



Assistive Technology: Legal Issues for Students with Disabilities and Their Schools

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This paper provides an analysis of federal policy, legislation, and adjudication related to assistive technology for students with disabilities. The authors review the expanded mandate for assistive technology in IDEA 1997 and its implications, including associated costs and benefits of assistive technology. Recent federal court decisions, hearing decisions, and Section 504 rulings that address assistive technology are discussed. School district responsibilities are explored, and recommendations are offered to special education professionals and parents who have children who may benefit from assistive technology devices and services.

In 1970, when federal legislation to support students with disabilities was first enacted, most of today's assistive technology (AT) did not exist or was not yet developed for widespread use by the public schools (Hager, 1999). The first legislation for students with disabilities was enacted primarily to ensure access to education. Technology was not considered an important feature at that time for general education, nor was it on the agenda for the young field of special education, a field that had scarcely located space within the walls of the public school building. It has only been in the past several years that technology has evolved into an important part of commerce, higher education, and general education, and has now filtered into the special education program (Blackhurst, 1997).

Congress defined AT in the Technology Related Assistance Act for Individuals with Disabilities (1994) (Tech Act). Congress also incorporated the Tech Act definition into the Individuals with Disabilities Education Act (1993) (IDEA) (20 U.S.C. § 1401 (a) (25) and (26)). In doing so, it intended that the benefits of using AT devices along with special educational programs and services would help to ensure a free appropriate public education (FAPE) in the least restrictive environment (LRE) with a preference for the general education setting, and improved outcomes including improved post-school outcomes (Hager, 1999).

Over the past decade, AT such as personal computers, communication devices, switches, specialized keyboards, and other assistive devices and services have influenced teaching strategies and student participation (Blackhurst, 1997). For example, students with visual impairments who were previously unable to produce print assignments without the assistance of a braille transcriber can now produce documents

on computers or braille note-takers and print the assignment in both braille and print. Additionally, students who do not have the capability to respond verbally to class questions or activities, such as a preschool circle-time, can now utilize communication devices to produce a verbal response, thus allowing for participation with classmates.

The purpose of this paper is to review federal legislation as it relates to AT for students with disabilities, discuss benefits and costs of AT, evaluate issues regarding AT that have arisen in IDEA hearings and court cases, and provide recommendations related to the future of AT for students with disabilities.

Federal Legislation and Assistive Technology

Congress explicitly addressed AT for students with disabilities in 1990 when it added definitions of AT devices and services to IDEA (1993), definitions that are retained in the current version (20 U.S.C. § 1401(1) and (2)). In 1997, amendments to IDEA (2000) further expanded the AT mandate by requiring that AT devices and services be considered for all students during IEP development (20 U.S.C. § 1414(d)(3)(B)(v)).

Congress has also recognized that children with disabilities other than those served under IDEA may have AT needs. AT is part of other federal legislation and regulations, including Section 504 (2000) and Section 508 (2000) of the Rehabilitation Act of 1973, the Americans with Disabilities Act (2000) (ADA), and the Assistive Technology Act of 1998 (2000). Because these acts cover individuals with disabilities, they include children as well as adults.



IDEA '97

In IDEA '97 (2000), AT is defined as “. . . any item, piece of equipment, or product system, whether acquired commercially off the shelf, modified, or customized, that is used to increase, maintain, or improve functional capabilities of a child with a disability.” (20 U.S.C. § 1401(1)). This definition is broad and includes far more than augmentative communication devices. The following are among the examples of AT provided by the Adaptive Technology Resource Center (2001), Blackhurst and Edyburn (2001), Dubbels (2001), and Sheldon and Hager (1997):

1. Positioning systems that allow access to educational activities;
2. Daily living aids and products such as specialized items for eating, toileting, and grooming;
3. Augmentative and alternative communication systems including symbols, communication devices, electronic communication systems, speech synthesizers;
4. Switches and controls for access to equipment;
5. Assistive listening devices, including hearing aids, personal FM units, TDD, closed captions;
6. Visual aids such as contrast enhancement, enlargement/magnification of materials, technology hardware and software, refreshable braille, electronic note-taking devices, and eye glasses;
7. Tactile materials;
8. Auditory materials, including voice output devices, audio tape recorders;
9. Motor aids such as walkers, wheelchairs, powered vehicles;
10. Recreational/leisure devices, including computer software, adaptive stitches, access devices (swimming pool lifts, adapted sports equipment);
11. Computer access including switches, modified hardware, accessible software and Internet access.

Under IDEA '97, AT services are defined comparably broadly as “any service that directly assists a child with a disability in the selection, acquisition, and use of an AT device” (20 U.S.C. § 1401(2)). Among the services included are:

1. Evaluation of the student needs, including evaluation in the student's customary environment;
2. Purchase, lease, selection, design, fitting, customization, and adaptation of devices;
3. Maintenance, repair, or replacement of devices;
4. Coordination of services and device use with other therapies and interventions;
5. Training or technical assistance for teachers, staff, family members, and students.

