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ABSTRACT
                 This participant's manual covers the fourth module of
a four-module training program for all individuals employed in
programs funded by Oklahoma's Developmental Disabilities Services
Division. This includes van drivers, recreation workers, residential
staff, administrators, case managers, secretarial/clerical staff,
vocational staff, advocates, physicians, psychologists, and others.
The primary objective of the module is to have the participant
understand future trends, both technological and environmental,
influencing the delivery of services to individuals with
developmental disabilities. Secondary objectives include discussing
influences on the policies of the State of Oklahoma in the provision
of services to individuals with developmental disabilities, listing
areas in which the power of self-advocacy is important, describing
the role of the State in relation to supporting families, and listing
technological advances that aid individuals with disabilities in
achieving greater independence. The module includes the primary and
secondary objectives, a text and question format that allows
participants to become actively involved in the learning process,
information from transparencies used in training, and copies of
handouts. (JDD)

EC

ED 374 587

MODULE FOUR

Foundation Level Training

The New Frontiers

Participant's Manual

Department of Human Services
Developmental Disabilities
Services Division

EC 303307

Department of Human Services
Developmental Disabilities Services Division

P.O. Box 25352
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MODULE FOUR

Foundation Level Training
The New Frontiers

Participant's Manual

Department of Human Services
Developmental Disabilities Services Division

i

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SPECIAL THANKS TO

Foundation Level Training

People with developmental disabilities are PEOPLE FIRST. Their humanity is more important than their disabilities. They have dreams. hopes. likes and dislikes. They want to be loved and give love. They want to be respected by others and by themselves. They want challenges in their lives - a chance to accomplish things. to exercise their abilities and be productive citizens. They want to make a contribution to their communities. They want to have work that means something and that pays them enough to meet their basic needs.

They want a decent place to live in a decent neighborhood. They want to be as healthy as possible. They want the freedom to come and go as they choose, to be as independent as possible. They want privacy and the freedom to choose where and with whom they live. They want to be able to make choices about their daily lives; from what to wear and eat to when to go to bed.

In other words, they want what we want.

In the past and even sometimes today, people with developmental disabilities have been seen only as people with needs which others must meet. Although this was never a true perspective — because people with developmental disabilities have had so few opportunities to exercise their talents and to give of themselves to others — it may have appeared to indeed be the situation.

This traditional viewpoint is one of the most important attitudes we must attempt to change — first in ourselves, then in others.

Today in Oklahoma, people with developmental disabilities are working at real jobs, volunteering in community service, being good

neighbors, participating in their government, attending classes, and in general, doing what all people do.

This foundation level training will give you an idea of who we serve, how we got here, where Oklahoma is today and what the future may hold. Most importantly, it will allow you to look at your own beliefs and hopefully develop an awareness that...

People are... People!

Primary Objectives

F oundation training was developed to meet the primary training needs of staff, individuals, and family working with people with developmental disabilities. The primary objectives for the Foundation Level training course are to:

PRIMARY OBJECTIVES

Foundation Level
Training

1 Provide all staff with a shared vision of what Oklahoma's system of services looks like, today and in the future.

2 Provide a consistent information, knowledge, and skill base for all individuals who serve people with developmental disabilities.

3 Prepare staff to become more effective members of the teams that provide assessment, planning, and delivery of services for individuals with developmental disabilities.

4 Improve the quality of communication and social interaction skills of staff who provide services.

5 Provide a functional definition of developmental disabilities and help staff understand common types of developmental disabilities.

6 Provide an understanding of historical issues influencing individuals with developmental disabilities and how these issues influence today's attitudes.

7 Provide staff and individuals with an understanding of the principle of normalization.

8 Provide a philosophy of services that is consistent with current state and national trends in service delivery.

9 Provide staff and individuals with a better awareness of the individual with developmental disabilities rights and legal issues surrounding service delivery.

10 Provide staff and individuals with an understanding of the services available within the State of Oklahoma and specifically, through the Developmental Disabilities Services Division.

11 Provide an understanding of mistreatment/ maltreatment, reporting measures for suspected abuse and neglect, and the importance of the use of non-aversive techniques.

12 Provide an introduction to future technological trends that may influence the quality of life of individuals with developmental disabilities.

13 Provide an awareness of the role of the state and the Statement of Beliefs that influence services for individuals with developmental disabilities.

