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Survey of the assistive technology use by visually disabled students in Wisconsin

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Survey of the Assistive Technology Use by Visually Disabled Students in Wisconsin

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Capstone Approval Page

Capstone Title: Survey of the Assistive Technology Use by Visually Disabled Students in Wisconsin.

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Abstract

The question driving my proposed research is this: *Are* the visually impaired students of Wisconsin receiving some type of assistive technology training and/or assistance? The proposed method of finding the answer to this question is to send a survey to each of the teachers of the blind and visually impaired.

The most prominent finding of the research was the implication that more extensive and continuing education on the use of assistive technology should be provided for both teachers and students. Hopefully the emergence of more studies will bring to light the concern for education involving assistive technology in the field of vision.

Literature Review

Assistive technology is a very important and increasingly necessary part of learning for students who are visually impaired. Since many visually impaired students cannot read print, such technology converts the elusive world of print into a means by which the students who are visually impaired can best make use of it. Assistive technology serves a number of purposes, such as enlarging print or what is seen on the computer screen, allowing students to take notes, write papers, etc. with the use of an electronic Braille note-taking device, and allowing students to use such things as scanners and screen-reading software to gain auditory input from the computer. Assistive technology allows the visually impaired population to have access to all the same opportunities and daily activities as others, whether it be using a Braille 'n Speak to take notes in class, having JAWS read e-mails out loud, or using a Closed Circuit Television (CCTV) to read the instructions on a bottle of Advil. This study is important because it is essential that visually impaired and blind students be given every opportunity to utilize assistive technology.

There is little research done in this area. There was a study done on the use of assistive technology in Florida (Lewis and Edwards, 1998) that found the vast majority of teachers of the blind and visually impaired would have found assistive technology courses helpful before beginning teaching.

Following the study in Florida, there was a similar research project done in Illinois (Kapperman, Sticken, and Heinze, 2002). The results of this research stated that "students who are served by teachers who are purely itinerant are less likely to receive assistive technology training than are students" in any other students receiving services under any other service delivery model. However, data gathered on students receiving services through any service delivery model found that the amount of students who actually received training in assistive technology was lower than it should have been.

Furthermore, the study found that "40% of the academically oriented students who required alternative reading media and whose teachers supplied valid responses to the survey questions were reported to be users of some type of assistive technology." This suggests that there is a high percentage of students who could possibly benefit from the use of assistive technology, but are not receiving instruction or having access to it.

Insufficient funds, lack of time in the day to orient students to the technology, and insufficient teacher training were listed as reasons for the fact that so many students were not receiving the training that could be beneficial to them.

The authors of the survey in Illinois have stated that "a nationwide effort should be undertaken to develop a new specialty in assistive technology in the field of vision, similar to the effort that was mounted to establish orientation and mobility as a specialty."

Hopefully, the more research that is conducted and the more the need for proper instruction and availability of assistive technology for students who are blind or visually impaired is recognized, the more teachers and administrators will seek opportunities to improve this are of education for the benefit of their students.

Survey of Assistive Technology Used by Visually Disabled Students in Wisconsin
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I. Teacher Demographics

A. Employment

Of the 48 teachers ofthe blind and visually impaired (TVIs) who responded to this survey, 17 of them worked for a CESA (Cooperative Educational Service Agency), 27 teachers worked directly for one or more school districts in Wisconsin, and the remaining four teachers worked at WCBVI (Wisconsin Center for the Blind and Visually Impaired), which serves as the state resource center, as well as a residential school for students who are blind or visually impaired.

Employment by:	No. of Teachers Who Responded to Survey
School District(s)	27
CESA	17
WCBVI	4
Total Responses:	48

B. Experience

The number of years teachers have had experience with teaching students who are blind or visually impaired ranged from half of a year to 36 years, but the average number was 15 years of experience.

