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Policy to Practice: Teachers' and Administrators' Views on Curricular Access by Students with Low Vision

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Abstract: This national study reviews national and state policies and guidelines, as well as surveys and focus groups of administrators and teachers, on the implementation of policies for students with low vision to gain visual access to the general education curriculum. The findings demonstrate that few states provide the necessary services to enable students to achieve access and that people, philosophy, and systems are the main impediments to and the solutions for change.

Providing access to the general education curriculum for elementary school students with low vision presents teachers and administrators with a unique and sometimes complex series of decisions. It does so because of the challenge of assessing functional levels of vision, factors affecting visual performance, appropriate technology to assist this access, and different state policies and procedures regarding access

(Abner & Lahm, 2002; Barraga, 1964; Barraga, 1970; Corn & Huebner, 1998; Corn & Koenig, 1996; Dalton, 1998; Lueck, 2004). Access is also affected by local practices. As an example, this study's authors learned from several teachers around the United States about local, informal guidance and the need for clinical low vision examinations or optical devices in students' Individualized Education Programs (IEPs), for which their districts would have to pay.

Background

To probe the effect of translating policy to practice, this study began with a review of national and state policies and studies on access for students with low vision; technology and its implications for visual access; and lessons from research on the success of putting policy into practice in general and special education; followed by nationwide surveys and focus groups of administrators, teachers, parents, and elementary school students with low vision (the latter two groups are still under study). This article presents a synopsis of this review, concluding with the results of the surveys and focus groups of administrators and teachers, along with the study's implications for policy and practice.

Development of policy and best practices

The passage of the Education for all Handicapped Children Act of 1975, the 1990 Individuals with

Disabilities Education Act (IDEA), the 1997 amendments to IDEA, and the Senate's passage of the reauthorization of IDEA in 2004 provide a strong and evolving mandate for the development and implementation of IEPs, the strengthening of academic expectations and accountability, and the provision of greater educational access for students who are visually impaired (those who are blind or have low vision). In addition, several documents and interdisciplinary group efforts in the past decade have articulated specific guidelines to assist states and educational agencies in applying federal policy to state and local practice.

The National Agenda

The original *National Agenda for the Education of Children and Youths with Visual Impairments, Including Those with Multiple Disabilities* (Corn, Hatlen, Huebner, Ryan, & Siller, 1995) and its recent revision (Huebner, Merk-Adam, Stryker, & Wolffe, 2004) called for a plan of action to ensure that instructional materials are accessible to students with visual impairments. These documents are part of a comprehensive action plan detailing goals and best-practice strategies that are designed to improve the quality and quantity of educational opportunities for visually impaired children. The majority of the goals are directly related to access to learning, with Goal 7 underscoring "an assurance that instructional materials are available to students in the appropriate media and

at the same time as their sighted peers" (Huebner et al., 2004, p. 23).

A Report to the Nation

A Report to the Nation (Corn & Huebner, 1998) presented national baseline data on state-level activities in achieving the goals set forth in the *National Agenda.* This document underscored the meager progress being made in assisting students with low vision to achieve the goal of gaining access to materials in the general education curriculum at the same time as their fully sighted peers.

Educational Service Guidelines

Blind and Visually Impaired Students: Educational Service Guidelines (Pugh & Erin, 1999) highlighted the direct advocacy role of the National Association of State Directors of Special Education (NASDSE) on behalf of students with visual impairments. Prompted by the lack of state follow-through on federal mandates on access to education, NASDSE provides assistance to state agencies that are working to maximize educational outcomes. Several issues are stressed, including equal access to materials and resources for equal educational opportunities and the need for educators to ensure the availability of assistive technology for students who are visually impaired.

A Call to Action

A Call to Action (Stryker, Huebner, & Hatlen 1999) presented practical suggestions for achieving the goals of the *National Agenda,* including goal statements, a description of major issues, and sample action plans. It also addressed the importance of providing optical devices if these devices help students gain access to regular-print textbooks.

