

**PEN-International:  
Improving the Circumstances  
Of  
People Who Are Deaf**

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Good day. I have been asked by Rector Fedorov and Professor Stanevsky to discuss the conceptual basis of the Postsecondary Education Network International (PEN-International), and its place at Bauman. Therefore, I would like to discuss the general framework upon which PEN-International is based and the predecessors to PEN-International, concluding with a description of PEN-International itself.

**General Framework**

There is a pragmatic assumption upon which I base my approach to education, that is, technical and professional education should prepare a student to ‘earn a living and to live a life.’ The two are interdependent--we cannot live a very good life unless we can earn a living that maintains us. Unless we are adequately prepared to compete in the workplace with others, we are relegated to dependence upon government, society or family for support that can sustain our life. In effect, to become contributing members of society and take advantage of the economic benefits society has to offer, we must possess the skills, competencies and knowledge needed to ‘earn and live’. Therefore, all my work has focused upon preparing deaf people to enter society and the workplace, and compete on a par with their peers who hear—to prepare deaf people to contribute to the welfare of our society at all levels.

People who are deaf worldwide have been seriously underrepresented in technical, scientific and professional careers. With very few exceptions, they are absent at university technical and professional programs. This results in their absence in the technical and professional workplace.

Around the world deaf people have been, and still are, denied access to the economic and social mainstream, in part, because they are not academically prepared to compete on a par with their peers who hear. If we assume that deaf people share the same distribution of intellectual capability as those who hear, we might fairly expect that these individuals would be proportionally represented in the economic and social mainstream, unless there are some systemic barriers to their doing so.

There exist certain environmental and attitudinal barriers that can act to block a deaf person from access to careers. If there are no career education programs for students who are deaf, it is impossible for them to prepare for a career. The environment in which they live can preclude their preparation for a career. If the expectation in society is that deaf people can’t engage in

certain types of careers because “deaf people have never done that before,” attitudes can block preparation for a career.

The impairment of a sense can interact with an environmental barrier to result in the inability of someone to perform a task. For example, a hearing impairment interacts with the telephone (an environmental barrier) to result in the inability of a deaf person to communicate in the workplace with a customer—a disability. If there is no accommodation, the person with a hearing impairment becomes handicapped as compared to their hearing peers. However, with technological accommodation (text to voice, captioning, interpreters, amplification, e-mail, text pagers and the like) the handicap can be eliminated. It simply ceases to exist.

As regards **environmental barriers**, early in the 1970's, I realized that the limited educational achievements of deaf students were due in part to serious deficiencies in career preparation. This led me to pursue the career development of deaf youth as an area of scholarly inquiry and to assume the co-directorship of the National Project on Career Education. The program developed career education programs at 60 different primary and secondary deaf education programs in the United States. In addition, I also established the Explore Your Future Program at NTID. This summer residential experience offers high school juniors the opportunity to explore various careers. These programs have resulted in deaf students pursuing various technical careers they might otherwise have never considered—e.g., medicine, information technologies and the like. Parenthetically, fostering career education is fertile ground for collaboration between Bauman and schools for the deaf across Russia.

Simultaneously in the 1970's, I initiated a long-term program of research regarding how the **attitudes** of parents, teachers and significant others influence their advice to deaf youth regarding training for various careers. While serving in England as a Rotary International Educational Fellow, I conducted research comparing the expressed advice of parents and teachers regarding careers for hearing and deaf youth. Subsequently, this research was replicated in Italy, South Africa, USA, India and Israel. I continue to maintain this interest and in 1999, while a Fulbright Senior Scholar at Örebro University (Sweden), I conducted a companion study. The findings of this research have been disseminated widely and also incorporated into PEN-International training. Parenthetically, this area of scholarship can be undertaken in Russia since it is societal expectations that help shape aspirations regarding careers.

The EU and the UN have adopted declarations effectively stating that people with sensory impairments have the right to access and accommodation so that they can derive benefit from, and contribute to, society. PEN-international attempts as best it can to base its practices in these fundamental principles.

### **Predecessors of PEN-International**

Let me now turn my attention to the predecessors to PEN-International. Throughout my career, I have assumed progressively more responsible positions in the field of deaf education. This has afforded me the opportunity to implement changes that positively influenced the career education of deaf people. In 1985, I was selected to serve as dean for the National Technical Institute for

the Deaf, a post I held for 14 academic years. It was in this position that I further refined the pedagogical orientation that led eventually to the establishment of PEN-International.

