DOCUMENT RESUME

ED 045 210 PS 004 127

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TITLE The Effects of Cartoon Characters as Motivators of Preschool Disadvantaged Children. Final Report.

INSTITUTION Community Health and Welfare Council of Hennepin County Inc., Minneapolis, Minn.; Grand Rapids Public Schools, Mich.; Michigan State Univ., East Lansing.
SPONS AGENCY Office of Economic Opportunity, Washington, D.C.
REPORT NO OEO-8124
PUB DATE Jul 70
NOTE 100p.

EDRS PRICE EDRS Price MF-$0.50 HC-$5.10
DESCRIPTORS Academic Achievement, Achievement, *Cartoons, Cognitive Processes, Comparative Analysis, Curriculum Guides, *Disadvantaged Youth, *Instructional Aids, Language Development, Language Skills, *Learning Motivation, Motivation, *Preschool Programs, Problem Children, Sex Differences, Social Development, Testing, Tests
IDENTIFIERS Project Head Start

ABSTRACT

A study designed to test effects of cartoon characters on the behavior of preschool disadvantaged children in an educational setting explored the use of cartoons as complementary additions to work materials. Because the 83 Head Start subjects had not been introduced to the alphabet an experimental set of worksheets was made which used the 26 letters. On many of these worksheets a cat cartoon character acted out some aspect of the meaning of a word associated with a particular alphabet letter. Other worksheets used were traditional. One control and three experimental groups were formed and the following areas of cartoon-effect were measured: emotional actions, learning activity, social activity and residual attitudes. Findings indicate that the cartoon is an intrinsic stimulator and information transmitter which would probably be more effective in elementary school classes with older children and that the cartoon should not be used for rote learning. It is suggested that the cartoon can fill a new role in the classroom, helping the teacher to reach curriculum objectives and the child to reach higher levels of learning. Appendixes include sample worksheets, pre- and posttests, a teacher questionnaire, data summary sheets, and a history of cartoon development. (Author/NH)

FINAL REPORT

To Division of Research and Evaluation

Project Head Start

Office of Economic Opportunity

Contract No. 8124

THE EFFECTS OF CARTOON CHARACTERS AS MOTIVATORS OF PRESCHOOL DISADVANTAGED CHILDREN

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July 1970

The research reported herein was performed pursuant to a contract with the Office of Economic Opportunity, Executive Office of the President, Washington, D.C. 20506. The opinions expressed herein are those of the authors and should not be construed as representing the opinions or policy of any agency of the United States Government.

ACKNOWLEDGEMENTS

There are several persons deserving of our appreciation for making this study possible. We wish to thank Ted Rottman and William Smit, Calvin College; Elmer Vruggink and Ina Lovell, Grand Rapids Public Schools; for their advice and encouragement in the development of this study.

A major role was played by the teachers. For their participation and assistance we are very indebted to Linda McCormick, Rosie Burtley, Carol Davis, Rosemary Hawley, Teri Reed and Sally Casey.

In addition, we want to thank Kathleen Cashen, Robert Johnson and Lyle Voskuil, Darrell Elders, Frank Rutowski, Richard Allers and Lawrence Lezotte for assisting in the research.

Our thanks also go to Patricia Mills and Joann Smith for their assistance in the area of clerical work.

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"The Effects of Cartoon Characters as Motivators of Preschool Disadvantaged Children"

FINAL REPORT

To Division of Research and Evaluation

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The purpose of the study was to test effects of cartoon characters on the behavior of preschool disadvantaged children in an educational setting. The study was designed to explore one method of using cartoons for educational purposes; that is, as complementary additions to work materials.

Since the local Head Start programs emphasize language development and self expression, and the children had not been introduced to the alphabet, work materials with the 26 letters of the alphabet were developed for the study. One set contained a cartoon character in the likeness of a cat acting out some aspect of the meaning of the word associated with the letter of the alphabet. The other set of worksheets were similar to traditional materials. To test the differential effects a control group and three experimental groups with approximately 20 members in each were formed by combining the children in five Head Start classes in Grand Rapids, Michigan. The four general areas in which the experiment was measuring

the effects of the cartoon were: emotional actions, learning activity, social activity and residual attitudes. The primary method of testing the hypotheses was by combining all of the children in the five schools who were in the same experimental group and comparing the groups.

It was found that the control group was significantly more effective in following the teachers' assignments, completing the worksheets and learning the most letters and words. The children in Experimental Group Two displayed the most activity on the worksheets, but the children in Experimental Group One displayed more interpersonal interaction, verbalization, and role-playing than any of the other groups.

It was also found that the cartoon has two major fects. The cartoon directly stimulates more activity when it is present in terms of excitement, interjection of feelings, increased personal activity, verbalization and interpersonal interaction.

The cartoon's second major effect was in the areas of preference for work materials, learning and the social dynamics of the group. It was found that this phenomena only occurs in groups in which the cartoon is present at the beginning of the program; therefore, when the cartoon was presented was more important than how long it was present.

It was also found that the cartoon character was especially useful for stimulating "withdrawn" problem children. It was also found that the cartoon made the work materials more desirable to the children and would always be chosen over the traditional type materials. But, the cartoon does not blur the distinction between work materials and games.

With regard to comprehensive learning, it was found that the cartoon did stimulate the child to comprehend the meaning of the words and the actions of the cartoon in areas the traditional materials do not cover. It was also found that the cartoon was associated with the children's acquiring greater "socialization" skills with regard to their social maturity development.

It was concluded that the cartoon character's presence in the alphabet work materials could be associated with a difference in classroom behavior, differences in the work materials, and the way the children were comprehending and reasoning. The one specific learning area in which the child with the cartoon seemed to be less effective than the child with the traditional material was in the area of rote learning and memorization.

It was also concluded that girls, non-whites and withdrawn children seem to be most attracted by and responded the most to the use of the cartoon on the work materials.

In summary, it was concluded that the experiment has shown that the cartoon is an intrinsic stimulator and information transmitter which would probably be more effective in elementary school classes with older children. It was also concluded that the cartoon should not be used when the educational assignment requires rote learning.

It is recommended that there are real possibilities for the cartoon in education; not only on work materials which are designed to transmit concepts and stimulate cognitive

problem-solving skills, but as a new role in the classroom which can aid the teacher in reaching the objectives of the curriculum, and making it possible for the child to reach higher levels of learning than would usually be expected. Therefore, it is recommended that further research be conducted on the potentials of the cartoon character on both work materials and as a dynamic complementary role to the teacher in the classroom.

CHAPTER I

INTRODUCTION

Educators today are faced with the ever persistent problem of planning materials for today's school population. The emergence of Head Start and other preschool programs have challenged the educator to seek work materials geared especially for the preschool population. The problem of planning materials for young children will continue to puzzle those who have the responsibility to provide children with the best possible work materials and learning opportunities. It is vitally important that materials relate to a "child's world," and at the same time attempt to link together those experiences and concepts that bring about personal and social adjustment. A child's recognition of fun symbols and enjoyment might be the spark that allows him to relate to the material and thus bring about satisfaction, motivation and learning. This study was conducted on the theory that children learn better and faster in a teaching situation in which they can relate and enjoy.

Traditionally, school materials have, on a very limited basis, stressed activities or symbols that are "fun oriented" with the purpose of capturing and utilizing a child's basic interest which is fun and fantasy. The objective of most story books is to present to the child pure enjoyment, to

spark the imagination and to allow for vicarious (fantasy) experiences. The objectives have, in turn, motivated the child, which explains why almost all children enjoy listening to stories.

The overall need has been for other school materials to contain the same kind of motivational stimulants. Educators agree that motivation is the key to learning. The limited background of learning experience found in the culturally disadvantaged child tends to make him seem less motivated when he does not respond to normal school material. It is extremely important to recognize that selective motivation (fun activities) is present in the preschool population.

A. Imagination and Motivation

Imagination plays an influential role in a child's mental and emotional life. Through it he gains experience with things beyond his actual reach. He projects his wants and desires well beyond the bounds of reality. Make-believe activities serve numerous functions in his mental life. He can play free-and-easy with reality. He can make it conform to his mental restrictions when it suits his fancy, since he does not have sufficient data to construct realistic ideas. He permits himself to manipulate ideas even though he only partly grasps them, and he can solve problems without the necessity of utilizing all relevant data.

Through make-believe, children may rid themselves of disagreeable situations or of conditions that annoy or thwart them.

In this way, imagination helps the child to escape from what, to him, is an intolerable situation. It is believed that disadvantaged children tend to use imagination to a greater degree in an effort to escape from the conditions of their environment.

Make-believe is actively associated with social development. The play of most preschool children is filled with make-believe activities. Thus, the bond that pulls these children together is strengthened. The make-believe setting enables children to tolerate each other more easily than would be characteristic of a realistic situation.

Fantasy is a form of make-believe. It is stimulated through the child's experience with nursery rhymes and fairy tales. The child delights in the nursery rhymes that are read to him during his early years. Later, as he achieves the ability to read, he may thrill to the exploits of his favorite fairy tale heros and heroines. This attitude continues to be exhibited by the child when he is old enough to watch motion pictures and television programs. The boy usually prefers tales of adventure; the girl becomes emotional over romantic stories even though she may not comprehend fully their implications.

A motive stimulates an individual to activity which goes beyond the achievement of immediate satisfaction or annoyance that he experiences in any situation in which his urges and interests are involved. For the child the motive is that of

recognition rather than the mastery of information or the completion of a task.

The terms "incentive," "interest," "drive," and "purpose" stress various aspects of motivation. Motivation is viewed by most educators as the very heart of the learning process. Reflection, interest, and effort--all the outcomes most desired by the teacher and most valuable to the pupil--spring into being with adequate motivation. This project deals with a motivation that is primarily interest-oriented and commonly labeled "intrinsic motivation." This most effective type of drive is secured by making the subject matter significant or meaningful to the learner. The learning carries its own record; interest is within the activity, and binds the pupil to his work. The educational application is to begin at the point of contact, and within the range of interest and capacity of the pupil.

B. The Cartoon as an Intrinsic Stimulator and Information Transmitter

For many years educators have been aware of the value of art in the curricula as a medium for both the child's expressing himself and receiving concepts from others. The cartoon adds a fantasy aspect which allows the child to integrate the information at his rate and level of comprehension; and, at the same time, perceive to some degree the relationship of the subject to "real life." Thus, the cartoon's personalized

method of information transfer and unique ability to encourage the child to project action and personality into the character stimulates the child's emotions, verbal behavior and reasoning.

