



WESTERN
PENNSYLVANIA
SCHOOL
FOR BLIND
CHILDREN

CONNECTING FUNCTIONAL
VISION ASSESSMENTS TO
INSTRUCTIONAL DECISIONS
ELIGIBILITY AND
SO MUCH MORE!

Kerry Lueders, MS, COMS, TVI, CLVT
Lynn Fox, EdD, TVI, COMS

INTRODUCTION

Objectives

- Identify Functional Vision Assessment components
- Identify FVA data to determine student need for specially designed instruction
- Determine ways in which FVA data demonstrate that educational performance has been impacted

FVA COMPONENTS

- Purpose
- Record Review
- Interviews
- Observations
- Assessments

PURPOSE

Should emphasize the use of vision to perform tasks

- while independence may be accomplished through non-visual means, the FVA is not focused on independence in general but on the use of vision

“The purpose of the Functional Vision Assessment is to determine the extent to which [Student] uses their vision to...”

RECORD REVIEW

- IEP/504
- Evaluation Reports
- Medical Reports

INTERVIEWS

- Student
- Parents/caregivers
- Teachers
- Therapists

OBSERVATION GUIDE

- Reading ability and efficiency
- Reading or close-viewing behaviors
- Pictures
- Preferred viewing distances for near and far work
- Preferred optimal positioning for viewing
- Use of writing equipment
- Writing
- Copying, drawing, cutting, or other relevant eye-hand coordinating tasks
- Color identification and use
- Lighting requirements; performance in different lighting conditions
- Contrast needs
- Near object location and reach
- Use of eye glasses, optical devices, or special equipment
- Requests for assistance

CLARITY

Record Review	Eye condition DVA sc, DVA cc NVA sc, NVA cc
Interview	What is the student's visual acuity? Does their acuity fluctuate? Do medications impact acuity? Other...
Observation	How far away does the student get from materials? What print size(s) does the student prefer? When does the student wear (or not wear) their glasses? What zoom level does the student use on a monitor? Other...
Assessments	Eye charts (SOSH, LEA, Teller) Functional Visual Acuities

CLARITY IDEAS

- Use grade-level curricular materials – make sure use student materials for needed accommodation(s)
- Take a picture during assessment to illustrate what the student ‘seeing’ at each point
- Use shopping flyers – varying/smaller fonts, page complexity, color pages (background) with text color
- Chalk boards and chalk colors – contrast
- Spotting items/people in classroom environment (size and distance): clock, faces

FIELD OF VIEW

Record Review	Confrontation fields Humphrey Goldmann Amsler
Interview	Does the student miss objects/obstacles on one side? Does the student lose their place? Does the student experience difficulty seeing in dark environments? Other...
Observation	How far away does the student get from materials? Does the student bump into objects? Does the student use head movements to scan materials? Other...
Assessments	Modified confrontation Functional Visual Fields (Static, Preferred, Early Warning)

FIELD OF VIEW IDEAS

- Use cat toys with wands or objects on dial rods to bring in upper/lower/side fields
- Tangent screens
- Early detection – use second person to maintain fixation to not turn and look
- Pictures of ‘way distance’ to show far points as comparisons

COLOR AND CONTRAST

Record Review	Contrast sensitivity (Mars Letter Contrast Sensitivity Test, Pelli-Robson Contrast Sensitivity Chart) Color discrimination (Farnsworth, Ishihara)
Interview	Does the student require well-contrasted materials? Does the student misstep at poorly contrasted steps/curbs? Other...
Observation	Does the student miss information that is poorly contrasted? Does the student enhance contrast on monitors? Other...
Assessments	LEA Low Contrast Grating Acuity Test Hiding Heidi Low Contrast Face Test Preferred foreground/background

COLOR AND CONTRAST IDEAS

- Magazines, take out menus, etc.
- Use same color objects on same color backgrounds
- Classroom materials
- Use color paper with black text