No. ofyrs. Teaching Students. Who Are Blind or Visually Impaired	No. of Teachers
Less than 10 years	18
10 to 19 years	13
20 to 29 years	15
30 to 39 years	2

Average No. ofYrs.:	[ill

C. Setting

There are a number of different settings in which a teacher of the blind and visually impaired may teach. The vast majority of TVIs work in an itinerant setting in order to service students from many districts. Other settings include a vision resource room, which is a room students may come to within the school setting to receive direct vision services or receive specialized instruction in certain curriculum areas. The self-contained classroom, or a classroom for students with specific or multiple disabilities who are not mainstreamed, is another example of a setting a TVI may teach in. While 37 of the teachers indicated that they worked in the itinerant model of teaching, three indicated that they worked in the self-contained setting, and six reported working in a combined itinerant/resource room setting. One teacher specified working within a self-contained classroom, but also indicated working on and off-campus with students in a career education program as well as making home visits. Finally, another teacher denoted working solely within the setting of making home visits.

D. Education

The majority of TVIs have reported receiving either a Bachelors or Masters degree in Vision Impairments. 17 teachers received a Bachelors degree in Vision Impairments, while 19 reported earning their Masters. Eight teachers said that they were certified to teach students who are visually impaired, but did not have a specific degree. The remaining three teachers reported that they were not certified in the area of Vision Impairments at all. Of those three teachers who were not certified, one teacher was certified in Early Childhood, but is teaching visually impaired students with an emergency license from the Department of Public Instruction (DPI), while working towards a Bachelors degree in Vision Impairments. Another of the three teachers not currently certified to teach the visually impaired reports having a degree in Elementary Education, and is presently working towards certification in Vision Impairments through the Silver Lake College program. The third teacher who reported not being certified in the area of Vision Impairments has a Masters degree in Education and is a certified rehabilitation teacher for blind and visually impaired adults.

No. of Teachers Earning Degrees/Certification and Universities/Colleges Where Degrees Were Obtained

University or College	Bachelors Earned	Masters Earned	Certification (No specific degree in Vision Impairments)
Northern Illinois University	7	5	2
Michigan State University	3	4	
Northern Colorado University		6	
Silver Lake College			6
Illinois State University	3		
Eastern Michigan University	2		
University of Minnesota - Twin Cities		2	
University of Pittsburgh		1	
Western Michigan University		1	
University of Louisville		1	
University of Nebraska			1
University of North Dakota		1	
California State University - San Francisco		1	

Of the six teachers who attributed their certifications in Vision Impairments to Silver Lake College, two of those teachers indicated that they are still in the process of completing their certification, but are nearing the end of the program and will be obtaining their certifications soon.

Two teachers were not included in this chart because one of the teachers who received certification in Vision Impairments did not list a school at which the certification was obtained, and one is certified as a rehabilitation teacher for blind and visually impaired adults, not Vision Impairments.

11. Background in Assistive Technology

A. Education

One of the questions that was posed to the teachers of the visually impaired inquired as to whether or not the teachers had taken a course (full semester or full quarter) on assistive technology for students who are blind or visually impaired before they began teaching. Of the 48 teachers, four did not answer this question because one

person did not remember much about learning assistive tech., one person was not certified in vision impairments, and two people simply skipped the question. 24 teachers responded by saying that they had taken such a course, while 20 teachers reported not having taken such a course.

Of those 24 teachers who took an assistive technology course, 14 said they found it helpful, but 10 said they did not find it helpful.. Ten of the teachers who took such a course and reported it to have been helpful took that course sometime in, or after, the 1990s, with the most recent being in 2002. Of the remaining. four teachers who took such a course and found it helpful, one teacher did not record a year in which the course was taken, and the other three had reported earning their degrees in the years 1977, 1987, and 1989. On the other hand, eight teachers who found such a course to be unhelpful had reported taking the class prior to the year 1990~ many having taken the course sometime in the 1970's. Only two of the teachers who reported the course to be unhelpful had taken the course in 1995.

Two of the teachers had written notes explaining that they did not find such a course helpful because at the time they had taken the assistive tech. course, there was not much assistive technology on the market, and technology has changed so much since the course was taken, that whatever was learned from such a course has become outdated or irrelevant.. The data gathered would support such statements, since it would appear that the majority of teachers who took an assistive technology class and found it helpful could, in part, attribute the effectiveness of the course to the fact that it was taken more recently. On the other hand, the majority those teachers who took a course, but found it to be unhelpful could, in part, attribute the ineffectiveness of the course to the fact that it was taken prior to the 1990s.