FAPE and AT

Although, under IDEA '97, the definition of FAPE was

not revised, Eyer (1998) believes that Congress, by the passage of IDEA '97, extended additional rights to students with disabilities beyond those in the Supreme Court's interpretation of FAPE in *Board of Education v. Rowley* (1982). In *Rowley*, the Court held that FAPE required meaningful access to an individualized education that was of some educational benefit to the student. How much benefit was enough for any given student was to be determined on an individual basis. Based on the increased emphasis in IDEA '97, “on educational progress and measurable results,” Eyer asserted that the “basic floor of opportunity has been elevated from access to meaningful progress” (Eyer, 1998, p. 17). Huefner (2000) observed that the courts “can be expected to evaluate FAPE in the context of measurable progress toward annual goals. Instead of limiting their analysis of benefit to whether a student is receiving special education services and achieving passing grades or whether IEPs were reasonably calculated to produce progress (i.e., looked good on paper), courts can be expected to carefully scrutinize implemented IEPs to evaluate the student's actual progress toward specified IEP goals” (Huefner, 2000, pp. 214-215).

IDEA '97 and its accompanying regulations (IDEA Regulations, 1999) require that a child's need for AT be considered in developing an IEP (20 U.S.C. § 1414(d)(3)(B); 34 C.F.R. § 300.346(a)(2)(v)) and in requiring access to and training on AT when necessary to ensure FAPE (20 U.S.C. § 1401(2); 34 C.F.R. § 300.6). The IEP team is the initial decision maker. The regulations add that evaluations, which would include AT evaluations, must be sufficiently comprehensive to identify all of the child's needs, even those not commonly linked to the IEP classification (34 C.F.R. § 300.532(h)). AT must be considered across all potentially education-related environments, including extracurricular settings, if the latter are needed to support the educational goals of the student (see 34 C.F.R. § 300.347(a)(3)(ii) and (iii)). The regulations also go beyond the statute in explaining that AT can be viewed as special education, related services, or supplementary aids and services, as warranted (34 C.F.R. § 300.308(a)). Moreover, they clarify that school-purchased AT devices may be used by the student at home, if the IEP team determines the necessity of doing so (34 C.F.R. § 300.308(b)). These current regulations largely reflect AT policy interpretations developed by the federal Department of Education's Office of Special Education Programs in the years between 1990 and 1997 (see Zirkel, 1998). Obviously, to incorporate AT into the IEP, additional assessment, planning, and implementation are required.

According to Hager (1999), Congress intends that AT “provide new opportunities for students with disabilities to participate in educational programs” (p. 23). Furthermore, AT devices and services should increase the participation of students with disabilities in the LRE with nondisabled peers



when they are delivered as supplementary aids and services to facilitate inclusion in the general education classroom. If specified by the IEP team, they must be provided (Julnes & Brown, 1993).

IDEA '97 provides safeguards for students and families. Families are entitled to pursue an impartial hearing to appeal the school's choice of AT if they feel that the evaluation, device, or service is not adequate in meeting FAPE for their child with disabilities (20 U.S.C. § 1415(f)).

Section 504, Section 508, ADA, and AT Act of 1998

In addition to children served under IDEA, children whose disabilities do not meet the IDEA eligibility criteria but who still need special assistance, including AT, may be covered by Section 504 of the Rehabilitation Act (2000). Section 504 provides additional protection for children who have disabilities that require AT to fully access and participate in an educational setting. Section 504 regulations (United States Department of Education, 1999) require school districts to take reasonable steps to ensure that students with disabilities have access to the school's full range of programs and activities (see 34 C.F.R. §§ 104.4, 104.22, 104.34, 104.37). This includes programs and activities that require AT for access (Julnes & Brown, 1993; Sheldon & Hager, 1997).

Another potential source of support comes from Section 508 of the Rehabilitation Act (2000), which requires mandatory accessible Web design by federal agencies (29 U.S.C. § 794d). According to Waddell and Urban (2000) states that accept funds under the AT Act of 1998 are subject to Section 508, and Section 508 technology guidelines will inform state and local government entities on how to provide accessible services.

Moreover, under regulations for Title II and Title III of the ADA regulations (2000), state and local government entities (including publicly operated preschools, public schools, and public postsecondary institutions) and public accommodations (i.e., private commercial facilities) must provide auxiliary aids and services for all individuals with disabilities (28 C.F.R. § 35.160 and § 36.303). Auxiliary aids and services include assistive technology devices and services (see 28 C.F.R. § 36.303). Particular auxiliary aids and services do not need to be provided by public accommodations, however, if doing so would result in significant difficulty or expense or require a fundamental change in services. If this is the case, less burdensome alternatives, if they exist, should be adopted (28 C.F.R. § 36.303).

Under the above statutes, a nondiscriminatory approach for school children who are not already covered under IDEA would generally equate to access to information, expanded communication networks, communication opportunities, and experience with technology and services that might be part of future employment opportunities (see Dubbels, 2001; Sheldon & Hager, 1997).

Beyond the mandates in the IDEA (2000), Section 504 and Section 508 of the Rehabilitation Act (2000), and the ADA (2000), individuals with disabilities are to be given access to products, programs, opportunities, and services through the AT Act of 1998 (2000). The AT Act of 1998 was designed, in part, to ensure the formation of Web accessibility and provide funding and incentives to the technology industry for Web development. Increasing the availability of AT for individuals with disabilities and providing easy access to information on the Web were among the important purposes of the Act (29 U.S.C. § 3001). Although the primary ultimate beneficiaries of the AT Act and Section 508 presumably are adults with disabilities, individuals of all ages are within the coverage of both sets of provisions.