PRIMARY OBJECTIVES

Foundation Level
Training

For the objectives of the course to be met, participants will need to demonstrate mastery of the subjects presented by passing a written exam at the end of each module, completing in-class activities, and demonstrating specific skills through written exercises.

Foundation Level Modules

Foundation Training is composed of four modules of instruction:

MODULE ONE - "PEOPLE ARE PEOPLE"

Introduces the use of **People First** language. Defines the term,
developmental disability, and describes some of the disabilities
included in that term. Emphasis is placed on the concept of looking
at individuals as _people rather than products of their disability._

MODULE TWO - "CHANGING TIMES"

Traces the historical events that influenced how services for people
with developmental disabilities developed across the nation and in
Oklahoma. Emphasizes an understanding of what didn't work and
why it didn't work so that we don't repeat the mistakes of the past.
Also introduces the principle of normalization and the importance
of role models.

MODULE THREE - "SYSTEMS AND POLICIES"

A snapshot of the State of Oklahoma service delivery system today,
including public and private service providers, families, advocates,
etc. Reaffirms the importance of individuals who work most
closely with people with developmental disabilities.

MODULE FOUR - "THE NEW FRONTIERS"

Provides a "Vision of the Future," a blueprint which logically
emerges from the previous three modules. It also provides a look
at future technological trends that may influence the lives of
individuals with developmental disabilities.

These modules are designed to be taught in consecutive order to
give participants an awareness and understanding of the history,
development and future goals of Oklahoma's Developmental

Disabilities Services Division. Each module includes learning objectives that will be addressed by the instructor through illustrated lectures, videos, and other audio/visual materials. Participants will take part in a variety of activities and exercises designed to clarify and illustrate each module's objectives.

Foundation Level Format

The Participant's Manual for Foundation training consists of four separately bound modules. Each module's format is organized into three sections:

LIST OF OBJECTIVES

Comprised of each module's Primary and Secondary objectives. Secondary objectives allow participants to accomplish mastery of the goals outlined by the module's Primary objective.

GUIDED NOTES

A text and question format that allows participants to become actively involved in the learning process. Most of the information in the transparencies shown by the instructor for each module are also included in right column boxes. Test questions will be taken from the Guided Notes section of the Participant's Manual. Participants are encouraged to complete all questions in their Manual as well as take additional notes. This information will be helpful in their employment settings long after training has ended.

HANDOUTS

Copies of the handouts emphasized in the training are located in the last section of the module. Other supplementary material may also be handed out by the instructor as training progresses.

MODULE FOUR

The New Frontiers

TABLE OF CONTENTS

MODULE FOUR - THE NEW FRONTIERS

New Frontiers
Objectives

MODULE FOUR - LEARNING OBJECTIVES

OBJECTIVES

Primary Objective

Secondary Objectives

Primary Objective:

Upon completion of this training and given the appropriate materials. the participant will demonstrate an understanding of future trends. both technological and environmental. influencing the delivery of services to individuals with developmental disabilities.

Secondary Objectives:

■ Discuss the beliefs that influence the policies of the State of Oklahoma in the provision of services to individuals with developmental disabilities.

■ List three areas in which the power of self-advocacy is important to individuals with developmental disablities.

■ Describe the role of the State in relation to supporting families.

■ List three technological advances that aid individuals with disabilities in achieving greater independence.

2

The New Frontiers
The Vision for Oklahoma Tomorrow

INTRODUCTION

This module will take a look at what the future may be like for people with developmental disabilities and their families. It is derived from what we know about the past — what worked and what didn't. And the present — the good, the bad, and the ugly.

It is common for futurists to do what is known as "trend extrapolation," that is, to take trends and project them into the future. What are the trends in developmental disabilities? You have already studied some of them. There has been a trend toward residential and vocational services serving people in smaller numbers and in the same settings where the rest of us live and work. There has been a trend toward greater inclusion of people with disabilities into the mainstream of society, and a complimentary trend for people who are not disabled to have more contact with their friends and neighbors who have disabilities. This module will examine "The New Frontiers" based on trend extrapolation. We will study values, which are the abstract, driving force for all societal change, and we will look at concrete developments in the area of technology. In order to be realistic, we must also look at issues of limited resources and the need to maximize our assets.

> *"For I dipped into the future,*
> *Far as human eye could see,*
> *Saw the Vision of the World, And*
> *all the wonders that would be..."*
>
> — Alfred, Lord Tennyson (1809-1892)

3

Objective 1: Discuss the beliefs that influence the policies of the State of Oklahoma in the provision of services to individuals with developmental disabilities.

