

## Relationship of the Expanded Core Curriculum to Young Adult Outcomes

South Pacific Educators in Vision Impairment  
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## What is the Expanded Core Curriculum?

(just in case you've never heard of it . . .)

- Curriculum used by specially trained teachers to teach students who are blind or visually impaired.
- Components of it can be found in some of the earliest published literature on teaching students who are blind (Erin, 2006)
- Consists of 9 areas compiled by Hatlen (1996, 2003)



## Defined as...

- A specific body of knowledge that must be learned by children who are visually impaired in order for them to realize success in school settings, as well as to achieve success as adults (Huebner, Merk-Adam, Stryker, & Wolffe, 2004).
- For children without disabilities this knowledge is learned incidentally, so specialized teaching is not necessary.



## The Nine Areas of the Expanded Core Curriculum

Compensatory Academic  
Social Interaction  
Recreation and Leisure  
Orientation and Mobility  
Assistive Technology  
Self-Determination  
Sensory Efficiency  
Independent Living Skills  
Career Education



# What Do We Really Know About the ECC?




## Research Results

- Teachers spend most of their time on academic and compensatory skills and only a limited time on other areas of the ECC (Wolffe, Sacks, Corn, Erin, Huebner, & Lewis, 2002)
- No time to teach self-determination skills (Agran, Hong, & Blankenship, 2007)



## Research Results, continued

- Students who receive high-quality instruction in the ECC have a "richer quality of life" (Sapp & Hatlen, 2007)
- Paraprofessionals feel that they provide direct instruction in all areas of the expanded core curriculum more frequently than the teachers of students with visual impairments felt they did (MacKenzie & Lewis, 2008)

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## Research Results, continued

- Instruction in ECC associated with lower post-school outcomes (Monson, 2009)
- Important, but teachers do not have the time (Lohmeier, Blankenship, & Hatlen, 2009)
- Teachers do not provide adequate instruction based on principles of the ECC (Sapp & Hatlen, 2010)

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## Research Results, continued

- Significant relationships between instruction in ECC and positive outcomes (Wolffe & Kelly, 2011).
- Proposed ECC for students with deafblindness (Gense & Gense, 2011).
- Teaching ECC areas second most prevalent activity in Queensland (Brown & Beamish, 2012).



## In Progress

- [Anne Sullivan Macy Act](#)
- “The expanded core curriculum includes instruction in communication and productivity (including braille instruction, and assistive technology proficiency inclusive of low vision devices); self-sufficiency and interaction (including orientation and mobility, self determination, sensory efficiency, socialization, recreation and fitness, and independent living skills); and age appropriate career education.”



## Research Questions

What is the relationship of the expanded core curriculum to post-school outcomes for youth with visual impairments enrolled in

- general education settings
  - specialized education settings
- at the start of the study?



## Project Information

- Institute for Education Sciences  
Grant #R32409288
- \$232,581
- 2009-2010
- Used data from Waves 1 and 4 of  
NLTS2



## The NLTS2 – Database

- National Longitudinal Transition Study 2
  - Funded by the United States Department of Education, authorized by IDEA amendments
  - Gathered data from school districts, parents of students with disabilities, the educators of students with disabilities, and from students with disabilities themselves.
  - Began in the 2000-2001 school year with students who were in at least grade 7 or between the ages of 13 and 16, continued through the 2009-2010 school year.
  - Results can be generalized to students with disabilities in general, as well as to each of the individual disability categories (Levine, Marder, & Wagner, 2004).
  - Captured information related to each of the ECC areas, with the exception of sensory efficiency, while students were in school.

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## The Study Sample, Drawn from the NLTS2 Database

- Identified as having a vision impairment by both the parent and the school district in Wave 1 (n = 1011)
  - Totally blind = 359 (35.5%)
  - Low vision = 652 (64.5%)
- No longer in school
- Responded to the parent/youth interview in both Waves 1 (2000-2001) and 4 (2006-2007)

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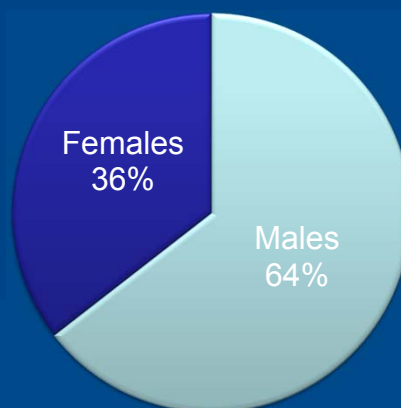
## Study Sample

- Sample size:

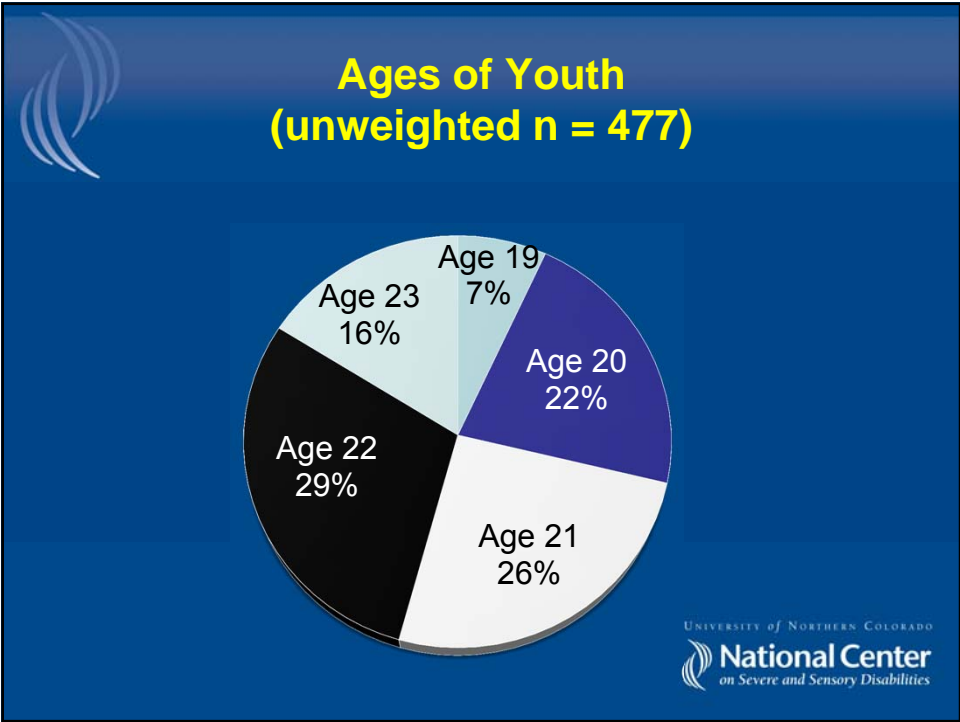
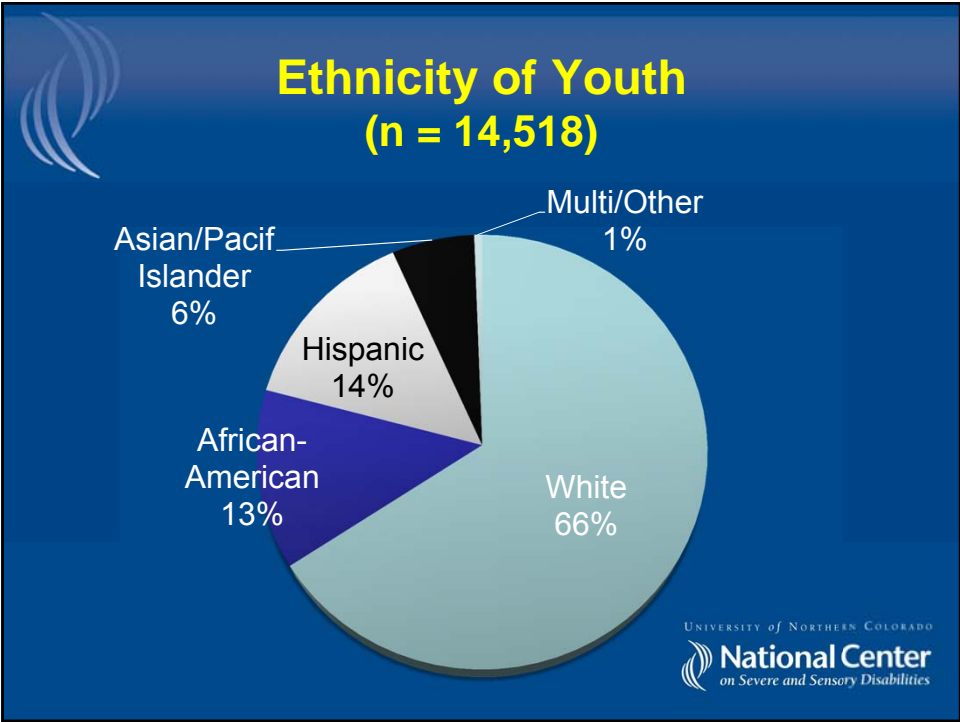
Unweighted = 477