BENEFITS AND COSTS OF ASSISTIVE TECHNOLOGY UNDER IDEA '97

Congress has acknowledged the importance of AT for students with disabilities because it has ensured that students with disabilities have access to AT via legislative acts. AT allows children with disabilities to more fully access, participate, and communicate in educational and social environments. AT services, however, do not come to children without costs to society. Although many AT devices and services are relatively inexpensive, others can be expensive, and often, parents and school districts get caught in a battle between the costs and benefits of AT.

Benefits

Congress intended the benefits of providing AT devices and services to include increased access to FAPE in the general education setting and improved outcomes for students with disabilities (Hager, 1999). IDEA '97 (2000) specifies that FAPE must be provided for all eligible students with disabilities and mandates that all special education and related services must be provided at no cost to parents or students (20 U.S.C. § 1401(8)(A)). IDEA regulations now require schools to provide AT devices and services, including personal devices such as hearing aids and eye glasses, if the IEP team determines their necessity for the delivery of FAPE (Hager, 1999).

IDEA '97 (2000) calls for increased efforts from schools to provide education in the general education setting. In fact, IDEA '97 establishes a presumption in favor of placement in general education settings by requiring IEP teams to indicate the extent to which the student will not be educated with nondisabled peers (20 U.S.C. § 1414(d)(1)(A)(iv)). Moreover, this LRE standard stipulates that the student be removed from general education only when the student cannot be successfully educated in the general education setting even when supplied with supplemental aids and services (which can include AT) (IDEA Regulations, 1999, 34 C.F.R. §



300.550(b)(2)). Students cannot be removed from general education based solely on needed modification in the general education curriculum (34 C.F.R. § 300.552(e)). Furthermore, the educational setting has been broadened to include a requirement that supplementary aids and services be provided to enable education to the maximum extent appropriate with nondisabled peers (IDEA, 2000, 20 U.S.C. § 1401(29)), and nonacademic services are to be provided in a manner that affords equal opportunity to participate in such activities (IDEA Regulations, 1999, 34 C.F.R. § 300.306). The expanded attention to AT devices and services in IDEA '97 has produced enhanced opportunities to provide benefit and improved outcomes for students with disabilities.

Costs

Costs of AT devices, time for additional evaluations, time associated with implementation and coordination of AT services, training for all appropriate individuals, and the provision of the necessary infrastructure to support AT devices and services can be demanding on fiscal resources as well as human resources.

AT Devices. AT devices can range from inexpensive to expensive (e.g., from pencil grips to voice recognition software, from text markers to talking texts, from simple communication boards to advanced computer systems). Because some AT devices are expensive and the purchase and implementation of them may place a burden on school districts, school districts may seek to involve private insurance companies in the purchase of such devices. The practice of having a student's private insurance company purchase AT devices or services is acceptable, providing the school obtains the parent's consent. Parents are not required to give such consent, however (Hager, 1999). Additionally, parental refusal to consent to the use of their private insurance company for this purpose does not relieve the school of its obligation to provide AT services and devices to the student (IDEA Regulations, 1999, 34 C.F.R. § 300.142(f)(2); Hager, 1999). Thus, the school must find other funding to provide the needed AT device and services to the student. Finally, when parents do consent to the use of their private insurance company to purchase AT devices and services, schools must inform parents of the potential consequences. Such consequences include the possibility of the family's exceeding a financial cap on benefits from the insurance company. Schools are to encourage parents to investigate their individual policy before providing consent (Hager, 1999).

AT Services. Not only can some AT devices be expensive, but services such as evaluations to determine the appropriateness of an AT device require time and expertise. Evaluations should be comprehensive and identify all of the child's needs, even those not commonly linked to the child's

classification (IDEA Regulations, 1999, 34 C.F.R. § 300.532(h)). The individuals who are engaged in such evaluations should have at least a minimal level of AT expertise. They must also take the time required to evaluate the student's needs in the academic setting and in all potentially education-related settings, including community settings (Sheldon & Hager, 1997). If the school district does not have individuals who have the necessary skills, outside consultants or evaluators may be needed to complete appropriate and comprehensive AT assessments (Chambers, 1997).

Training in the use of AT devices in the classroom also requires time and expertise. Effective use of AT requires additional planning and coordination between teachers, staff, aides, and families. Time for curriculum planning and modification must be allowed, ensuring that AT devices are embedded in the student's curriculum and educationally related extracurricular activities. Administrative support is essential to allow for the resources necessary for planning and team coordination. Coordination among individuals who will support the AT use in the educational setting is instrumental in ensuring that AT devices are working properly and the desired outcomes are achieved.

Teachers, staff, families, and others who will be working with students using an AT device may be undertrained or unaware of the benefits of AT (Golden, 1998; LRP Publications, 1999). When this is the case, the school and the school district are responsible for training all appropriate individuals in the use of the AT device and apprising them of the desired student outcome, which is another expenditure of time and money (Sheldon & Hager, 1997). Time must also be allocated to the training of the students who are using AT devices. An investment in training will ensure that AT goals and objectives are being achieved and will also facilitate accurate data collection regarding AT evaluation and goal attainment.