The end result can be a greater increase in the child's knowledge, reasoning and social maturity than would occur in the child using traditional work materials; and, the emotional release stimulated by cartoons can contribute to his mental health and afford the teacher greater opportunity for understanding the child.

The cartoon is quite appealing to preschool and early elementary children because they seem to enjoy seeing other children and animals acting out the dramas in human life. Young children especially enjoy behavior and personalities which are repeated enough to become familiar, because by anticipating the action and vicariously participating in it, the child temporarily gains a sense of control over his environment which is emotionally satisfying and enhances his concept of himself.

The child definitely distinguishes work from play, and the cartoon character does not blur this distinction. If a cartoon is on work materials, these materials are still considered "work," but the learning and enjoyment is enhanced.

A static character presented on work materials is not able to transmit as many or as subtle concepts of social behavior and manipulations of one's environment as a fully animated cartoon in motion pictures or on television, but it has an implied animation which can complement verbal and written classroom instruction.

It was anticipated that the two greatest problems with regard to research and the use of the cartoon in the curricula of this age group would be:

1. The cartoon would be difficult to administer to this age group in a manner in which the effect could be sufficiently measured.

2. Due to the variation among the children's social and emotional development, the cartoon might be an excessive or overwhelming stimulus which would cause the child to act out certain feelings in the classroom, not accomplish the learning tasks, and possibly distract others in his group.

In summary, the cartoon appears to be an effective motivator because:

1. It can be appealing and emotionally satisfying, and thus contribute to the child's enjoyment of educational tasks.

2. It allows the child to express himself.

3. The child can perceive the subject material in real life through the cartoon.

4. It allows the child to integrate concepts at a personalized rate and level of comprehension.

5. It stimulates emotions, verbal behavior and reasoning in the class work.

6. It encourages learning and social development.

7. It affords the teacher greater insight about the child.

CHAPTER II

OBJECTIVES OF THE PROJECT

A. General Objectives

The general objective of this study was to contribute to a better assessment of how cartooned work materials compare to non-cartooned (tradition oriented) work materials among a preschool population. Perhaps the findings of this study will provide for more valid generalizations concerning current issues about the effects of work materials and their relationships to preschool children. It is hoped that better guidelines may thereby emerge for the development of special work materials for disadvantaged children.

Can the levels of academic achievement and satisfaction of disadvantaged preschool children be improved through educational materials that include "fun symbols that children enjoy? Can these materials which, in the past, have often lacked the fun symbols that have always b basic to childhood, stimulate and motivate a preschool child? If so, what will be the effects of such motivation on the personal and social adjustment of the students? These were the fundamental and general questions of this research project.

To accomplish these objectives, the study explored the influence of the cartoon character on the children in the Head Start program through the amount of letters and words learned and retained, the expressed satisfactions and preferences

related to the work materials, the manner in which the child comprehended the work materials and the cartoon, the manner in which the work materials were used, and the emotions and social behavior associated with the cartoon.

B. Specific Research Hypotheses

The amount and type of classroom activity of Head Start Program students vary from one subject area to another, and this variation may be due in part to differences in the characteristics of the work materials. As stated previously, the use of cartoon characters in work materials seems to have great potential as non-verbal stimulators and transmitters of information. Therefore, the basic hypothesis is that as the cartoon character is present or absent in the work materials, the children's classroom behavior, preferences for specific materials and learning will vary.

The following sub-hypotheses state that the presence of a cartoon character in work materials is associated with preference for the work material, specific individual and interpersonal behavior, learning and social development.

1. Children prefer to use work materials with cartoon characters than to use the same work materials without cartoon characters.
    a. The cartoon character is appealing and represents a positive personality to the child.
    b. The child becomes comfortable with the cartoon character when it is used repetitiously

and often considers the character a friend or helper associated with specific academic tasks.

c. The cartoon character stimulates the child to express his feelings and understanding of a subject.

2. Children using work materials with the cartoon character will display increased individual and interpersonal activity, will be more involved in the ideas portrayed by the cartoon and express greater enjoyment of the task than the children using the same work materials without the cartoon character.

a. The cartoon character stimulates more variety in the child's personal work activity, more verbalization and more interpersonal contact when using the work materials.

b. The cartoon character interjects action into the work materials and stimulates the child's emotions; thus, the child will be less careful and consistent in his product than the child without the cartoon.

c. The cartoon character stimulates the child to react to its emotional connotation rather than its objective outward appearance.

d. The child will use the work materials according to his perception of the cartoon's role

in the work materials, while the child without the cartoon will tend to work more according to the teacher's instructions.

e. Children using work materials with the cartoon character express a greater interest in the education task than the children using the same work materials without the cartoon character.

3. Children using work materials with the cartoon character will learn more than the children using the same work materials without the cartoon character.

a. When applied to specific work materials, the increased motivation of the child with the cartoon character will be reflected in the greater amount of assigned tasks accomplished and retained than the child with the same work materials without the cartoon.

b. The child using work materials with the cartoon associates the information received with "real life" more than the child using the traditional work materials without the cartoon.

c. The child using work materials with the cartoon is more greatly stimulated to develop cognitive everyday problem-solving skills, such as familiarization of object, function of object, how to use objects, differentiation, movement in space, and combining objects than

the child using the same work materials without the cartoon.

4. Children using work materials with the cartoon character will rehearse in fantasy the social relationship portrayed by the cartoon and thus refine their self-other attitudes more than children with the same work materials without the cartoon.

CHAPTER III

METHODOLOGY

A. Data Collection and Work Materials

The objectives of Head Start instruction are to take the first step in acquainting the children with formal instruction and in starting to work in specific content areas of reading, arithmetic, and language. The idea is to give them a "head start" in terms of those skills that serve as the foundation for what they will be doing in their future schooling.

The current Head Start Program in Grand Rapids, Michigan is focused primarily on language development. The children are given many concepts that are verbally reinforced through teacher-child interaction. The children are taught to speak and answer in complete sentences which makes this a "talking" program. This was an asset during the testing sessions.

Since the local Head Start programs have emphasized development of language and ability to express oneself, it was felt that the experiment would be best conducted in this reasoning and skills area. Therefore, the letters of the alphabet were chosen as the subject matter for the experiment. At that time, none of the local classes had included the alphabet, and saw this as augmenting their program and goals. Only one child in the pilot study and no children in the experiment had learned any letters in the alphabet. Therefore, these letters were new to all of the children in all of the groups in each class.

The five Head Start classes in Grand Rapids had approximately twenty students each. The teachers and children had been working with each other since September, 1969, so the children were accustomed to the teachers' routine and her way of presenting subject matter. Therefore, it was decided to use the regular classes in the experiment with their routine and familiar adults and classmates to minimize as much as possible any adjustments the children would have to make. It was also decided that the regular Head Start teachers should execute the experiment and conduct the tests after they had been thoroughly familiarized with the work and test materials and had been carefully instructed in how to present them.

During the regular daily program the teachers had spent about one hour a day working on academic skills, divided into 20-minute periods in each of three areas: reading, arithmetic, and language. During these periods the children work in small groups with the teacher working with four to six children on one subject. At the end of the 20 minutes, the children move in a group from the first teacher to a second teacher, or teacher's aide, who is working in a second area. Teacher aides have been trained to work with the children in other activities while the teacher works with each group. It was decided that the alphabet could be taught in one of these 20-minute periods each day for each of the four groups.

It was concluded that the teachers should report important daily activities of each group which were not reflected in the work materials. In addition, the teacher tested the child-

n's progress in learning the letters and words, and measured

the children's game preferences. At the end of the experiment, the children were given a final examination just before the Christmas vacation. In the middle of the first week after they returned to school in January, and over two weeks after the final examination, a recall examination was conducted.

Each class was divided into four groups of approximately five children each and the cartoon character was used selectively as follows:

Group 1: (Control Group)

New teaching materials with one letter of the alphabet introduced each day on a set of two pages (all 26 letters used without a cartoon character).

Group 2: (Experimental Group #1)

New teaching materials with one letter of the alphabet and cartoon introduced each day on a set of two pages (all 26 letters used with a cartoon character).

Group 3: (Experimental Group #2)

New teaching materials had cartoons on worksheets for alphabet letters from A through M, and did not have the cartoon on the worksheets with the alphabet letters N through Z.

Group 4: (Experimental Group #3)

New teaching materials did not have cartoon on the alphabet letters A through M, and had the cartoon on the worksheets with the alphabet letters N through Z.

(See Table 3.1 below)

TABLE 3.1

PRESENCE OF CARTOON CHARACTER IN WORK MATERIALS BY GROUP

Group	Total Alphabet	Letters A thru M	Letters N thru Z
Control	No Cartoon	----	----
Experimental #1	With Cartoon	----	----
Experimental #2	----	With Cartoon	No Cartoon
Experimental #3	----	No Cartoon	With Cartoon

Four basic types of worksheets were developed:

1. The first page for the traditional type presentation of the alphabet had a regular letter and a capital letter of the alphabet, plus a word whose first letter was the alphabet letter emphasized and a static picture representing the word.

2. The second page for the traditional type presentation of the alphabet had a capital and regular letter with dotted lines to encourage filling in the lines.

3. The first page of the experimental worksheets had the same letters and words, but the picture representing the word was incorporated into an action implied by the cartoon character.

4. On the second page of the experimental worksheets

the same letters were used as were on the traditional materials, but the cartoon character was present holding a pencil.

The cartoon character had been developed in the general likeness of a cat, and had been given the name of "Ollie." When using the work materials with the cartoon, the teachers always referred to the character as "Ollie Cat." The character's personality allowed the child to identify with the cartoon character. In the experimental groups, the cartoon was constructed to act out some aspect of the meaning of the word associated with the alphabet letter. This allowed the teacher to work directly through the cartoon to reinforce learning the meaning of the word.

1. The Pilot Study

Before conducting the actual experiment, it was decided to test the work materials and method of data gathering on a preschool enrichment program. The thirty children were divided into four groups of seven or eight members. It was discovered that five children seemed to be the optimum size of group for the teacher to give sufficient personal attention to each child and still have enough other children to be required to work somewhat independently. It was also decided to drop the subjects of group solidarity and personal discipline, because the study could not be designed to adequately test them.

The first two sessions and one examination of each group were recorded on tape and evaluated with regard to the teacher's manner of presentation and what could be learned about the children's behavior in addition to the work materials, test papers, and the teacher's daily comments. It was decided that tape recording the work sessions and weekly tests produced little additional information and would only be used in the final examination of the actual experiment.

It was also discovered that the phonetic sounds associated with the alphabet letters were too abstract to allow these children to distinguish between them and the name of the letter; therefore, this part of the instruction was discontinued.