Plan for training personnel

In 2000, funded by a grant from the U.S. Department of Education, Office of Special Education Programs, a partnership of the Council for Exceptional Children's Division on Visual Impairments, the Personnel Preparation Division of the Association for Education and Rehabilitation of the Blind and Visually Impaired (AER), the American Foundation for the Blind (AFB), and the Council for Exceptional Children developed and published the *National Plan for Training Personnel to Serve Children with Blindness and Low Vision* (Mason & Davidson, 2000). The plan focused on providing high-quality services to children with visual impairments through a national strategy to supply and maintain qualified personnel to provide high-quality services. It also acknowledged that fiscal constraints and conflicting educational philosophies, not the best educational interests of students, often drive the structure and methods of educational services.

AFB Solutions Forum

AFB's Textbook and Instructional Materials Solutions Forum, established in 1998, is a collaborative effort of nationwide agencies, organizations, and leaders in the field of visual impairments, along with policymakers, publishers, instructional resource centers, media specialists, parents, and consumers. The forum identifies barriers and solutions to gaining access to educational materials in the appropriate media and at the appropriate time.

National and state data

For the purposes of this study, *equal access* is defined as the availability of the materials at the same time as other students in the classroom and in the least-restrictive medium. In 1996, the Association of Instructional Resource Centers for the Visually Handicapped studied the nation's general low vision services (Dalton, 1998). Among its findings was the consistent delay in the delivery of materials; poor quality control, with most states reporting that they spot-checked, rather than proofread, large-print materials; minimal access to low vision clinics; and the lack of regularly scheduled low vision clinics (only two states reported such clinics). One of the telling conclusions of the study was that "instructional materials can and are offered to our students in specialized formats, but these instructional materials certainly are not provided at the same time as those for their sighted peers" (quoted in Dalton, 1998, p. 49).

Lewis and Allman (1999) also reported on the limited availability or unavailability of large-print materials in schools and community and vocational settings. Findings from this and the previous study confirmed that few states were implementing regular procedures for addressing visual access for students with low vision and that students did not have full and immediate access to information at the same time as their fully sighted peers.

In agreement with the findings on individual states, this study surveyed 49 states and one U.S. territory and found that only 11 states require learning media assessments and 8 states require low vision assessments. Only 2 states address the subject of clinical low vision examinations, and no state requires clinical low vision examinations, a critical precursor to determining the level of functional vision for the appropriate choice of a medium.

Although a variety of optical, nonoptical, and assistive technology devices have long existed to promote visual efficiency, large-print books have been the prevailing medium for students with low vision since the American Printing House for the Blind first provided them in 1947 (Roberts, 1986). Over the past decade, several states, notably Florida, Iowa, and Tennessee, have studied the efficacy and cost-effectiveness of low vision services and the use of optical devices as an alternative medium to large print. Corn et al. (2003) described the benefits of the Tennessee Department of

Education's Project PAVE (Providing Access to the Visual Environment) and its statewide, multidisciplinary provision of low vision assessments and optical devices and instruction to students aged 3–21. They found better outcomes for students' access to the common core curriculum and lower expenses for copying and purchasing large-print materials when comprehensive low vision services were provided.

Wilkinson, Stuart, and Trantham (2000) studied Iowa's model of low vision care for students from birth to age 21 and reported that the change to more comprehensive services (from evaluation to prescription and training with optical devices for visual access) resulted in a decrease in the use of large-print materials from 157 students in 1989–90 to 8 students in 1990–91, with a savings of more than $90,000 in the acquisition and production of large-print materials.

Similarly, the Florida Department of Education's Low Vision Initiative to study the use of low vision devices as an alternate access approach for students with low vision showed that 75% of the students in the first year of the study required a better prescription than they were presently using, eyeglasses being an important preliminary consideration for the selection of an appropriate learning medium (Lewis & Allman, 1999). This study also reported that the cost of providing low vision services in 1998 was less than half the cost of providing large-print books for the same students.

Implications of new technology

The growth of computer technology has significantly increased the potential to give students with low vision greater access to information. In recent years, several authors (Kapperman, Sticken, & Heinze, 2002; Kelley, Finley, Koehler, & Picard, 2001; Vincent, Dumont, Bouchard, & Lesperance, 2003) have addressed the growing interest in assistive technology for individuals with visual impairments. Abner and Lahm (2002) detailed the past decade's new opportunities for access, including optical scanners, modern closed-circuit television systems, optical magnifiers, and various technologies for using computers. Although these advances promise greater visual access, many people who are visually impaired are unaware of the information or resources that are necessary to benefit from them, particularly because of the lag between technological innovation and application. The causes of this lag include universities' emphasis on providing instruction in traditional training versus teaching assistive technology applications and the delay in the dissemination of information on the effectiveness of programs in bridging the gap between technology and employment barriers for students with visual impairments (Butler, Crudden, Sansing, & LeJeune, 2002; Church & Glennen, 1992).

