



Teachers College Columbia University



**Doctoral Programs in the Education
of the Deaf and Hard of Hearing**



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I. Doctoral Programs in Deaf Education

There are two possible doctoral degrees available: the Ed.D. and the Ph.D. The Ed.D. and Ph.D. doctoral programs are divided into several areas of study including: 1) advanced study in general special education, 2) advanced study in a minimum of two paradigms of research, 3) advanced study in the education of the d/Deaf and hard of hearing, 4) advanced study in linguistics, psycholinguistics, and developmental psycholinguistics and 5) a professional specialization.

Although the program requirements for the Ed.D. and the Ph.D. are very similar there are differences. The Ed.D. is in the Education of the d/Deaf and Hard of Hearing and is administered and awarded through Teachers College itself as an affiliate of Columbia University. The Ph.D. is in Physical Disabilities, which includes a specialization in the d/Deaf and Hard of Hearing. The Ph.D. in Physical Disabilities with an emphasis on the d/Deaf and Hard of Hearing is administered and awarded through the Graduate School of Arts and Sciences at Columbia University. Both degrees require a minimum of 70 credits beyond the master's degree and both presume a background in and/or direct professional experience in working with individuals who are d/Deaf or hard of hearing. The major difference between the two degrees, aside from the administrative issues noted above, has to do with the nature of the dissertation itself. Typically, the Ed.D. dissertation is more applied and field based; whereas, the Ph.D. requires the work to be theoretical in nature. Another difference has to do with the composition of the dissertation committees and the title of the degree, i.e. in case of the Ed.D. the diploma will read Ed.D. in Deaf and Hard of Hearing and the Ph.D. will read Ph.D. in Physical Disabilities. The program requirements for both degrees are essentially the same.

II. Administrative Structure

The Program in the Education of the d/Deaf and Hard of Hearing along with its two doctoral degrees (Ed.D. in the Education of the d/Deaf and Hard of Hearing and the Ph.D. in Physical Disabilities with an emphasis on the d/Deaf and Hard of Hearing) is situated within the Program Cluster of Special Education in the Department of Health and Behavior Sciences. The Department of Health and Behavior Sciences is one of nine departments within Teachers College.

Teachers College is an independent institution that is affiliated with Columbia University, in a manner not unlike like Barnard College, Jewish Theological Seminary, the Hospital of Physicians and Surgeons and others. Similarly, Columbia University itself is organized into different independent units such as Columbia College (the undergraduate program), The Graduate School of Arts and Sciences and so on. The President of Teachers College holds the rank of Dean within the administrative Structure of Columbia University.



III. Philosophical Orientation

The orientation of the Department of Health and Behavior Sciences and its Special Education Cluster in which the Program in the Education of the d/Deaf and Hard of Hearing resides is focused on educating, not merely training, professionals. Experience in special education and the field of the education of the d/Deaf and hard of hearing shows that changes in the political and social environment are often rapid and deep-seated, producing a constant flux of purposes, ideologies and methods. Hence, complete reliance on a prepackaged compendium of skills and knowledge is not appropriate. The goal of educating professionals is attained by the nurturing of thoughtful action rooted in a set of scholarly disciplines with a strong understanding of the philosophic and theoretic base of those forces that guide those changes in the field and their political and social context.

The program holds to the belief that there are specific areas of student competence that are necessary for successful performance of designated roles regardless of subspecialization. These include a solid foundation in the various positions with regard to the philosophy of science and inquiry and knowledge of the multiple forms of research methodology and theory building processes associated with these differing views. Additionally it holds to the belief that an in depth, yet broad understanding of the organization of language and how it is acquired and how it is used is necessary. This in conjunction with a review of contemporary work in the field of the education of the d/Deaf and hard of hearing constitutes the core of our doctoral programs.

