

Switch Access Beyond Cause and Effect: Stepping Stones for Effective Learning

Linda Burkhart
Independent Consultant
linda@Lburkhart.com

Fio Quinn
Independent Consultant/Content Developer
mfquinn@srt.com

1

Switch Access Beyond Cause and Effect: Stepping Stones for Effective Learning Part 3

Moving from two switches, two functions to learning to step-scan (failure-free with feedback)

2

Which Kids?



- Physical Challenges that limit direct select access to a computer display
- Frequently other multiple challenges such as: CVI, Complex Communication Needs, Auditory Processing challenges, cognition, learning differences, previous experiences, etc.
- Individuals who need multiple access methods due to physical position, fatigue, environmental factors, strategic competencies, and preference

3

Two Switch Step Scanning

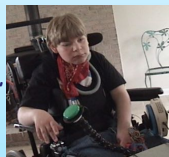
**Some Kids Just "Get it"
Other Kids Need to Learn it**

Kids who understand the concept of Step Scanning, skip Stepping Stone #4 and move on to Stepping Stone #5

4

Stepping Stone 4: Learning to Two Switch Step Scan: Move, Move, Get

- For children who do not cognitively understand how step scanning works (some children may skip this step)
- One switch becomes a "mover"
- Second switch becomes a "getter"



5

Step 4: Move, Move Get or Learning to Two Switch Step Scan

6

Technology Features: Two switches but only one switch is active at a time. Switch 1 moves an item along a path. Switch 2 is not active. Each switch activation moves the item closer to the end of the path. Once the item arrives at destination, the first switch ignores the input while the second switch becomes active and selects the item at the end of the path.

Learning Two Switch Step Scanning - Lesson 4 & Step Scanning App (Judy Lynn)

7



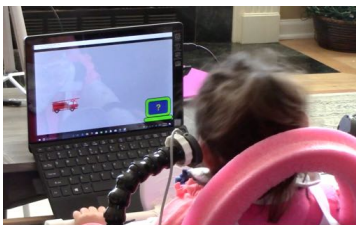
Mind Express Steps Before Step Scanning (Burkhart)

8



Two Switches to Success (Mind Express) Move, move, get

9



Switch Skills for Two Set 2 (Inclusive TLC)

10



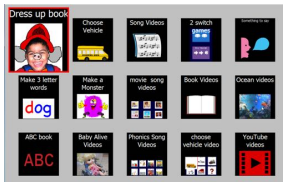
also some on helpkidzlearn.com

Step 5: Two Switch Step Scan - Failure Free



Create using many different switch accessible software and Apps that allow you to make pages that branch to other pages. For example: Mind Express, Clicker, Boardmaker Plus, Boardmaker Studio, Communicator, GoTalk Now, Grid, Compass, Whatever software/app you might have access to, etc.

11



No "Right" or "Wrong" Answers
- Just a "Playground" to Explore with
Good Strategic Feedback for the
Child's Selections

12

CAUTION:
Some People Have
Redefined
"Errorless Learning"

13

CAUTION:
Some People Have
Redefined
~~"Errorless Learning"~~

We are now using:
"Failure Free with Feedback"
(Karen Erickson)

14

Step 5: Two Switch Step Scanning - Failure Free with Feedback

Technology Features: Scanning does not begin until the individual activates switch
1. Activation of the first switch immediately interrupts any sound, animation or auditory cue and highlights the next item in the array. Switch must be released and reactivated to move to the next item. The second switch selects the highlighted item. Launcher features highly desired.

15

16

Problem Solving with Launcher



17

<http://tarheelgameplay.org>

The screenshot shows the Tar Heel Gameplay website. It features a grid of educational games, including "Caring", "Addition", "Subtraction", "Multiplication", "Division", "Fractions", "Decimals", "Percentages", "Algebra", "Geometry", "Science", "History", "Literature", "Art", "Music", "Physical Education", and "Social Studies". Each game has a small thumbnail image and a brief description. The website also includes a search bar and a navigation menu.

18

Individual Student Launchers (Mind Express)

(Burkhart)

The screenshot shows the Individual Student Launchers (Mind Express) interface. It features a grid of launchers for various educational activities, including "Ocean videos", "write longer letter", "ABC book", "Who Can Swim?", "write with the alphabet", "Make 3 letter words", "school videos", "write short letter", "Book Facts about Dogs", and "Music videos". Each launcher has a small thumbnail image and a brief description. The interface also includes a search bar and a navigation menu.

19

Scan and Paint & Cause Effect Amusement Park (Judy Lynn)

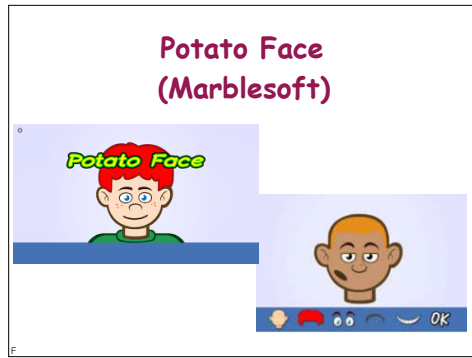
The screenshot shows the Scan and Paint & Cause Effect Amusement Park interface. It features a grid of launchers for various educational activities, including "Ocean videos", "write longer letter", "ABC book", "Who Can Swim?", "write with the alphabet", "Make 3 letter words", "school videos", "write short letter", "Book Facts about Dogs", and "Music videos". Each launcher has a small thumbnail image and a brief description. The interface also includes a search bar and a navigation menu.