Finally, providing the necessary infrastructure is an additional cost for implementing the new AT legislation. Individuals with training to support the AT adequately will require financial compensation at a level comparable to the private commerce sector. This is problematic not only because financially strapped school districts may not be able to afford such services but also because a critical shortage of such individuals exists (Behrmann, 1995).

Because of the many costs associated with providing AT to students with disabilities in an educational setting, districts may try to ignore or reduce the importance of AT devices. This can often result in conflicts between parents, districts, and the law.

ADJUDICATION OF ASSISTIVE TECHNOLOGY ISSUES UNDER IDEA '97

Parents who wish to contest a district's decision concerning AT have the right to a due process hearing and



may also appeal the administrative decision to state or federal court. Yet, in the years since 1990, when AT devices and services were first explicitly included in IDEA, assistive technology cases have been slow to make their way into federal court. This is not surprising when one considers that administrative remedies (i.e., due process hearings) must be invoked first, after which it typically takes several years for an appeal of an AT hearing decision to culminate in a final court decision. Because the number of hearing decisions began to escalate beginning around 1997, more court cases can be expected in the future.

AT issues and disputes include (a) orthopedic and mobility devices (e.g., wheelchair) and services, (b) medical or health-related devices and services, and (c) augmentative communication/hearing aid devices and services, and (d) instructional devices and services. The authors limited the following analysis of AT cases and hearings to those after passage of IDEA '97 that focus on AT for instructional use. A summary of earlier AT hearing decisions are provided by Zirkle (1998).

Court Decisions

A search, on Lexis-Nexis and in the Individuals with Disabilities Education Law Report, of federal court cases invoking the term *assistive technology* in the first five years since the passage of IDEA '97 led to identification of 16 cases. In most of these cases, AT was not directly at issue. In a few cases, mobility or hearing technologies were at issue. In only four of the cases were AT instructional devices and services directly at issue (see Table 1).

East Penn School District v. Scott B. The first of the four cases, *East Penn School District v. Scott B.* (1999) (Scott B.), involved an IEP that was developed prior to enactment of IDEA '97. In Scott B., the school district was seeking to overturn a hearing panel ruling that Scott's 1996-97 IEP was inappropriate. Scott was a young man with physical disabilities and mental retardation, and the dispute centered

on whether the transition and AT portions of his IEP were appropriate. The following summary addresses only the AT components of Scott's IEP.

The court relied on the decision of the United States Court of Appeals for the Third Circuit in *Polk v. Susquehanna Intermediate Unit 16* (1988) in determining that FAPE and an appropriate IEP must provide more than a trivial educational benefit and should consist of "access to specialized instruction and related services which are individually designed to provide educational benefit to the handicapped child" (quoting *Board of Education v. Rowley*, 1982, pp. 200-201). The court reviewed Pennsylvania's definition of AT devices and services, which closely tracks the U.S. Code. The court agreed with the appeals panel that the IEP was substantively flawed in that the AT device (i.e., a laptop computer with a word prediction program entitled Telepathic) and AT services were insufficient to provide meaningful benefit. The AT device and services were found to be ineffective for several important reasons.

1. The AT device and services were not designed to permeate Scott's entire school day and therefore the school district did not have a strategy for integrated and effective use of the technology.
2. The keyboarding instruction was not adequately adapted to Scott's physical needs.
3. There was a significant delay in obtaining the AT device and training the teacher on how to use it. The court also noted that neither the classroom aide nor Scott's parents were trained on use of the AT device.
4. The school district did not justify its selection of the word prediction program.

In addition, the court credited the testimony of the parents' AT specialist, that the student's word recognition, grammar, and reading needs were more extensive than the word prediction program could address. The court placed the burden of proof regarding the appropriateness of the IEP on the school district and held that the school district failed to meet its burden.

Table 1.
Federal Court Decisions Involving AT for Instructional Purposes: 1997-2002

Name of case	Court	Year	Parent's Complaint with respect to AT	AT Decision	Relief granted with respect to AT
East Penn Sch. Dist. v. Scott B.	E.D. Pa.	1999	AT word prediction device and services were insufficient to provide FAPE	In favor of student	Compensatory education: 2 yrs of AT services
Bd. of Educ. of Harford County v. Bauer	D. Md.	2000	Request for the AT in proposed but unimplemented IEP	In favor of student	Payment for Co-writer & Write-Aloud software for use at home & in private school
Barber v. Bogalusa City Sch. Bd.	E.D. La.	2001	IEP did not provide for use of a computer	In favor of district	None-student was receiving sufficient AT services
Kevin T. v. Elmhurst Commun. Sch. Dist. No. 205	N.D. Ill.	2002	Failure to consider or provide AT	In favor of student	Compensatory education



The court determined that an award of compensatory education should accrue from the time that the school district should have known that its AT device and services were inappropriate. The court then decided that one semester would have been a reasonable amount of time for the school district to obtain a suitable laptop and software and implement an appropriate plan for AT services. This decision resulted in a compensatory education award of 2 years of AT services.