What is evident is that technology exists to increase visual access for students with low vision, when the visual sense is capable of and more efficient in gaining

access to the general education curriculum. What is also evident is that students who are blind and those with low vision are equally capable of gaining access to information through braille and advances in technology and nonvisual ways of gaining access to computers. It is further axiomatic that administrators and teachers should promote whichever sensory mode or combination of sensory access modes best suits a student's learning capabilities. We believe that for students with low vision, an either/or philosophy regarding the use of vision constitutes an unnecessary philosophical pull, with students failing to obtain the benefits of the most-appropriate or least-restrictive medium or combination of media. If students are capable of gaining access to information visually, and if optical, nonoptical, and computer technologies increase their access to the general education curriculum and enhance their learning, then it is the responsibility of professionals to facilitate this access. Professionals are equally responsible for facilitating nonvisual access for students who are blind or have insufficient vision to benefit from visual access modes.

In 1991, the Committee to Develop Guidelines for Literacy, composed of experts in the field of education of students who are visually impaired, presented recommendations on selecting appropriate learning media for students. As the report noted:

> It is apparent to the majority of those concerned with the education of visually handicapped children that a major

> (perhaps *the* major) reason for the fact that so many of these children are illiterate is that they do not have access to the learning medium that is most appropriate for their educational needs. (Committee, 1991, p. 65)

The committee also stressed that combinations, such as braille and print, may be the most appropriate learning media.

One partner in the AFB Solutions Forum, the National Center for Accessible Media, focuses its research and development on a multimedia approach to accessibility via CD-ROMs, digital television, the Web, and other advanced technologies. The center represents a trend toward the use of a variety of media in gaining access to information, which requires an ever-changing attitude to match the rapidly evolving technology, which promises greater and more timely access to information. Regardless of one's philosophy on the appropriateness of access, most professionals in the field concur that it is important to increase access to information in a timely manner for students with visual impairments.

From educational policy to effective practice

It is now 29 years since the passage of P.L.94–142 in 1975. How have the laws, policies, and guidelines that have been established so far affected practice? Whether the cause is the lack of awareness of policy, training, availability of materials, knowledge of optical devices,

computers, and rapidly advancing technology or difficulty in dealing with educational changes, it is increasingly apparent that practice is definitely lagging behind policy.

Recognizing this lag, in 1995, Heumann and Hehir sent the "Memorandum on Policy Guidance in Educating Blind and Visually Impaired Students" to chief state school officers and the Office of Special Education Programs (OSEP), warning that "services for some blind and visually impaired students are not appropriately addressing their unique educational and learning needs" (Heumann & Hehir, 1999, p. 135). This notice of policy guidance was reissued in 2000 by then-Secretary of Education Richard W. Riley, who further reminded professionals in the field of visual impairment about the need for appropriate accommodations:

> Consistent with the emphasis in the IDEA Amendments of 1997 on relating the child's IEP to the child's involvement and progress in the general curriculum, IEP teams must insure that blind and visually impaired students, including those with other disabilities, receive appropriate accommodations and modifications. (R. W. Riley, 2000, p. 36588)

Numerous authors in both general and special education have discussed the relationship of policy to practice (Bracey, 1998; Plaut & Sharkey, 2003; K. L. Riley & Stern, 1998; Roach & Caruso, 1997; Shields, 1995; Williams & Katsiyannis, 1998). Shields discussed the dynamic and uncontrollable nature of

educational practice and questioned whether it is possible to be guided by educational policy, and Plaut and Sharkey underscored the problem by stressing the communication divide between policymakers and practitioners. Perhaps Bracey (1998, p. 145) expressed the policy-to-practice lag best when he concluded: "At the moment, it seems clear that educational research and practice, after decades of following separate paths, have met. But they do not know each other very well."