Additionally, the Program in the Education of the d/Deaf and Hard of Hearing recognizes and respects the notion of diversity; racial, ethnic, as well as linguistic. It recognizes that diversity exists not only between and across culture groups of individuals but within them as well. As for the population of individuals who are d/Deaf or hard of hearing, we recognize that it, too, is extremely diverse. As a result, the students in the program are expected to be knowledgeable, tolerant of and accepting of notions and skills associated with the oral/aural approach, cued-speech, total communication, sign supported speech and bilingual-bicultural approaches to teaching d/Deaf and hard of hearing students, including issues relating to Deaf culture, American Sign Language, and other signing systems.

IV. The Admissions Process and Criteria for Admissions

Application for Admission to the program is made through the Office of Admissions, Teachers College, Columbia University, New York, New York 10027. A physical application can be obtained and returned to them or an application can be made online by going to the Teachers College homepage, www.tc.edu and clicking on Admissions. From there you will be guided through the application process. Alternatively by contacting our Office of Admissions directly you may have the necessary application materials and College catalog sent to you through postal mail. If you request the physical admissions packet and have not received it within two weeks of your request, then you should either contact the Office of Admission or Professor Robert E.



Teachers College, Columbia University Department of Special Education



Kretschmer in the Department Health and Behavior Studies who is the coordinator of the Program in the Education of the d/Deaf and Hard of Hearing.

The Admissions Office and the Special Education Cluster in the Department in Health and Behavior Studies require that the following information be included in your application package:

- 1) completed application. Note: on the application itself, indicate your interest in the appropriate doctoral program, i.e., the Ed.D. in Deaf and Hard of Hearing (Program Code: DHEA Ed.D.) or the Ph.D. in Physical Disabilities (Program Code: PDIS Ph.D.),
- 2) two official transcripts of all academic work at the undergraduate and graduate levels,
- 3) three letters of recommendation from individuals familiar with and able to comment about the academic, professional, and personal qualifications of the applicant,
- 4) personal statement in which the applicant discusses his or her professional interests and desires, focusing primarily on why the applicant is aspiring to obtain a doctoral degree, what the applicant seeks to do with such a degree and why the applicant specifically chose to apply to the Program in the Education of the d/Deaf at Teachers College, Columbia University, along with any personal information that would be of interest to the committee,
- 5) resume,
- 6) a writing sample that represents a good example of the applicant's scholarly writing, i.e., an undergraduate or graduate term paper, a master's project, a masters thesis, or a published article in a professional journal,
- 7) results of any standardized testing (MAT and GRE scores are not required but are optional and in the case of individuals whose native language is not English, TOFEL scores are required).

Once a **completed** application is received by the Office of Admissions it will be forwarded to the doctoral admissions committee of the Special Education Cluster in the Department of Health and Behavior Studies for review. Appropriate candidates will then be invited for an interview with members of the Special Education Cluster.

Acceptance into the Program is based upon

- Performance on the MAT or GRE and/or the TOFEL if submitted
- Undergraduate and graduate academic performance (a combined GPA of 3.0 or better)
- Stated Professional Goals
- Letters of recommendation
- Superior writing skills
- Evidence of commitment to the field, the ability to work cooperatively with others, personal initiative, and the capacity for independent judgment and action in both student and professional roles.



V. Financial Assistance

The Department of Special Education receives funds from the Office of Special Education and Rehabilitation in the United States Department of Education to provide support for leadership personnel in the area of the d/Deaf and hard of hearing. The availability of these funds varies from year to year and is distributed according to specific grant requirements that vary also. Interested applicants should contact Robert E. Kretschmer, Ph.D., www.rek16@columbia.edu (212) 678-3867, concerning the current status of support in this area. There is also a limited amount of College general funds and minority fund academic scholarships available each year. Applicants should also contact the Office of Financial Aid regarding general information about this matter, application forms, and other forms of financial aid.

VI. Program Descriptions and Degree Requirements

It is Teachers College policy to establish general requirements for the doctoral program relative to residency and period of candidacy, academic standards, doctoral certification and dissertation procedures, and total credit requirements for the degree. These College requirements represent minimal standards. Departments within the College, as well as Programs within Departments, are permitted to elaborate upon and modify the College requirements in ways that fit the objectives of the given program. The attached sheets present the general requirements of the Ed.D. and Ph.D. programs in terms of core requirements.