From the evaluation of the pilot study, it was decided that the worksheets and Friday tests would be used in the experiment without revision, but it was decided to pretest the teachers' attitudes and the children's intelligence, social competence, perceptual and motor skills, and rote motivation. It was also decided that in order to insure comparability, the researchers should select the children to be placed in the four groups in each of the schools.

2. Selection of Groups for the Experiment

The teachers were first asked to identify each child according to whether he was in the upper or lower half of the age range possible for Head Start children; in the upper or

lower half of the academic achievement range in the class; was a male or female, and his race. From this information, the experimenters selected the children for each of the four groups in the classes. The teachers were then shown the proposed grouping of children. Only a few minor changes were suggested to separate children with classroom behavior problems, or two children who were close friends.

Finally, the children from the five schools who were in the same experimental group were combined for analyses. It was thus concluded that most of the important characteristics of the children and classrooms which might affect the results of the study had been minimized, so that the four groups were relatively comparable before they were exposed to the alphabet.

During the selection of children for the groups, the teachers identified children who had problems which affected their behavior in class. These "problem children" were distributed evenly through the four groups.

Fourteen of the original ninety-seven children in the experiment were dropped before completing the experiment due to excessive absences. There was no significant difference in the number of children dropped among the five schools. (See Table 3.2 below)

As mentioned previously, the teachers had identified twenty-one of the children in the study as having emotional or social maturity problems or low intelligence great enough to affect their behavior in class. It was discovered that the

TABLE 3.2

TOTAL NUMBER OF CHILDREN AND NUMBER OF PROBLEM CHILDREN WHO BEGAN AND COMPLETED THE EXPERIMENT BY SCHOOL

	Total		Problem Children	
School	Began	Finished	Began	Finished
Campau	20	16	7	6
Coit	17	13	4	2
Franklin	20	18	2	2
Lexington	20	17	2	1
Sheldon	20	19	6	5
TOTAL	97	83	21	16

proportion of these "problem children" dropped were significantly higher than the proportion of the "non-problem" children, but because they had been evenly distributed among the groups, only a small change was seen in the relative differences among the sizes of the four groups between the beginning and the end of the experiment. (See Table 3.2 above and Table 3.3 below)

The final composition of the groups by age, race and sex showed that girls outnumbered the boys 46 to 37; the children who were less than 4½ years old outnumbered the older children 51 to 32, and when the two Spanish-American children were combined with the Negro children the non-white children outnumbered the white children 47 to 36. (See Table 3.4 below)

TABLE 3.3

NUMBER OF CHILDREN IN EACH GROUP WHO BEGAN AND COMPLETED THE EXPERIMENT BY SCHOOL

School	Control		Exp. #1		Exp. #2		Exp. #3	
	Began	Comp.	Began	Comp.	Began	Comp.	Began	Comp.
Campau	5	4	5	5	5	4	5	3
Coit	4	3	4	4	4	4	5	2
Franklin	5	5	5	4	5	4	5	5
Lexington	5	4	5	4	5	5	5	4
Sheldon	5	5	5	5	5	4	5	5
TOTAL	24	21	24	22	24	21	25	19

TABLE 3.4

GROUP COMPOSITION OF THOSE COMPLETING THE EXPERIMENT BY SEX, AGE AND RACE

Group	GIRLS				BOYS			
	Over 54 Months Old		Under 54 Months Old		Over 54 Months Old		Under 54 Months Old	
	NW*	W**	NW	W	NW	W	NW	W
Control	4	1	3	1	3	3	2	4
Exp. #1	4	4	3	3	1	0	5	2
Exp. #2	2	2	5	5	1	1	3	2
Exp. #3	2	1	3	3	2	1	4	3
TOTAL	12	8	14	12	7	5	14	11

* Non-white
** White

3. The Experiment

a. Instruction of Teachers and Pretests

Several meetings were held before the experiment began to instruct the teachers in presenting the alphabet and administering the weekly tests on Friday. In addition, the teachers were also given a questionnaire concerning their expectations of the four groups in the experiment and were asked to provide Caldwell Test Scores and family profiles for each child.

During the week preceding the regular experiment, the teachers pretested the children with regard to their knowledge of the alphabet and of cartoons, as well as their preferences for four games to be used in the experiment as comparisons to the alphabet. In addition, the Slosson I.Q. Test and the Vineland Social Maturity Test were administered to all of the children by five school diagnosticians.

b. Daily Work Schedule

During the experiment, the procedure was to present one letter of the alphabet in a 20-minute session each day by explaining the letter, showing the children how to make the letter in the air, explaining the word and then allowing them to take their worksheets to a table and color whatever they felt like coloring. If they had accomplished the first worksheet, they were given a second sheet.

Each day the teachers wrote their observations of the work sessions on cards. This was usually a description

of specific children's behavior, the group atmosphere, or events or conditions in the class which might influence the alphabet work session which could not have been known from the worksheets or the tests. Examples of the types of behavior recorded children's questions to other children; their obedience and effort to accomplish the work assignment; their interests in the project; references they might make about the cartoon in other ways and at other times of the day, and whether or not there seemed to be any enthusiasm for the alphabet with the cartoon more than with the alphabet without the cartoon.

c. Weekly Examinations

On Friday, instead of giving a letter, the teacher gave a test of the letters and words introduced to that date and asked the children their preference of five "games" which included the four pretested games plus the alphabet.

The teacher would ask one child at a time to visit with her in either another room or a secluded area in the regular classroom. During this period, the teacher would first show the child five games sitting on a table and ask with which game he would most like to play. After the child selected a game, it was removed and the question repeated until only one game remained on the table.

Next, the teacher showed the child a copy of the second page of the daily worksheets of each alphabet letter to which the class had been exposed. She would first ask the

name of the letter and then a word which had the letter in it. If the child correctly identified the letter, the sheet was placed in a gaily colored box, implying that this was the child's letter. If the child incorrectly identified the letter the teacher would continue to hold it. Each week the child would be responding to the new letters of that week plus all of the alphabet previously introduced and tested.

After the alphabet test, the child went back to his work group and another child accompanied the teacher to the test area. This was repeated until the whole class was tested for the week.

d. Final Examination

After the 26 letters had been administered, and from five to seven weekly examinations had been given, a final examination was given to each child just before he went on his Christmas vacation. The examination included the same list of five "games" as in the regular Friday test, but an additional question of "What do you like about the _____ game?" was added to each of the five items. The final examination also included the regular Friday test of the knowledge of alphabet letters and associated words. An additional page was used in the examination for the children in Experimental Groups 1, 2 and 3. They were asked, "Who is this?" (cartoon), and "What does Ollie Cat do?"

The children in Experimental Groups 2 and 3 were also asked, "Which sheet do you like best?" (alphabet worksheet with or without cartoon), and "Why?"

The children's final examinations were also recorded on tape, but for the following reasons no additional information which was comparable for all of the children was gained: Not being sufficiently familiar with the tape recorder; forgetting to start recording at the beginning of the examination of each child and thus losing some of the conversation; not knowing how to relocate the microphone or stop a tape recorder that was not recording a child; children not verbalizing or speaking up enough to be heard clearly; and teachers who forgot to explain what was happening in the room and consequently the tape was not describing anything that was not written on the examination sheets.

e. Recall Examination and Vineland Retest

After the Christmas vacation, approximately one week after classes began in January, the recall test was given. The recall examination was the same as the regular Friday tests which included the alphabet and the game preference test. The teachers were also asked to evaluate the child for a second time on the Vineland Social Maturity Scale in order to see if there were any changes for the three-month period. The teachers were asked to mark a red line between the child's highest successful skill and the next skill. Then she was asked to consider only those skills the child did not have in October and not change any skills previously acknowledged as possessed by the child.

B. Analysis

1. Basic Variables

It was decided that the basic variables in the project were as follows:

The Primary Independent Variable: Cartoon Character

Independent Intervening Variables:

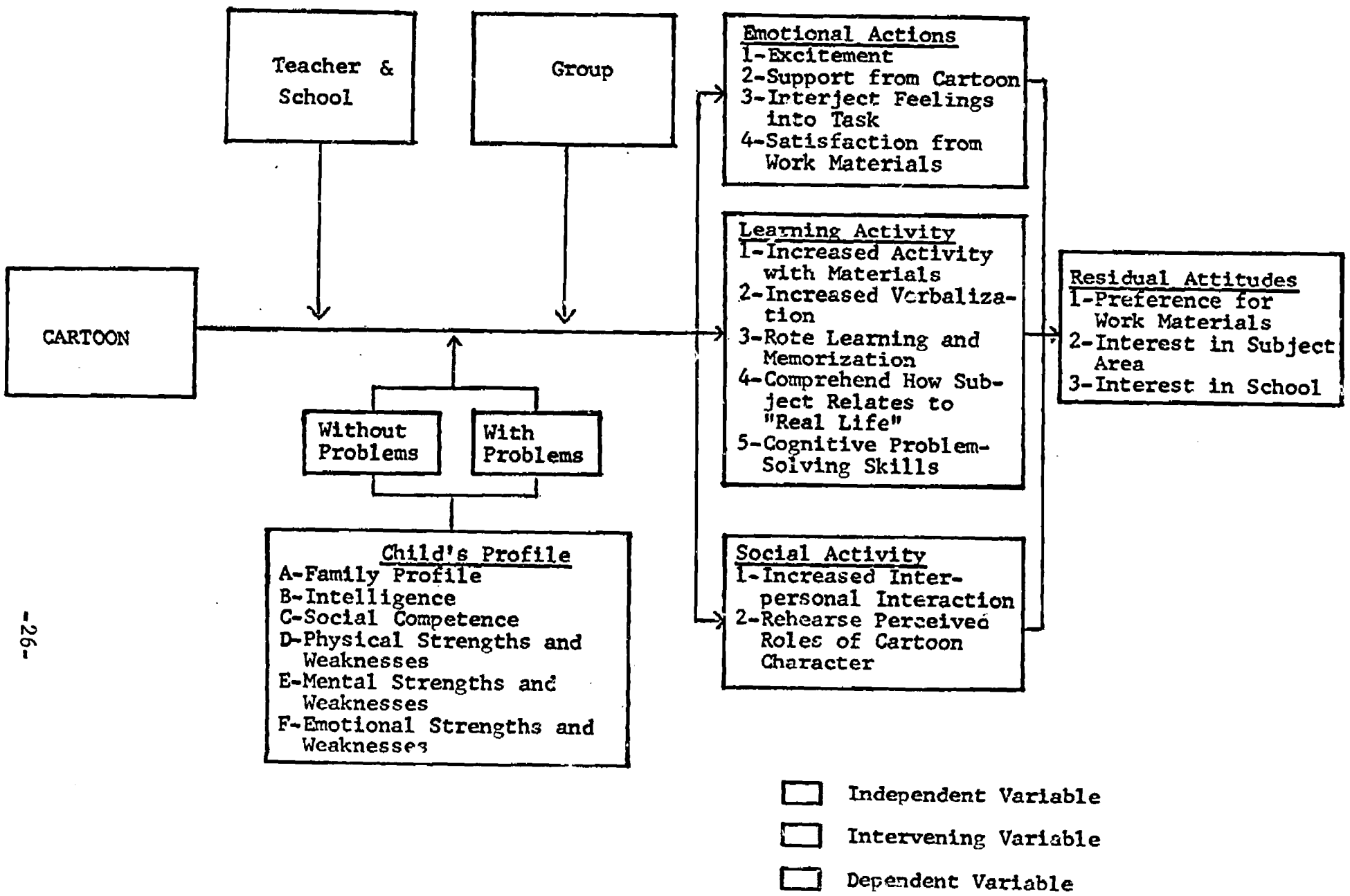
1. School (Teacher)
2. Group
3. Individual Profile
   a. With or without an identified problem associated with classroom behavior
   b. Family profile
   c. Intelligence
   d. Social competence
   e. Physical, mental or emotional strengths and weaknesses