Board of Education of Harford County v. Bauer. The second case is *Board of Education of Harford County v. Bauer* (2000), a case from the federal district of Maryland that was not published except in the Individuals with Disabilities Education Law Report (1996). In *Bauer*, the school district was ordered to provide computer software and AT training to a ten-year-old student with Attention Deficit Disorder (ADD) for his use at home and in a private school where his parents had placed him after two unsuccessful years in public school. The court affirmed a due process hearing decision that also awarded tuition reimbursement at the private school because the school district had failed to design IEPs that provided FAPE for two school years. Because courts are allowed to award any appropriate remedy under IDEA and because AT had been included in the school district's proposed 1999-2000 IEP, the court upheld the award of AT and training in its use.

Barber v. Bogalusa City School Board. The third federal district court case is *Barber v. Bogalusa City School Board* (2001). In this case, a teenage girl with profound visual impairment claimed that her IEP did not provide FAPE, because, among other reasons, it did not provide her with use of a computer. The girl was receiving numerous modifications in her general education setting, including use of a tape recorder, auditory aids, and large-print books. Her previous year's special education teacher had recommended use of a reading machine and other visual aids instead of a computer because the girl had difficulty reading items on a computer screen and using a keyboard. Her current teacher thought that a computer might be beneficial for use in adapting lesson plans but not for the student's personal use. The court concluded that the student had not been denied assistive technology needed for her to benefit from her education.

Kevin T. v. Elmhurst Community School District No. 205. The most recent case reviewed was *Kevin T. v. Elmhurst Community School District No. 205* (2002). It concerned an adolescent male with learning disabilities, attention deficit hyperactivity disorder (ADHD), and a bi-polar disorder who was unilaterally graduated from high school over the objections of the student and his parents. The court ordered compensatory education based on a denial of FAPE that included, among other things, failure to consider or provide AT in violation of IDEA '97. This is the first case to reference the new requirement in IDEA '97 that the necessity of AT must be considered in developing a student's IEP.

Hearing Decisions

Hearing decisions under IDEA are reported in the Individuals with Disabilities Education Law Report (IDELR). The topic heading of *assistive technology devices and services* was first introduced in the IDELR Cumulative Digest and Tables, Volumes 16-19 (1993). An examination of listings under this heading between 1992-1996 (volumes 16-23, 1993, 1996) revealed fewer than ten reported hearing decisions over that five-year period. The number over the next five-year period more than tripled. The following discussion was limited to hearings between 1997 and 2001 where AT was directly at issue and the hearing decision was not outdated because of changes in IDEA '97. Like the court cases, hearings involving orthopedic, health, and augmentative-communication/hearing aid devices were excluded. It should be noted that the 1997 hearings and some of the 1998 hearings involved AT requirements that existed prior to enactment of IDEA '97. They are included because they reflect the attention being focused by then on the 1990 IDEA requirements for AT evaluation and training (see Table 2).

Decisions Favoring the Student. At least four hearings between 1997-1999 and one in 2001 held that the school district denied FAPE by failing, among other things, to provide appropriate instructional AT devices or services. In *Upper Darby School District* (1997), the hearing panel concluded that a Pennsylvania school district had performed an extremely inadequate reevaluation of a cognitively able student with multiple disabilities, including visual impairments and cerebral palsy. The hearing panel ordered the district, among other things, to pay for an AT evaluation that would encompass appropriate input and output devices, including voice activation programs, word processing programs, and keyboarding programs. Independent of the outcome of the evaluation, the hearing officer ordered the district to provide the student with a laptop for his sole use, with sufficient memory to run the programs recommended by the independent AT evaluation, and the training needed to operate the hardware and software.

The hearing panel in *In Re: Student with a Disability* (1998) concluded that a Delaware school district did not implement portions of the student's IEP, including provision of a computer or word processor for in-class assignments. The student was given limited access to a computer and was not provided with the software recommended by the school district's own consultant. The hearing panel ordered an AT evaluation and adoption of the ensuing recommendations, including technology that would benefit the student at home, even if the AT needed at home or in pullout settings might be different from that required in the general classroom. Because of the school district's failure to implement the student's IEP over a protracted period, the hearing panel also specified that



Table 2.
Administrative Hearing and State Complaint Decisions Involving AT for Instructional Purposes: 1997-2001