Of the 20 teachers who did not take a course on assistive technology, 19 teachers agreed that if they were to take such a course, they would indeed find it to be helpful. One teacher wrote an explanation saying that the reason such a class would not have been helpful was because there simply was not enough assistive technology available in 1988 to make such a course necessary or effective. Of the 19 teachers who did not take such a course, but would have found one to be helpful, one teacher reported that a class in assistive tech. will be taken andthe teacher will be certified in 2004, two teachers

obtained degrees in the 199Os, five teachers obtained their degrees in the 1980s, and nine teachers obtained their degrees in the 1970s.

B. Inservice Training

Besides university or college courses on assistive technology, inservices are a good way for teachers to be introduced to, trained on, and kept up to date about assistive technology. Of the 48 TVIs who answered the survey, 41 reported receiving some sort of inservice training, while four teachers did not receive any inservice training, and three teachers did not answer the question.

The teachers who received training on assistive technology most commonly reported the source of the training to be from state seminars, conferences, and professional development workshops, company distributors who come for demos, the summer program at North Central Technical College in Wausau, Wisconsin, the Wisconsin Assistive Technology Initiative (WATI), training sessions through the Wisconsin Center for the Blind and Visually Impaired (WCBVI), and inservices designed around specific pieces of technology, such as JAWS, Braille "N Speak, Zoom Text, Braille Note, and the CCTV.. Some other sources of training that were not as common, but were mentioned at least once were training programs through the American Foundation for the Blind (AFB), the Wisconsin Council of the Blind (WeB), and the summer training program at Northern Illinois University.

A few of the teachers wrote comments on their surveys indicating that they try to attend as many inservices and places as possible in which there are opportunities to learn more about assistive technology. One teacher commented that although every opportunity to gain knowledge about assistive technology was utilized, the workshops and conferences never seemed to be offered when the teacher saw a student who needed it, or the information in the workshops did not address the specific needs of students on the teacher's caseload. Another teacher indicated that even though every opportunity to learn more about assistive technology is taken, it never seems to be quite enough information.

III. Caseload Information

A~Number of Students~

       The teachers were asked to list the total number of students they had. on their current caseload, and then break that total down and specify, how many students fit into each of the five age groups.

Total No. of Students as Indicated by Teachers' Caseloads

A2eGroup	Total No. of Students~ in A2e Group
0-2 years	49 students
3-5 years	138 students
6-9 years	197 students
10-14 years	250 students
15-21 years	202 students

       The teachers were then asked to state how many of the students on their caseload used assistive technology specifically designed for the blind and visually impaired. Of the 836 total students in all the teachers' caseloads, a reported 289 of those students use some type of technology designed specifically for the blind or visually impaired.

B. Availability of Technology

       The TVIs were asked if any of their students would benefit from the use of assistive technology, but are not receiving it due to lack of funding. Seven teachers reported that some of their students are not receiving assistive technology due to a shortage of funding, and according to the reports of these seven teachers, approximately 35 students altogether are not receiving assistive tech. for this reason.

       The teachers were then asked if any of their students would benefit from the use of assistive technology, but were not receiving it due to limited opportunities for teacher training. In response to this question, 14 teachers said that they believe some of their students are not receiving assistive technology that would be helpful to them as a result of limited opportunities for teaching training. Two teachers were unsure, but acknowledged it as a possibility.

       Since there could be other reasons why students who would benefit from assistive technology are not receiving it, other than financial and teacher training. the teachers

were also asked to list any other factors they feel contribute to the potential problem. One teacher said that beginning teaching in December, the previous teacher did not use much assistive tech., and so the budget was already set and no tech. was able to be purchased, however, there is intent to purchase assistive tech. for the following school year. Another teacher indicated that the caseload is so high and it is itinerant, so that leaves little time for assistive technology. Another factor indicated by one teacher is that some of the students are very low functioning and benefit from other forms of technology than those specifically designed for the blind and visually impaired. Still another teacher said that one student is in a private school and will need assistive technology the following school year, but the state will not fund such tech. for a private school.. Finally, four teachers indicated that a large factor in students not benefiting from the use of assistive technology is their own refusal to use it, especially at the cost of looking different or standing out from their peers.