Dependent Variables:

1. Immediate Effects
   a. Emotional actions
   b. Learning activity
   c. Social activity
2. Long-Range Effects
   a. Preference for work materials
   b. Interest in academic subject
   c. Interest in school

The analysis of the experiment was designed a se variables and their following relationships. (Se below)

CHART: RELATIONSHIPS OF INDEPENDENT AND DEPENDENT VARIABLES IN CARTOON MOTIVATION PROJECT



2. Children's Summary Sheets

As the data in the experiment were obtained, the materials were placed in separate file folders for each child. After the active data collection period, these data were arranged into the following nine sections on a set of summary sheets for each child:

1. The Family Profile
2. Psychological Summary of the child
3. Problem Child (blank if not; brief description of problem if he was)
4. Pretests
5. Worksheets
6. Friday Tests
7. Teachers' Daily Comments about the child
8. Final Examination
9. Recall Test

The information in the first three sections was directly transcribed from the original materials, but it was necessary to summarize and classify the raw data in the examinations, worksheets and teachers' comments. The Children's Summary Sheets were therefore both an instrument for visual analysis and an intermediate form for automatic data processing.

3. Statistical Analysis

After the summary sheets were coded, they were processed by the Michigan State University computer. The items in the data in the nine sections of the summary sheets were compared

by school, experimental group, sex, age, race, and problem children. In this manner, summaries of frequencies of absolute numbers and tests of significance of the cross-tabulations could be acquired at the same time. The Chi square test of significance was utilized for the discrete variables and the Analysis of Variance test was utilized for the continuous variables.

The primary method of testing the hypotheses was by combining all of the children in the five schools who were in the same experimental group and comparing the groups.

CHAPTER IV

FINDINGS

A. Collective Description of the Children in the Experiment

The characteristics of the eighty-three children were summarized for the purposes of describing the children and their families, and possibly identifying any potential biases in the results of the experiment. The sex, age, and racial composition of the children in the experiment, as described in Chapter III, showed that there were more girls than boys, more children who were less than 54 months old than older, and more non-white children than white. In addition, the children's family and personal profiles displayed the following characteristics:

Family Profile

1. Type of Family. Approximately 52% (43) of the children were from complete families (mother and father both in the home); approximately 42% (35) of the children were living in families in which the mother was head of the household, and one child was living with his father. The remaining 5% were not living with either parent; two children were living with other relatives and two children were living in foster homes.

2. Size of Family. The size of the children's families ranged from two members to 13 members, with the mean size being 5.6 persons. Approximately 23% were members of a five person family, and 45% were members of a 6 or more member family. This means that the majority of the children came from medium to large-size families.

3. Child's Sibling Position. Approximately 37% of the children in the experiment had both older and younger brothers and sisters; 28% of the children were the oldest child in the family; 27% were the youngest child in the family, and 8% were the only child in the family.

Personal Profile

1. Intelligence Quotient. The mean quotient for the 83 children was 99.4, which showed that there were approximately the same number of children with I.Q.'s above the average intelligence quotient as below.

2. Social Quotient. The mean quotient for the 83 children was 107.6, which showed that collectively these children's social maturity was slightly above average for their age.

3. Perceptual-Motor Skills. Approximately 57% of the children were in the satisfactory range, while 43% were classified as unsatisfactory. No children were classified as above-average.

4. Rote Motivation. Approximately 63% of the children were classified as satisfactory for their age group, while

36% were classified as unsatisfactory. One child was considered above average.

5. Strengths. The strength most frequently identified by the school psychologists was "conceptualization." Thirty-five children had this strength. The second most frequently identified strength was "perceptual-motor skill," with 11 children having this strength. Twenty-one of the 83 children had no identifiable strengths.

6. Weaknesses. The weakness most frequently identified by the school psychologists was "perceptual-motor skill." Thirty of the children were identified as having this problem. Only 16 of the 83 children had no identifiable weaknesses.

The above-mentioned components of the family and personal profiles of the children were singularly cross-tabulated with the dependent variables and the relationships tested for significance. It was concluded that these characteristics did not significantly influence the results of the experiment.

The Problem Child

Sixteen of the 83 children were identified as "problem children" by the teachers or school psychologists before the experiment. This meant that they had problems which were reflected either in their classroom and playground behavior or in their psychological tests. It was interesting to note that counter to the commonly accepted theory concerning the association of type of family structure with children's behavior

problems, a significantly greater proportion of these particular problem children were living in families where the mother and father were both present than the non-problem children. In contrast, a lower proportion of the problem children were living in families where the mother was the single head of the household than the non-problem children. The problem children also tended to come from larger families and be the oldest child.

As might have been expected, the problem children's personal profiles showed that a greater proportion of the problem children had unsatisfactory perceptual-motor skills for their age; their rote motivation was satisfactory or unsatisfactory according to whether their problem was hyperactivity or hypoactivity, and a smaller proportion of problem children had identifiable academic strengths.

B. Significance of Intervening Variables on Dependent Variables

Before evaluating the differential effects of the work materials with and without the cartoon upon the emotions, learning, social development and attitudes of the children, the following six intervening variables were tested to determine whether they significantly affected the results of the experiment.

Differences Among Schools and Teachers

In order to understand the five teachers' philosophies and approaches, the teachers were given a brief questionnaire before the experiment asking what they expected the results would be from using work materials with and without the cartoon. It was determined from their answers that the teachers' approaches would be significantly different. The training sessions before the experiment were designed to minimize some of the differences in teaching methods; but it was understood that these training sessions could not prevent many immeasurable school-associated factors from influencing the experiment.

Therefore, the potential influence of the schools and teachers on the experiment was intentionally minimized by creating the four experimental groups from relatively comparable numbers of children from all of the five schools. In spite of this mixing of students, it was necessary to test whether any of the differences in the dependent variables were significantly associated with particular schools.

The data of the children were separated by school and cross-tabulated with all of the dependent variables. It was found that none of the relationships were significant except the change in the rank order of the alphabet in the weekly preference tests. Although there was a slight overall increase in the alphabet's rank from the beginning to the end of the experiment when all of the schools were combined, Lexington and Sheldon Schools had a greater proportion of

children who ranked the alphabet lower at the end of the experiment than at the beginning than the other three schools. This means that the effects of the work materials with the cartoon on game preference test changes were diluted by the difference among the schools.

Differences Among Experimental Groups

As described in Chapter III, much effort and thought were invested in creating four comparable experimental groups in each school. It was concluded that the composition of each of the groups would not significantly affect the results of the experiment. Therefore, the only other possible differences in the groups which could influence the experiment were the children's attitudes toward the alphabet and cartoon, and any differences in the social dynamics within the groups. It was found that there was no significant difference among the four groups in the children's attitudes toward either the alphabet or the cartoon at the beginning of the experiment.

Only one minor difference was found among the groups with regard to their social dynamics. It was found that the teachers identified fewer children as "leaders" and more children as "followers" in Experimental Group 2 than in the other three groups. After evaluating the data, it was decided that none of the differences in this group's behavior could be attributed to this factor.

Differences Between Sexes

When the children were divided according to sex and cross-tabulated with all of the dependent variables, the only significant relationships found were the manner in which the children used their worksheets and colored the pictures. The girls generally conformed more to traditional educational expectations. The girls colored more pictures, colored them more carefully, used more colors, and drew more extra letters and words in the margins on the front of the worksheet. The girls also colored the pictures more realistically. This was taken into account when the four groups were compared.

Differences Between the Age Groups

The children who were less than 54 months old were compared with the children who were 54 months old or older with regard to the dependent variables. The only significant relationship was that the older children, in general, were more careful in their coloring than the younger. The younger children scribbled more. This was taken into account when the four groups were compared.

Differences Between the Races

When non-whites and whites were cross-tabulated with the dependent variables, only three relationships were significant.

The non-white children were more attracted to the alphabet, were more eager about coloring the worksheets, and

therefore colored significantly more second pages of the daily worksheets than the white children. In general, the non-white children also colored the worksheets less realistically.

Differences were also found in the areas of social maturity, which changed over the three-month period between the beginning and the end of the experiment. The non-white children seemed to improve in the areas of socialization, self-direction and occupation. This was a self-oriented, psychological, and social type of development. In contrast, the white children improved largely in the area of self-help dressing, which is a mechanical, basic type of improvement.

Finally, it was found that there was a significant difference between the races with regard to the weaknesses identified by the school psychologists. More white children had an identifiable weakness than non-white children. And, almost all of the children with hearing and speech problems were white. On the other hand, the non-white children had decidedly more perceptual-motor skill problems.

These three relationships were taken into account when the four groups were compared.

Differences Between Problem Children and Non-Problem Children

Only two significant differences were found between problem children and non-problem children with regard to possible influence on measurable results among the groups in the experiment.

It was found that the differences in the w[illegible] materials did not stimulate changes in either the [illegible]em child's social role in his experimental group or [illegible] his method of coloring from day to day, as was seen in [illegible] of the non-problem children. In other words, the prob[illegible]hild displayed less emoti[illegible]al responsiveness to daily changes in the pictures on the work materials. This fact was one of the major reasons why problem children were not studied as a separate group in greater detail in the experiment. This is not to say that the cartoon did not measurably affect the problem child, but that we could deal with the problem child's behavior change only in gross terms.