STATEMENT OF BELIEFS

We, the people of Oklahoma, with a firm belief in the inalienable rights of all individuals to live full lives, do state:
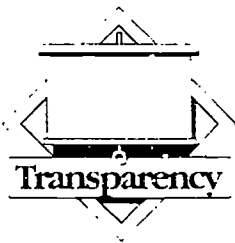
- All individuals have the right to lead productive lives to the fullest extent possible;

- All individuals have the right to full participation in the decisions that concern their lives;

- All individuals have the right to be educated to the highest degree, and in the most typical environment, possible;

- All individuals have the right to their personal values without imposition or infringement;

- All individuals have the right to fully exercise their liberties as citizens of their community and country;

- All families are entitled to the integrity and well-being that comes from the firm assurance of support and entitlement;

- All individuals have the right to risk: to experience not only the satisfaction of achievement, but also the challenges of failure;

- All individuals should have their needs respected with regard for individual desires, capabilities, living situations, and medica requirements.

Above all else, we believe power rests with the individual: that each person must be given the opportunity to develop and shape his or her own destiny in a manner that emphasizes and supports

Transparency

4

the goals he or she may strive to achieve. To that end. and with the firm knowledge of the trusts we bear. we look to the vision of Oklahoma's New Frontiers.

1. Why are beliefs important? _____

_____

_____

2. Are there other beliefs that should be included in this statement?

_____

_____

_____

Questions

Objective 2: List three areas in which the power of self-advocacy is important to individuals with developmental disabilities.

What We Value

Transparency

POWER OF SELF-ADVOCACY

Those of us who work in the field of developmental disabilities can help give people with developmental disabilities an awareness of the power of self advocacy. We can. and should. use every effort to reinforce people's self-esteem and confidence. This in turn will lead to increased participation in those events that influence the public's awareness and perceptions.

With this awareness will come a change in perspective. not only by the public. but also by the individual and his or her family. There will come an awareness of the things that people with disabilities can accomplish. and from that awareness will arise the ability to accomplish their goals.

No one in this society can claim to be totally independent of others. We are all interdependent. Some people with disabilities will always be dependent upon us. They may or may not be taxpayers but that has nothing to do with their value as human beings.
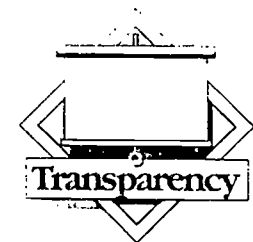
POWER OF SELF-ADVOCACY

Individuals with developmental disabilities must recognize their own worth. They must be able to come to the realization that they have the power of self-advocacy — the power to influence their own futures.

As a population, they can bring about changes in attitudes and beliefs by their very participation in community and national affairs.

"All people are beings;
All humans beings are valuable;
All the rest is commentary..."

– Burton Blatt -
"Christmas in Purgatory"

5

3. How does self-advocacy differ from other types of advocacy?

_____

_____

_____

4. Why is it important for individuals with developmental disabilities to display self-advocacy? _____

_____

_____

5. What are some of the misconceptions that the public might hold toward the individual with disabilities concerning self-advocacy? Why? _____

_____

_____

INDIVIDUALIZED EDUCATION

Education is more than just learning the "three R's." Education is also an environment where students learn from each other. Educational leaders will be in the forefront of developing individualized curricula that allow all students, not just those with disabilities, to stretch their minds and achieve goals not thought possible in the past.

Students who go to school from the beginning with people who are diverse in terms of color, ability, religion, and other characteristics, are more likely to be comfortable with "differentness." They know each other as human beings, not as labels. And, in adulthood, they are more likely to seek such diversity.

6. Why is the term "special" unsatisfactory when discussing individuals with developmental disabilities? ("special" schools, "special" classes, "special" people?) _____

_____

_____

6

7. What is the "power of self-advocacy" and how can it change attitudes and beliefs? _____

_____

_____

8. How could the development of individualized curricula help students with developmental disabilities? _____

_____

_____

Objective 3: Descri ꞧe the role of the State in relation to supporting families.

The Role of the State

SUPPORTING THE FAMILY

The role of the State of Oklahoma and its service providers should be defined as:

Support, Not Supplant, the Natural Home

The family is the main, and best, supportive environment possible. Of course, families can be defined in many ways. Whether traditionally (one father, one mother, and various siblings), or non-traditionally (a few friends living together and caring about each other), families provide the strength and support necessary for a person with developmental disabilities — to achieve his or her full potential.