IV. Specific Technology Categories

A. Enlarging Hardware/Software

The teachers reported that approximately 147 of the students in their combined caseloads make use of enlarging hardware or software. The most used types of hardware and software are Zoom Text and CCTVs. Other hardware/software listed included Bis Shot, WYNN, Magic, Close View, Big-E Cursor, and features ofIntelliTalk and IntelliTools. Two very popular modifications were made as well, but not with the use of technology for the visually impaired - these modifications were to simply get large 19-21 inch monitors or increase the size of the font or screen magnification/resolution.

Along with the list of enlarging hardware and software, it seems that some misconceptions or confusion had arisen as well. Several teachers listed such things as JAWS, which is screen-reading software, non-technological enlargement devices such as magnifiers or large print, one person listed a monocular, which is a distance low vision aid, and one person simply stated, "I don't know." While magnifiers and large print are indeed enlarging tools, they are not considered assistive technology and are not of an electronic nature. As for listing JAWS, a monocular, and stating, "1 don't know," this would suggest that a few teachers either misread or misunderstood the question, or that

their concept and understanding of the technology is limited. Fortunately, the vast majority of teachers listed materials that most definitely are considered to be enlarging hardware or software.

Teachers were asked to indicate any enlarging hardware or software that was available, but was not being used. Two teachers indicated that CCTV s were available, but not in use, and one teacher indicated the same for Zoom Text.. The reasons listed for the non-use of these items have to do with student's self-conscious attitudes or refusal to use the technology,

35 teachers reported that such technology is indeed listed as a requirement or need on their students' Individualized Education Plan (IEP), while only two teachers indicated that such technology was NOT listed on their students. IEPs. This is good news because if the use of such technology is documented on the IEP, it shows not only that the IEP team has recognized the need, but is planning on providing the appropriate technology for those students.

Sometimes a coop or district is only to purchase a certain amount of products, and as a result, many students must share the materials. Although it is not always possible, it would be the best-case scenario for students to have their own technology, and not have to share. 15 teachers reported their students having to share enlarging hardware or software, while 21 teachers reported that their students do NOT have to share enlarging hardware of software.

Approximately 36 teachers said that their students were trained in some way on the use of enlarging hardware or software. About 40 teachers indicated that they have taught their students how to use enlarging hardware or software, so it would follow that the next line of questioning would be discussing the type of training these teachers received. 14 teachers said that they received some type of formal training in the use of enlarging hardware or software, whether it be inservice, training through the vendor, a conference, a workshop, or district training sessions. However, 21 teachers indicated that they had no formal training in this type of technology, and they either taught themselves or had minimal, informal training. About four teachers said that their students learned how to use enlarging hardware or software from their computer classroom teachers, one

teacher indicated that a vendor taught the students, and two teachers said that a technology specialist was responsible for teaching this technology to the students.

B. Speech Access

The TVIs have reported that of the students in their combined caseloads, 57 students are using speech access, or screen reading software and other speech synthesizers designed to make the computer speak. The most popular examples of technology listed under this heading would be JAWS for Windows, Zoom Text Extra, Write Out Loud, and WYNN Screen Reading Program. Some of the other programs listed are Window Eyes, Read Please, Intelli'Talk, Read and Write Gold, and Omni 2000. One teacher also listed regular interactive CDs that have speech output, but were not specifically designed for the blind and visually impaired.

Some other materials that were listed, but did not exactly fit under this category were the Braille Note, the Braille 'N Speak, and Kurzweil. The first two are considered note-taking devices, while the latter falls under the heading of Optical Character Recognition (OCR) software. Only five teachers listed these materials under this heading. Most likely these materials were listed as a result of a misconception about what "speech synthesizers" entails, because while all three programs do have speech output, they are not considered screen reading software or speech synthesizers under the category of speech access.