C. Comparison of the Four Groups

Work Materials

The Control Group used work materials similar to traditional materials for teaching the alphabet and did not have the cartoon during the experiment. There was very little enthusiasm among the children in this group. From the teacher's commentaries, it was found that the children in the Control Groups were less eager about the alphabet than the children in the other three groups. In addition, 77% of the children whom the teachers identified as being completely disinterested in participating in the alphabet work groups were members of the Control Groups.

In terms of personal activity on the worksheets, the

children in the Control Group in comparison to the children in the other three groups: 1) colored more second sheets; 2) wrote more extra letters and words in the margins on the front and back of the worksheets; 3) generally tried to color within the lines of the pictures and letters more often than the children in the other groups; 4) used fewer colors, and 5) their coloring was more careful, consistent, and attuned to reality. (See Table 4.1 below)

The children in the Control Group generally seemed to concentrate more on accomplishing the assignment and did not talk to each other as much as the children in the groups with the cartoon. An element of competition was more evident in the Control Group than in other groups. The children either competed to see who could color the fastest or would compare the quality of their coloring with each other.

The teachers did not observe in the Control Groups an interest or even awareness in associating the work materials with anything beyond the immediate memorization of a letter and its association with a word.

Experimental Group 1 used work materials which had the cartoon character on all 26 letters of the alphabet. The teachers noted considerable activity and excitement on the part of many of the children in this group. There were often overt interjections of their feelings both verbally and physically on the worksheets. The teachers also reported a significantly higher number of these children were eager about the alphabet than the children in the other groups.

TABLE 4.1

COMPARISON OF GROUPS BY AMOUNT OF ACTIVITY SHOWN ON THE WORKSHEET

Activity	Highest Average Number	Second	Third	Fourth
Number of letters exposed to	Ex.1	Cont* Ex.2		Ex.3
Regular Assignment				
Number of letters colored	Ex.2	Ex.3	Cont.	Ex.1
Number of pictures colored	Ex.2	Cont.	Ex.3	Ex.1
Number of second sheets used	Cont.	Ex.2	Ex.3	Ex.1
Extra marks on front of sheet				
Scribbles	Ex.2	Ex.3	Cont.	Ex.1
Letters	Cont.* Ex.2		Ex.3	Ex.1
Words	Cont.	Ex.3	Ex.2	Ex.1
Extra marks on back of sheet				
Scribbles	Ex.2	Cont.	Ex.3	Ex.1
Pictures	Ex.2	Ex.3	Cont.	Ex.1
Letters	Ex.2	Cont.	Ex.3	Ex.1
Words	Cont.* Ex.2		Ex.3* Ex.1	

* Groups were tied

In terms of personal activity on the worksheets, the children in Experimental Group 1: 1) colored the least letters, pictures and second sheets of all the groups; 2) wrote the least extra letters and words in the margins on the front and back of the worksheets; and 3) spent more time coloring the cartoon and/or the picture than the other three groups. (See Table 4.1 above)

Many of the children verbalized with their neighbor about the cartoon during the experiment. And, some of the children were overheard making references to "Ollie" on the playground, and occasionally made remarks about the cartoon character when the teacher announced it was time to begin the alphabet work period.

The children in Experimental Group 1 generally liked the cartoon, considered him a "friend" and "helper" and frequently described him as "happy." Some of the children interpreted Ollie as "watching them."

Many comprehended Ollie's implied action each day as a role in real life. As the children became involved with the cartoon character's behavior on the page, the teachers would sometimes observe excitement and laughing and at other times criticism of what Ollie was doing. Thus, the children were rehearsing roles in life and were stimulated to use cognitive reasoning skills to comprehend the function the cartoon portrayed. From the teachers' observations of the children's behavior in the work groups, it was found that both in this group and Experimental Group 2 that many of the children

played a "supportive" social role in contrast to the "competitive" role observed in the Control Group and Experimental Group 3.

Experimental Group 2 used work materials which had the cartoon for the first half of the alphabet and the traditional work materials for the second half. The teachers observed the same types of excitement and interjection of feelings into the work materials in this group while they were using the work materials with the cartoon as was found in Experimental Group 1. When the cartoon was taken away, there was an immediate decrease in this excitement, the verbalization changed from talking about the cartoon to wondering "where Ollie went," and over time the interpersonal interaction decreased. These children also gradually settled down to a routine similar to the children in the Control Group after the cartoon was gone. Some of the children asked about the cartoon several times during the last half of the experiment, and were elated to see him again when asked to choose between the two types of work materials during the final examination.

In terms of personal activity on the worksheets, the children in Experimental Group 2: 1) colored more of the printed letters and pictures, 2) scribbled more on both sides of the worksheets, and 3) tried to compensate for the loss of the cartoon in the last half of the experiment by drawing extra pictures in the margins of the front and back sides of the worksheets. (See Table 4.1, page 39)

As in Experimental Group 1, but to a lesser extent, these children also thought of Ollie as a "friend" and "helper." These children also showed a tendency to comprehend Ollie's implied action each day as a role in real life, and were observed commenting on the action the cartoon portrayed.

Experimental Group 3 used work materials similar to traditional materials for teaching the alphabet during the first half of the experiment and materials with the cartoon during the second half. The children's behavior and attitudes resembled those of the Control Group during the first half of the experiment, and did not change immeasurably after the cartoon was introduced on the letter "N".

In terms of personal activity on the worksheets, the children in Experimental Group 3 were always the second or third of the four groups in terms of the amount of assigned work accomplished and extra marks on the fronts and backs of the worksheets. (See Table 4.1, page 39) These children seemed to concentrate more on accomplishing the assignment and did not talk to each other as much as the children in Experimental Groups 1 and 2. An element of competition was also present in this group, but was decidedly diluted when the cartoon was introduced in the second half of the experiment.

In summary, the Control Group was significantly more effective in following the teachers' assignments, completing

the worksheets, and learning the most letters and words. The children in Experimental Group 2 displayed the most activity on the worksheets, but the children in Experimental Group 1 displayed more interpersonal interaction, verbalization, and role-playing than any of the other groups.

It was also found that the cartoon has two major effects. The cartoon directly stimulates more activity when it is present in terms of excitement, interjection of feelings, increased personal activity, verbalization, and interpersonal interaction. Experimental Groups 2 and 3 were more like Experimental Group 1 in these behavioral areas during the time the work materials had the cartoon on them. On the other hand, these two groups were more like the Control Group when the cartoon was not present.

The cartoon's second major effect was in the areas of preference for work materials, learning, and the social dynamics of the group. It was found that this phenomena only occurs in groups in which the cartoon is present at the beginning of the program; therefore, <u>when</u> the cartoon was presented was more important than <u>how long</u> it was present. Thus, Experimental Groups 1 and 2 were found to match in these behavioral areas, while Experimental Group 3 and the Control Group matched in these behavioral areas.

It was found that the cartoon character was especially useful for stimulating the "withdrawn" problem children. All of the withdrawn children, who had an opportunity to work on materials with the cartoon character, colored the sheets and talked to the teacher and children more than they had previously done in any other work assignments. The amount of change varied from rather large differences in behavior to smaller differences. In the most pronounced cases, the cartoon character seemed to stimulate two non-responsive children to begin participating in class activities and to verbalize.

Preferences

When the children in Experimental Groups 2 and 3 were asked during the final examination to choose between the two types of work materials, every child picked the alphabet worksheet with the cartoon character on it. The children in both groups most frequently explained that they had chosen it because "Ollie was on it."

With regard to the "game preference test," it was found that the attitudes of the children towards the four original games changed very little during the experiment. When the alphabet was introduced as "a game" into the preference tests, it was generally regarded as fourth choice, with only the coloring sheet being of less interest. The rank order of the alphabet rose to third position by the time of the final examination, but fell to fifth in the recall test after Christmas.

Experimental Group 1 clearly gave the alphabet game the highest rank throughout the experiment, while the Control Group gave it the lowest rank. Experimental Groups 2 and 3 were generally in the middle between these two poles. During the final examination, Experimental Groups 2 and 3 tended to vote more like Experimental Group 1, but in the recall examination they voted more like the Control Group.

In summary, it was found that the cartoon made the work materials more desirable to the children and would always be chosen over the traditional type materials. But, the cartoon does not blur the distinction between work materials and games.

Learning and Social Development

The children in the Control Group learned significantly more letters and words than the children in the other three groups, and also recalled more letters and words in the examination after the Christmas vacation. (See Table 4.2 below)

The children in Experimental Group 1 learned fewer letters than the children in the other three groups even though, on the average, the children in this group had been exposed to more letters of the alphabet. In addition, these children also recalled fewer letters in the recall examination. This is a clear indication that the cartoon distracted the children from differentiating the subtle differences in form of the

TABLE 4.2

COMPARISON OF GROUPS BY AMOUNT OF ALPHABET LETTERS AND WORDS CORRECTLY IDENTIFIED IN THE FINAL AND RECALL EXAMINATIONS

	Highest Average Number	Second	Third	Fourth
Number of Letters Exposed to	Ex.1	Cont.* Ex.2		Ex.3
Final Exam				
Letters known	Cont.	Ex.2	Ex.3	Ex.1
Words known	Cont.	Ex.1	Ex.3	Ex.2
Recall Exam				
Letters known	Cont.	Ex.2	Ex.3	Ex.1
Words known	Cont.	Ex.1	Ex.3	Ex.2

* Groups were tied.

letters. In contrast, the children in Experimental Group 1 were second in both the final and recall examinations in numbers of words known. This is probably associated with the cartoon which was designed to portray the meaning of the words.

Experimental Group 2 was exactly opposite of Experimental Group 1. This group knew the fewest words on both the final and recall examinations but was second in both examinations with regard to the number of letters of the alphabet known.

Experimental Group 3 was always the third of the four groups in the number of letters and words known.

This shows that the cartoon character should not be used for rote learning and memorization.

With regard to comprehensive learning, it was found that the cartoon did stimulate the child to comprehend the meaning of the words and the actions of the cartoon in areas the traditional materials do not cover. The complexity of the cartoon motivated the child to discriminate finer details than were on the traditional work material. The cartoon implied action, encouraged the child to understand the use of objects, and to practice conceptualizing movements in space. The Cartoon stimulated feelings and caused the child to become involved in the action which, in turn, stimulated verbalization and increased activity on the work materials, among the children, and in the child's role playing.