Essentially the core requirements for both the Ed.D. and the Ph.D. involve a sequence of courses in the philosophy of science, theory building and research methodologies. Candidates for either degree are to demonstrate in depth knowledge of at least two research methodologies typically used in our field, e.g. group designs, single subject designs and qualitative methods. The student is permitted, however, to substitute a sequence of courses in policy study and analysis for one of the other research methodology requirements. Other research methodologies are also possible, e.g. philosophical argumentation, linguistic argumentation, historical methods, subject to petition and approval by the student's academic advisor. In addition, each student admitted to full time study is expected to apprentice him/herself to his/her major professor and to be involved actively in research, service, and administrative duties. Each student is expected to complete a pre-dissertation research project of publication quality in conjunction with the major professor and to participate in or be responsible for the generation of training or research grant proposals. Those interested in preservice teacher education are also expected to engage in university level teaching.

Upon admission to the program the student is considered a doctoral student, but not a doctoral candidate. Doctoral candidacy is awarded after the student completes his or her certification examinations. Typically students take the "AM" portion of the certification examination at the end of the first year of academic study or, its equivalent. This examination is a three hour written examination to demonstrate one's general knowledge of issues, trends and policies in special education in general and the applications of the knowledge and understandings,



thus far, obtained in their doctoral program. In addition to course work, a suggested preparatory reading list is available.

Upon completion of the AM portion of the certification examination, the student will complete the PM portion of the certification process. Although the PM certification examination varies from program to program the PM certification exam in the program in the Education of the d/Deaf and Hard of Hearing (both Ed.D. and Ph.D.) involves completing a meaningful project commensurate with the student's aspirations. Such projects may be: the preparation and execution of a university level course that could be used upon graduation, a publishable piece of empirical research, a publishable literature review critiquing of a body of research in a particular subject domain, or a publishable deconstruction of certain public policy within a particular subject domain.

Upon completion of both the AM and PM portions of the examination, the student is considered a doctoral candidate. This typically coincides with obtaining the Ed.M. or M.Phil. degree *en passant*. Once the student is a doctoral candidate, he or she is expected to complete an additional 20 credits of course work prior to embarking on the dissertation. Once a student has chosen a topic for the dissertation and generated the necessary statement of the problem, the literature review, the methodology used, obtained approval by the Institution Review Board (IRB) whose responsibility it is to insure the appropriate protection of human subjects within the study, and in some cases, depending upon the methodology chosen, a pilot study, the doctoral candidate must arrange for a proposal hearing through the Office of Doctoral Studies.

Upon successful completion of required modifications made to the proposal as suggested by the committee at the proposal hearing, the student is permitted to begin the dissertation in earnest. In essence passing the proposal hearing is a form of contractual agreement between the dissertation sponsor and advisor and the student, wherein it is agreed that no significant changes to the dissertation approach will be allowed without the candidate's agreeing to the changes, unless it can be demonstrated that a "fatal flaw" exists which was not apparent at the time of the proposal hearing.

Once the data have been collected, analyzed and an initial interpretation has been assigned to the results, the student is expected to have an advanced seminar where the he or she presents the preliminary data analysis and the plan for any subsequent data analysis and interpretation. At this point, the committee members may offer additional suggestions. From that point on, the student must be in continual enrollment until the dissertation is defended. Prior to this time the student may be enrolled part-time or possibly not enrolled for course work at all for a given semester. After successful completion of the advanced seminar, this cannot be the case.

Once the student is deemed ready by the student him or herself, the student's dissertation sponsor and dissertation advisor, a formal and final oral defense is held. In the case of the Ed.D., a minimum of three individuals must sit on the defense - the dissertation sponsor, the dissertation advisor and an outside reader assigned by the Dean's Office. In the case of the Ph.D., a minimum of five members must sit on the defense, one of which must be from Columbia University itself or one of its affiliates other than Teachers College.