Still another program was listed that could possibly fit under this category, but is not considered one of the traditional and familiar speech access programs, and that program is Dragon Naturally Speaking Professional Software. This is voice-recognition software and is therefore reciprocal in nature to speech access software. However, since it does provide automatic speech feedback as one is speaking/typing, it may be a stretch, but it could fall under this category if used by people who are blind or visually impaired.

A few teachers listed some programs that were available, but not in use. These programs were JAWS, Window Eyes, and Dragon Naturally Speaking. A few teachers who had the technology on hand listed these, but some of their students were not making use of it. Two teachers indicated that they had access to just about any speech access

product on the market, but there was no need for students to be making use of it at this time.

It is very important that technology be listed on a student's IEP so as to guarantee the student access to and instruction in such technology. Keeping this in mind, 20 teachers reported that speech access software was listed as a necessity on their students' IEPs, while four teachers indicated that this was not the case with their students' IEPs.

Eight teachers have expressed that their students must share the speech access software, and 16 teachers said that it is not necessary for their students to share such technology. It is unknown, however, if the reason the technology must be shared can be attributed to limitations in access to the software itself, or if it is because the computers containing the speech access software must be shared.

Approximately 24 students have received some form of training in this particular area of technology, and 25 teachers have indicated that they have personally taught these students how to use the tech. Eight of those teachers say they have been trained in the use of such technology through workshops, conferences, district training, or by a technology assistant. Seventeen teachers have indicated that they have received no formal training in the use of speech access software. A handful of teachers have also indicated that their students were taught how to use such technology by either the vendor of the technology, learning it in computer class, and a teacher indicated one student was self-taught.

C. Note-Taking Devices

This cate~ory generally refers to Braille note-taking devices designed specifically for the blind and visually impaired. The teachers reported that 23 students in all use note-taking devices. Such devices listed were the Braille Note, Braille Lite, and the Braille 'N Speak.

Teachers have also indicated that the product that is most commonly available, but not always being used is the Braille 'N Speak, but one teacher indicated that there was a Braille Lite that was available, but not being used.

Despite the fact that this survey is about assistive technology, there were two instances of misunderstanding that resulted in the Perkins Brailler (a manual, non-

technological device), and one teacher indicated that the slate and stylus was available, but not being used.

Sixteen teachers reported that the use of note-taking devices was listed on their students' IEPs, while only two teachers reported that note-taking devices were not listed on their student's IEPs.

Since note-taking devices are something that students generally need with them at all times and contain many homework, schedule, and other personal files, it is best if such devices are given for individual use. Keeping this in mind, two teachers reported that their students are sharing note-taking devices, while 16 teachers said that their students each had their own personal note-taking device.

The data states that approximately sixteen students have been given some instruction in the use of a note-taking device, while two students had not received any instruction. About 11 teachers indicated that they were responsible for teaching their students how to use note-taking devices, and the amount of formal training was evenly distributed in that 9 teachers report having formal training and 9 teachers report NOT having formal training in the use of note-taking devices. Three teachers also stated that their students learned how to use their note-takers by taking a class, and one teacher said that the product vendor was responsible for teaching the use of the note-taker.

D. Refreshable Braille Displays

Refreshable Braille displays can be stand-alone displays for use with a computer, or they can be built into a note-taking unit. Approximately 10 students are reported to be using some type of refresh able Braille display. Just two teachers report their students using a 40-cell display for use with a computer, and the rest of the teachers said the only refreshable Braille display their students use are the displays found on the Braille Note and Braille Lite.

The only misconception under this heading was the one teacher who listed Duxbury as a refreshable Braille display. Duxbury is actually Braille translation software that transforms print into Braille on the computer.

Only about three teachers had said that a Braille Note, Braille Lite, or other display is available and not in use.

As with any other assistive technology, it is important for refreshable Braille displays to be listed in the students' IEP in order to make sure such accommodations are available. Six teachers report having refreshable Braille displays listed on their students' IEPs, and two TVIs report that it is not listed within their students' IEPs.