20

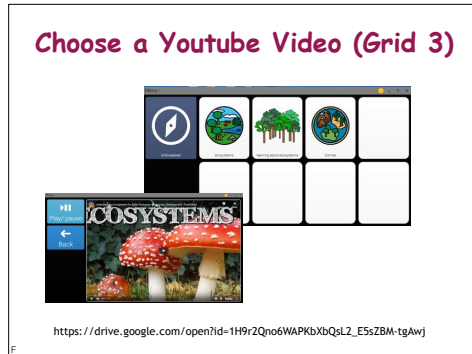
GoTalk Now Plus Alphabet Play Book

The screenshot shows the GoTalk Now Plus Alphabet Play Book interface. It features a grid of launchers for various educational activities, including "Ocean videos", "write longer letter", "ABC book", "Who Can Swim?", "write with the alphabet", "Make 3 letter words", "school videos", "write short letter", "Book Facts about Dogs", and "Music videos". Each launcher has a small thumbnail image and a brief description. The interface also includes a search bar and a navigation menu.

21



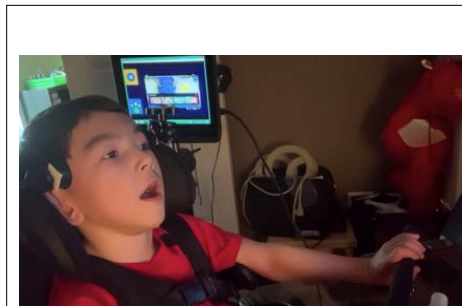
22



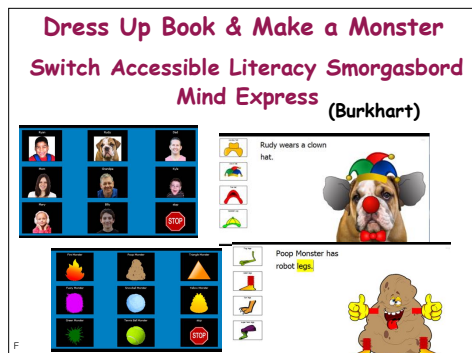
23



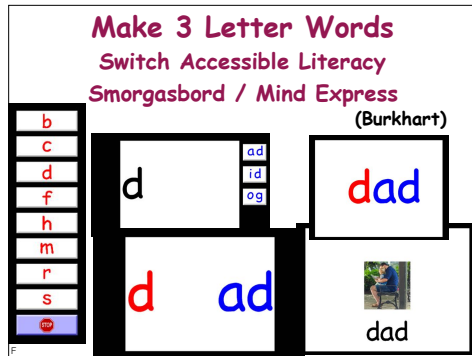
24



25

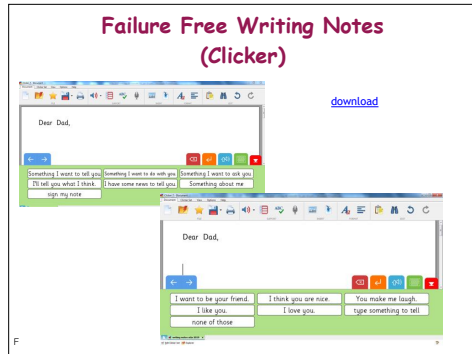


Make 3 Letter Words
Switch Accessible Literacy
Smorgasbord / Mind Express
(Burkhart)



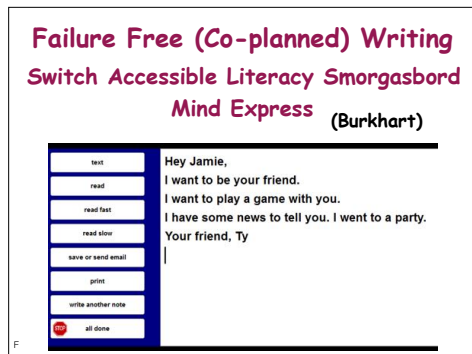
26

Failure Free Writing Notes
(Clicker)



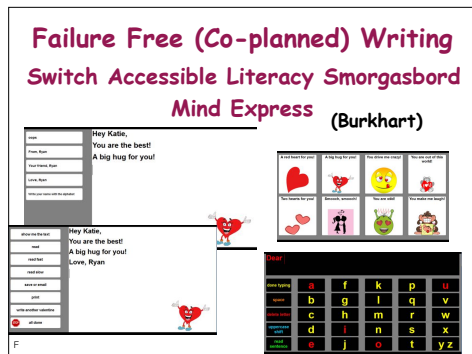
27

Failure Free (Co-planned) Writing
Switch Accessible Literacy Smorgasbord
Mind Express (Burkhart)



