

THE EFFECT OF A PICTURE SYMBOL PREREADING PROGRAM ON PRESCHOOL CHILDREN'S ATTITUDES TOWARD READING

This study was designed to test the hypothesis that picture symbol prereading activities will improve a child's attitude toward books. The design used in this study was a pretest-posttest control group design with a control group of 15 students and an experimental group of 25 students. The groups held similar attitudes toward reading at the beginning of the experiment. Students from the experimental group were given picture symbol prereading activities in place of traditional prereading activities. Posttest scores from the Primary Pupil Reading Attitude Inventory showed a 34% increase in reading selections for the experimental group, but practically no change for the control group. The results of a t test yielded a significant difference of .01. The results of this study indicate that picture pre-reading activities have a positive effect on preschool children's attitudes toward books.

One important goal of a preschool is to give children a positive school experience at a most formative period of development. Positive initial experiences with reading are an especially important part of the preschool experience. This study investigated the relationship between a picture symbol prereading program and preschool children's attitudes toward reading. It was predicted that exposing preschool children to picture prereading activities would improve their attitudes toward books at an early age, and, as a result, make enhanced reading achievement throughout their education more likely.

Opinions differ on how to teach prereading skills. The idea that reading is a method of decoding symbols is not new. According to Sullivan (1976), reading consists of decoding the printed symbol and then making that symbol meaningful to the decoder based on past experiences. Wadsworth (1978) also describes reading as a process of deriving meaning from written symbols. For centuries, before man learned to communicate through a structured alphabetical language (that is orthographically), records of his ancestors' accomplishments were kept in the form of picture stories (Aukerman, 1971). There seems to be little disagreement that decoding picture symbols can be used as a step toward decoding more abstract orthography.

Woodcock and Dunn (1964) developed an experimental approach for teaching reading to young mentally disabled children in which the children first learned to read using a vocabulary of rebuses and later proceeded through a transition program to traditional orthography. This experimental program was applied in the Peabody Chicago-Detroit Reading Project (Woodcock, 1967). The project compared six approaches, including one that used the rebus reading series (Woodcock, 1965). No significant differences were shown among the six approaches with respect to reading achievement at the end of a 2-year period. Although the results did not demonstrate the experimental rebus program to be superior, they did demonstrate that by using this symbol system, students learned to read as well as they did with any of the other five more traditional methods.

In a later study, Woodcock (1968) demonstrated that learning to read rebuses was markedly easier than learning to read traditional orthography. Furthermore, the differences in learning difficulty increased as the vocabulary and sentences became more complex. The results indicated that reading problems arise primarily from the abstract nature of traditional orthography as a symbol system and not from the nature of the reading process itself. In this study, Woodcock suggested that rebuses should be more widely used in beginning reading materials to reduce the learning load on the child.

Other studies have focused on using pictures to improve comprehension and vocabulary. Evans (1978) explored the possibility that a toddler's vocabulary may be increased by picture reading. The purpose of her study was to compare the effectiveness of three methods or conditions for teaching object names to young children. The three methods were: (a) informal play, with an adult naming and describing an object; (b) picture reading, naming and describing photographs of actual objects; and (c) a combination of picture-

reading and playing with the actual object. Her results indicated that very young children learn to name objects more rapidly when involved in picture reading.

It is possible that reducing the learning load on a child, enhancing vocabulary, and offering other benefits from picture prereading activities could improve preschoolers' attitudes and self-concepts. Various studies have been done on the relationship among reading attitude, self-concept, and reading achievement. Few authors question the relationship between positive self-concept and academic success. However, the relationship between attitude toward reading and reading achievement is more problematic.

Bates (1983) investigated the relationships among reading attitude, self-concept, and reading achievement of academically talented fifth- and sixth-grade students and concluded that reading attitude scores and self-concept scores can be used to predict reading achievement. It was further concluded that the number of students with positive self-concept scores was significantly related to the number of students having positive reading attitude scores.

Another study presented by Combs (1977), was designed to determine the significance of the correlation between reading achievement and attitude toward reading. The sample for this study consisted of 553 students in grades 4, 5 and 6 who were either high achievers in reading or low achievers in reading. These students were surveyed to determine their attitudes toward reading. Combs compared the two groups and determined that reading achievement and attitude toward reading are correlated significantly.

Studies have also examined reading attitude and self-concept. Johnson (1981) examined the self-concepts of children who had begun to read before first grade. Test results showed that they had positive self-concepts.

The purpose of this pilot study was to extend this thread of inquiry and explore the relationship between success at a picture prereading program and attitude toward reading. It was suggested that through picture symbol prereading programs preschool children would have the opportunity to read a story before they could decode writing. It was hypothesized that a picture symbol prereading program would significantly improve attitudes toward reading in preschool children.

Method

Subjects

The sample of children for this study was taken from two locations of the same preschool (A Children's Garden). Students from one school, located in Vista, California, comprised the control group of 15 students (9 girls and 6 boys). Students from the second school, located in Encinitas, California, comprised the experimental group of 25 students (6 girls and 19 boys). Only children who were 4 or 5 years old were used for this study.

The experimental group was assigned to the teacher who was most comfortable with teaching picture symbol prereading. Since both schools were under the same management, the teaching methods and materials used with both the control and the experimental groups were considered the same, except for the treatment. Furthermore, both teachers in this experiment had over 5 years of teaching experience.