As with the broader fields of education and special education, the same appears true for the field of visual impairment, where anecdotal reports and studies (Corn & Wall, 2002; Dalton, 1998; Goodrich & Sowell, 1996; Kapperman et al., 2002; Lewis & Allman, 1999; Roberts, 1986; Wilkinson et al., 2000) have pointed out that despite laws and national guidelines promoting, if not mandating, the timely provision of access to the general educational curricula and materials, the majority of children with visual impairments are not receiving these materials in a timely manner.

The second phase of the nationwide study presented here incorporated the use of surveys and focus groups of administrators and teachers to further determine the status of the implementation in practice of policies regarding access to the general education curriculum for students with low vision in Grades 3–8.

Method

Participants

The participants included 64 administrators and 138 teachers. Of the 64 administrators, 25% were male and 75% were female, with an average of 16 years of experience (*SD* = 9). A wide range of administrative personnel were involved, including one state director of special education, state vision consultants, county directors of special education, superintendents of residential schools, supervisors of vision programs, and supervisors of low vision clinics.

Of the 138 teachers, 11% were male and 89% were female. This was an experienced group, averaging 13 years of teaching experience (*SD* = 9). The majority of the teachers (59%) were itinerant teachers of students with visual impairments, and 25% were dually certified as teachers of students with visual impairments and orientation and mobility (O&M) instructors. When asked how they allocated their time during the average week, the teachers reported that, on average, they spent 5% of their time on administration, 71% on teaching, 8% on O&M, and 11% doing other things. Each of the four categories had a large range of scores, from 1% to 100%, but when the teachers were asked how much time they spent in *direct* teaching of children, the 71% response for teaching dropped to 50%. The low percentage of direct teaching time may be due to the combination of being itinerant and the large distances that some teachers must drive, with 41% working in

rural areas, 36% working in the suburbs, and 23% working in urban areas. The median caseload was 12, with a range of 1–64 students. As an indication of the heterogeneity of the student population being served by these teachers, only 2% (310) of the 1,839 children (approximately 2 students per teacher) in these teacher's caseloads met the grade, academic, and visual criteria for this study.

Procedures

The country was divided into 10 regions from which one state or territory of each region was randomly selected. These 10 states or territories were contacted to determine if they would be willing to participate in the study. When a state or territory was unable or unwilling to participate, a second state was randomly selected. In all the regions, either a first or second state agreed to participate. The 9 states and 1 territory that participated were California, Colorado, Georgia, Iowa, Massachusetts, Minnesota, Oregon, Texas, the Virgin Islands, and West Virginia. One focus group was planned for administrators and one was planned for teachers in each state or territory, for a total of 20 focus groups.

A convenience sample of administrators and teachers was selected by working with personnel in each state to identify and recruit the participants. For teachers to be eligible to participate, they had to have at least one student in their active caseload who had low vision

(from 20/70 to no worse than the ability to see large print), was in Grade 3–8, and was in the academic track (expected to graduate from high school). Typically, the data were collected either at the annual statewide meeting of teachers of students with visual impairments or at a meeting of a professional organization, such as AER.

Questionnaire and focus groups

All the participants completed a written questionnaire. The purpose of the questionnaire was to obtain information on the participants' work experiences; to evaluate their knowledge of laws and regulations at the federal, state, and local levels; to identify the types of learning media the students were using; and to determine how IEP decisions were made. (See the teachers' and administrators' surveys.)

The purpose of the focus groups was to identify the major problems and solutions that affect full access to the general education curriculum for students with low vision. Each of the 20 focus groups (10 for teachers and 10 for administrators), which ranged from 5 to 20 individuals, began with the presentation of the same three key pieces of information: (1) IDEA mandates that students are to be educated in the least-restrictive environment; (2) a few states have implemented programs that provide students with the necessary evaluations and equipment to function in the least-restrictive environment and have demonstrated these

programs to be cost-effective (Corn et al., 2003; Lewis & Allman, 1999; Wilkinson et al., 2000); and (3) professional organizations and leaders in the field have developed position papers advocating that educating students in the least-restrictive environment is considered to be the best professional practice (Corn et al., 1995; Huebner et al., 2004; Pugh & Erin, 1999; Stryker et al., 1999). It was emphasized that no preference existed for any specific mode of visual access, simply that a process was in place, typically the IEP meeting, at which assessments were considered as part of the determination of each child's least-restrictive means of access. After this introduction, each focus group was asked to provide answers to the same four questions: (1) Why are students with low vision not provided with the least-restrictive access to visual learning? (2) What factors inhibit or impede them from receiving the least-restrictive access? (3) What are the factors that facilitate students' receipt of the least-restrictive access? and (4) What is one thing that people in power should know that would help them improve access to the general education curriculum?