From the social maturity test, before and after the experiment, it was found that "socialization" was the most frequent skill acquired during this three-month period. Thirty per cent of the children in the experiment increased their skill in this area. Ninety-one per cent of these children were from the three experimental groups exposed to the cartoon. The majority of the children acquiring social skills in the areas of occupation, self-help dressing, and self-direction were also from the three experimental groups.

CHAPTER V

CONCLUSIONS

A. Effects of the Cartoon on the Child's Behavior

To state the conclusions according to the hypotheses, it was found that the cartoon character's presence in the alphabet work materials could be associated with a difference in classroom behavior, preferences in the work materials, and the way the children were comprehending and reasoning.

The children with the cartoon character on their work materials definitely preferred the work materials more than the children who did not have the cartoon. From comments by the children, it was found that almost all of the children thought that the cartoon was appealing and "good." These children also frequently described "Ollie Cat" as a supportive friend and helper. Almost all of the children achieved some satisfaction from the overall stimulation of the cartoon.

It was also found that there was a significant increase in individual activity in the groups with the cartoon. This was especially evident in Experimental Groups 2 and 3 where both worksheets could be compared. There was an increase in activity in both physical work on the sheets and in interpersonal interaction. The children using work materials with the cartoon also showed a greater variety in their coloring

and especially in their innovations in the margins of the front side of the page or on the back of the worksheet.

The children also were more active, excited, less careful in their coloring, and responded differently in the work sessions according to their feelings about the cartoon, the particular alphabet letter, or other outside conditions. In other words, the children felt a sense of freedom and satisfaction in doing work in which feelings could be used. It was also found that in this context the child often was observed coloring and talking about the cartoon according to the cartoon character's emotional connotation to the child rather than an outward appearance.

The child also used the work materials according to his perception of the cartoon's expectations. That is, the children who interpreted the cartoon as a friend or helper to accomplish their work with the alphabet seemed to express the need to do the assignment as well as possible and complete the work. Those children who perceived the cartoon negatively often verbally and physically attacked the character on the worksheet. Much discussion about the cartoon character was noted by the teachers during the work period, but only a small number of children seemed to carry the concept of Ollie into other work or play activities. Almost all of the children using the work materials with the cartoon seemed to anticipate the task of learning another letter with more excitement and enjoyment than the children using traditional materials.

The one specific learning area in which the child with the cartoon seemed to be less effective than the child with the traditional material was in the area of rote learning and memorization. In addition, children with traditional work materials generally concentrated more fully on the assignment and accomplished more as well as produced better quality work. This can be explained largely from the fact that the cartoon stimulated the child emotionally, encouraged him to be less inhibited in the task, and also took a large proportion of his attention and energy away from the alphabet.

The instruments in the experiment were not designed to describe in detail the comprehensive learning acquired, but there were strong indications that the cartoon motivated the child to translate some of the information involved in the alphabet to real life. It was also found that the following cognitive problem-solving skills had been stimulated by the cartoon:

1. Its nature required the child to see a rather complex object and distinguish it from other objects.

2. When this process was repeated several times, the cartoon became familiar to the child.

3. The activity of the cartoon expressed functions of many objects, including the cartoon itself.

4. The children were exposed to the reasoning required to learn how to use objects and how to differentiate them from among other objects.

5. There was also an opportunity to perceive an implied motion and spatial perspective in the cartoon which allowed the child to better understand movement in space and the reasoning related to combining objects.

It was found that children using the work materials with the cartoon character often expressed their concept of the cartoon in terms of the cartoon's social relationship to the objects in the picture, "generalized others" or actual children in the class. From these expressions of approval or disapproval, it was observed that the child was rehearsing in this fantasy their concepts of themselves and their relationships to others. The children using work materials without the cartoon did not have an opportunity to play these roles.

In addition to the conclusions reached about the hypotheses of the study, it was concluded that the cartoon character could be used more effectively where there are needs to transmit information to girls, non-whites, and withdrawn children, because these types of children showed a much greater preference for the cartoon and responded the most to the cartoon than other types of children.

B. Use of the Cartoon in the Experiment

The experiment represents an important first step in exploring the dynamics of cartoon with regard to Head Start children, and the use of the cartoon on particular work materials.

This experiment has narrowed the questions about the use of cartoons somewhat. These data have eliminated several questions about the use of cartoons in terms of general characteristics of the stimulation achieved, specific areas of child development most amenable to this type of stimulation, whether the cartoon is useful in preschool education programs, and especially whether it is useful as a stimulator of disadvantaged and problem children.

As for the effectiveness of the experiment, it was expected that there would be much less control of the intervening and dependent variables in a field experiment such as this than there would have been in a laboratory experiment. The daily changes in the school environment; the subtle differences in the way the teachers instructed the children and collected the data, and the age of these preschool children were expected to prevent highly sensitive measurement of the cartoon's intrinsic motivation of the children. As a field experiment, the project was conducted as carefully as possible under the given circumstances.

In addition to anticipating the difficulty of using the cartoon on work materials for this age group in a manner in which valid and reliable measures could be administered, it was also anticipated that the cartoon might be an excessive stimulus which would affect the child in such a manner that he would be unproductive and distract the other children. By using this definition to evaluate the results of the experiment on learning the alphabet, all of the children who used

the work materials with the cartoon could have been considered over-stimulated. But, in the sense that the particular child was not receiving the concepts involved in the work material and distracting the other children, it was concluded that there were no children in the experiment who were overly-stimulated by this type of cartoon.

The alphabet was not a good subject on which to test the effect of the cartoon, because by its nature it is a rote method of learning when the children are expected to sequentially memorize the twenty-six letters and a series of words without necessarily fully comprehending their relationships. The alphabet worksheets were especially poor vehicles for the cartoons as stimulators and information transmitters, because the character was forced to be an almost static object which frequently did not contribute to the concepts of the words involved.

In summary, the experiment has shown that the cartoon is an intrinsic stimulator and information transmitter which would probably be more effective in elementary school classes with older children. It was also concluded that the cartoon should not be used when the educational assignment requires rote learning.

CHAPTER VI

RECOMMENDATIONS

A. Role of Cartoon in Education

It is recommended that the cartoon would be more effective on older children, if it is desired to transmit comprehensive and cognitive learning. If the child were more mature than the Head Start children, he would be able to comprehend more of the subtleties of the concepts, attitudes and norms the cartoon would be projecting. The older child would also be able to make frequent subtle adjustments in his behavior to reach complex goals; and therefore, the stimulation of the cartoon would tend to produce greater results in terms of the objectives of the school program. The older child is able to better communicate what he has gained from the cartoon.

The cartoon is an extremely dynamic concept and should be used as a static item as little as possible. Generally, the cartoon's ability to explain a concept which is difficult to explain orally or symbolically is best done as an animated figure because the character's many subtle movements contribute to understanding the nuances of the concept desired. In addition, the child must see through the cartoon either how to resolve problems by watching the cartoon resolve them, or he must see how to work with others by seeing how the cartoon works with others. These last two concepts require an animated figure.

It is also recommended that the cartoon be utilized in a role capacity, where the child is encouraged to identify with the cartoon as a friend and helper. The dynamic role not only has the advantage over transitory uses of the cartoon on work materials because it can establish a comfortable, familiar relationship with the child, but it also can establish a personality for itself and thereby transmit values and norms to the child. In this manner, the cartoon can be a substitute for the teacher.

Therefore, it is recommended that there are real possibilities for the cartoon in education; not only on work materials which are designed to transmit concepts and stimulate cognitive problem-solving skills, but as a new role in the classroom which can aid the teacher in reaching the objectives of the curriculum, and making it possible for the child to reach higher levels of learning than would usually be expected.

B. Using Cartoon in Future Research

This research project was able to evaluate only a few potentials of the cartoon as a stimulator and information transmitter in educational programs. It is recommended that further research be conducted on the potentials of the cartoon character in both work materials and as a dynamic complementary role to the teacher in the classroom.

When used to augment the information on the work materials and stimulate greater constructive activity on the part of the child, it is recommended that the cartoon character's static nature be diminished as much as possible; and, that it be used in the role of transmitting additional concepts which are consistent with the objectives of the particular program. Never use the cartoon for rote learning.

With regard to using the cartoon in a dynamic role, it is recommended that a longitudinal study be developed to extend over a full school year. Since the comprehensive and cognitive learning and social development concepts seem to have the greatest potential, it is recommended that these be used as the dependent variables. By utilizing group dynamics theories to design the method of introducing and using the cartoon in the classroom and by designing the function of the cartoon with the purpose of improving the children's cognitive, problem-solving skills and social development, a completely new area of educational methods may be opened.

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APPENDIX A

WORK MATERIALS

WORKSHEET A — CONTROL GROUP

1. Today, boys and girls, we are going to work with something new.
2. Does anyone know what alphabet means?
3. The alphabet is all the letters that make up the words that we say every day.
4. This is a letter of the alphabet.
5. This letter is used in lots of words.
6. Does anyone know what letter this is?

** 7. This letter has a name. It is called A.

8. The word apple begins with the letter A.
9. This letter has a special sound (A).
10. Let's say A (follow through with A sound).
11. Look at the letter closely and let's use our arms and hands to draw the letter in the air.
12. First we will draw the large letter which is called a capital letter. Now we will draw the small letter which is called a small letter.

    (a) Teacher demonstrates correct starting point.