Instrument

The test employed to measure attitude toward reading was the Primary Pupil Reading Attitude Inventory (Askov, 1973). This attitude inventory was used to assess students' attitudes toward reading both before and after the picture prereading treatment. Since 4- and 5-year-old children ordinarily have not started reading written words, attitude toward reading was defined as a student's reaction to books. This test was considered appropriate for preschool children because it uses a method of forced choice of pictures to determine attitude. Each test item offers a choice of two activities represented in picture form. For some test items one of these activities involves reading books. The test consists of 30 items. Only 18 of these items include a reading activity choice. The other 12 items contain random activities that are used as distractors. The test has been used for testing children's attitudes toward reading before they entered the first grade.

To validate the Primary Pupil Reading Attitude Inventory, Askov (1972) asked teachers from three different classrooms to select their five students who were highest and five who were lowest in leisure-time reading interest. The Primary Pupil Reading Attitude Inventory was administered to those students, and a t test indicated that the mean scores of the two groups were different at the .01 level of significance. (The mean of the total group of students tested [N = 94] was 8.21.) The test-retest reliability coefficient of second- and third-grade pupils with a one-week interval was .906.

Procedure

The teacher using picture symbol prereading activities was trained at the beginning of the study while she was developing lesson plans. At this time, she was provided with the necessary picture symbol teaching materials. Before the experiment, the two teachers used identical prereading activities. During the experiment, the students in the control group continued with traditional prereading skills activities. The amount of time devoted to prereading skills activities was approximately the same for the two groups.

At the beginning of the experiment, the Primary Pupil Reading Attitude Inventory was given individually to the students in the control group and the experimental group. Each student was taken to a quiet room where he or she was presented with each pair of picture choices. Each picture was explained to the student before he or she chose a preference.

Materials. The treatment in this study was a picture-symbol prereading program, developed by Jane Mills, which includes: (a) 2 three-book picture reading book sets, The Building Set and The Follow and Find Set (Mills, 1987); and (b) Food Kit and Zoo Kit picture activity packages (Mills, 1988). The picture symbols that were used in this study were taken from the Mayer-Johnson Communication Books I and II (1981, 1985). The Mayer-Johnson symbols were chosen because they provide a large assortment of picture words that are well depicted. These symbols are less abstract than those from symbol systems that had been used in previous studies.

Treatment. The treatment was 30 minutes of prereading activities divided into two 15-minute segments. The students in the study were exposed to this treatment three times per week for 4 weeks.

During the initial 15 minutes of instruction, the teacher worked with her students using large flashcards that formed simple picture sentences. She then introduced the books, each of which contained one short picture-symbol story that was simple and fun for young children. The books were organized in 2 three-book sets. Each set focused on a theme and had three levels of difficulty. The first book in each set was simple, with only one symbol word per page. The second book in each set was more difficult, with longer, multi-symbol sentences. Figure 1 shows an example of a page from one of the second-level books. The third book in each set was the most difficult, with five or more symbols per page.

The teacher used each picture reading book by first reading the story to the children. Next, she was to read a part of each sentence and allow the children to complete the sentence by reading a final picture word. Finally, the teacher encouraged the students to participate in reading the entire picture story independently while she remained available to assist when needed.

In the second 15 minutes of each 30-minute session, the students worked with the food and zoo activity kits. These activities included playsheets. The students were provided with colorful picture symbol stamps which they used as aids in activities which involved matching pictures, activities which involved demonstrating food preferences, and activities that included making short two-or three-word stories. For example, the food kit included a play-sheet which asks a student in picture symbols which foods he or she likes and which foods he or she does not like. The child can locate stamps of his or her favorite foods and stick the stamps on the playsheet.

The posttest, which was also the Primary Pupil Reading Attitude Inventory, was given to both groups at the end of the four week treatment period. Test results were compared to determine whether attitudes toward reading in the experimental group were affected by the treatment.

Results

Scores from the pretest administrations of the Primary Pupil Reading Attitude Inventory indicated that the experimental group and the control group held similar attitudes toward reading at the beginning of the experiment. The children in both groups chose reading activities approximately 27% of the time (see Table 1). The posttest scores showed that students from the experimental group chose 43 more reading activities than they did during the pretest, which is a 34% increase. On the other hand, students in the control group remained consistent in the number of reading choices they selected. Since both groups were essentially the same on the pretest, the posttest scores were directly compared using a t test. The results of a t test yielded a significant difference of .0104 (see Table 1).

The results of this study indicate that picture prereading activities have a positive effect on preschool children's attitudes toward books. The children who received the picture prereading treatment chose reading activities a significantly higher number of times than the students who did not receive the treatment.

Conclusions

One of the main objectives of a preschool is to give students a positive school experience. Thus, early education research should focus on determining what types of activities will improve a child's attitude toward academic subjects. After one month of picture prereading activities, students selected 34% more book activities than they did before the treatment, while the selections of students who were exposed to more traditional prereading activities remained the same. Students who were given picture reading activities were more interested in books than students who were not. It is suggested that helping preschool children develop interests in books, can better motivate them to develop reading skills.

The teacher who used the picture reading materials in this study was impressed with the positive effects the activities had on her students. She observed that the books inspired the children to believe that one day they would truly be able to read. This was especially noticeable with those children who had difficulties with other prereading skills. The results of the study indicate that these activities could have a greater effect on children who experience difficulties with prereading activities in that they may be more willing to try. By using pictures to develop in preschool children attitudes that will encourage growth in academic areas, we are setting children up for success in their school careers.

TABLE 1 Pre- and Posttest Reading Selections of Children With and Without Picture Symbol Prereading Activities

Group	n	Available	Selected	%
With	25			
Pretest		450	124	27.6
Posttest		450	167	37.1
Without	15			
Pretest		270	73	27.0
Posttest		270	71	26.3

Note. Options available based on 18 reading opportunities per individual.

PHOTOS (BLACK & WHITE): Figure 1. Example of two pages in the Arnie Picture Prereading book.

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