Parents oꞥ non-disabled kids are increasingly impressed with the power of individualized programs for kids with developmental disabilities, and are beginning to demand the same individualization for their own sons and daughters.

Transparency

*SUPPORT!
NOT SUPPLANT
the natural home*

7
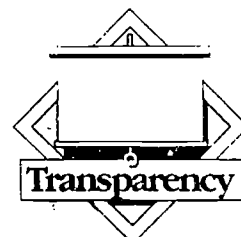
INCLUSION

While integration is the presence of a person within a community, inclusion is the presence and full participation of a person within a community. The trend is toward movement away from large, congregate environments to more typical environments where people with developmental disabilities live in the middle of things.
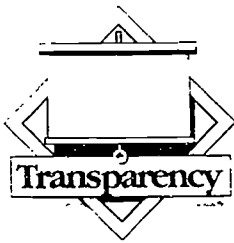
MATRIX

What has been in the Past ══════════> Future

Physical and Social Exclusion	═══>	Physical and Social Presence	═══>	Physical and Social Presence and Participation
(SEGREGATION) ═══>		**(INTEGRATION)** ═══>		**(INCLUSION)**

EDUCATIONAL

Separate School Buildings ═> Separate Classrooms ═> Supporting in Same Classroom

RESIDENTIAL

Large Institutions	═══>	Small Institutions Group Homes	═══>	Home Owner Natural Home

VOCATIONAL

Workshops/ "Activity" Centers	═══>	Work Crews Enclaves in Industry	═══>	Real Jobs in Real Places

9. Why should Oklahoma move from state-supported institutions to family support services? _____

_____

_____

10. Why is the Procrustes myth discussed earlier applicable today to individuals with developmental disabilities? _____

_____

_____

11. What is meant by the term "Inclusion?" "Segregation?" "Integration?" _____

_____

_____

Objective 4: List three technological advances that aid individuals with disabilities in achieving greater independence.

Technology and the Environment

TECHNOLOGY

Technological advances are making available almost daily new innovations to improve the lives of people with developmental disabilities. This technological "empowerment" allows the individual to take control of his/her environment. Adaptive devices allow individuals to modify existing technology to fit his/her unique situation.

Some technological devices that may be in common use in the future include:

■ Hovercraft (wheel)chairs that will allow movement over the most rugged surfaces.

■ Telephone accessory devices that relay typed messages from individuals with hearing impairments to other telephone users.

■ Computer-controlled doors that respond to voice commands to open and shut.

■ Glasses that allow people with hearing impairments to read what a speaker is saying on the inside of the lens.

■ Talk-back computers that allow individualized education as well as open employment opportunities in a variety of fields.

Devices that are readily available include the following:

■ Chairlifts that allow individuals to get in and out of bathtubs.

■ Battery-powered, light aluminum and plastic chairs to replace heavy steel wheelchairs.

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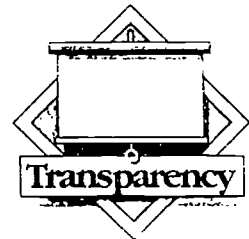
■ Flexible and miniaturized communication boards and computer keyboards that allow communication of needs and feelings.

The challenge for all of these technologies — those that are not in common use and those that are available today — is to make them readily available in the future.

While some of these devices are still in the experimental design stages. many do exist. Imagine what the future might bring.

ENVIRONMENT – POSITIONING

New "positioning" techniques allow people to maximize their control over their bodies. If people's physical body positions are not changed regularly, gravity will affect the correct functioning of many organs and structures. Bones become misshapen, organs do not function properly, and food cannot be eaten in a correct manner. The ability to grow and develop is severely diminished. New techniques of physically moving and "positioning" an individual's body can aid or eliminate many of these negative occurrences. What will happen if, in the future. we get to infants early on to prevent the deformities we now seek to minimize or reverse?

POSITIVE TEACHING TECHNIQUES

In the past, there was a great deal of concern regarding people who displayed severe behavior problems, e.g., were destructive toward themselves or others. The methods used were primarily designed to control the individuals — to prevent them from hurting themselves or others — yet seemed not only excessive, but from another era. Electric shock, spraying caustic liquids in people's faces. wrestling people to the ground. isolation, and frequent use of physical restraints were often used. This punishment approach dehumanized both the person who used the methods and the person on whom it was used.