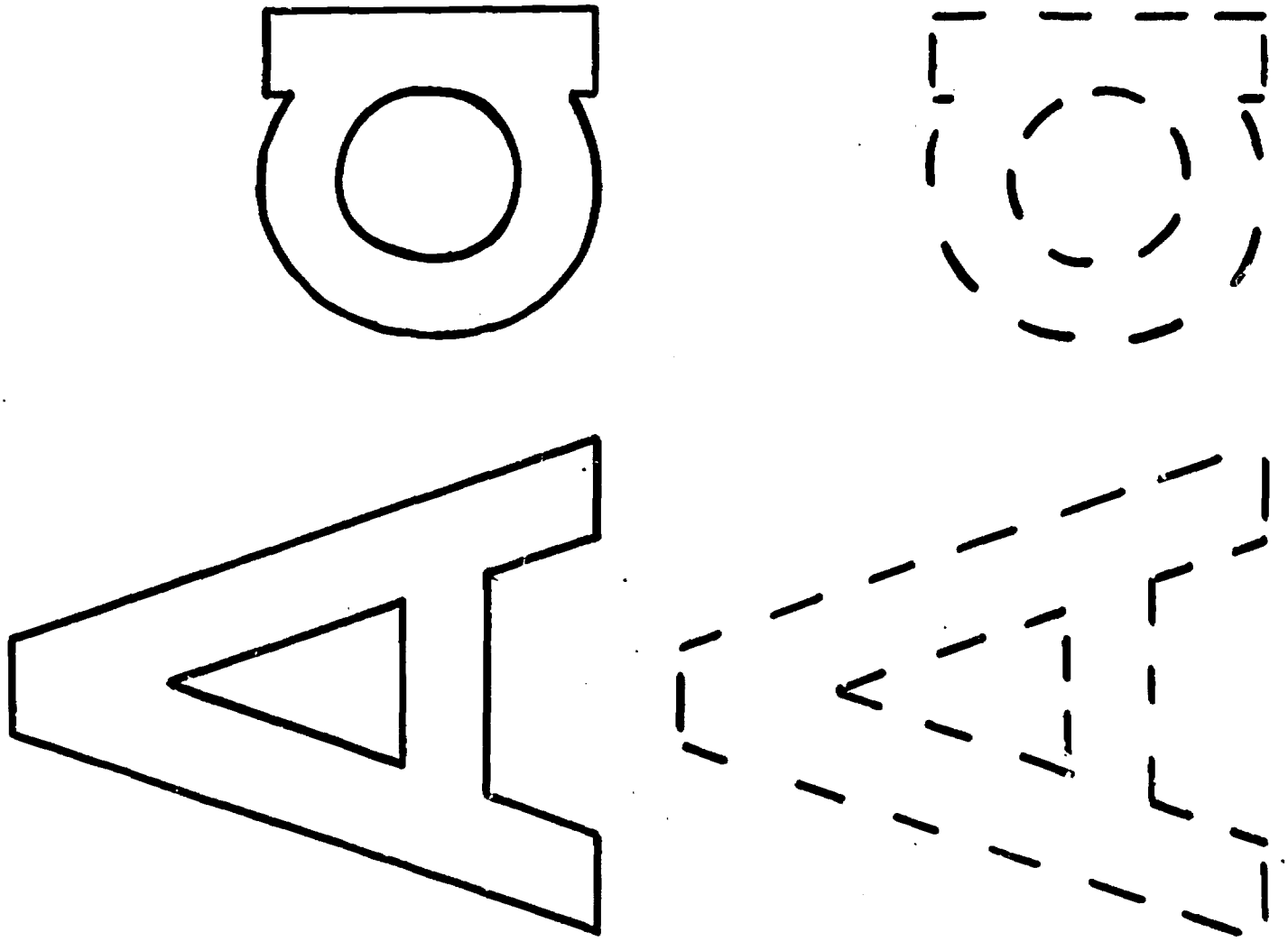
13. Now you may color your page. After you have colored your page, you may add anything else you would like.

** (Note) Students should repeat after the teacher: This letter's name is A.

a
apple
A
Apple

WORKSHEET A (Part Two) CONTROL GROUP

1. Look, boys and girls, do you remember this letter?
2. What is the name of this letter?
   (a) Teacher points to capital A.
   (Note) Children should be encouraged to answer in complete sentences.
   Example: This letter's name is capital A.
   This letter's name is small A.
3. What is the name of this letter?
   (a) Teacher points to small A.
4. What does this look like?
   (a) Teacher points to dotted capital A.
   (Note) Children should be encouraged to answer in complete sentences.
   Example: This letter's name is capital A.
5. What does this look like?
   (a) Teacher points to dotted small A.
   (Note) Same child response: This letter's name is small A. (or)
   The name of that letter is a small A.
6. These letters are not finished. Take your crayon and connect the lines and finish both letters A.
7. Then you may color your letters.
8. And remember, let's do a good job.



WORKSHEET A — EXPERIMENTAL GROUP

1. We have a new person in our class today, boys and girls. His name is Ollie Cat.
2. He is a cat because he has whiskers, big shiny eyes and a tail.
3. Ollie Cat is going to help us learn the letters of the alphabet.
4. Does anyone know what alphabet means?
5. The alphabet is all the letters that make up the words that we say every day.
6. This is a letter of the alphabet.
7. This letter is used in lots of words.
8. Does anyone know what letter this is?
** 9. This letter has a name. It is called A.
10. Look at Ollie's happy smile.
11. What is Ollie doing?
12. Ollie is painting an apple.
13. The word apple begins with the letter A.
14. This letter has a special sound (A).
15. Let's say A (follow through with A sound).
16. Look at the letter closely and let's use our arms and hands to draw the letter in the air.
17. First we will draw the large letter which is called a capital letter.
    Now we will draw the regular letter which is called a regular letter.

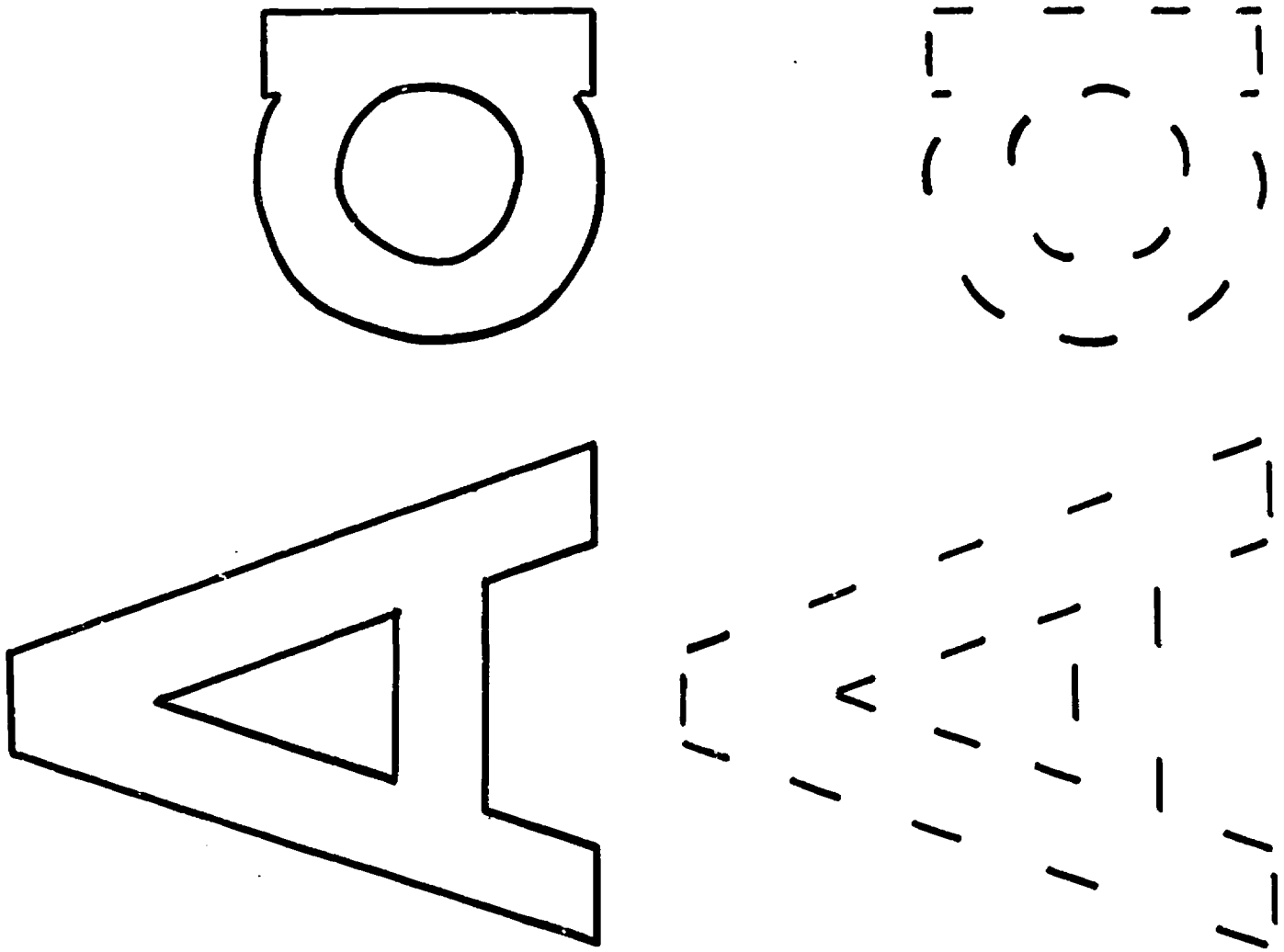
    (a) Teacher demonstrates correct starting point.
18. Now you may color your page. After you have colored your page, you may add anything else you would like.

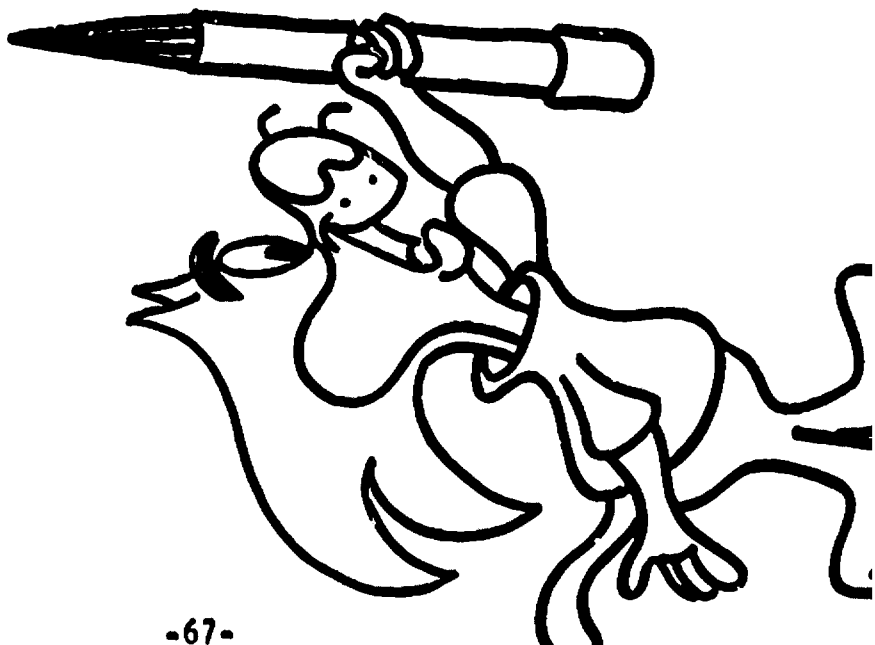
** (Note) Students should repeat after the teacher: This letter's name is A.

