Using Computer Based Instruction to Teach Grocery Shopping

Objective: To teach students to read grocery aisle signs and locate items on a grocery store aisle.

Setting and Materials:

Settings: Instruction is conducted in classroom or office two to three days per week. Skill generalization is measured in the community at four local grocery stores.

Materials:
1. Materials include a video Hi8 cam recorder
2. Tripod
3. 8mm-120-minute videotape
4. 35mm auto focus camera
5. 35mm Kodak film
6. Scanner
7. Apple Video Player
8. Hyper studio 3.1 software program
9. Macintosh G3 PowerBook computer
10. Touch Window (Edmark Corporation)
11. Clipboard
12. Individual photographs of each target word.

Content Taught

1. The student is taught how to identify 12 grocery items from a list and find them on a grocery store aisle using "life like" scenarios via computer based video instruction.

2. Task analysis for computer based instruction includes the following steps:
   a. Locate the first item on the grocery list
   b. Touch the word on the corresponding aisle sign for positive examples (aisle signs containing 1 or more of the 12 target words)
   c. Touch the item on the shelf
   d. Cross off the item on the list
   e. Locate the next item on the list and repeat the steps, or
   f. Touch the shopping cart on the lower right corner of the screen to proceed to the next aisle for negative aisle sign examples (aisle signs containing none of the 12 target words)

3. Task analysis for training in the grocery store includes the following steps:
    a. locate the first item on the grocery list
    b. locate the word on the corresponding aisle sign for positive examples
    c. walk down the aisle
    d. locate the item on the shelf
    e. place the item in the shopping cart
    f. cross of the item on the list
    g. return to the beginning of the aisle
    h. locate the next item on the list and repeat the steps, or
    i. walk to the next aisle for negative aisle sign examples

Teaching Procedures

1. Prior to the lesson:
    a. Create still photographs of target grocery words, aisle signs, and video recordings of actual movement through grocery store aisles.
    b. Still photographs –
        i. 12 target grocery words (e.g., cookies, crackers, mayonnaise, potato chips, cereal, juice, detergent, bar soap, soup, paper towels, tea, pickles) will be used for instruction
        ii. Divide the words into three sets:
            1. cookies, crackers, mayonnaise, potato chips
            2. cereal, juice, detergent, bar soap
            3. soup, paper towels, tea, pickles
        iii. Take three photographic examples of product brands for each target grocery word (e.g., bar soap: Irish Spring, Ivory, Dove). These will be presented on a list and attached to a clipboard for students to use during computer based instruction.
        iv. Take front and back photographs of target aisle signs from three local grocery stores.
        v. Scan and save the photographs on the computer.

    c. Video recordings will include appropriate modeling (by a familiar person) of the following steps:
        i. Movement through the grocery store, including location of aisles, location of items within the aisles, and selection of items.
        ii. Videos should move in a right-to-left direction throughout the store.
        iii. Footage should include full-aisle recording, recording of target items being approached, and distal and close-up recordings of the target items on the shelves.
        iv. Video should be taken by entering and exiting each aisle from the back of the store opposite the cashier counters.
2. Computer based instruction:

a. Student should sit at a desk directly in front of the computer.
b. Teacher should sit to the right or left of the student.
c. Provide the student with the list of grocery store items.
d. Teacher will start the computer program.
e. Gain attention of student; say "You need to buy the things on your list."
f. Students will begin the task analysis for computer based instruction:
   i. Student will view the first video segment, which included entering the store, obtaining a shopping cart, traveling through the produce and bakery section and stopping at the beginning of the first aisle with an overhead sign.
   ii. A still photograph (5 x 8) will then appear on the screen above the overhead aisle sign.
   iii. Ask student, "Do you see the word _____?" (target item on the list)
   iv. Use a system of least to most prompts- verbal prompt (e.g., "touch crackers"); after 5 seconds, repeat verbal prompt with a gesture to correct word; after 5 seconds, repeat verbal prompt and physically complete the step with student.
   v. Student will select (touch screen) the correct word on the aisle sign, and teacher will provide praise, (e.g., "Yes, crackers are on the aisle")
   vi. Selection of the correct word will prompt the computer to show a video segment proceeding down the aisle toward the item.
   vii. The video segment will then closely zoom in to the item on the shelf.
   viii. A still photograph of the item on the shelf will appear on the screen
   ix. Student will select (touch screen) the correct item, and teacher will provide praise, (e.g., "Great, you found the crackers")
   x. Correct selection will prompt the computer to show the item being placed into the shopping cart.
   xi. Student will then cross the item off the list and locate the next item on the list.
   xii. Teacher will then prompt the computer video program to scan going back down the aisle, and the still photograph of the same overhead aisle sign will appear on the screen.
g. Once steps of task analysis has been completed, provide a reinforcing activity (i.e., listening to music, watching television) for the student

Evaluation

Data should be collected on the number of correct student responses for the task analysis. Students should meet 100% correct choices on three consecutive sessions. Teachers can use actual grocery stores to assess skill generalization.

Lesson Plan Based on:

Mechling, L. C., Gast, D. L., & Langone, J. (2002). Computer-based video instruction to teach persons with moderate intellectual disabilities to read grocery aisle signs and locate items. *The Journal of Special Education*, *35*, 224-240.