One teacher reported the sharing of devices among students, while seven teachers reported their students having access to their own refreshable Braille display. Perhaps this is because most of the aforementioned displays are integrated into personal note-takers. It is not clear whether the one teacher who reported sharing is referring to sharing a note-taker, sharing a 40-cell display for use with a computer, or whether it is the computer the display is attached to that needs to be shared.

Six students reportedly received some type of training in the use of such technology, while two students were not trained in the use of such devices. However, it is not able to be determined whether the training was in reference to the displays for use with computers, or whether it was in reference to training on a note-taker with a refreshable Braille display. Five teachers stated that they were responsible for training their students on the usage of such technology, and only one teacher said that the vendor actually showed the student how to use the display. Only three teachers of the blind and visually impaired received formal training in the use of refreshable Braille displays, while seven teachers reported having no formal training.

E. Optical Character Recognition (OCR) Software (such as Open Book and Kurzweil)

Approximately 10 students were reported to be making use of optical character recognition software such as Kurzweil and Open Book.. Wynn Read was also recognized as a type of scanner. When asked which type of technology was available to the students, but not being used, the teachers reported more cases of the students NOT using Kurzweil and Open Book than cases of their students making use of both programs. It seems that in many cases, the teachers are the ones using such scanning software in order to quickly and efficiently prepare materials in large print or Braille for their students. The teachers report using such software more than the students use it.

Only five teachers reported having optical character recognition software listed on their students' IEPs, and a mere three teachers pointed out that their students did not have such software listed on their IEPs. This may have something to do with the fact that more teachers seem to be using such technology than students.

Four teachers reported the sharing of such assistive technology,' and another four teachers reported that they did not have to share their optical character recognition software. If software is purchased that has a certain number of licenses, it may be installed on the same number of computers, so perhaps this may account for some or all of the cases in which the technology is shared.

Teachers have reported that six students were trained on the usage of this technology, and five of those teachers also reported being the instructors who taught those students. Five teachers reported having formal training on the software themselves, and five teachers reported having no such formal training. One teacher listed district training as a way that a student was trained on optical character recognition software.

Strengths:

The fact that the survey was sent through mail and e-mail had both positive and negative implications. Since it was mailed, teachers could take the survey on their own time and be thoughtful in their answers.

The open-ended questions provided a qualitative aspect to the survey that was helpful in finding the reasons students might not be receiving assistive technology. Open-ended questioning is a good way to gather information that may not be asked for or identified through more structured close-ended questioning.

Limitations:

Much of the data was not compiled in the form of cross-tabulation or correlation. This makes it difficult to offer certain insights into the direct connections between each of the survey questions and then describe their implications.

As the data was being compiled, it became clear that many questions could have been rephrased, clarified, eliminated, or different questions added.

Some of the questions on the survey had to be eliminated due to their misinterpretation by many teachers. Some of the questions were ambiguous and left room for misunderstanding. In some answers, the misinterpretations were recognizable, but there were also some questions in which inconsistencies could not be identified. For example, when asked how many students on their case load used a specific type of technology, some teachers responded by saying none of their students used that particular type of technology, but then contradicted themselves by answering another question in that section by reporting they did have students using that technology.

Also, since the surveys were mailed and e-mailed, there was no element of discussion with the individual teachers in order to clear up misunderstandings before or as the quiz was taken. This creates a somewhat biased sample because it is possible that only the teachers who felt comfortable in their knowledge of assistive technology were the ones who responded. True, some teachers who responded to the survey admitted that they did not know very much about some types of technology, but there were also a lot of teachers who left a lot of the questions blank. This could be because they simply did not have students using that particular type of tech., or it could be because they did not know

enough about the technology to answer the question. The results cannot account for the reasons the other 53% of teachers surveyed did not respond.

Summary:

One of the most prominent implications of this survey has been that there is, indeed, a need for more teacher training in the use of assistive technology. The teachers have acknowledged that technology is changing with the times and the training they received in school is not adequate anymore, Many teachers are self-taught and then use what information they gather on their own to teach their students. One of the reasons for this is the large caseload numbers due to shortages for teachers of the blind and visually impaired. Teachers have so many students and so little time. Teachers have indicated that while most of them make use of every inservice and/or workshop offered, it often is not enough to learn about technology for just a few hours, and sometimes the workshops do not always offer hands-on training.