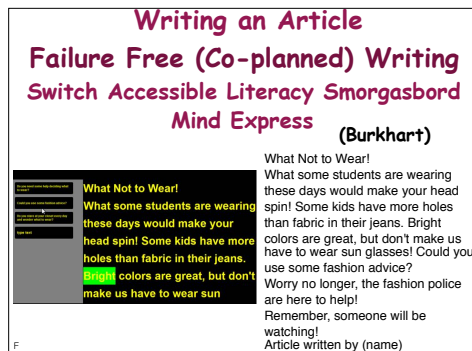
28

Failure Free (Co-planned) Writing
Switch Accessible Literacy Smorgasbord
Mind Express (Burkhart)



29

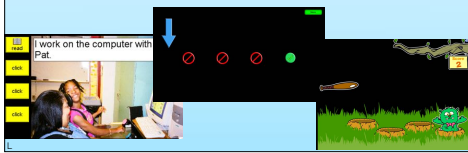
Writing an Article
Failure Free (Co-planned) Writing
Switch Accessible Literacy Smorgasbord
Mind Express (Burkhart)



30

Step 6: Two Switch Step Scan for Clear Choices:

Activities for Increasing Accuracy and
Cognitive Engagement - Moving to a
specific target in an array



31

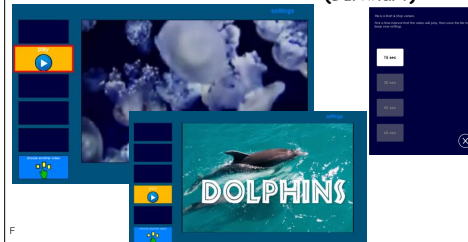
Step 6: Two Switch Step Scan for Clear Choices:

Technology Features:

Same as step 5 plus ability to have some
cells scanned with only a sound or 'nope',
'more', etc. and then have a big effect for
target selection: video, song, animation,
etc.

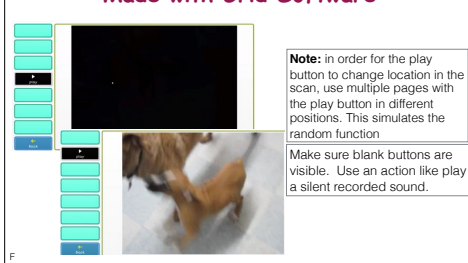
32

Scan to target to play video Switch Accessible Literacy Smorgasbord Mind Express (Burkhart)



33

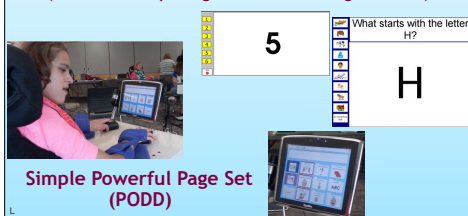
Scan to target to play video Made with Grid Software



34

Step 7: Practice for Increasing Accuracy with Two Switch Step Scanning

Some activities have correct and incorrect options, but
also have good feedback for incorrect items
(Child is still exploring without data being collected)



35

Step 7: Practice for Increasing Accuracy with Two Switch Step Scanning

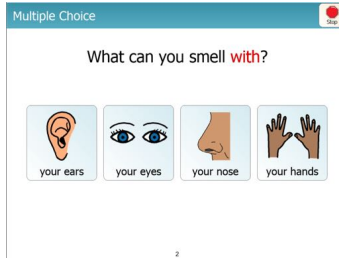
36

Technology Features:

Same as step 5 plus more specific content with clear feedback. Different selections have very different results. Cognitive load is still kept relatively simple.

Boardmaker Studio

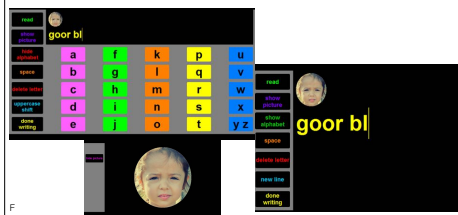
37



Write about a Picture

38

**Switch Accessible Literacy Smorgasbord
Mind Express (Burkhart)**



Commercially available activities that require correct answers may be introduced

39

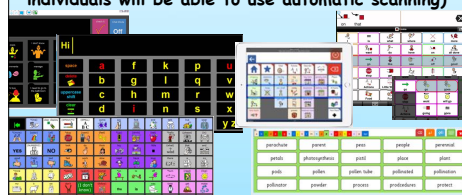
- Use a launcher so the individual can choose to use these or not
- Mix in activities that are failure free (stepping stone 5)
- Use activities with simpler cognitive load
- Provide strategic feedback if possible (instead of just "wrong")



Step 8: Automaticity Two Switch Step Scan Reducing Time for Success

40

The child has now developed automaticity with switch access and they can focus on content and not just on activating the switches (Now, some individuals will be able to use automatic scanning)



Listening Comprehension with Feedback
Switch Accessible Literacy Smorgasbord
Mind Express (Burkhart)



41

Thanks for attending!

Linda Burkhart
Independent Consultant
linda@Lburkhart.com

Fio Quinn
Independent Consultant/Content Developer
mfquinn@srt.com

Please see separate handout for resources

42