A more detailed look at what the Ed.D. and Ph.D. programs entail follows:

Doctor of Education: Exceptionality Focus Area: Deaf and Hard of Hearing

Students of exceptional ability who are interested in and committed to contributing to special education through leadership and scholarly work may apply for the Ed.D., which represents the highest level of achievement in the profession. The doctoral program prepares graduates to assume leadership roles in teacher education programs in colleges and universities in this country and in other countries, to administer special education program in schools and agencies, and to conduct research in special education and related services.

Doctor of Philosophy: Exceptionality Focus Area: Deaf and Hard of Hearing

Research and Evaluation Emphasis: Students with excellent potential as researchers and theoreticians who are interested in scholarly careers in special education, education, and related social sciences may apply for the Ph.D. degree program, which represents the highest level of achievement in the Arts and Sciences. This degree program is administered jointly by Teachers College and the graduate faculty of Columbia University. Prospective students may obtain information on program offerings by contacting the program office

VII. Degree Requirements

Department Courses Required for All Student Majors in Degree Program

Core Requirements for all Ed.D. and Ph.D. Special Education majors:

- HBSE 5010 (3) Study of the philosophic foundations of special education
- HBSE 6001 (3) Research in special education I, II, III
- HBSE 6010 (2-4) Advanced study of problems and issues in special education
- HBSE 7500 (2-3) Dissertation seminar in special education
- HBSE 8901 (0) Dissertation advisement in special education

Specialization Requirements, Deaf and Hard of Hearing:

- HBSE 5307 (1-6) Advanced practica in special education:
Deaf and hard of hearing
- HBSE 5907 (1-4) Problems in special education: Deaf and hard of hearing
- HBSE 6070 (2) Psychology of deafness
- HBSE 6407 (1-6) Advanced internships in special education:
Deaf and hard of hearing
- HBSE 6507 (2) Advanced seminars in special education:
Deaf and hard of hearing

15 points in linguistics and proficiency in two forms of research methodology



Non-Department Courses Required for All Student Majors in Degree Program:

- HUDM 4122 (3) Probability and statistical inference
- HUDM 5122 (3) Applied regression analysis

Doctoral Program in the Education of the Deaf and Hard of Hearing			
(Minimum requirement of 70 credits)			
	Core Requirement	Area of Concentration	Specialization
	34 Credits	23 Credits	13-15 Credits
Research Sequence			
Advisor Sponsor			
Advanced Study D/HOH			
Linguistics Core			
Dissertation			
Individualized Course Selections			

VIII. Demographics of Current Doctoral Students

- Student who has completed course work, has passed her certification exams, and is working on her dissertation proposal – Practicing classroom teacher of the d/Deaf, depth of knowledge of linguistic principles and language acquisition processes; helps coordinate a doctoral research grant as a part of a federally funded leadership grant preparing both special education and regular education leadership personnel, directed by Robert E. Kretschmer, Ph.D. The research seeks to document the effect that we as teacher educators have on our students’ practices and the children they teach. The research protocol is being adopted by the Office of Program Evaluations for follow up purposes of the graduates of all of the preservice graduates; She is fully funded by the grant, i.e. full tuition and \$4,000 living stipend.
- Student who has finished all of her course work and has passed certification exams. She will have a proposal hearing in January of 2008. The topic is comparing the efficacy and



quality of interpretative services provided by a live interpreter vs. remote interpretation within psychotherapeutic sessions with Deaf clients and a Hearing Psychiatrist unfamiliar with ASL. Non-funded

- Student who is in her second year of course work whose area of interest is cued speech. The student is in the process of preparing for her doctoral certification examinations. She is fully supported by the above-mentioned grant, but is working full-time as well since the living stipend is far too insufficient.
- Student full-time first semester student. The student has received a scholarship for this year, but that will be drastically reduced next year. Her area of interest is cognitive studies – multisensory integration and pedagogy for students with multiple disabilities. Student does not work.
- Student part-time first semester. The student has received a small scholarship from the College for this year but next year's funding is uncertain. Her areas of interest are linguistics and language acquisition. Works full time teaching ASL as a foreign language
- Student part-time first semester. The student has received a small scholarship from the College for this year but next year's funding is uncertain. Teaches speech at the elementary school level to d/Deaf children at a school for the d/Deaf.