Results

Findings from the questionnaire

The successful application of laws and policies assumes, at a minimum, an awareness that laws and policies exist. We asked both groups, "Are you aware

of any guidelines, legislation, or policies that address access to visual learning for students with low vision?" This question was asked separately for federal, state, and local legislation.

The administrators reported a high level of awareness of federal (86%), state (75%), and local (88%) legislation, policy, or guidelines. Those who were not aware of legislation or policies that specifically address visual learning were senior-level administrators (state directors of special education without a background in visual impairment) or supervisors of multiple programs, including blindness and low vision, also without a background in visual impairment. The teachers reported a lower level of awareness of federal (62%), state (36%), and local (45%) legislation, policy, and guidelines.

Recognizing that "awareness" of legislation and policies is a low threshold and, we believe, knowledge that all teachers and administrators should possess, we sought to understand the participants' level of knowledge by asking them to list the legislation, policies, or guidelines. In this case, 74% percent of the administrators and 38% of the teachers responded. Although the percentage of response was different, the content of the responses was not. In general, both groups listed federal legislation, policies or guidelines, such as IDEA, ADA, Section 504 of the Rehabilitation Act, and the *National Agenda*. Documents, such as the policy guideline statements of Heumann and Hehir

(1999) and R. W. Riley (2000), were not identified, nor were the NASDSE guidelines (Pugh & Erin, 1999). At the state level, the most frequent responses were braille bills associated with literacy guidelines and the requirements for learning medium assessments. For the local level, there was not a common language among the states but, in general, the responses dealt with comments like "special education team guidelines," "special education center handbook," and "literacy plan."

Overall, the administrators were upbeat and affirmative when describing their programs. For example, 70% of the administrators perceived that teachers were successfully implementing administrative policies in practice. The majority of administrators (66%) believed that their state has a procedure to evaluate the success of putting policy into practice, but only 30% thought that the procedure was effective. In addition, 90% of the administrators reported that low vision eye care specialists are available and that 74% of the students who need low vision examinations receive them, with 84% believing that teachers receive reports of these examinations within three months. The administrators also said that 91% of the students with low vision have had a functional low vision educational assessment, with 90% believing that teachers receive the report within three months. In contrast, 65% of the teachers reported that low vision eye care services are available, and only 59% stated that they receive the reports within three months.

Furthermore, 80% of the teachers reported that educational low vision assessments are completed, and 69% said that they receive the reports within three months.

There was both general agreement and a divergence of opinions between the administrators and teachers. Both groups generally agreed that low vision services are available (74% of the administrators and 65% of the teachers) and that functional low vision assessments are conducted (91% of the administrators and 88% of the teachers). However, 70% of the administrators versus 31% of the teachers believed that policies are being implemented in practice.

Table 1 presents a comparison of the opinions on the availability of various types of visual access. The administrators optimistically reported that all modes of visual access were available more than 90% of the time, whereas the teachers reported that all modes were available from 59%–73% of the time.

Table 2 lists the types of visual access to information and the percentage of students for whom each type is their primary mode of visual access. Recognizing that some children have more than one strategy for accessing information, we required the teachers to pick the mode that each student used most frequently. The largest single response (25%) was that the students were using unaided vision (no devices), followed by the combination of large print (20%) and enlarged

copies (15%) or the combination of magnification from optical devices (19%) and electronic magnification (17%).

Findings from the focus groups

Inhibiting factors

Each focus group was asked, "Why aren't students provided with the least-restrictive access to visual learning?" Following a complete discussion of this question, each focus group was asked: "What are the factors that inhibit or impede students from obtaining the least-restrictive access to visual learning?" There were a total of 165 responses from the teachers and 178 responses responses from the administrators. The responses of both groups can be divided into three main categories: people, philosophy, and process.

