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Interactive CD-Rom "Assistive Technology for Students with Learning disabilities"

in two languages: English and Russian

Since the first day I came to America, I was thinking about making something useful that I could take home, developing something interesting for my Russian colleagues. That was why I decided to design the CD-Rom "Assistive Technology for Students with Learning disabilities" and make two versions of it: in English and in Russian. When I first started working on it I thought the main goal would be to make it in Russian, for Russian teachers. I believed it would be useful only to them. But as I was working and working I found out that American teachers didn't know much about assistive technology in special education for students with mild and/or learning disabilities either. I suppose that has happened because the area of assistive technology for students with mild disabilities is very new. Historically, assistive technology devices and services have been associated with individuals with physical and moderate or severe needs. The area of assistive technology for children with learning disabilities was not researched for a very long time.

According to the passage of the 1997 amendments to the Individuals with Disabilities Educational Act (IDEA), teachers are expected to have an additional set of knowledge and skills about assistive technology. But not a lot of teachers know about this phenomenon, and more than that not a lot of teachers use it in their classrooms. So my training CD turned out to be a success with American teachers as well as Russian professionals.

Here is what I have done:

1. I did a literature review in the topic "Assistive Technology for Students with Learning Disabilities".

2. I found all possible resources for purchase assistive technology for referencing on the CD-ROM.

3. I selected 5 teachers (for 5 different categories of AT for LD) and interviewed them about their experience in and thoughts about Assistive Technology in their classrooms.

4. I designed, developed, and burned the CD-ROM.

5. I translated it into Russian and burned the same CD only in Russian.

Some technical things about this CD: As this CD contains interviews the special installation has to take place. There is a special button under which you will find detailed instructions on how to do it. If you have some problems with something on this CD you can click on help button (you can find it on each page).
Interactive CD-Rom "assistive Technology for Students with Learning disabilities" has eight sections.

Section 1 provides essential information (literature review) about the phenomenon of assistive technology for students with LD. It is called "Assistive Technology". You can find literature review on this topic here. From this sections teachers learn what assistive technology is; for example, that "The IDEA defines an assistive technology device 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 individuals with disabilities". Then there is the information about who AT is for, where teachers can find it, for example, that AT can be useful for students with learning disabilities not only in self-contained classes but also in inclusion and students without disabilities just love to work with such technologies and it can really useful for them too. "How it works" subpart tells you about some features of assistive technology for students with learning disabilities. And the most important information is in the subpart "Why it is important to use it for your students". I hope that this information will persuade teachers to start using assistive technology for students with learning disabilities.

Sections 2-6 give you the opportunity to learn about 5 different types of assistive technology for student with learning disabilities:

- word processing,

- word recognition,

- speech feedback,

- speech recognition, and

- concept mapping.

In each section you will find introduction to that particular type of assistive technology; the list of technologies available now; interviews with teachers (5 different teachers) and the samples of using the technologies in the classroom (e.g., lesson plans or student's work samples).

Here is the example of each section design on the example of the Word Prediction section. The others follow the same design with a different content. First there is Introduction to Word Prediction which include the literature review (each section has different literature review based on each type of AT for LD). For example, here we can learn that according to Newell, Arniott, Booth, Bettie and Rickets (1992) word prediction was originally developed for individuals with physical disabilities to reduce the number of keystroke required to type words. The person types the first letter of a word, and the program offers a list of words beginning with that letter. If the desired word appears, it can be chosen from a list by pressing the number n the keyboard that is displayed next to that word – or pointing and clicking with the mouse (Raskind, 1996). Recent studies with students with learning disabilities made by Morocco, Dalton and Tivan in 1990; MacArthur, Graham, Swartz and Shafer in 1995; Raskind and Higgins in 1998 indicate that word prediction in combination with effective instruction can enhance the writing of students with learning disabilities. It was found by Booth and Bettie in 1992 that even those children with severe spelling problems could produce the first letters of most of the words they wished to write; they could recognize the word when it was offered within a prediction list.