Name of Hearing	State Ed. Agency	Year	Parent's complaint with respect to AT	AT Decision	Relief granted with respect to AT
Upper Darby Sch. Dist.	SEA PA	1997	Inadequate evaluation of student's needs	In favor of student	Comprehensive AT evaluation, laptop, & training for student
Laredo Indep. Sch. Dist.	SEA TX	1997	Request for laptop for use at home and school	In favor of district	None-FAPE being provided with existing computer & Alpha Smart
Austin Indep. Sch. Dist.	SEA TX	1997	Delay in AT evaluation	In favor of district	None-delay was not untimely
In Re: Student with a Disability	SEA DE	1998	Failure to implement portions of IEP	In favor of student	AT evaluation and technology for home & school use
Smithtown Central Sch. Dist.	SEA NY	1998	Student not classified under IDEA and not provided AT	In favor of student	Full evaluation for eligibility; AT evaluation, if eligible
Tuscaloosa County Bd. of Educ.	SEA AL	1998	Request for increased access to modified computers	In favor of district	None-sufficient AT provided when parent removed child from school system
Gwinnett County Sch. System	SEA GA	1998	AT evaluation & text reader not provided	In favor of district	None-student was receiving enough benefit
Texas City Indep. Sch. Dist.	SEA TX	1998	Formal AT evaluation not provided	In favor of district	None-informal evaluation showed no further need
Williford Sch. Dist.	SEA AR	1998	Outdated laptop; inadequate AT evaluation	In favor of district	None-district agreed to new evaluation
In Re Student with a Disability	SEA DE	1999	Inadequate AT evaluation	In favor of student	Independent AT evaluation
Williams Bay Sch. Dist.	SEA WI	1999	Only partial AT	In favor of student	Complete AT evaluation. & implementation of recommendations
Greater Albany Pub. Sch. Dist. (State Complaint Investigation)	SEA OR	1999	Request for computer training, tape recorder, voice recognition software, dictation training, & AT re-evaluation	In favor of district	None-student making adequate progress & performing satisfactorily in general curriculum
Douglas County Sch. Dist. Re-1	SEA CO	1999	Failure to provide sufficient AT devices/services	In favor of district	None-pencil grips & Alpha-Smart keyboard already provided; no evidence of other AT needs
Bd. of Educ. of Mamaroneck Union Free Sch. Dist.	SEA NY	2000	Request for more sophisticated calculator	In favor of district	None-FAPE being provided with existing calculator
E. Whittier City Elem. Sch. Dist.	SEA CA	2000	Request for Apple iBook laptop with voice output technology at home and school	In favor of district	None-FAPE being provided with AlphaSmart and desktop computers
Ft. Bend Indep. Sch. Dist.	SEA TX	2001	Request for Fast ForWord software (acoustically modified speech)	In favor of district	None-sufficient benefit under IEP without Fast ForWord
Jefferson County Sch. Dist. R-1	SEA CO	2001	Request for home computer & keyboard instruction	In favor of district	None-FAPE being provided with available school computers & software
Brandywine Public Schools	SEA MI	2001	Request for compensatory computer services	In favor of student	Paraprofessional for 4 weeks during summer

expedited time lines be followed for completion of the evaluation and delivery of devices and services.

A third decision in another Delaware case also entitled *In Re: Student with a Disability* (1999) held, among other things, that the school district failed to provide an adequate AT evaluation for a high school student with Down syndrome. The district was ordered to schedule and pay for an independent AT evaluation and consider the results in developing the student's IEP. The hearing decision criticized the district for limiting its AT devices to a footstool in the student's computer classes, and faulted the district's director

of assistive technology for not being able to adequately define the meaning of AT.

In *Williams Bay School District* (1999), the school district, among other things, was ordered to complete its AT evaluation of an adolescent student with autism. The school had been providing some AT based on a partial report of the student's needs. The school was also ordered to implement, in the general classroom as well as in the student's IEP, any recommendations resulting from the completed evaluation.

Finally, a fifth decision in *Brandywine Public Schools* (2001), involved, among other things, a several-month delay



in providing a specially designed computer keyboard and software program that were specified in a young student's IEP. The hearing officer ordered four weeks of compensatory education during the summer with a paraprofessional who could work with the child on the computer, using the adapted keyboard.

Decisions Favoring the School District. At least twelve hearing decisions between 1997-2001 determined that FAPE was provided without the need for changes to the existing AT or without any need for AT. Four of the twelve hearings raised issues concerning AT evaluations or the evaluation process itself. The others concerned the alleged need for more AT than was being provided.

With respect to the AT evaluation process, the parents in *Austin Independent School District* (1997) claimed that the school district illegally delayed the AT evaluation of their son with dyslexia from late spring until the following fall when school resumed. The hearing officer ruled that the evaluation was timely but noted the importance of monitoring the effect of the AT on the student's progress and of considering AT in developing his new IEP. In *Gwinnett County School System* (1998), the hearing officer ruled that an adolescent with learning disabilities was receiving educational benefit without an AT evaluation and text reader requested by the parents. It is noteworthy that the student was found to have previously rejected offered technological devices such as keyboards, recording devices, and keyboarding and word processing services. A third hearing, *Texas City Independent School District* (1998) determined that no formal AT evaluation was required under IDEA because an informal evaluation indicated no need for further evaluation. Finally, in *Williford School District* (1998), the hearing officer observed that the school district had previously paid for two AT evaluations and, additionally, had agreed to complete a new AT evaluation at the beginning of each new school year. The parent had alleged, among other things, that the laptop provided by the school district was outdated and too cumbersome for the student to manage. The hearing officer, however, did not address the appropriateness of the AT equipment, presumably because the district agreed to develop additional recommendations for adapting the last AT evaluation in light of the student's current curricular needs.

