Managing Autism:
The Next Generation, Considerations & Resources

THE 6TH ANNUAL AUTISM CONFERENCE

MUSON CENTRE, ONIKAN, LAGOS

THE REPUBLIC OF NIGERIA

APPROPRIATE USE OF TECHNOLOGY FOR THE INTELLECTUALLY AND DEVELOPMENTALLY DISADVANTAGED

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Appropriate Use of Technology

- CHALLENGES
- CARE
- ACCESS
- IMPROVING SYSTEMS AND POLICIES
- ASSISTIVE TECHNOLOGY
- APPROPRIATE TECHNOLOGY
- SUMMARY AND CONCLUSION

CHALLENGES

Factors Working Against the Education of Autistic Individuals

► Lack of Accurate Population Statistics

► Lack of Proper Diagnosis

► Inadequate Manpower

► Attitudes of the Society

► Lack of Funding

► Non Implementation of Legislation

► Poor Teaching Practices
Inclusion
Focus on the Individual's Voice and Interest

Care

A Medically Underserved Population

▶ There are millions of people with disabilities lacking adequate health care because of a lack of primary care providers who are properly trained to treat them. Thus as an underserved group, people with disabilities experience disadvantages in health and well-being compared to the general public

▶ In particular, people with intellectual and developmental disabilities remain subject to significant health care disparities

▶ Resulting in poorer health in general, including poorer health outcomes, higher prevalence of adverse, chronic, and/or secondary conditions and increased mortality.

Access

- Excitement about technology helping individuals with Autism

- Language and Communication Skills, Social Skills, Cognitive Skills, Organizational Skills, etc.

- The Types of Technology
  Alternative and Augmentative Communication – enhance and
     increase Verbal Output
  Teaching Tool or Strategy for Increased Independence to support
     academics and literacy, social skills, vocational training, daily living

- The Appropriate Type of Technology

- The Cost of Technology

- Technology Assessment: Feature Matching Analysis

Improving Systems and Policies

Deliver a Standardized Certificate and Incorporate into Other Educational Experiences Across Discipline and Level.

Provides Consistent Train the Trainer Experiences.

Awareness and Designation as A Medically Underserved Population

- Focuses efforts on Community-based primary care capacity, offering Case Management, Home Visits, Outreach and Other Services
- Guides awareness by other professionals, including police, faith leaders, etc.

Unified ASD Diagnosis

- Constitutes a positive development both from the standpoint of expanding access to service provisions and as a means of showing fidelity to the research literature.
- Many people appear to fit one diagnosis in a certain context or at a certain time, but then they seem to shift into another category within the autism spectrum (usually to one whose social challenges are considered less severe. Therefore, removing these falsely narrow, competing diagnoses will improve access to services based on individual need and demonstrate a greater consistency with the current state of research regarding the autism spectrum.

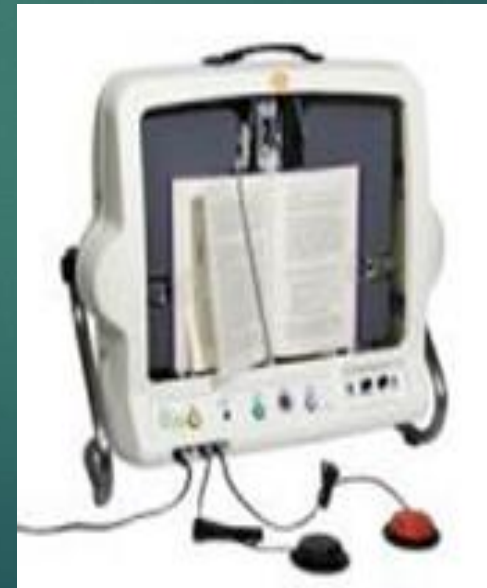# Improving Systems and Policies

Provide for the transition to adulthood

▶ Youth with developmental disabilities face numerous challenges with regard to maintaining effective and continuous care, education and access as they reach adulthood. Age-based eligibility requirements have historically contributed to widespread loss of services when youth reach adulthood, regardless of disability.