People.

The teachers included comments on three types of people: teachers, parents, and students. Common themes were that teachers think that creating large print is easy and is not time-consuming; that they lack training in the use of instructional strategies for optical devices and computer software; and that general education teachers think that large print is the appropriate modification, especially compared to options that involve large amounts of equipment that may distract the other students. The administrators also commented on teachers, with a common theme that

teachers, especially older teachers, lacked the training and knowledge to do their jobs fully. The administrators also indicated that teachers have large caseloads and cover a broad region, especially in rural areas. That general education teachers are not aware of these issues was also mentioned.

The teachers' and administrators' comments regarding parents and students were similar. The teachers said that parents want large print because they believe that "bigger is better," and some observed that parents do not want the stigma that is attached to optical devices, which make their children's visual impairments more obvious to others. Similarly, the teachers and administrators expressed common opinions about students. They noted that students do not want to stand out from their peers and thus resist wearing anything that makes them look different. They gave the same reason for students' possible preference for working in large print, which, they thought, minimizes the appearance of students' differences from their peers. The teachers noted the increasing number of students in their caseloads who have multiple disabilities, the majority of whom are not learning to read.Teachers also felt that cultural issues were more evident in states with large populations of immigrants. The teachers felt that some families did not seek to develop the independence of their children. As teachers expressed it, in some cultures, if a family does not care for their child or treat their child as a dependent, society will look down on that family.

Philosophy.

Philosophy also contributes to the problem and was identified by teachers and administrators alike. Many teachers said that in the broader educational community, large print is the accommodation for children with low vision and that districts have already spent a lot of money on vision services and do not want to spend more. They also noted that students who are perceived as the most needy are often given priority over other students with similar needs. For example, a child who needs brailled materials may get the service, whereas a child with low vision, who can "survive and get by," may be overlooked.

The administrators also identified philosophical issues. Some thought that the itinerant model of service delivery does not meet the needs of students. They also acknowledged that although large print may not be the least-restrictive medium, it meets students' needs for access, especially since it is quick and easy to obtain. A number of administrators, typically those who were supervisors of programs without credentials in visual impairment, said that they simply were unaware of this issue, but would think about it differently after their participation in the focus group. Both the administrators and teachers mentioned the tendency to concentrate on short-term problems and to spend little time on long-term issues, such as the students' lives after graduation.

Process and systems.

The third area of comments involved factors related to processes and systems that impede access to visual learning. Many teachers said that no system is in place that allows a teacher to make a telephone call to refer a student for a high-quality low vision examination. Because teachers are busy and have large caseloads, they do not have sufficient time— especially in rural areas with large geographic distances and limited services—to refer a student, schedule an examination, and make arrangements for transportation. In comparison, large-print materials are quick and easy to produce. In some states, the teachers thought that the type of accommodation was influenced by vendors and their desire to increase their sales of equipment. Finally, many teachers remarked, "People don't understand the importance of this."

The administrators concentrated many of their comments on the lack of a cohesive system for referring students for clinical low vision examinations and the complicated process that would be involved in changing the system. As one administrator put it, "This is one more thing to coordinate." The general consensus was that the more people who were involved, the less likely that change to the system would happen.

The responses to the question of what factors impede

access to visual learning and obtaining low vision devices confirmed that the reason why so many children work from large-print or enlarged copies is that large print is perceived as easy to produce and can be delivered right to the house or school. The ease of obtaining large print was compared to the difficulty of obtaining computer technology, optical equipment, and electro-optical equipment, and to the challenge of meeting the students' needs for low vision equipment in school and the home. If a school district purchased equipment for school, then what would students use at home?

Facilitating factors

The next questions asked the teachers and administrators to identify factors that would facilitate students' full access to the curriculum in the least-restrictive way and to make one comment on this topic that they would like people in power to hear. There were a total of 136 responses by the teachers and 114 responses by the administrators. The responses of the teachers and administrators who reported that their states had a program for providing access to visual learning differed from the responses of teachers and administrators who reported that their states did not. Beginning with the responses of the participants from states that did not have a program, the primary themes were philosophy and policy.

Philosophy.