Some students are not receiving technology due to lack of funding, and even more than that, students are not receiving technology because of lack of opportunities for teacher training. Some students may be in need of technology, but are simply not receiving it because their teachers either do not know about it, or do not know how to use it. It is hard to recommend the usage of technology if teachers do not know what technology exists, and the benefits of such technology.

Although, for the most part, it seemed that the students were using most categories of assistive technology listed on the survey, it seemed that Optical Character Recognition (OCR) Software was not being used mainly by students. It seems to be used mainly by teachers as a way of efficiently transcribing their students' assignments into Braille. Depending on the age of students and the amount of work necessary, the author believes that this is also a valid form of technology to be teaching students, as it can be a very integral and helpful part of their adult lives.

Overall, without doing individual evaluations, it is difficult to say how many students are receiving inadequate instruction in the use of assistive technology or not receiving technology training at all. It is clear that by the teacher's own admissions and the survey results that further and continuing education is necessary in the use of assistive

technology for both the teachers and the students. The overwhelming majority of teachers who both took assistive technology courses before teaching and those who did not take such courses reported finding them useful, or that they WOULD have found such courses useful.

Survey of Assistive Technology Used by Visually Disabled Students in Wisconsin

1. Please list the name of school district or special education cooperative where you are employed. _____

2. How many years of experience have you had as a teacher of the blind and visually impaired? _____

3. Please check whichever of the following describes the setting you teach in.

____ a. itinerant   ____ d combined itinerant/resource

____ b. resource   ____ e. combined resource/self-contained

____ c. self-contained   _ f, other (please explain) _____

_____

4. What type of training do you have?

_ a. Bachelors Degree in Vision Impairments

_ b. Masters Degree in Vision Impairments

_ c. Certification in Vision Impairments (without specific degree in VI)

_ d. Not certified in Visual Impairments (please list your degree) _____

5. Please name the college or university at which you studied vision impairments.

Bachelors: _____

Masters: _____

6. What year did you obtain your degree(s) in vision impairments?

Bachelors: _____

Masters: _____

7. Have you completed a course (full semester or full quarter) on assistive technology for students with visual impairments before teaching?

If yes, did you find the course to be helpful in your teaching? _ Yes ___ No

If no, would you have found such a course to be helpful? _ Yes ___ No

8. Have you received any inservice training concerning the use of assistive technology? If yes, please explain.

___ Yes ___ No

9. Please list the total number of students in your caseload. __

10. Please record the number of students in each age group you work with on any basis, including consultative.

__ a. 0-2 years   __ d. 10-14 years

__ b. 3-5 years   __ e. 15-21 years

__ c. 6-9 years

11. Bow many of your students are currently using any type of assistive technology specifically designed for the blind and visually impaired?

_____

12. Which parties determine the use of assistive technology for your students? Check all that apply.

___ a. Student's IEP team   ___ e. District assistive tech. evaluation team

___ b. You, as the student's teacher   _ f. Vendor or sales representative

_ c. Parent(s)   _ g. Other (please specify) _____ _

___ d. School technology specialist   _____

_____

13. Do you currently have any students on your caseload that would benefit from the use of assistive technology, but are not receiving it because of inadequate funding? If yes, how many?

_Yes,   _____   ___ No
(number)

14. Do you currently have any students on your caseload that would benefit from the use of assistive technologoy, but are not receiving it because of limited opportunities for teacher training?

___ Yes   ___ No

15. If you currently have students on your caseload that would benefit from the use of assistive technology but are not receiving it for reasons other than lack of funding or opportunities for teacher training, please list the reasons.