LIGHTING AND GLARE

Record Review	Eye conditions
Interview	Are there situations in which the student experiences challenges with lighting and glare? Does the student use a task lamp? Does the student prefer to face away from windows? Other...
Observation	In what conditions does the student squint and/or shield their eyes? Does the student reposition him/herself? Does the student wear transition lenses or absorptive filters? Does the student dim their monitor? Other...
Assessments	Sun lens evaluation (outdoors and indoors) Task light evaluation (fluorescent, incandescent, combination, LED; type, amount and position)

LIGHTING AND GLARE IDEAS

- Use portable lamps to assess
- Florescent light covers – to eliminate light flickering
- Window covers
- Smart board light bulb replacements

VISUAL EFFICIENCY

Record Review	Eye conditions Prism diopters in Rx Hirschberg, Versions, Krimsky, Cover Test, Base-out Prism Test
Interview	Have you noticed the student repositioning their head and/eyes to get a better view? Does the student report double vision? Other...
Observation	Does the student look directly at objects when viewing them? Does the student demonstrate a null point? Does the student demonstrate integrated hand-eye coordination? Other...
Assessments	Tracing, tracking, scanning, localization, eye movements, distance and depth perception, shifting of gaze, head and body positioning

VISUAL EFFICIENCY IDEAS

- Assess on computer monitor
- Include visual clutter – use an atlas to find info
- Visual closure
- Games to assess ability to shift gaze
- Look for items in environment

COMFORT AND CONFIDENCE

Record Review	Eye conditions Rx Medications
Interview	Does the student complain of pain and discomfort when performing tasks visually? Describe the student's level of visual accuracy. Other...
Observation	Does the student demonstrate proper ergonomics? Is the student visually oriented to the task and environment? Does the student demonstrate frustration or avoidance? Is the student independent when using their vision? What is the student's level of affect? Other...
Assessments	Functional Visual Performance Critical Incidents

COMFORT AND CONFIDENCE IDEAS

- Visual fatigue – know thresholds for type of tasks (paper/pencil vs monitor)
- Observe student in variety of settings, in a variety of tasks
- Ask parents how student does homework afterschool – need visual break, need task lighting,
- Is there an environmental change to max vision function

FVA RESOURCES

- Commercial
- Teacher-created
- Environmental

COMMERCIAL RESOURCES

- American Printing House for the Blind (APH)
 - [ToAD](#)
 - [NewT](#)
 - [Tadpole](#)
 - [Sensory Learning Kit](#)
 - [Functional Vision and Learning Media Assessment \(FVLMA\)](#)
- [Vision Associates](#) materials
- School curricular materials
- Digital
- Occluder
- Tape measure
- Non-optical devices

TEACHER-CREATED RESOURCES

- Interview questions
- Forms
- Visual efficiency exercises
- Targets
- Font size comparison charts

ENVIRONMENTAL RESOURCES

- Home
- School
- Community

RESOURCES ACTIVITY

Map resource items to assessment components.

BREAK

ACTIVITY RESULTS

Station 1	Station 2
Station 3	Station 4

RESOURCES IDEAS

- Newt Kits – APH maybe piece apart, buy al a cart
 - Overlay on point sizes
 - Picture matching
- Established student interview for different grade levels
- Lakeshore Alphabet cards with picture on backs --- use for distance, contrast, labeling
- CVI Range – parent questionnaire

CASE REVIEW

CASE REVIEW

CLARITY	FIELD OF VIEW

CASE REVIEW

COLOR AND CONTRAST

VISUAL EFFICIENCY

CASE REVIEW

COMFORT AND CONFIDENCE

OTHER

RECOMMENDATIONS

1. Lighting and light sensitivity
 - Transitions from dim to bright and vice versa
 - Light adaptation time
 - Sunglasses
2. Use of magnifying devices
 - Large print
3. Eye fatigue
4. Astigmatism, myopia
5. Color/contrast
6. Further assessment of writing materials
 - Is the student's writing legible to the student?
 - Darker lead pencil? (4B or 6B, good eraser)

