

The Impact of using Picture-to-Text Software on  
Writing Productivity of Young Writers

Materials

features of the picture-to-text software such as; create picture buttons, select words, use the buttons to add words to the sentences, erase words, add punctuation marks, and listen to the text.

Demonstrated = d      Physical Cues = p      Verbal cues = v      Independent = I

Picture to Text Software	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16
create picture buttons	-	-	-													
select words	-	-	-													
add words	-	-	-													
erase words	-	-	-													
add punctuation	-	-	-													
listen to the text	-	-	-													
16 word Pallet-paper	-	-	-	-	-	-										
16 word Pallet-paper	-	-	-	-	-	-										

- A. The baseline phase- During these ten to fifteen minute sessions, the child will be provided four pictures and asked to choose two pictures that will be used as writing prompts. The child will be asked to write four or more sentences for each picture prompt. For one picture, the student will write using paper and pencil. For the other picture, the child will type using picture-to-text software on a computer.
- B. The software training phase- Each of the 2 – 3 training sessions would last an extra ten to fifteen minutes after the writing samples have been written. The child will learn how to use different features of the picture-to-text software such as; create picture buttons, select words, use the buttons to add words to the sentences, erase words, add punctuation marks, and listen to the text. When the child can access those features without help or cues, the independent phase will follow.
- C. The independent phase- These sessions will be ten to fifteen minute sessions. As in the baseline phase, the child will again be given two prompts and write for a total of eight minutes.
- D. D phase will be initiated with a child only if, during the baseline, training, and independent phases there is little or no change in the writing products. During phase D a word box with 16 words would be given to the child with the paper and pencil condition. For the computer condition, a 16 button word/picture pallet would be provided.

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There are 2 dependent variables. The first is the number of points earned on each written product using the same data collection sheet. Points will be given for such components as the number of words and sentences written on a topic. The second dependent variable is the number of seconds the child takes to begin writing or typing. There is a place to document the time on the data collection sheet.

The main independent variable is the picture-to-text condition. A second independent variable, a word box with 16 words and typed pallet with 16 words with pictures will be provided as models, only if there is little or no improvement in the writing samples.

The methods will be as follows.

Two writing samples will be taken at the beginning of each session throughout all phases. Because the child is generally given paper and pencil for writing in school, paper and pencil will be the first tools used each session.

Sessions will be held at the child's home or at a quiet setting such as a library depending on the parent request. The child would meet with the researcher for 2 - ten minute sessions per week during the baseline, 2 – twenty to thirty minute sessions per week during training, and for 2 - ten minute sessions per week during the rest of the study for a total of six - eight weeks. Maintenance probes would be taken two weeks after the final session.

At the beginning each session, for each condition, the child will choose one of two picture prompts and then be given a few minutes to independently generate thoughts. A set of writing tools will be prepared for the child to use and a timer will be set for four minutes of actual writing time, the student will begin to write or type about the picture in one or more complete sentences. At the end of four minutes a notation will be made on the word the child is writing or typing. He or she will be allowed to finish his or her thoughts about the picture.

For each writing sample the adult would show the student a picture prompt and say, "Look at this picture. Write four or more sentences to describe what is happening. You will be given a few minutes to think. Then write/type for four minutes. If you would like more time, you may write until you let me know that you are finished."

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Two weeks after the final session, maintenance probes will be taken and assessed with both sets of tools. The child will be given a choice of which set of tools to use first.

In order to give insights on attitudes about writing and preferred tools, a short survey will be given to the child and to the parent or legally appointed guardian in both the first and the last sessions.

### Materials

In both conditions, a stopwatch will be used to measure how long it takes the child to begin writing after being given the directions and a timer will be used to measure four minutes for the actual writing. For the paper and pencil condition the child will be given a choice of two different types of lined paper, two different types of unlined paper, and several pencils. For the picture-to-text condition the child will have a word processor and picture-to-text software opened to a blank document. For the word box and word pallet condition the picture writing prompt will be paired with a word box or pallet with 16 words that are appropriate to the picture prompt. The words will reflect what is seen in the picture and will be chosen by the researcher. To provide some standardization, the words and order will be as follows: four nouns, two pronouns, “they” and “them”, four verbs, the words “the” and “with”, two colors, and two adjectives.