I purposefully did not identify their age, race or sex. If this is necessary I will obtain their permission to reveal this information.

IX. Current Program Design

Please refer to above sections.

X. Existing Faculty Expertise and Research Interest

There are three full time faculty in the program. One individual teaches courses for us but he coordinates the Program in Teaching ASL as a Foreign Language

- Robert E. Kretschmer, Ph.D., Coordinator the Program in the Education of the d/Deaf and Hard of Hearing. Certified teacher of the d/Deaf and a certified school psychologist. Particular interest in linguistics, language acquisition, application of linguistic theory to pedagogy, discourse and text analysis, reading and writing acquisition and processes across the curriculum.
- Ye Wang, Ph.D., Assistant Professor in the Program in the Education of the d/Deaf and Hard of Hearing. Research interests include literacy, multiple literacies, technology and literacy instruction, universal design, research methodology and early childhood education.



- Maria Hartman, Full-time Instructor who teaches courses and supervises student teaching.

The above three individuals are working as a team on a number of projects.

Rusty Rosen, Ph.D. Coordinator of the Program in Teaching ASL as a Foreign Language. Research interests and expertise include Second Language Acquisition, Acquisition of ASL as a second language, Deaf culture.

Current research projects completed and in progress by Kretschmer, Wang, and Hartman:

1. The contribution of the oral component in the processing of SimCom face to face communication: Sign + Oral vs. Sign only. Data collected and analyzed. Manuscript in preparation
2. The induction of real scale and abstract scale productive signing in individuals who are hearing and unfamiliar with ASL. Data collected and in the process of being analyzed.
3. The use of visible speech in reading instruction of d/Deaf preschool children, IRB approval obtained. Grant support is being sought. Implementation has not yet begun.
4. The production of sounds imitating sound producing objects during free play of preschool deaf children with cochlear implants vs. children with hearing aids.
5. The organization and nature of free play and social interaction of a group of deaf children with cochlear implants and children without cochlear implants. IRB approval obtained. Participant selection in progress.
6. The consistency with which college educated individuals are able to identify the implicit speech acts within a selected set of New York Times editorials. IRB approval being sought.
7. Identifying the embedded cues within a selected set of New York Times editorials that signal the implicit intent (speech act) of the writer. IRB approval being sought.
8. Editorials as story telling and “Telling the American Story” as outlined by Livia Polanyi. IRB approval being sought. Data analysis has begun for a pilot and grant support will be sought.
9. Teaching the structure, intent, and meaning of editorials as a social studies unit with d/Deaf and Hard of Students. To be designed based upon the results of 6, 7, and 8 (above).
10. Inferencing the emotional state of characters in a story on the basis of processing statements detailing the entail of those emotional states as outlined by Andrew Ortony in his book *The Cognitive Structure of Emotions*. Stimuli created, pilot study with college students in progress.
11. Comparing eye-tracking movements as a measure of reading fluency when reading silently and reading orally. Training on the eye tracker in progress.

We have number of other possible projects under consideration now that we have access to an EEG machine and an eye tracker.



XI. Existing and Emerging Technologies that can be Used for Facilitating Collaborative Work and Course Offerings

Teachers College has a wealth of resources both in terms of faculty expertise as well as research equipment including access to an EEG, an eye tracker, E-Prime a computer based experimental control software that allows for data acquisition in real time and measuring reaction times to various stimuli, various statistical as well as qualitative data analysis software packages, etc. Assuming grant funding, we also have access to an ERI machine.