However, there are still not a lot of literature and studies about assistive technology for students with learning disabilities. A lot of work still has to be done in this area.

Next, each section includes the main information – technologies currently available in each particular group of technologies. In our sample Word Prediction section, you can find "famous" technologies like Co:Writer and AlphaSmart and also technologies that are very new like Enkidu. You will find the description of each technology and also websites where you can find more detailed information about the technology and its prices.

Then there is the interview with different teachers. For example, in the Word Prediction particular section there is an interview with Laura Jones, special education teacher from GR Witfield School, Grimsland, NC, who uses Co:Writer with her students with learning disabilities. Mrs. Jones is an excellent and very experienced teacher and she uses as many assistive technologies in her classroom as possible. She mentions all technologies she uses in her interview but the main emphasis is still on word prediction technologies. She shares her experience with word prediction technologies (primarily it's Co:Writer) stating the reasons why she and her students really like it.

I have chosen to interview teachers for my CD because I believe that these interviews are able to encourage inexperienced teachers. It's always a risk to start using something new, not well known, but when other real teachers who really use it in their real classrooms tell you that it good, you start to believe in it.

Then, again for example, in the Word Prediction section there is a lesson plan where word prediction assistive technology is used. This is lesson plan given by Alice McArthur from Wahl-Coats Elementary School. I like this plan because it shows how students with disabilities can work in inclusion and be on track. When other students write paper/pencil story, students with disabilities use computer with Co:Writer and Write:OutLoud . One more thing I like here is that Alice McArthur use Co:Writer differently with different students. And it is mentioned in her lesson plan: Students who are proficient in keyboarding are not allowed just to select the word,

they can use word prediction to find the word, but as soon as they do, they have to type it in by themselves instead of just choosing it. Students who have no such skills can just go ahead and select the word and drag it. That helps students with different skills to have approximately the same speed and complete the task during the lesson time.

In other sections under the same subpart you can find the samples of students' works showing the difference with or without the technology or the sample of teacher's schedule showing how often she uses assistive technology.

In the section "Tips for Parents" you will find the information useful for parents who want to use assistive technology for their child but don't know where to start. This part can be interesting not only to American parents and parents in Russia. Last years there was an increasing number of Russian immigrants in America. And very often they don't speak English. Russian version of this CD and especially "Tips for Parents" can help them to learn about their rights and opportunities that can really help their children who are ESL students.

The section "Resources" consists of references and website links for all information about assistive technology. You can just click on the link you are interested in and I will take you to that website.

In Russian version of this CD-Rom everything is the same: colors, pictures, design, except language. In Teacher's Interview parts I subtitled all interviews so teachers can listen to the original interview and read the subtitles in the separate window.

I have learned a lot through this project. I don't feel frustrated any more when people start talking about this "strange" thing: assistive technology. I have learned a lot of important information that I'm sure will be very beneficial in my own teaching carrier. The research about available technologies showed that there are a lot of technologies right now that can really help students with learning disabilities to overcome their difficulties and to improve their academic skills. When I talked to teachers, all of them were really glad to talk about it. Because they really like AT, they know from their own experience that it can really help. And each interview

inspired me even more to finish this CD, so it can help and encourage other teachers to start

using AT to get the amazing results for the students that those interviewed teachers already have.

Here are the examples of some CD pages:

Assistive Technology for Students with Learning Disabilities

1. Assistive Technology
2. Word Processing
3. Word Prediction
4. Speech Feedback
5. Speech Recognition
6. Concept Mapping
7. Tips For Parents
8. Resources

The CD-R is divided into the eight sections listed above. Choose the section you wish to enter by clicking on its name or go step by step by clicking on ENTER.