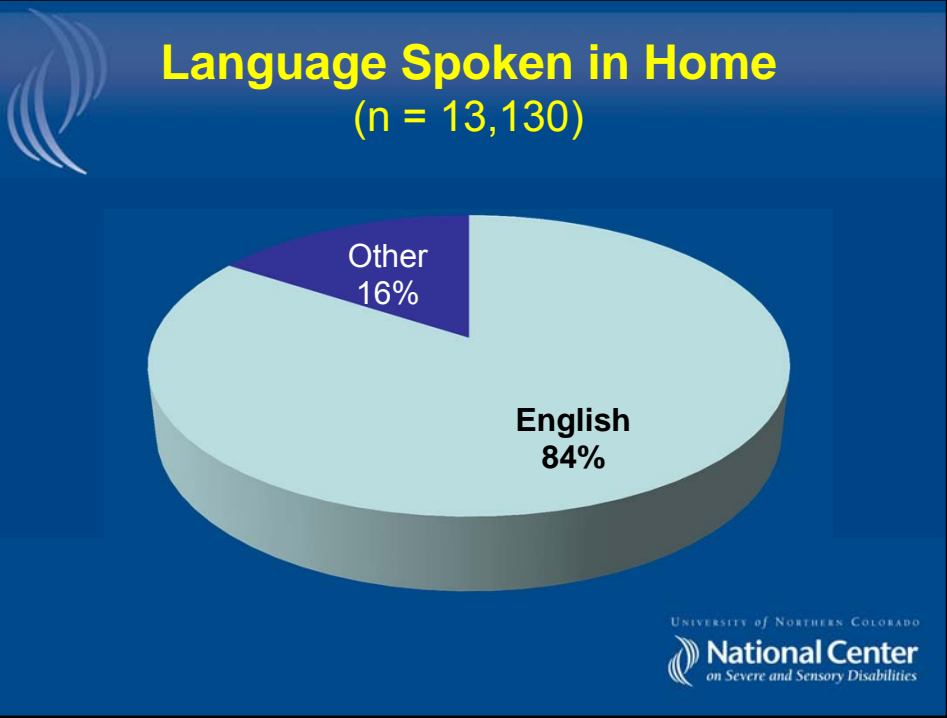
Weighted = 14,533

## Gender of Youth (n = 14,533)









## Age at Diagnosis (n = 14,533)

Disability identified at age	Proportion
Birth	62.4%
≤ 5 years	88.9%

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## 3 Steps

- Factor analysis (exploratory)
- Creation and calculation of composite variable
- Multiple regression



## Data Reduction

- Identified all variables that had any relationship to ECC
- **412** likely variables from Parent, Teacher, School Program, and School Characteristics Survey, plus Direct Assessment
- **224** eliminated because of missing data or constant responses

## First Factor Analysis

General	Special	Factor
1	1	Specialized instruction and services
2	3	Social interaction
3	3	Youth behaviors
3	6	Parent expectations
4	2	Accommodations and modifications
4	4	Related services
5	2	Orientation & mobility
6		Self-determination
7	6	Technology
8	5	Recreation and leisure
8	8	Compensatory/access
9	7	Career instruction /services
	9	Independence

## Factor Analysis

- **188** submitted for Exploratory Factor Analysis with 9-factor solution, using Principal Components method with Varimax Rotation, Factor Loadings > .5
- Resulted in different factors in each educational setting

## General Education

- Factor 1: Career, Transition, Accommodations, and Supports
- Factor 2: Support Services and Social Behaviors
- Factor 3: Orientation and Mobility Skills, Independence
- Factor 4: Related Services
- Factor 5: Specialized Instruction and Accommodations
- Factor 6: Classroom Instruction
- Factor 7: Vocational Education and Parent Expectations
- Factor 8: Braille, Assistive Technology, and Classroom Aide
- Factor 9: Volunteer Service

## Special Education

- Factor 1: Career, Transition, and Educational Supports
- Factor 2: Orientation & Mobility Skills and Computer Skills
- Factor 3: Expectations and Social Integration
- Factor 4: Social Behavior
- Factor 5: Work Experience, Accommodations, Mobility
- Factor 6: Related Services
- Factor 7: Technology, Accommodations, Related Services
- Factor 8: Assistive Technology, Recreation
- Factor 9: Compensatory Access OLORADO

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## Living Arrangements (n = 14,053)

Description	Proportion
Lives with parents	68.5%
Lives on own	9.2%
Lives with spouse or roommate	8.4%
Lives in dormitory or other college housing	5.3%
Lives in group home	2.4%
Lives in military housing	0.1%
Lives in correctional facility	0.1%

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## Composite Variable of “Adult Success” – Three Components (Halpern, 1993)