Of course, we have the typical technologies that most colleges and universities have: internet capabilities, WIFI capabilities, EndNote, a wide variety of software packages, a digital media center, computer labs, ClassWeb and Blackboard, telecommunications and remote video capabilities.

In addition we have OUTSTANDING Library services that include:

1) An Adaptive Technology lab, which has the following workstations :

A. Station one, for persons with learning disabilities and motor impairments:

1. Dragon Naturally Speaking 8.0

<http://www.scansoft.com/naturallyspeaking/>

Dragon Naturally Speaking is a speech recognition program that "listens" to spoken commands, processes the verbal input, and sends the commands to the computer as if they had been typed at the keyboard. The program requires training, and each user has to set up his or her own account.

2. Math Talk/ Scientific Notebook 5

<http://www.metroplexvoice.com/products.htm#mtsn>

Math Talk/ Scientific Notebook is a mathematics dictating program that allows the users to "voice" mathematical symbols and equations with regard to Pre-Algebra, Algebra, Calculus, Trigonometry, and Statistics. The program requires training and must work with Dragon Naturally Speaking.

3. Co:Writer 4000 v4.1

<http://www.donjohnston.com/catalog/cow4000d.htm>



Co:Writer 4000 is a word prediction program that generates possible words for writing and typing support. The predictions are generated by combining knowledge of spelling (phonetic and dictionary), grammar rules, context clues, user history, and letter cues. The program also offers speech feedback, and allows users to customize the words that are predicted.

4. IntelliKeys

IntelliKeys is a versatile enlarged keyboard that enables users with physical, visual, or cognitive disabilities to easily type, enter numbers, navigate on-screen displays, and execute menu commands. Overlays for numbers, mouse movement, and alphabetical and QWERTY key layouts can be slid into the keyboard for instant use. Customized overlays can also be created and printed with the Overlay Maker Program.

5. IntelliTalk II

IntelliTalk is a word processor that allows students to combine graphics, text, and speech to support and enhance writing and communication skills. It includes special features that promote comprehension, reinforce concepts, and provide a multi-sensory writing environment for all learners.

6. Inspiration

<http://www.inspiration.com/productinfo/inspiration/index.cfm>

Inspiration is a program that allows users to create graphic organizers, which help promote visual literacy and thinking skills. Graphic organizers can help with prereading, postreading, prewriting, revising, discussing, and reasoning. Users can visually see how ideas relate to each other by using concept maps, webs, and other graphic organizers. The diagrams can further be transformed into a traditional hierarchical outline for students to prioritize and rearrange ideas.

B. Station Two, for persons with blindness or low-vision:

1. Window-Eyes 4.5

<http://www.gwmicro.com/products/>

Window Eyes is a screen reader program that reads information displayed on the computer video monitor. They are used in conjunction with software programs like word processors, databases, spreadsheets, browsers, e-mail clients, and other applications. Screen readers come bundled with speech



engines, which are software programs that convert incoming text into an unlimited vocabulary voice, and handle the text to speech conversion process.

Screen readers let you hear your keystrokes as they are entered at the keyboard, and also let you read what is displayed on the video monitor. They are also configurable to read any portion of the screen with a hotkey. This is useful for reading segments of the screen rapidly, such as the program title, menu bar, status line, current word, current line, whatever is desired.

2. Zoom Text Xtra 8.1 Level 1

<http://www.aisquared.com/index.cfm>

Zoom Text is a screen magnification program that magnifies the size of the characters or graphics displayed on the computer screen up to 16 times.

3. Smartview CS (CCTV)

Closed Circuit Television System (CCTV) is an electronic magnifier designed to assist persons with vision impairments. It consists of a video camera and video monitor. CCTV systems also come equipped with sliding trays for holding books and other printed information beneath the video camera. The sliding trays slide left to right, and forward and back, allowing the reading material to be positioned beneath the camera. CCTV systems can provide from 2 times to about 60 times magnification, depending on the system.