RECOMMENDATIONS (CONTD)

1. Explore functional visual field
2. Consultation with PE teacher (balls, fast movement)
3. Nystagmus – when not converging
4. O&M assessment
5. Data about preferential seating distance, font size with and without optical devices
6. Stereo test – esotropia, depth perception
7. LMA

EXPANDED CORE CURRICULUM

ECC Screening Tool and Protocol

ASSESSMENT DATA DRIVES INSTRUCTION

Conduct
screening
with all Team
Members

Team identifies
2-3 priority
areas for
assessment

Conduct a
criterion-
referenced
assessment

ECC SCREENING TOOL

EXPANDED CORE CURRICULUM SCREENING INTERVIEW TOOL
(To be completed Yearly)

Student Name: _____
 School: _____
 Grade Level: _____ Age: _____ TVI: _____
 Date of Needs Assessment: _____

Check all who contributed to this Needs Assessment:

Parents	General Education Teacher	COMS
Student	Special Education Teacher	Other related service providers
Other Family Members	TVI	Administrators






















Key: (+) Strength (-) Need (0) Not a Need at this time

Circle or highlight Priority Areas























Skills	Key	Justification Statement
AT/TECHNOLOGY		
Computer		
Keyboarding		
Use of screen reader		
Braille technology		
Voice output technology		
Screen enlargement		
Managing/Securing Equipment		
Use/management of Electronic Texts		
Additional Skills (identify)		
CAREER EDUCATION		
Knows function of community workers		

- Have team members complete the ECC Screening Tool
- Analyze the results aggregated across all team members
- Find the 2-3 top priority areas
- Use EVALs to conduct a valid and reliable assessment on those areas

























EVALs Section 1

-  01_Beginning Concepts
-  02_Pre-Braille
-  03_Braillewriter
-  04_Abacus Counting
-  05_UncontBrailleNum
-  06_Braille RandW
-  07_Handwriting_Blind
-  08_Handwriting_LV
-  09_Listening
-  10_Nemeth Code Elem
-  11_Nemeth_Algebra1
-  12_Nemeth_Algebra2
-  13_Nemeth_Geometry
-  14_Organization
-  15_Slate Stylus
-  16_Study
-  17_TGMath
-  18_SexEd
-  19_SocialSkills
-  20_BSDomAct
-  21_leisure

EVALs Section 2

-  01_BeginCareerEd_I
-  02_BeginCareerEd_II
-  03_CareerConn
-  04_CareerEdUnits
-  05_CompGenEmploy
-  06_WorkRelatedJobSite
-  07_BegBnS_BL_TnS
-  08_BL_BnS_TnS
-  09_BrailleNote
-  10_FunCompUse
-  11_AssistiveTools
-  12_Keyboarding
-  13_LowVision
-  14_Scanners
-  15_Speech
-  16_Telebraille
-  17_Visual Effic
-  18_Magnifier Use
-  19_Monocular Use
-  20_Self-Determ
-  21_EXIT Level 1
-  22_EXIT Level 2

EVALs Section 3

-  01_Health
-  02_AppofRead
-  03_BeginRead
-  04_Handwriting_LV
-  05_Writing_Blind
-  06_PersonalData
-  07_PracApplications
-  08_SightWords
-  09_TelephoneSkills
-  10_UncontBraNum
-  11_Vocabulary
-  12_WriteComp
-  13_BS LA Secondary
-  14_BasicMath
-  15_MeasurementSki
-  16_Money_Skills
-  17_Time Calendar
-  18_BS Math Second
-  19_Elementary Sci
-  20_General Science_Health
-  21_BS Science_Healt
-  22_PA General SS
-  23_PA TexasHistory
-  24_PA USHist_EtoR
- 25_PA USHist_RtoP
- 26_PA WorldHistory
- 27_PA WorldGeo
- 28_PA Economics_PI
- 29_PA Government
- 30_BS General SS
- 31_InfSkillsAssess