The philosophical theme stressed was that children leave school and enter a world that will not be in, or accommodate the need for, large print or enlarged copies. If a child is working in large print, the participants believed, it is a sign more of his or her need for a crutch than of independence. The teachers also noted that large print is expensive and not always available in a timely manner, while other forms of access are more cost-effective. Even if large print was not expensive and was delivered in a timely manner, the teachers emphasized, assistive technology should not be regarded as an educational excess.

The administrators also made the philosophical point that educators need to recognize that they are preparing students for lifelong learning and to keep the following question in mind: "What is it we are preparing students to do?" Connecting all these comments was the importance of early intervention. Finally, the administrators from states with large rural populations pointed out that in rural areas, it simply costs more to provide a free and appropriate public education to students who are considered a low-incidence population.

Policy.

The teachers wanted policies that establish a statewide mission statement with standards for low vision care, requirements that each child with low vision receives a low vision examination, and policy manuals to be

provided to school principals. The administrators sought to have legislation passed that would mandate these services, including the proposed Federal Instructional Materials Act of 2003.

The responses of teachers in states that did have visual access programs were centered more on fine-tuning the available options, with an emphasis on psychosocial themes. These teachers wanted to encourage the manufacturers of devices to make the devices look "cooler" by adding school colors and team logos and to give students a wider choice of styles in eyeglasses. Additional comments included these: "Each child is getting what he or she needs"; "Overall, kids' needs are being met"; "Optical devices are great"; and some even "handed them out the same day as the [low vision] exam." A few administrators indicated that some parts of their states had access programs and described these areas as "pockets of excellence." They understood the challenges of making the program work, stating "It has happened because of a core group of committed people." Such a core group was identified as both a strength and a weakness, since, ultimately, the administrators thought that to get programs in more states would require systems, not just a core group of dedicated people.

Discussion

The findings of this study suggest that, across the country, children with low vision generally do not have

access to the full general education curriculum at the same time as their fully sighted peers and do not receive it in the least-restrictive format. Most children are not receiving the access mandated by law, despite several national efforts; policy committees; guidelines; guidance policies, which are freely distributed to state directors of special education, training and other professional development activities; and other documents to facilitate and ensure its intent. It is surprising how limited was some administrators' and many teachers' understanding of laws, guidelines, and policies. The findings of this study demonstrate that, on the whole, important policies and guidelines are not systematically and clearly finding their way into the knowledge base of administrators of these programs, beyond the level of general awareness. Given this situation, it is not surprising that teachers are not aware of these policies and that the policies are not being implemented in a systematic fashion. The survey that was administered simply required a check mark indicating a level of "awareness," a particularly low threshold. We found that even with this low threshold, 18% of the administrators and 52% of the teachers were not aware of the documents.

Visual access remains elusive, despite 40 years of progressive educational philosophy, including research that has affirmed the idea that children can learn to use and improve their vision, that clinical eye care can be integrated with educational programs, and that low vision services are cost-efficient and educationally

effective. Advances in knowledge and technology related to low vision have provided the potential for greater access than ever before, yet for most students, access is still not the reality.

It is interesting to note that administrators have a more optimistic view than do teachers regarding the overall picture of the translation of policy into practice. Administrators appear to be more aware than teachers of federal (86% versus 62%), state (75% versus 36%), and local (88% versus 45%) policies and guidelines. The administrators also believed that students are receiving low vision examinations and functional assessments at a higher percentage rate than the teachers did (a 10%–25% difference in responses). Regardless of the reasons for these differences, the majority of teachers are either not informed about policies and services or forget to attend to them, or the policies simply do not exist on the local level—the level closest to the students. What is the most telling, even for the generally optimistic administrators, is that only 66% of the administrators believed that their states had a procedure to evaluate policy to practice, with merely 33% of these administrators believing that the policy is effective.