Assistive Technology (AT)

Any item, piece of equipment, software or product system that is used to increase, maintain, or improve the functional capabilities of individuals with disabilities usually on a continuum from Low Tech to High Tech.

LOW TECH APPLICATIONS

▶ Standard text

Use reading strategies & tools

Color

Highlighters

Highlighting tape

Colored overlays or reading strips

▶ Books adapted for access

Page fluffers

Flip Page Turner- www.ablenetinc.com

BookWorm - www.ablenetinc.com

Strategies

Think how the book is like me.

Think how the book is like another book.

Think how the book relates to what I know.

Ask Questions
I wonder if....?
Why did...?

Make a picture in your mind.

Tell it in your own words.

Assistive Technology (AT) Low Tech Applications con't

- ▶ Books adapted for access cont.

  Visual Modifications

  - Enlargement

  - Increased spacing

  - Hand-held or bar magnifiers

- ▶ Low Tech Modifications to text

  Modify vocabulary (use Wite-0ut® to replace wording)

  Use visual cues for trouble words, where to start reading, etc.

  Language Master to read trouble words

Assistive Technology
High Tech Applications

Typically based in computer software programs and ranging up to Virtual Reality Applications

- Technology tends to be a high interest area for many of these children, their parents and their care givers.

- Technology seems to be helping those with Autism communicate and function more independently.

- Computers are predictable and, therefore, controllable

- They enable errors to be made safely

- They offer a highly perfectible medium

- And they give possibilities of non-verbal or verbal expression.

Assistive Technology
High Tech Applications

Advantages of Virtual Reality for the Autistic Individual

- VR uses sight and sound more than touch: auditory and visual stimuli have been found to be most effective in teaching abstract concepts to people with autism.

- In the virtual environment, input stimuli can be modified to a tolerable level

- The environment can be altered gradually to teach generalization and cross-recognition.

- Above all, VR offers a safe learning environment in which the individual may make mistakes which might be physically or socially hazardous in the real world.

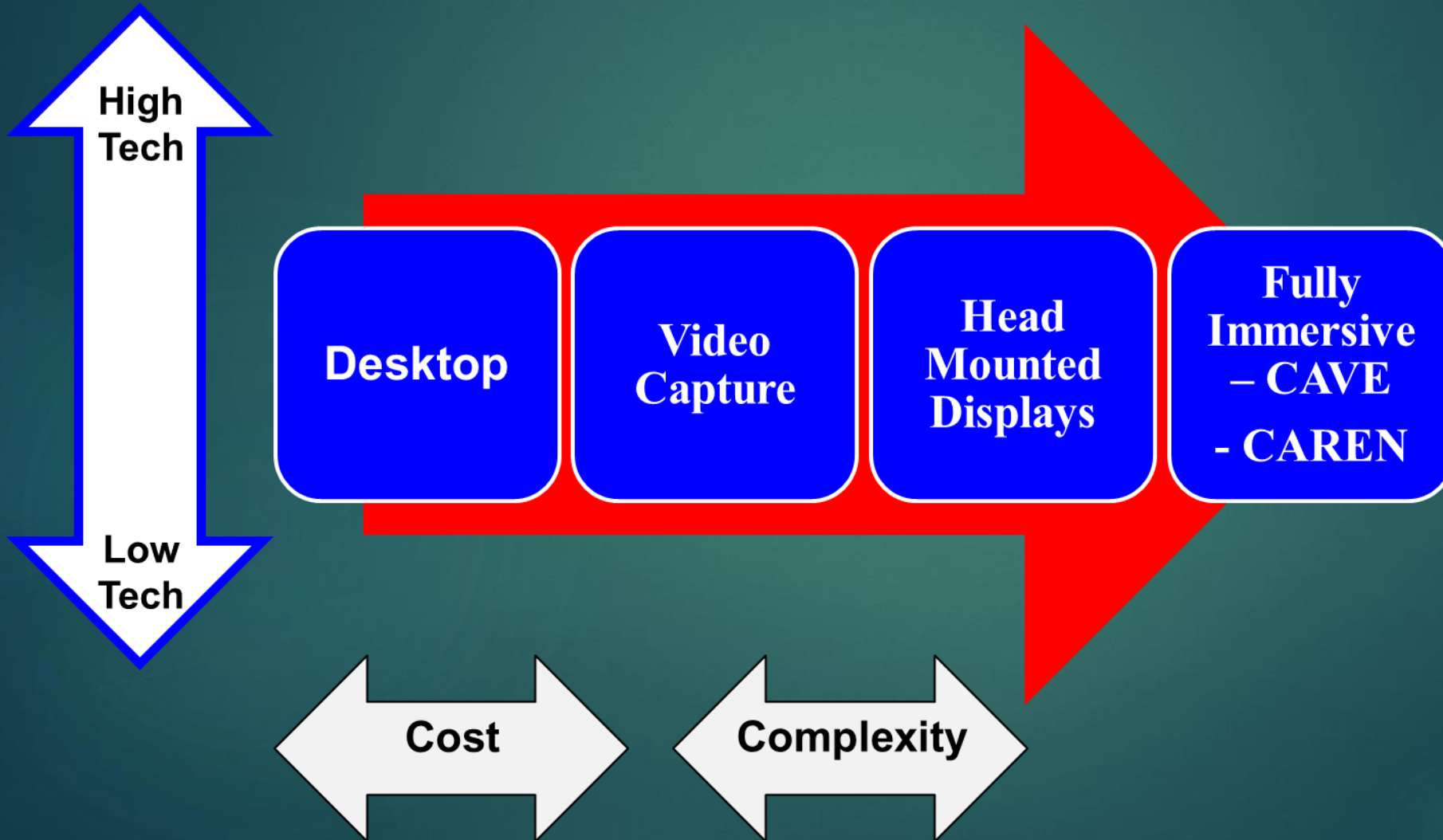# Functional Virtual Environments Desktop System: Street crossing