### Physical and Material Well Being (5 points):

- a. Physical and mental health -- Youth has problems with general health
- b. Food, clothing and lodging -- Youth currently lives on his/her own/alone; with a spouse or roommate; or in a college dorm or military housing
- c. Financial security -- youth household income; benefits youth received at current or most recent job: health insurance ; services youth currently receives: financial assistance (aid, disability waiver, SSI, Medicaid)



## “Adult Success,” cont’d

- d. Safety from harm (n/a)

### Personal Fulfillment (3 points):

- a. Happiness -- How well youth likes/liked current or most recent job
- b. Satisfaction -- Youth is happy with current living arrangement
- c. Sense of general well-being -- Youth's attitude towards current/recent job: pretty well paid

## **“Adult Success,” cont’d**

### **Performance of Adult Roles (20 points):**

- a. Mobility and community access - How well youth can get places outside the home; can use public transportation; can arrange a plane or train trip
- b. Vocation, career and employment -- Youth competitively employed in the past 2 years ; usually works full- or part-time
- c. Leisure and recreation -- Youth participated in in- and/or out-of-school group activities ; spent time doing outdoor physical activities (playing sports, jogging, swimming, biking, skating); participated in: a sports team

## **“Adult Success,” cont’d**

### **Performance of Adult Roles, cont’d:**

- d. Personal relationships and social networks -- How often youth gets together with friends outside of organized activities; Youth spent time with friends or going on dates; Youth was invited to social activities with friends
- e. Educational attainment -- High School Graduation ; Youth attended a postsecondary institution since high school
- f. Spiritual fulfillment -- Groups youth participated in: a religious group



## “Adult Success,” cont’d

- g. Citizenship (n/a)
- h. Social responsibility (n/a)



## Multiple Regression


- General education settings:  $R^2 = .04$
  - Specialized education settings:  $R^2 = .07$
- ***No relationship between any of the factors in either educational setting and “adult success”***





## Reexamination

- “Adult success” variable inadequate measure (28 possible points)
  - 25<sup>th</sup> percentile = 3.5
  - 50<sup>th</sup> percentile = 8.5
  - 75<sup>th</sup> percentile = 13.0
  - Range = 1 – 20
  - 7.9% = 0

- 
- Chose one outcome variable – “Competitive Employment”
    - 10.1% of sample
  - Performed logistical regression

## Logistical Regression, Specialized Education Settings

Factor	Factor Description	Increase in odds of Competitive Employment when factor increases by one unit
F1	Career, transition, educational supports	1.106
F4	Social Behavior	1.885
F5	Work experience, accommodations, mobility	1.756
F9	Compensatory access (braille, LP, LVD)	.452 (54.8%↓)

*No relationship between factors and competitive employment when in General Education Settings*



## Logistical Regression, All General and Special Education Settings

Factor	Factor Description	Increase in odds of Competitive Employment when factor increases by one unit
F1	Career, transition, educational services and supports	1.049
F3	Related services, technology, O&M, life skills	.786 (22.6%↓)





## Limitations

- Much missing data, especially from teachers
- Number of dichotomous variables required recoding of all variables into dichotomous values
- Only 11.4% of sample competitively employed at Wave 4, even though out of school > two years

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## Take Aways

- 8 of the 9 ECC components appeared to be addressed in this sample of youth and adults with visual impairments
  - But little distinct pattern
  - Not discrete components
- Failed to find a relationship between identified factors and composite variable of “adult success”

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## Take Aways, continued

- For those adults engaged in competitive employment, best predictor variables were:
  - Social behaviors and opportunities
  - Career and transition services and instruction
  - Compensatory access (braille & large print), but in opposite direction
    - More braille and large print = less chance of employment?
    - Artifact of discrimination?
- In general education settings, no factors emerged as predictors

## Take Aways, continued

- When general education and special education settings are considered together, more related services received seems to predict less opportunity for competitive employment
  - But, which came first?



## More Importantly

This sample of youth with visual impairments not only unemployed, . . .  
but disengaged



## The REAL Take-Aways

- 92.4% making \$25,000 or less
  - Yet 61% think they are fairly well paid
- 17.3% currently receiving financial assistance
- 36.3% do not get places outside the home well
- 49.6% do not use public transportation well



- Only 11.1% have health problems



- Use of time:
  - 24.6% of time spent with friends or going on dates
  - 17.6%, reading for pleasure or doing hobbies
  - 17.1%, watching TV
  - 10.7%, using computer for email/chat/internet
  - 10.1%, listening to music
  - 8.6%, doing outdoor physical activities
  - .1%, going out to eat at restaurants

## Questions To Ask Ourselves

- Where is the disconnect?
- Why is this sample of youth as unemployed as blind adults were 50 years ago?
- Is the ECC theory, fact, or wish?
- Are we expending our energy in the right place at the right time?

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***Together we can do more***


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