Oklahoma has committed itself to the abolition of aversive punishing approaches to change behavior. It is one of the first states in the country to do so.

FACILITATED COMMUNICATION

Facilitated communication is a method of assisting expressive. symbolic communication with people who are non-verbal or who are limited and delayed in their expressive ability. The facilitator supports the hand or arm of an individual who is communicatively impaired in a manner that enables him/her to accurately press the keys of a typing device and thus to communicate.

12. How does technology allow an individual with developmental disabilities to become independent? Give examples. _____

_____

_____

13. List three environmental modifications that can allow an individual with developmental disabilities become more independent. _____

_____

_____

14. How can proper positioning help an individual? _____

_____

_____

15. Discuss the development of positive teaching techniques for all children. Why would parents of "normal" children want to see the same techniques used for their children? _____

_____

_____

11

SUMMARY EXERCISE: PARTICIPANT MENU

Assignments

List three or four questions that you may have over the training you have participated in. These can be over specific items or may be questions you might have concerning your future employment areas a ·d what you have learned will fit into the "real world." _____

_____

_____

Summary

Group Discussion

We are moving from segregation to inclusion.

We are moving towards supporting people in their own homes.

We are moving from " programs," "models," and "continuums," toward individualization.

In short, we are moving in directions that promote the individual, in directions that say — loudly and clearly —

All people are...
People!

The future is a bright vision. We are following paths whose direction promises hope and fulfillment...

For all people!

Our Task

■ Our task each day is to give the assistance required to allow each individual to be as independent as possible.

■ Our task each day is to be an advocate who helps create the work, leisure and home environment which allows each individual to be as independent as possible.

■ Our task each day is to treat the people we serve with respect and dignity. Regardless of their developmental disability, each person deserves the opportunity to live the fullest life possible.

■ Our task each day is to provide the resources necessary for each individual to accomplish the fullest life possible.
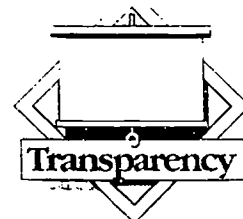
People with developmental disabilities have more options today than they had in the past. However, there are still many prejudices that exist and their struggle is still very real. You as service providers can be advocates for the people you serve. You can start to tell your friends and neighbors about the great things that are happening. You can promote legislation which protects the rights of people with developmental disabilities. You ca. dispel some of the myths and misconceptions that still exist. You can help in so many ways. It all begins with respect for human dignity.

Remember...

We are all interdependent.

We are all People First —

We can all help each other to get the most out of life!

People with disabilities will be treated as human beings...

Who have value within the community...

And are valued by the community for the contributions they make.

13

Foundation Level Training
The New Frontiers

Handouts

WHAT WORKS TO HELP PEOPLE SPEAK FOR THEMSELVES TO CHANGE THEIR OWN LIVES?

A person's ability to speak for him or herself grows when others:

Firmly believe that the person has the right to choices, both in every day life and in setting life goals.

Do not label the person, but get to know the person for him or herself.

Ask and listen with care to what the person wants, what the person's goals are, what specific help the person needs.

Focus on the person's capabilities, not the person's inabilities.

Match supports to the person instead of putting the person into what's available.

Excourage the person to work on what the person wants, even if it is hard to see how far the person can go toward a goal.

Work along with the person to find ways to make what the person wants possible by helping with problem solving and by connecting the person with other people who can be trusted to help.

Realize that the person can learn from mistakes if the person has the right to make them and then support to figure out what went wrong and how to move on.

Recognize that it's O.K. for the person to say, "I hate this. Let's start over!"

SELF-ADVOCACY

Role Plays

Case #1 - Samantha is 23 years old and has been blind from birth. Her friend, Johnathan, believes that Samantha should run for city council since she has a unique perspective on the treatment of individuals with developmental disabilities. However, Samantha and Johnathan have run into opposition from other council members who believe that Samantha's disability would hamper her performance of her council duties. Samantha and Johnathan must convince the council that this would in no way be a detriment and might, in reality, be an asset.

> **Players:**
> Samantha - self-advocate
> Johnathan - advocate
> 2-3 council members - opposing

Case #2 - Gary is a sixteen-year-old with moderate mental retardation. He wants to move into a group home but his parents are afraid that he cannot function in a community setting -- that he won't be protected enough. Gary is also afraid, but has talked to his case manager, Margery, and his friend, Jeff, both who are currently living in such a home. They have encouraged him and he is anxious to try such an arrangement. Gary and Margery must convince his parents that he is able to make such a move. Gary must also gain confidence enough to present his case convincingly.