While my baccalaureate and masters degrees are in Civil Engineering, I hold a Ph.D. in instructional technology. As a result, I am a strong proponent of systematic, scientific and research-based approaches to the education of students who are deaf. Consistent with this philosophy, at NTID, I established the NTID Instructional Technology Consortium and Learning Consortium to enhance teaching and learning through the use of instructional technology and related innovative teaching strategies with deaf students. The Instructional Technology Consortium and Learning Consortium were implemented to:

- Improve student learning and the practice of teaching by putting new instructional tools directly into the hands of faculty (e.g., smart boards, telecommunication technology, animation tools, the WWW and the like),
- Provide an environment in which faculty can assess how well their teaching techniques are meeting student needs (e.g., faculty peers working as mentors with colleagues),
- Provide a model of excellence in applying instructional technology to the education of deaf students (e.g., training and in-service workshops developed by faculty peers for use with colleagues).

I mention these because they now are being implemented by PEN-International.

While conducting attitude research in Sweden as a Fulbright Scholar in 1999, I became intrigued by how different countries define the ways deaf people should be included in the educational, social and economic mainstream. I encountered the same career education issues in Europe that I had encountered in the USA. The inclusion of individuals who are deaf is an explicit goal of both the USA and the EU. However, achieving that end requires free and appropriate access to education. In an effort to enjoin multilateral discourse on this topic, I was co-author of a program (Project Inclusion) that created a unique course for educators from the United States, Sweden, Greece and Netherlands. The course identified effective policies and appropriate programs regarding educational inclusion in each country and organized this information into a first-of-a-kind comparative course on the subject. The course has been offered in the USA and Sweden with funding from the EU and US Government. The faculty team (of which I was the curriculum coordinator) learned that there are eight factors which "...interact to produce different educational philosophies and practices for deaf students which are rationalized within a specific country and culture"—social history, politics/government structure, geography, degree of economic development, size and diversity of population, resources, technology and core cultural/social values. My work on this project led me to the inescapable conclusion that it is not possible or desirable to impose a single model or solution to address the needs of deaf people across countries. While there is much that can be learned from what is done in another country, the eight factors listed above must be considered.

There is one last international program that has shaped PEN-International: Project Access—a Hungarian-American strategy funded by the Soros Foundation to establish learning centers at each of the eight Hungarian schools for the deaf. The project provided faculty members from each school with training in the use of innovative instructional and information technologies for

teaching and learning (<http://www.rit.edu/~624www/access/>). Subsequently, learning centers were established at each of the schools and faculty members developed an information technology curriculum for use with their students. The eight participant schools are now exchanging pedagogy through the WWW and utilizing what they are learning in their schools. For example, a home page design competition was conducted between each of the eight schools and these became a tool for sharing what was learned and how that translated into student results at each school.

### **PEN-International**

The cumulative experience and scholarship I just described, led me to conceptualize the Postsecondary Education Network International, that is funded to date by more than \$3 million in grants from The Nippon Foundation of Japan.

As I mentioned previously, university education for deaf students is rare in the vast majority of Central European and Asian-Pacific Basin countries. In countries where students are taught at the postsecondary level, the number of universities providing such education is very limited. Understandably, there is no network within, or between, these countries for sharing knowledge and collaboration to improve the tertiary education of deaf students. Consequently, an infrastructure for exchanging knowledge and educational technology has been needed. Further, a network that can be used as a platform for expanding tertiary education services for deaf students is a necessity if more deaf people are to access tertiary education and enter the workplace.

PEN-International was therefore established as the first-of-a-kind international partnership to address these needs. In my role as principle investigator and project director, I conceptualized and authored the project proposal to The Nippon Foundation (<http://www.pen.ntid.rit.edu/>). PEN-International is dedicated to sharing expertise so that deaf students can access education in the technologies.

There are three hallmarks that appear on the PEN-International flag. These are stated in Russian, Chinese, Japanese and English: excellence, integrity and innovation. I would like to briefly focus upon these hallmarks since they are essential for the long-term success of our program.

**Excellence**—excellence is measured by ever increasing contributions and continuous improvement. It is characterized by a deep and abiding commitment to quality.

**Integrity**—integrity is an incorruptibility regarding the trust placed in us by the funding organization and those with whom we work to provide quality programs and services; a trustworthiness regarding our pledge to deliver programs that eventually will improve the educational circumstances of people who are deaf.

**Innovation**—since the systems available to educate people who are deaf have fallen short of the mark around the world, innovative pedagogical and technological innovation are needed.