EVALS SCORING: PRE- AND POST-TEST

SUGGESTED Scoring Guide:

C = Competency

Competency for an objective is determined by the student's ability to perform a skill using one of the following criteria:

- consistently (100% of the time) in at least one setting with minimal support (no more than 2 prompts)
- frequently (90%-100% of the time) in several settings with minimal support (no more than 2 prompts)

Determination of Progress:

The following scale can be used to determine progress on the "Post-test:"

- 1 = none to minimal progress: less than 10% increase in skills.
- 2 = moderate progress: 10% - 19% increase in skills.
- 3 = substantial progress: 20% or greater increase in skills.

EVALS EXAMPLES

USE OF MAGNIFIER

- A. Identifies a variety of magnifiers (e.g., hand magnifier).
- B. Selects the correct magnifier for current task.
- C. Identifies the purpose of the magnifier.
- D. Positions self and magnifier for optimal viewing.
- E. Stabilizes reading material.
- F. Stabilizes the hand using the magnifier.
- G. Adjusts eye-to-lens distance for comfort.
- H. Coordinates hand, head and eye movements.
- I. Uses magnifier to read on a flat surface.
- J. Uses magnifier to read a variety of print.
- K. Uses magnifier for other tasks (e.g., reading washing instructions, identifying playing cards, verifying denominations of currency, etc.).
- L. Spontaneously uses the magnifier.

Pre-test Post-test

BEGINNING READING SKILLS	TEKS	Gr. Level	Pre-test Cs	Post-test New Cs
B. Reading Vocabulary and Comprehension				
1. Explores graphic representations in various settings (e.g., signs, books, labels).	PK - LA(6)	Pre-K		
2. Understands that different forms are used for different functions (lists, letters, recipes).	PK - LA(6)	Pre-K		
3. Discriminates Braille or print from tactile symbols or pictures.	PK - LA(6)	Pre-K		
4. Uses pictures or tactual cues (e.g., objects or parts of objects, tactual symbols) to enhance the comprehension of the story.	PK - LA(6)	Pre-K		
5. Recognizes personally meaningful vocabulary symbols (e.g., objects, activities, events, people).	110.2 - K.8(C)	K		
6. Recognizes personally meaningful vocabulary words (e.g., objects, activities, and people).	110.2 - K.5(A) 110.3 - 1.5(A)	K 1		
7. Discriminates word boundaries in print or Braille.	110.2 - K.5(C) 110.3 - 1.5(C)	K 1		
8. Differentiates between words and letters in print or Braille.	110.2 - K.5(CD) 110.3 - 1.5(CD)	K 1		
9. Taps out syllables in word.	110.2 - K.6(B) 110.3 - 1.6(B)	K 1		
10. Identifies like and unlike sounds.	110.2 - K.6(CD) 110.3 - 1.6(CD)	K 1		
11. Forms rhyming words by substituting initial consonants.	110.2 - K.6(D) 110.3 - 1.6(D)	K 1		
12. Identifies the initial letter in a spoken word.	110.2 - K.6(D) 110.3 - 1.6(D)	K 1		
13. Identifies the final letter in a spoken word.	110.2 - K.6(D) 110.3 - 1.6(D)	K 1		
14. Recites letters of the alphabet and in order (not an identification task).	110.2 - K.7(A) 110.3 - 1.7(A)	K 1		
15. Identifies letters.	110.2 - K.7(A) 110.3 - 1.7(A)	K 1		
16. Discriminates sounds for individual letters of the alphabet.	110.2 - K.7(A) 110.3 - 1.7(A)	K 1		
17. Indicates if a given sound can be heard in a word.	110.2 - K.7(A) 110.3 - 1.7(A)	K 1		
Subtotal				



TRANSITION PLANNING

Transition Planning

Global Evaluation

EXIT Level 1 *EXperiences In Transition*

Student Name: _____ School Year: _____

Level 1 of this assessment is most appropriate for students who will require continuous, on-going support as adults.