> **Players:**
> Margery - case manager
> Gary - self-advocate
> 2-3 family members - opposing

Case #3 - Amy is a thirteen-year-old girl with mild mental retardation. She has been in a "special" education class at her school. She no longer wants to remain in this class and instead go to the same "regular" classes as her schoolmates. Her parents also feel that this change would be beneficial to Amy. However, one math teacher and two school board members are opposed, saying that Amy's presence would slow down the regular curriculum too much for the other students. Amy and her parents must convince these individuals that she would be able to handle the work.

> **Players:**
> Amy - self-advocate
> Her parent(s) - advocates
> Math Teacher and two school board members - opposing

Case #4 - Jeremy is a twenty-five-year-old man with epilepsy. His condition is fairly severe so he is currently wearing head protection for seizures. (Someday we hope to be able to use technology to discontinue use of such stigmatizing devices.) He does not want to continue to wear this since his medication has been working and he has had only mild\medium seizures perhaps once every three or four months for the last two years. His doctor and his mother do not believe Jeremy should remove his head gear, but both his case manager and his physical therapist believe that he has enough prior warning concerning the onset of a seizure that he would be able to protect himself accordingly. Jeremy and his support team must present a convincing enough case that his doctor and his mother will agree to not using the head gear.

> **Players:**
> Jeremy - self-advocate
> Support team (2) - advocates
> Physician and mother - opposing
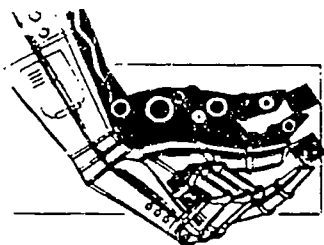
ENABLING THE DISABLED

Technologies for People With Handicaps

A search for technologies to assist people with disabilities turned up a tabling mouse, flexible keyboards, and a program for creating music.

A computer engineer who has been profoundly deaf since birth found it frustrating to use the traditional telecommunications device for the deaf (TDD), since its one-line readouts are slow and cannot be stored. And he couldn't communicate with colleagues or anyone else who didn't have a TDD unless they used a telephone operator as a translator.

So Dillip Emmanuel built a better telecommunications device—one that turns a personal computer into an all-purpose communications center. His MIC300i modem and *FullTalk* software allow the user to receive, record, review, and send telephone calls through a PC. The package includes telephone directories, auto-redial functions, and other customized features, many of which promise to make it beneficial even to non-deaf users. The package could also be a boon to the many companies that hope to expand their services to deaf customers. Emmanuel now heads a company that manufactures and markets his invention.

A biomedical engineer working on brain research at the National Institute of Health wanted to create an inexpensive learning device to help his young, severely retarded son to communicate and develop thinking skills. So Andrew Mitz went down to his basement and built a simple electronic recorder and playback device—a pair of black boxes onto which he attached photographs of a toy or any other object the child might want. He named the device *WeeTalk*. Touching one of the photos activates the device to "say" the name of the object, which cues a parent or teacher to bring the desired object. Mitz found an almost instant market for *WeeTalk*, which he continues to build in his basement and now sells for $185 apiece. What Emmanuel and Mitz—and hundreds of other inventors—realized is that necessity is still the mother of invention. And for meeting the needs of the 43 million disabled persons in the United States, computers may have become the "midwife" of invention.

More than 700 ideas emerged from a recent competition for "enabling" technologies. The goal of the Johns Hopkins University Search for Computing applications to Assist Persons with Disabilities was "to apply computer creativity to help people with disabilities overcome barriers to communication, movement, education, or employment," according to Paul L. Hazan, an administrator at Johns Hopkins' Applied Physics Laboratory, who directed the project. Andrew Mitz's *WeeTalk* and Dillip Emmanuel's telecommunications modem were just two of 30 regional winners whose new enabling technologies were on display for two days at the Smithsonian Institution.