Josman, N., Milika Ben-Chaim, H., Friedrich, S. and Weiss, P.L. Effectiveness of virtual reality for teaching street-crossing skills to children and adolescents with autism. International Journal of Disability and Human Development. 7: 49-56, 2008.

Bart, O., Katz, N., Weiss P.L., & Josman, N. Street crossing by typically developed children in real and virtual environments. OTJR: Occupation, Participation and Health, 28: 89-97, 2008.

- 6 children, 9-16 years, low functioning ASD used desktop VR street crossing intervention program (ten 30 min sessions); 6 children with ASD as controls.

- All children in VR group improved in task while operating the VE.

- all succeeded in advancing from initial baseline performance to their final baseline significantly

- number of accidents decreased significantly

- transfer of skills: 3/6 children achieved greater proficiency in the protected real street environment occurred

The Assistive Technology Cost Continuum

Appropriate Technology

▶ An ideological movement (and its manifestations) originally articulated as by the economist Dr. Ernst Friedrich "Fritz" Schumacher in his influential work, *Small is Beautiful*. Though the nuances of appropriate technology vary between fields and applications, it represents a meaningful opportunity to address the cost continuum.

▶ it is generally recognized as encompassing technological choice and application that is small-scale, decentralized, energy-efficient, environmentally sound, and locally controlled AND people-centered.

▶ Also known as the "design for the other 90 percent" movement, advocating the creation of low-cost solutions for the 5.8 billion of the world's 6.8 billion population who have little or no access to most of the products and services many of us take for granted.

Summary and Conclusions: The Technology Drivers - Telepresence, EHR and Virtual Reality

- Increasing self-determination and personal control in decisions affecting people with Autism

- Providing opportunities for people with Autism to live and participate in their own communities

- Improving quality of life for individuals and families as they define it for themselves

- Supporting families as the most important and permanent unit of development, protection, and lifelong assistance to persons with Autism

- Investing in each individual's developmental potential and capacity to contribute in age-related roles as productive and respected community members

- Ensuring access to sufficient, high-quality health and social supports to protect each person's health, safety, rights, and well-being

- Moving people with developmental disabilities out of poverty by significantly increasing opportunities for real work with real pay

Thank You!!