and a commitment that the development of these skills is important and possible. The methods need to be supported by research and development which enables duplication with other deaf children, yet allowing modification to fit a heterogeneous population.

Professionals need to be willing to advocate for, purchase, and use technological support in education. The cost of educating children with special needs is often the first place administrators feel they can cut expenses. Advocacy for educational support should be pursued by deaf persons, deaf educators, and parents of deaf children. Access to visual information may be the link to literacy, as well as social, vocational, and educational opportunities.

CONCLUSION

"Unlocking the Curriculum" has made two important contributions to the education of deaf persons. First, it has forced educators and parents to take a look at the current status of education of deaf children. Second, the authors have presented challenges to the profession. Difficult questions and challenges should be addressed in carefully designed research. Educational and research efforts should focus on the improvement of the quality of education of deaf children by revising standards for teachers. The curriculum should allow access by all deaf children no matter what communication approach has been chosen. Technological advances should be utilized to support the education of deaf children. Interpreters and teachers who meet and maintain high standards and sign language skill levels should be hired. Most of all, the involvement, participation, and responsibility of the family in the education of the deaf child should be facilitated. All persons should be held accountable, not just the parents, the teacher, the curriculum, or

the communication approach. There is at present (or in the future) no *one*, best way to educate *all* deaf children. Until deaf educators stop arguing over what one communication approach is best, efforts will continue to be futile; and history will repeat itself. When these challenges are met, we may have not only unlocked the curriculum, but opened the door of equal opportunity for the deaf person.

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Ed. Note. The reader may want to see two very recent publications noted at press time:

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