Many of the inventions were modifications that make computers easier for disabled people to use, such as the *Unicorn Smart Keyboard*, developed by Arjan S. Khalsa of Richmond, California. The Keyboard, which took top prize ($10,000) at Johns Hopkins Search, is a flexible, affordable alternative standard computer keyboards. It comprises 576 small keys that can be grouped to form larger, custom keys, thus simplifying the keyboard and giving access to the computer by a mere touch of the hand. The system comes with seven preprogrammed overlays to meet specific needs, such an all-alphabet overlay, all-numbers, alphabet and numbers, arrows, and standard QWERTY. With a special program, users will be able to customize their own keyboard configurations to assign a single character, word, phrase, or sequence of keystrokes to each key.

Another keyboard modification was devised by Jeffrey and William Szmanda of Menomonee Falls, Wisconsin. They broke the standard flat keyboard apart so that the pieces can be adjusted to each of the user's hands. The *Comfort Keyboard* consists of three sections: the two sides of the traditional QWERTY key-board cut in half and a third component for the numeric keypad. Each section can be adjusted into an infinite number of positions to accommodate the natural posture of each hand.

The *Comfort Keyboard* could aid people with cerebral palsy, muscular dystrophy, arthritis, or other physically impairing conditions, as well as quadriplegics who use a head wand to type on the keyboard. But the device also has promise in preventing disabilities: Many people who use computers every day suffer from carpal tunnel syndrome resulting from repetitive hand and wrist motions in awkward positions. To assist computer users who are blind, IBM programmer Frank A. McKiel of Trophy Club, Texas, came up with a "talking mouse," which generates musical tones, filtered noise, sound effects, and synthesized speech. The goal was to provide audio feedback as the user moves a pointer over windows, controls, and other graphical features on a computer. McKiel won third prize ($1,500) in the Johns Hopkins Search.

Among the many computer-based learning aids introduced was an animated program for helping hearing-impaired persons improve their speech-reading skills. "Read-My-Lips," developed by Kathleen Ahlers and Joaquin Villa of Illinois, animates any language that uses the Latin alphabet, demonstrating the positions of the lips, tongue, and vocal organs as they produce individual syllables. The interactive, multimedia instructional modules use stories and games to teach lipreading, vocalization, and other language skills for the deaf.

Hazan is optimistic about the potential impacts that these and other enabling technologies will have on the lives of disabled persons. A similar search conducted in 1981 led to many new devices that became standard products for disabled people. Now, as more people are computer literate and as the price of technology declines, it is likely that an even greater proportion of these new inventions will become commercially available in the near future.

A VISION OF A TOTALLY INTEGRATED LIFESTYLE

Aspect	Description	Indicators
Education	Individualized functional curricula and experiences with students without disabilities.	-Home school placement -Inclusion in regular age appropriate classes and activities -Functional curriculum -Community referenced training -Individuals and their families integral members of the IEP planning process
Employment	Employment, with the necessary supports, in regular job settings.	-Individual receives transition services and has employment experiences prior to graduation -Individual engages in real work in real workplace settings -Individual receives support in the work environment -Natural proportions of individuals with and without disabilities are employed at the work site -Individual receives wages and benefits appropriate to skills and qualifications -Individual communicates with peers in the work environment -Individual has transportation to and from work
Social Relation-ships	Social networks and friendships throughout the individual's life.	-Individual has friends in the community -Individual is included in after school and out of school activities with peers -Individual has informal support network of family and friends -Individual has long term, intimate relationships -Individual has support in developing social relationships
Self-determina-tion	Making choices that affect all aspects of lifestyle.	-Individual has opportunities to make real lifestyle choices -Individual preferences are valued and acted on in lifestyle decisions -Individual is involved in all aspects of lifestyle planning -Individual is supported during decision making processes -Individual has ability to affect lifestyle changes
Recreation and Leisure	Access to and membership in clubs, groups, hobbies, and cultural pursuits in the community	-Individual has choices about recreation and leisure activities -Individual participates in leisure and recreation activities in the community -Individual is a contributing member of clubs and groups of their choice in the community
Neighborhood and Community	Access to and inclusion in community activities and services.	-Individual uses neighborhood and community services on a regular basis -Individual participates in neighborhood recreation and leisure activities -Individual Education Plans include use of neighborhood and community services
Home	Appropriate living alternatives and family involvement at each stage of the life cycle.	-Participates in the selection of a place to live -Individual selected a place to live among a range of options -Individual selects roommates (if roommates are desired) -Necessary supports were individually determined -Individual is pleased with living arrangements -Family is pleased with living arrangements -Transition planning efforts address where a person will live -Choices and desires at home are valued and respected -Individual makes decisions about all aspects of home routines (decorating, meal times, vacations)

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