C. Station Three, for persons with learning disabilities

1. 10. Kurzweil 3000

http://www.kurzweiledu.com/products_k3000win.asp

Kurzweil 3000 is a scanning and reading program that scans the printed material into computer and reads it out for users. Text will be highlighted when reading to provide users with both audio and visual input. The software usually supports various file formats like text, word, and PDF.

2. Co:Writer 4000 v4.1

<http://www.donjohnston.com/catalog/cow4000d.htm>

Co: Writer 4000 is a word prediction program that generates possible words for writing and typing support. The predictions are generated by combining



knowledge of spelling (phonetic and dictionary), grammar rules, context clues, user history, and letter cues. The program also offers speech feedback, and allows users to customize the words that are predicted.

3. Rocket Reader 7.9

<http://www.rocketreader.com/>

Rocket Reader is a speed-reading program that trains the eye and the brain to accurately read a single sentence or line of information with a single eye movement. The program continually monitors each user's progress and adjusts the difficulty level of exercises accordingly.

4. Inspiration

<http://www.inspiration.com/productinfo/inspiration/index.cfm>

Inspiration is a program that allows users to create graphic organizers, which help promote visual literacy and thinking skills. Graphic organizers can help with prereading, postreading, prewriting, revising, discussing, and reasoning. Users can visually see how ideas relate to each other by using concept maps, webs, and other graphic organizers. The diagrams can further be transformed into a traditional hierarchical outline for students to prioritize and rearrange ideas.

D. Station Four, for persons with learning disabilities

1. WYNN 3.1

<http://www.freedomscientific.com/LSG/products/wynn.asp>

WYNN is a scanning and reading program that scans the printed material into computer and reads it out for users. Text will be highlighted when reading to provide users with both audio and visual input. The software usually supports various file formats like text, word, and PDF.

2. Rocket Reader 7.9

<http://www.rocketreader.com/>

Rocket Reader is a speed-reading program that trains the eye and the brain to accurately read a single sentence or line of information with a single eye movement. The program continually monitors each user's progress and adjusts the difficulty level of exercises accordingly.



3. Openbook 7.2

http://www.freedomscientific.com/fs_products/software_open.asp

Openbook is a scanning and reading program that scans the printed material into computer and reads it out for users. Text will be highlighted when reading to provide users with both audio and visual input. The software usually supports various file formats like text, word, and PDF.

4. Accessible Graphing Calculator version 1.2.3

<http://www.viewplustech.com/productDetail.php?productCode=5>

Accessible Graphing Calculator is a self-voicing calculator that provides voiced feedback and audio tone display for graphics. It also allows users to import tabulated data from other applications and emboss tactile graphics.

5. Co:Writer 4000 v4.1

<http://www.donjohnston.com/catalog/cow4000d.htm>

Co:Writer 4000 is a word prediction program that generates possible words for writing and typing support. The predictions are generated by combining knowledge of spelling (phonetic and dictionary), grammar rules, context clues, user history, and letter cues. The program also offers speech feedback, and allows users to customize the words that are predicted.

6. EasyReader

<http://www.dolphincomputeraccess.com/>

EasyReader supports the playback of the latest Digital Talking Books (DTBs), for all types of DAISY books.

7. Inspiration

<http://www.inspiration.com/productinfo/inspiration/index.cfm>

Inspiration is a program that allows users to create graphic organizers, which help promote visual literacy and thinking skills. Graphic organizers can help with prereading, postreading, prewriting, revising, discussing, and reasoning. Users can visually see how ideas relate to each other by using concept maps, webs, and other graphic organizers. The diagrams can further be transformed into a traditional hierarchical outline for students to prioritize and rearrange ideas.