Another reason why students may not be receiving visual access services is that, in many cases, services may simply not be available. When services are available, they are not easily obtained by some teachers or their students. The results of the survey indicate that

the majority of teachers and administrators reported that the various modes of access to visual information are "available" (see Table 1). This finding does not demonstrate, however, that the modes are actually being obtained and used, especially since only 31% of the teachers thought that access policies were reaching practice. This problem is enhanced by the small percentage (15%–20%) of students in the caseload of the average teacher who fit the research criteria. These teachers serve large and heterogeneous groups of students, each with their own individual educational requirements. The students are typically dispersed over a large geographic area, and their teachers are equally "stretched" by geography, large caseloads, meetings, report writing, and numerous other work demands that take half their time away from direct teaching. This point underscores the teachers' need for a simpler solution to obtaining low vision services than is currently available. The teachers identified the problem as the lack of a system for obtaining these services. Some administrators also acknowledged that they had not even thought of these issues and had become aware of them only in the focus groups.

In states with programs to provide access to visual learning, the administrators were proud of the services, and the teachers were generally pleased. In states in which the programs were viewed as successful, an administrator, such as a state vision specialist or knowledgeable leader, provided organization, coordinated resources, and offered follow-up advocacy

to effect changes in the system.

While teachers in some states with a coordinated program for accessing visual information discussed the cosmetic issues of the design of equipment and the use of school colors and logos to make devices more appealing to students, teachers in states without such a program described more basic needs, such as finding time in their schedules, the challenges of knowing the equipment, and the overall frustration that comes with realizing that something should be done but not having the knowledge, resources, or administrative support to do it.

Both the administrators and the teachers spoke of their lack of knowledge and training in the use of the mechanisms for providing access to visual information for students with low vision, such as optical devices and assistive technology. It is reasonable to assume that if teachers are not familiar with the various types and principles of optical and computer technology, their students are further separated from the potential advantages of access that these tools could provide. Such assertions as "Large print is quick and easy," "Classroom teachers think large print is [an effective accommodation for students with] low vision," and "Classroom teachers don't want space-consuming equipment or equipment that may distract other students" certainly underscore a resistance to change in the students' access to optical devices and assistive technology.

Implications

Policy implications

Federal policies and national policy guidelines are the products of much labor by countless individuals. After federal laws and regulations are established, the government looks to the states and leaders in the field to provide the necessary guidance, leadership, and training to enact the laws' intent. One of many examples of efforts to move policy to practice is the statewide training project of NASDSE and the Council of Schools for the Blind, which provided states with free copies of *Blind and Visually Impaired Students: Educational Service Guidelines* (Pugh & Erin, 1999) and training, with particular focus on timely and appropriate media for students with visual impairments. As this study has shown, however, in the area of timely and appropriate access for elementary school students with low vision, federal policy and laws lack the necessary quality-control mechanisms and uniform training to ensure that policy mandates are being followed. What is consistently missing is a uniform evaluation mechanism to ensure that policy follows the intended path from lawmakers to the U.S. Department of Education to state departments of education to local administrators to teachers to parents and, finally, to the students they are intended to benefit. Good intentions seem to be followed by lost opportunities. Greater attention needs to be paid to

accountability to back up the prose of legislation and national guidelines.

Practice implications

As this study showed, administrators and teachers have a number of different views on translating policy into practice. Only 31% of the teachers, compared to 70% of the administrators, believed that policies regarding access—to low vision services, low vision devices, and printed materials—for students with low vision are being implemented. The findings also revealed that the implementation of a policy is directly related to a particular leader, usually a state vision consultant, who is aware of and motivated to implement policy. In addition, administrators who did not have backgrounds in the field of visual impairment were consistently less aware of policies that affect access for students with low vision. This problem was compounded by the fact that the teachers were less aware of policies than were the administrators and were the least aware of local policies, all of which bodes poorly for the practice of said policies. This situation begs the question: How can administrators provide training for teachers or monitor policies with which neither they nor the teachers are familiar? The results point to the efficacy of employing state vision consultants with appropriate backgrounds for the students they serve if the necessary training and practice of appropriate policies is the desired outcome.

At the minimum, the results of this study constitute a wake-up call for our field to reexamine assumptions, especially on the effect of extensive awareness raising and guidance from federal educational agencies and national leaders on the topic of access. This is true especially in relation to the relevance of the impact of practice on large groups of state administrators, parents, teachers, and students. The dissemination of information alone, without an underlying structure, training, support systems, resources, networks, and accountability to effect change, may, unintentionally, have little to no effect on closing the well-documented policy-to-practice chasm.

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