PEN-International's three primary goals are:

- To increase the application of information technology and instructional technology to teaching
- To improve teaching, learning, curriculum development, and instructional development, and
- To expand programs and services for deaf students.

Bauman is a charter member of PEN-International because it is an engineering university of excellence that has been educating deaf students since 1934. The university has a proven record of preparing deaf people to “earn a living and live a life.” Further, the university established a Center on Deafness in the early 1990's and has a sister institution agreement with NTID. In addition to Russia, PEN-International is being implemented in China (Tianjin University of Technology), Japan (Tsukuba College of Technology), the Czech Republic (Charles University) and the Philippines (College of St. Benilde). Next year, it is expected that Thailand and Korea will be added to the network.

PEN-International works to enhance and maintain local capability and global networking at each participant institution. Institutions are being moved from **importers** of ‘know how’ to **self-sufficiency**. As the project progresses, each institution is **exporting** what has been learned to other postsecondary institutions in their respective countries. In effect, this project is intended to move institutions from **importer** to **self-sufficiency** to **exporter** but within the context of a country's history, culture, geography and educational system.

Each participant institution becomes a **center of excellence** in its home country. PEN-International works collaboratively with each participant institution to determine its needs with respect to educational and instructional technology. A high technology multimedia laboratory and distance learning facility is constructed at each participant institution for student and faculty use—teaching, learning in and out of classes, development of teaching materials, experimentation and research. Simultaneously, a training program is prepared to enhance local technological and deaf education capability among faculty members at each participating institution.

Faculty members who are trained by PEN-International use technology, as appropriate and necessary, to better educate students and train other faculty at their respective institutions in the innovative application of teaching and learning strategies in deaf education. Each **center of excellence** will disseminate what it has learned regarding educating deaf students to other institutions in its home country and works to increase the number of tertiary level programs for deaf people in the country. Each **center of excellence** also becomes a PEN-International **node**. Each node (country) collaborates to share what has been learned with other countries. PEN-International works to propagate a dynamic dissemination network and fosters an innovative technological and pedagogical **ripple effect**.

Several distinguishing features characterize this effort. The international network is an innovative blend of:

- WWW technology (the PEN-International WWW site);
- Distance learning technology (ISDN and satellite technology);
- Instructional technology (multimedia);
- Telecommunication technology;
- Curriculum and instructional development;
- Faculty training and development; and,
- International symposia (an international symposium will be held at NTID in June and Bauman is playing an important role in that activity)
- Evaluation and research

In each of these eight areas, PEN-International is working to develop an agenda for scholarship regarding adaptation, adoption, development, and application of solutions that meet the need of people who are deaf. Since Bauman is a technological university of international repute, it is playing a major role in this agenda. For example, Dr. Stanevsky and I have begun conversations regarding speech to text technology. Further, the new PEN-International multimedia lab at Bauman is being used to educate deaf students at the university.

Russia is a large country with deaf people spread throughout the nation in various population centers. These deaf people cannot be served by one center of excellence unless we can utilize information and instructional technologies to reach out across the country. Since the Center on Deafness at Bauman already is a recognized center of excellence, it is moving quickly to pilot test dissemination efforts in Russia. The government of the Russian Republic has pledged \$1.5 million to further this dissemination effort. Dr. Stanevsky is taking the lead in this regard.

PEN-International is building upon the success of Bauman and the experience of NTID to develop a model that can be replicated throughout Central Europe. It is our vision that Bauman will be **the** dissemination center regarding the tertiary education of deaf students within Russia, the former Russian Republics and in Slavic speaking countries. Bauman will become even more influential, in Russia and globally, in fostering excellence and innovation in deaf education at the tertiary level.

People who are deaf have experienced barriers to realizing the full economic and social benefits that accrue from being fully contributing members of society. A significant source of this deprivation is their historic lack of access to high quality tertiary education programs that prepare them for productive careers. PEN-International and its partner institutions are applying their collective vision, skills and abiding faith in the abilities of deaf people to rectifying these circumstances around the world. Pen-International is taking a multifaceted approach to improving accessibility through the use of technology, training, and program development. However, for the success of such programs, we must not forget the significant role that attitudes toward people can play.

When PEN-International is assessed, when our contributions to teaching and learning are summatively evaluated 10 years from now, when we are judged, the words of Virgil should ring

true, “Experto credite—Trust one who has proved it.” PEN-International will be trusted because it has contributed in significant ways to improving the circumstances of deaf people; because of excellence, integrity, and innovation.

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