Seven other hearings and one state education agency complaint investigation rejected requests for specific AT devices (*Fort Bend Independent School District*, 2001; *Jefferson County School District R-1*, 2001; *Board of Education of the Mamaroneck Union Free School District*, 2000; *East Whittier City Elementary School District*, 2000; *Greater Albany Public School District*, 1999; *Douglas County School District Re-1*, 1999; *Tuscaloosa County Board of Education*, 1998; *Laredo Independent School District*, 1997). In each situation, the hearing officer found that the student

was receiving educational benefit under his or her current IEP. The hearing officers described the students as performing satisfactorily in the general curriculum, progressing academically, making meaningful progress, or receiving sufficient educational benefit without the need for the requested AT. Collectively, these decisions stand for the proposition that although parents may request or prefer specific technological devices, other ways of meeting student needs often suffice and parents cannot dictate the need for AT or the choice of AT devices.

In the *East Whittier* (2000) and *Jefferson County* (2001) hearings, parents had requested provision of a specific AT device at home as well as at school. The parents in *East Whittier* requested an Apple iBook--a laptop computer with voice-output software. The district argued that direct instruction with access to desktop computers with voice output at school was the better educational approach for this student. The hearing officer's decision stated that "while access to such a computer at home may benefit (the student), the evidence does not establish that she requires it to benefit from her instruction or to obtain a FAPE" (p. 186). In *Jefferson County*, the hearing officer denied the student's request for AT at home, in part because the student had not taken advantage of the computers and arrangements provided for him by the IEP team at school. The hearing officer described the request for the home computer as a want and not a need (p. 809).

Summary of IDEA Adjudication

Generally speaking, hearing decisions and court cases demonstrate awareness that school districts have a responsibility to provide, in appropriate situations, an AT evaluation to determine a student's need for AT devices and services. When the issue of qualifications has been raised, courts and hearing officers have recognized that an AT evaluation should be performed by a qualified AT specialist and is meant to ensure that AT devices and services are individualized and adapted to meet the unique needs of the student. A hearing decision not yet mentioned, *Smithtown Central School District* (1998), also recognized the need for an AT evaluation by ordering that one be conducted if the student in question was found eligible for disability classification under IDEA. *The Scott B.* (1999) federal court decision and the hearing decision in *In Re: Student with a Disability* (1998) recognized the additional requirement that the evaluation must explore AT needs across the student's daily activities and the environments in which the student functions (see 34 C.F.R. § 300.532(h) and 34 C.F.R. § 300.347(a)(3)(ii)).

Access to AT includes the need for timely procurement of AT devices and services. *Scott B.* (1999), *In Re: Student with a Disability* (1998), *In Re Student with a Disability* (1999),



and *Upper Darby School District* (1997) applied this standard by setting deadlines for provision of AT. Delay in providing needed AT resulted in compensatory education in *Brandywine Public Schools* (2001). Training of all significant persons is also pivotal to the success of the student's AT goals. The same cases mandated training for the student or individuals interacting with the student. Specific AT devices were ordered in *Upper Darby School District* (1997). Furthermore, explicit maintenance, and reimbursement to parents for AT associated costs were required in *Upper Darby School District* (1997).

On the other hand, parent requests for specific devices were denied in multiple situations where the student was shown to be making progress under the school's current AT plan or IEP. Moreover, in two hearings in which parents specifically requested AT for settings outside of school (*East Whittier City Elementary School District*, 2000; *Jefferson County School District R-1*, 2001), AT at home was denied. Nevertheless, in *Board of Education of Harford County v. Bauer* (2000) and *In Re: Student with a Disability* (1998), AT was ordered for the student in the classroom and at home. The hearing officer in the latter case noted that AT requirements might be different for the two environments and that all necessary peripherals were to be provided to the student.

What is largely missing in these hearing decisions and cases is recognition that AT needs must be considered during development of each IEP, can extend to nonacademic environments, and can be useful as a part of transition planning (see Parette, VanBiervliet, & Hourcade, 2000).

Section 504 Rulings

Section 504 (2000) issues have also been at the core of some AT disputes. The Office for Civil Rights (OCR) has reviewed several such disputes since 1997 (see *Southside (TX) Independent School District*, 1998; *Red Oak (TX) Independent School District*, 1998; *Detroit (MI) Public Schools*, 1998; *Lee's*

Summit R-VII (MO) School District, 1999; *Bradley County (TN) School District*, 2000) (see Table 3).

In *Southside (TX) Independent School District* (1998), the parent complained that her son's AT provisions in his IEP were not being implemented. Because Section 504 (2000) is civil rights legislation, OCR's concern focuses on discrimination issues. OCR evaluated whether the school had adhered to OCR access guidelines. OCR found that the district had provided access to the described AT devices and software as required in the IEP; thus, Section 504 requirements were met. OCR noted, however, that the purpose of the AT devices was not specified in the IEP and referred the question of a possibly inadequate IEP under IDEA to the Office of Special Education and Rehabilitative Services.

In *Detroit (MI) Public Schools* (1998), a parent provided OCR with an addendum to his child's IEP specifying that his child should receive AT services at home. OCR found that the addendum was not signed by any school officials and that the student's official IEP did not contain any provision for AT in the child's home. Therefore, no failure to implement the IEP had occurred.