E. Station Five, for persons with blindness

1. Jaws 6.0

http://www.freedomscientific.com/fs_products/software_jaws.asp

Jaws is a screen reader program that reads information displayed on the computer video monitor. It is used in conjunction with software programs like word processors, databases, spreadsheets, browsers, e-mail clients, and other applications. Screen readers come bundled with speech engines, which are software programs that convert incoming text into an unlimited vocabulary voice, and handle the text to speech conversion process. Screen readers let you hear your keystrokes as they are entered at the keyboard, and also let you read what is displayed on the video monitor. They are also configurable to read any portion of the screen with a hotkey. This is useful for reading segments of the screen rapidly, such as the program title, menu bar, status line, current word, current line, whatever is desired.

2. Openbook 7.2

http://www.freedomscientific.com/fs_products/software_open.asp

Openbook is a scanning and reading program that scans the printed material into computer and read it out for users. Text will be highlighted when reading to provide users with both audio and visual input. The software usually supports various file formats like text, word, and PDF.

3. EasyReader

<http://www.dolphincomputeraccess.com/>

EasyReader supports the playback of the latest Digital Talking Books(DTBs), for all types of DAISY books.

4. Duxbury 10.4

<http://www.duxburysystems.com/dbt.asp>

Duxbury is a Braille translation program that converts standard text into Braille, allows users to compose, edit, and print Braille documents. The program also displays Braille dots on the screen, useful for sighted transcribers to proofread before printing.



5. Braillex 2D screen

Braillex 2D screen is a Braille display that connects to personal computers and translates text displayed on the screen into instantaneous Braille output. A screen reader is required to drive a Braille display. The screen reader sends information to the Braille display. When the display receives the text string, it automatically displays the text using mechanical Braille dots. The dots are controlled by the display, and pop up and down to form the Braille characters that correspond with the incoming text stream. Braille displays can be of great value when performing word processing, database management, spreadsheet functions, computer programming, surfing the web, and so forth.

6. Basic Braille Embosser

Braille printers, or Braille embossers, are devices that are dedicated to printing hard copy Braille documents. The typical Braille embosser uses blunt pins to punch dots into heavy weight paper for production of Braille hard copy. The pins drive the paper against a rubberized plate that absorbs the force of impact and prevents the pins from punching the dots completely through the stock.

7. Tactile Graphics Designer version 2.3.2002

<http://www.tactileaudio.com/>

Tactile Graphics Designer is a program for sighted people to create embossed and printed tactile graphics. Users can draw tactile graphics by using a mouse or on the TagPad that comes with the program. Images in bmp or jpg format can also be imported into the program and converted to tactile graphics. TagPad is a sensitive glass pad for freehand drawing and requires training.

2) The Library also makes certain electronic equipment available on loan or at a very low price

Equipment available to borrow:

You may check out the following equipment at the first floor service desk of the library:

- laptop computers, power cords, mice, and floppy drives
- headphones
- wireless microphones
- USB mass storage devices
- Zip drives, cords, and disks



- cassette player instructions, player, and plug
- conference phones and external microphones
- transcriber, headphones, and foot pedal

The library has access to an extensive journal, e-journal, and e-book database of its own and through the Columbia University network. If an electronic version of a book exists, an individual can log in and check the book out as if it were a library book. Additionally it has extensive mark-up and note taking capacities built in. If an individual cannot access a journal article on line, the library can make it available in PDF format within days, often within 2 days. Professorial request for new acquisitions, including journal series are rarely if ever denied.

Teachers College also participates in a doctoral consortium with all of the major universities and colleges within the metropolitan area. Examples of universities that participate are NYU, The New School, The City University of New York, and Columbia University. Students are able to take courses at any of the Inter-University Doctoral Consortium if the desired or needed course is not available at their home institution.

XII. Possible Areas of Collaborations: Course Work, Doctoral Committees, Teaching, Research Opportunities, and Externships

We are open to any form of collaboration. I would suggest that we explore an Inter-University Consortium Agreement that would allow for a more convenient free flow of students taking courses across universities, including others possibly taking advantage of the Inter-University Consortium to which Teachers College belongs.

XIII. Administrative and Technological Support to Establish/Sustain a Collaborative Effort

This will depend on the nature of the collaborative effort.