Directions:

1. This assessment should be used to determine present level of performance, to write IEP objectives and to determine yearly progress.
2. For the Pre-test, assess each objective to determine present level of performance. Add all marks in the Pretest **C** columns and record the subtotal at the bottom of each page, then add all of the subtotals together and enter the total in the "Total of this Skill Area" **and** the total on the back of this page.
3. For the Post-test, review all areas of the assessment where programming has occurred or IEP goals have been addressed to determine what **new** skills are at the Competency (**C**) level. Add all marks in the **New Cs** column and record the subtotal at the bottom of each page, then add all of the subtotals together and enter the total in the "Total of this Skill Area" **and** the total on the back of this page.
4. The total (from the "Scoring Scale" on the back of this page) will be used to determine the student's progress.

Scoring Guide:

C = Competency

Competency for an objective is determined by the student's ability to perform a skill using one of the following criteria:

- consistently (100% of the time) in at least one setting with minimal support (no more than 2 prompts)
- frequently (90%-100% of the time) in several settings with minimal support (no more than 2 prompts)

Basic Skills *Infused Skills Assessment*

Student Name: _____ School Year: _____

Introduction:

The Basic Skills Infused Skills Assessment is a very effective tool for analyzing the strengths and weaknesses of students with visual impairments who may also have cognitive and behavioral challenges. This assessment begins at a developmentally young, non-verbal skill level, and progresses up to higher cognitive functions, while remaining appropriate for students in life skills programming.

This assessment is divided into different areas: Social Communicative Interactions, Emotional Development, Senses/Motor Skills, Basic Concepts, and Representation and Cognition. Each of these categories has a list of skills arranged in a hierarchy of development from lowest to highest. As you score each skill, you will have four possible choices: three levels of competency in the skill, or that the skill has been generalized.

Typically, as you move through a category, you will find higher scores at the beginning, and then a clear point at which the student ceases to have any degree of competency in the remaining skills. This can be very useful to assist you in your programming and IEP development. Skills from each category that show a low degree or absence of competency make an ideal starting point to develop an IEP. Also, there is some degree of overlap between categories, so that is very possible to have multiple IEP's addressed within a lesson. Scoring the Assessment will give you a numeric value of progress from the time of your pre-test to your post-test.

Pre-test: Have both *Assessment* and *Score Sheet* ready. Use black ink.

Each skill is scored once. There are examples for some skill areas, but these are for your clarification only. Feel free to make notes. Score each skill according to these criteria in the **Assessment**.

- Student does not demonstrate this skill - **leave blank**.
- Student does this skill consistently in one routine/environment with a familiar person 50-59% of the time - **make one hash mark in "Pre-test Cs" box**.
- Student does this consistently in more than one routine/environment with two or more people 60-69% of the time - **make two hash marks in "Pre-test Cs" box**.
- Student does this consistently in more than two routines/environments with three or more people 70-79% of the time - **make three hash marks in "Pre-test Cs" box**.
- Student does this consistently in more than four routines with four or more people 80-100% of the time - **make three hash marks in "Pre-test Cs" box, and one hash mark in "Pre-Test Gs" box**.

CONCLUSION

FVA REPORT SAMPLES

Haegerstrom-Portnoy, G. (2004). Evaluation methods and functional implications: Young children with visual impairments and students with visual and multiple disabilities. In A. H. Lueck (Ed.), *Functional vision: A practitioner's guide to evaluation and intervention* (pp. 115-176). New York, NY: AFB Press.

Greer, R. (2004). Evaluation methods and functional implications: Children and adults with visual impairments. In A. H. Lueck (Ed.), *Functional vision: A practitioner's guide to evaluation and intervention* (pp. 177-253). New York, NY: AFB Press.

QUESTIONS?

CONTACTS

Kerry Lueders

Salus University

klueders@salus.edu

Lynn Fox

Western PA School for Blind Children

foxl@wpsbc.org