Section 1 provides essential information about the phenomenon of assistive technology for students with LD.
Sections 2-6 give you the opportunity to know about different types of assistive technology. In each section you will find introduction to that particular type of AT; the list of technologies available now; interviews with teachers and lesson plan.
Section 7 will help parents who are going to buy AT for their child with learning disabilities.
Section 8 includes web links to websites telling about assistive technology, journal resources.
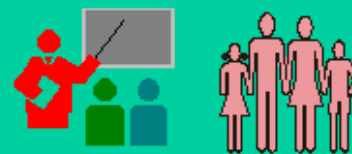
For help in understanding how to use this CD-R click ⓘ

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Assistive Technology

What is it assistive technology?

The IDEA defines an assistive technology device 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 individuals with disabilities" {20 U.S.C. Chapter 33, Section 1401(25)]. (26)

With the passage of the 1997 amendments to the Individuals with Disabilities Education Act (IDEA Amendments of 1997, Public Law 105-17), teachers are expected to have an additional set of knowledge and skills. For every student with an individualized education program, teachers must consider to appropriateness of assistive technology as a tool or intervention. Teachers with little knowledge of assistive technology will have difficulty fulfilling this new requirement without assistance or additional training. Many special educators currently in the field may need to gain new competencies in an area of special education unfamiliar to them.→

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Word Prediction
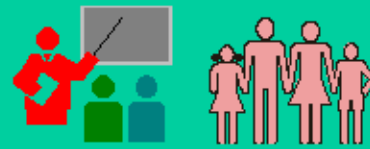
1. Assistive Technology

2. Word Processing

3. Word Prediction

4. Speech Feedback

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Introduction to Word Prediction

For students with LD, word prediction software and word processors with word banks assist transcription during the process of writing (MacArthur, 1996).

Word prediction programs "predict" what word the writer intends to use based on the initial letters typed (MacArthur, 2000).

Word prediction programs work together with word processors. These programs predict the word a person wants to enter into the computer. The person types the first letter of a word, and the program offers a list of words beginning with that letter. If the desired word appears, it can be chosen from the list by pressing the number on the keyboard that is displayed next to that word – or pointing and clicking with the mouse. That word will automatically insert into the sentence. If the desired word does not appear on the list, the user continues to type the next letter until it does appear. After the user chooses a word, the computer predicts the next word in the sentence. Again, it offers a list of possible words, even before the first letter is typed. Prediction is based upon the sentence content and spelling, as well as the number of times a word is used. Word →

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Resources
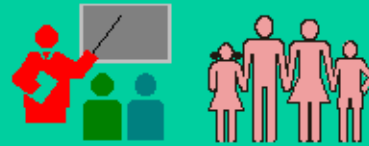
Resources

1. Assistive Technology

2. Word Processing

3. Word Prediction

4. Speech Feedback

5. Speech Recognition

6. Concept Mapping

7. Tips For Parents

8. Resources
   8.1.References
   8.2.Web Sites Links

References

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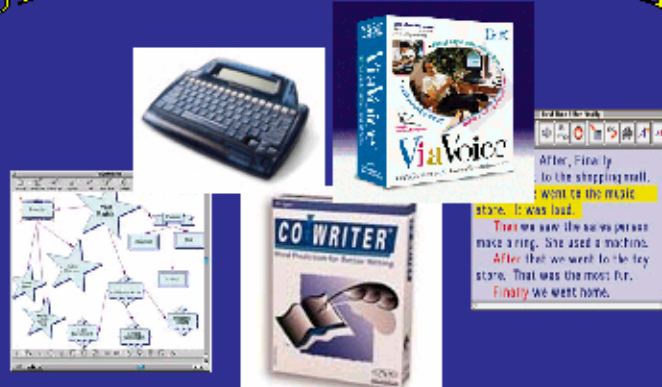8. Lehner, R., Levin, B., DeHart, P., & Comeaux, M. (1987). →

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Assistive Technology for Student with Learning Disabilities

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Помогающие Технологии Для Учеников с Трудностями в Обучении

Этот CD-ROM разработан, чтобы предоставить информацию о помогающих технологиях родителям, учителям, работающим как в бщеобразовательных школах, так и с детьми с трудностями в обучен

Этот CD содержит видео материалы в MPEG формате, за инструкциями нажмите здесь ■

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Помощь

Вход