Enlarging Hardware/Software

16. Please indicate the number of students on your caseload that use enlarging hardware/software.

_____

17. Please list the names of the specific enlarging hardware/software used by your students.

18. Please list any enlarging hardware/software that is available to your students, but is not being used.

19. Please list the number of students that use above-mentioned devices for each of the following tasks:

___ word processing   ___ calendar/planning

___ note-taking   ___ checkbook management

_____ e-mail   ___ spreadsheets

_____ internet   ___ database management (for gathering and analyzing information)

_____ Braille translation   ___ other (please specify)

20. Is the use of such technology listed on students' IEPs? _ Yes ____No

21. Are any of the devices shared among students? _ Yes _No

22. Did you receive formal training on the use of these devices? _ Yes ____ No

If yes, where and by whom? _____

23. Did your students receive training on the use of these devices? _ Yes ____No

If yes, where and by whom? _____

Speech Access

24. Please indicate the number of students on your caseload that use speech access.

25. Please list the names of the specific screen reading software and/or speech synthesizers used by your students.

26. Please list any screen reading software and/or speech synthesizers that are available to your students, but are not being used.

27. Please list the number of students that use above-mentioned devices for each of the following tasks:

___ word processing ___ calendar/planning

___ note-taking ___ checkbook management

_____ e-mail ___ spreadsheets

_____ internet ___ database management (for gathering and analyzing
information)

_____ Braille translation ___ other (please specify)

28. Is the use of such technology listed on students' IEPs? _ Yes ___ No

29. Are any of the devices shared among students? _ Yes _No

30. Did you receive formal training on these devices? _ Yes ___ No

Hyes, where and by whom? _____ _

31. Did your students receive training on the use of these devices? _ Yes ___ No

Hyes, where and by whom? _____ _

Note-Taking Devices

32. Please indicate the number of students using note-taking devices. _____

33. Please list the names of the specific note-takers used by your students.

34. Please list any note-takers that are available to your students, but are not being used.

35. Please list the number of students that use above-mentioned devices for each of the following tasks:

__ word processing   __ calendar/planning

__ note-taking   __ checkbook management

_____ e-mail   __ spreadsheets

_____ internet   __ database management (for gathering and analyzing information)

_____ Braille translation __ other (please specify)

36. Is the use of such technology listed on students' IEPs? _ Yes ____ No

37. Are any of the devices shared among students? _ Yes _ No

38. Did you receive formal training on the use of these devices? _ Yes ____ No

If yes, where and by whom? _____

39. Did your students receive training on the use of these devices? _ Yes ____ No

If yes, where and by whom? _____

<u>Refreshable Braille Displays</u>

40. Please indicate the number of students on your caseload using refreshable Braille displays. _____

41. Please list the names of the specific types of displays that are being used by your students.

42. Please list the names of any refreshable Braille display devices that are available to your students, but are not being used.

43. Please list the number of students that use above-mentioned devices for each of the following tasks:

__ word processing   __ calendar/planning

__ note-taking   __ checkbook management

_____ e-mail   __ spreadsheets

_____ internet   __ database management (for gathering and analyzing information)

_____ Braille translation   __ other (please specify)

44. Is the use of such technology listed on students' IEPs? _ Yes ___No

45. Are any of the devices shared among students? _ Yes _ No

46. Did you receive formal training on the use of these devices? _ Yes ___No

If yes, where and by whom? _____

47. Did your students receive training on the use of these devices? _ Yes ___No

If yes, where and by whom? _____

<u>OCR Software (Open Book and Kurzweil</u>

48. Please indicate the number of students on your caseload using OCR software.
_____

49. Please list the names of the specific types of software that are being used by your students.

50. Please list the names of any OCR software that is available to your students, but are not being used.

51. Please list the number of students that use above-mentioned devices for each of the following tasks:

___ word processing   ___ calendar/planning

___ note-taking   ___ checkbook management

_____ e-mail   ___ spreadsheets

_____ internet   ___ database management (for gathering and analyzing information)

_____ Braille translation   ___ other (please specify)

52. Is the use of such technology listed on students' IEPs? _ Yes ___ No

53. Are any of the devices shared among students? _ Yes _ No

54. Did you receive formal training on the use of these devices? _ Yes ___ No

If yes, where and by whom? _____

55. Did your students receive training on the use of these devices? _ Yes ___ No

If yes, where and by whom? _____