The complaint in *Red Oak (TX) Independent School District* (1998) alleged, among other things, that the school district discriminated against the student by failing to provide access to a computer during his disciplinary placement. A review of the student's IEP revealed that he was allowed to use a calculator as an AT device but his IEP did not mention a computer. Therefore, OCR found no violation.

In *Lee's Summit R-VII (MO) School District* (1999), parents alleged that their son was denied access to a computer that was part of the services listed on his IEP. Copies of logs sent home weekly to the parents, however, showed that the boy had access to the computer and that the only time he failed to use the computer was when he chose to write certain assignments by hand. OCR found insufficient evidence to support a Section 504 violation.

Table 3.
Office for Civil Rights (OCR) Rulings Under Section 504 Involving AT for Instructional Purposes: 1997-2001

Name of case	Agency	Year	Parent's complaint with respect to AT	AT Decision	Relief granted with respect to AT
Southside (TX) Indep. Sch. Dist.	OCR	1998	Failure to implement AT provisions of IEP	In favor of district	None-access to AT was being provided
Detroit (MI) Pub. Schs.	OCR	1998	Denial of AT services at home	In favor of district	None-No failure to implement IEP services
Red Oak (TX) Indep. Sch. Dist.	OCR	1998	Failure to provide AT during disciplinary placement	In favor of district	None-no failure to implement IEP services
Lee's Summit R-VII (MO) Sch. Dist.	OCR	1999	Failure to provide computer services on IEP	In favor of district	None-no failure to implement IEP services
Bradley County (TN) Sch. Dist.	OCR	2000	Failure to conduct AT evaluation	In favor of district	None-parent rejected school's offer of assessment



Finally, in *Bradley County (TN) School District* (2000) a complaint was lodged against the school, in part because it refused to conduct an AT evaluation on Student 1, who was defined as having a disability under Section 504 (2000). However, OCR found that the district had offered to assess the student's technology needs "as they related to his educational programs," (p. 899) and the parents had rejected this offer. OCR noted, "Neither 504 nor Title II [of the ADA] require [sic] an AT evaluation of every student with a disability. A District may decide not to do a formal AT evaluation. A decision not to evaluate, however, may be contested in a due process hearing" (p. 899). The District had developed and implemented a 504 plan and had communicated with the parent. OCR ultimately determined that there was insufficient evidence to support a violation of Section 504.

All the above OCR complaints essentially asserted that AT was not being delivered in the manner expected by the parents. All these procedural challenges were resolved in favor of the school district.

Implications and Recommendations

IDEA '97 has enhanced expectations for AT in the following ways.

1. AT must be considered for all students during development of the IEP, and additional assessments may be required.
2. Comprehensive AT evaluations must be conducted, when indicated; must identify all of the student's needs; and must be conducted by someone knowledgeable in AT.
3. AT must be available in educationally related school environments.
4. AT should provide new opportunities for participation in academic and nonacademic programs and activities.

Although the court in *Scott B.* and a few hearing officers recognized the need for AT availability across all educationally related school environments, parents and their attorneys need to be prepared to educate hearing officers and judges as to the implications of the IDEA '97 provisions and to argue for all of the above requirements. In turn, schools need to be awake to these expanded requirements because judicial acknowledgment and understanding of them can be expected to grow.

Another recommendation to schools is to avoid delay in the provision of AT devices and services specified in an IEP. Any substantial delay puts a school district at risk of being found to have denied FAPE and to be responsible for the costs of compensatory education and privately funded AT devices and services.

A third recommendation anticipates future AT challenges and concerns gaps in transition services. IDEA '97 stresses improved post-school outcomes for students with disabilities. AT transition needs and services, including the issues of ownership of AT devices along with AT service gaps,

should now be addressed by the IEP team as part of transition planning. The possibility of transferring ownership of the AT device to a state Vocational Rehabilitation agency when the district no longer has a need for the device is one possible approach to the gap in transition planning. (see Letter to Goodman, 1998). The future-employment argument (i.e., the need for AT to provide increased employment opportunities after high school) has yet to be raised or addressed by either hearings or court cases. If the hearings are a barometer of future trends, families have just begun to request AT devices and services beyond the academic setting. To date, no family or student has requested AT devices and services in the school setting specifically to prepare the student to be employable or to have increased access to educational or training opportunities after exiting public education. Nonetheless, every IEP team and transition specialist should anticipate increased challenges and should plan for AT needs beyond the school years, ensuring that student gains resulting from AT can continue in post-school settings.

Additionally, if meaningful progress toward IEP goals and improved post-school outcomes are to be actualized, both phrases need to be clarified and the relationship between the phrases determined as they relate to AT. How much evidence of progress toward annual goals and longer-term transition goals should be required for FAPE? Families should have realistic expectations and know that FAPE does not require an ideal set of AT devices and services. Nonetheless, they should raise questions and arguments that focus on the substantive rather than procedural requirements of FAPE, and the outcomes to be measured under the IEP need to be explored more in hearings and court cases.

In conclusion, the AT access argument (i.e., that AT can provide students with opportunities to participate more fully in the general education environment and the community) may open the door for students to receive more of the necessary benefits that AT can afford them. Certainly such actions would ensure their fuller participation and independence in the community, thus benefiting society as a whole as well as the AT recipient.

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