Apple
apple

WORKSHEET A (Part Two) EXPERIMENTAL GROUP

1. Look, boys and girls, here is Ollie Cat again.
2. Perhaps Ollie Cat will help us remember our letter.
3. What is the name of this letter?
   (a) Teacher points to capital A.
   (Note) Children should be encouraged to answer in complete sentences.
   Example: This letter's name is capital A.
   This letter's name is small A.
4. What is the name of this letter?
   (a) Teacher points to small A.
5. What does this look like?
   (a) Teacher points to dotted capital A.
   (Note) Children should be encouraged to answer in complete sentences.
   Example: This letter's name is capital A.
6. What does this look like?
   (a) Teacher points to dotted small A.
   (Note) Same child response: This letter's name is small A. (or)
   The name of that letter is a small A.
7. These letters are not finished. Take your crayon and connect the lines and finish both letters A.
8. Then you may color your letters.
9. Do a good job -- remember, Ollie Cat is watching you.





PRE-SCHOOL ALPHABET
(by Robert Gill)

A - Apple

B - Ball

C - Cake

D - Doughnut

E - Egg

F - Fish

G - Guitar

H - Horse

I - Ice Cream

J - Jelly

K - Kite

L - Lemonade

M - Mirror

N - Net

O - Oboe

P - Peanut

Q - Quarter

R - Rope

S - Spoon

T - Tulip

U - Umbrella

V - Violin

W - Wagon

X - X-Ray

Y - Yoyo

Z - Zipper

TIME SCHEDULE OF CARTOON MOTIVATION EXPERIMENT

Mon	Tue	Wed	Thu	Fri	Sat
			Oct 23 Pre-Test	Oct 24 Pre-Test	
Oct 27 A	B	C	D	Test #1	Edit observation reports and turn in worksheets
Nov 3 E	F	G	H	Test #2	Same as above
Nov 10 I	J	K	L	Test #3	Same as above
Nov 17 M	Switch materials, Exp. Groups 2 & 3 N	O	P	Test #4	Same as above
Nov 24 Q	R	S	THANKSGIVING HOLIDAYS		
Dec 1 T	U	V	W	Test #5	Same as above
Dec 8 X	Y	Z		Dec 12 Test #6	Same as above
			Dec 18 Retention Test		

APPENDIX B

INSTRUMENTS

DATE:_____

SCHOOL:_____

GROUP:_____

TEACHER:_____

NAME OF CHILD:_____

OBJECT PREFERENCE PRE-TEST

A. Teacher asks if the child likes to play with each of the objects.

B. Teacher asks with which the child most likes to play? 2nd, 3rd, and 4th preference?

	CHILD'S PREFERENCE
Wooden Puzzle	_____
Play Dough	_____
Coloring Sheet (Boy)	_____
Number Peg Game	_____

STORY SPACE (NOTES)

DATE:_____

SCHOOL:_____

CLASSROOM:_____

TEACHER:_____

NAME OF CHILD:_____

KNOWLEDGE AND ATTITUDES CONCERNING CARTOONS

A. Have you seen these before? (Newspaper cartoon & comic book)

B. What is this? (cartoon)

C. Have you seen someone like this on the T.V.?

D. Do you like watching them on T.V.?

E. What do they do?

Test Form

NAME_____

GROUP_____

RECOGNITION OF LETTER BY NAME

Letter	Word	Letter	Word
A _____	_____	N _____	_____
B _____	_____	O _____	_____
C _____	_____	P _____	_____
D _____	_____	Q _____	_____
E _____	_____	R _____	_____
F _____	_____	S _____	_____
G _____	_____	T _____	_____
H _____	_____	U _____	_____
I _____	_____	V _____	_____
J _____	_____	W _____	_____
K _____	_____	X _____	_____
L _____	_____	Y _____	_____
M _____	_____	Z _____	_____

APPENDIX B.2

QUESTIONNAIRE FOR TEACHERS

(Please answer on other pages)

1. From your experiences as to how children of this age learn and their rates of achievement, how would you categorize their performance in terms of letters of the alphabet and words recognized in the test?

2. Which of the four groups in the experiment do you expect to learn the alphabet the best? Please explain why.

3. What effect do you think the cartoon has on:

   Rote learning?
   Comprehensive learning?
   Social development?
   Psychological development?
   Verbal behavior in class?
   Non-verbal behavior in class?

4. What effect do you think the non-cartoon materials in the experiment have on:

   Rote learning?
   Comprehensive learning?
   Social development?
   Psychological development?
   Verbal behavior in class?
   Non-verbal behavior in class?

APPENDIX B.3.

PSYCHOLOGICAL TEST DATA SHEET

Name_____ Examiner_____

Head Start Center_____ Teacher_____

****

Slosson Intelligence Test (SIT)

Date_____ Birthdate_____ Chronological Age_____

Mental Age_____ Intelligence Quotient_____Percentile_____

****

Slosson Drawing Coordination Test (SDCT)

Date_____ Developmental Age_____ Accuracy Percent_____

****

Wechsler Preschool and Primary Scale of Intelligence - Animal House

Date_____ Chronological Age_____ Errors & Omissions_____

Jastak

Raw Score_____ Time_____ Scaled Score____ Standard Score___

****

Vineland Social Maturity Scale Date_____ Chronological Age____

Total Score_____ Social Age_____ Social Quotient_____

****

Caldwell Test

I.	Raw Score	_____	Percent	_____
II.	Raw Score	_____	Percent	_____
III.	Raw Score	_____	Percent	_____
IV.	Raw Score	_____	Percent	_____
			Total	_____

****

Examiner's Remarks:

****

RE-TESTS

Vineland Social Maturity Scale Date_____ Chronological Age_____

Total Score_____ Social Age_____ Social Quotient_____

****

Other Test Data or Remarks:

Cartoon Motivation Project
November, 1969
January, 1970

APPENDIX B.4

FRIDAY AND RECALL EXAMINATIONS

DATE:_____

SCHOOL:_____

GROUP:_____

TEACHER:_____

NAME OF CHILD:_____

OBJECT PREFERENCE TEST

A. Teacher asks if the child likes to play with each of the objects.

B. Teacher asks with which the child most likes to play? 2nd, 3rd, and 4th preference?

	CHILD'S PREFERENCE
Wooden Puzzle	_____
Play Dough	_____
Cartoon/Alphabet	_____
Coloring Sheet (Boy)	_____
Number Peg Game	_____

STORY SPACE (NOTES)

Test Form

NAME_____

GROUP_____

RECOGNITION OF LETTER BY NAME

Letter	Word	Letter	Word
A _____	_____	N _____	_____
B _____	_____	O _____	_____
C _____	_____	P _____	_____
D _____	_____	Q _____	_____
E _____	_____	R _____	_____
F _____	_____	S _____	_____
G _____	_____	T _____	_____
H _____	_____	U _____	_____
I _____	_____	V _____	_____
J _____	_____	W _____	_____
K _____	_____	X _____	_____
L _____	_____	Y _____	_____
M _____	_____	Z _____	_____

APPENDIX B.5.

FINAL EXAMINATION

DATE:_____

SCHOOL:_____

GROUP:_____

TEACHER:_____

NAME OF CHILD:_____.

OBJECT PREFERENCE TEST

A. Teacher asks if the child likes to play with each of the objects.

B. Teacher asks with which the child most likes to play? 2nd, 3rd, and 4th preference?

	Child's Preference
Wooden Puzzle	_____
Play Dough	_____
Cartoon/Alphabet	_____
Coloring Sheet (Boy)	_____
Number Peg Game	_____

STORY SPACE (NOTES)

WHAT DO YOU LIKE ABOUT:

THE WOOD PUZZLE?

THE PLAY DOUGH?

THE ALPHABET?

THE COLORING SHEET?

THE NUMBER PEG GAME?

DATE:_____

SCHOOL:_____

CLASSROOM:_____

TEACHER:_____

NAME OF CHILD:_____

KNOWLEDGE AND ATTITUDES CONCERNING CARTOONS

A. Have you seen these before? (Newspaper cartoon & comic book)

B. What is this? (cartoon)

C. Have you seen someone like this on the T.V.?

D. Do you like watching them on T.V.?

E. What do they do?

Test Form

NAME_____

GROUP_____

RECOGNITION OF LETTER BY NAME

Letter	Word	Letter	Word
A _____	_____	N _____	_____
_____	_____	O _____	_____
C _____	_____	P _____	_____
D _____	_____	Q _____	_____
E _____	_____	R _____	_____
F _____	_____	S _____	_____
G _____	_____	T _____	_____
H _____	_____	U _____	_____
I _____	_____	V _____	_____
J _____	_____	W _____	_____
K _____	_____	X _____	_____
L _____	_____	Y _____	_____
M _____	_____	Z _____	_____

TEST FOR EXPERIMENTAL GROUPS ONLY

Cartoon/Alphabet Exam

FOR EXPERIMENTAL GROUPS #2 & #3 ONLY

1. Which sheet do you like the best?

   Alphabet without cartoon_____

   Alphabet with cartoon _____

2. Why?

FOR ALL THREE EXPERIMENTAL GROUPS

3. What does Ollie Cat do?

APPENDIX B.6

CHILDREN'S SUMMARY SHEET

Name of Child_____
School_____ Group_____
Age_____ Sex_____ Race_____

I. Family Profile

Living with Mother and Father. . . . . _____
Living with Mother and Stepfather. . . . _____
Living with Mother only. . . . . _____
Living with Father only. . . . . _____
Living with Other Relative . . . . . _____
Living with Non-relative . . . . . _____

Total Number of Family Members at Home . . . . . _____

Older and younger brothers and sisters . _____
Older brothers and sisters only. . . . . _____
Younger brothers and sisters only. . . . _____
No brothers and sisters. . . . . _____
Twins. . . . . _____

II. Psychological Summary

Chronological Age. . . . . _____
Mental Age . . . . . _____
Social Age . . . . . _____
I.Q._____ Percentile . . . . . _____
Perceptual-Motor . . . . . _____
Motivation . . . . . _____
Social Quotient, October . . . . . _____
Social Maturity Change:

SHG_____ SD_____ SHE_____ L _____ No Change_____
SHD_____ S_____ C_____ O _____

Caldwell Total Score_____

Strengths		Weaknesses	
Perceptual-Motor . .	_____	Perceptual-Motor. . . .	_____
Conceptualization. .	_____	Conceptualization . . .	_____
Consistency.	_____	Inconsistency	_____
Concept Formation. .	_____	Concept Formation . . .	_____
Comprehension. . . .	_____	Comprehension	_____
Rate of Learning . .	_____	Rate of Learning. . . .	_____
Verbalization. . . .	_____	Verbalization	_____
Emotional Stability.	_____	Emotional Instability .	_____
Attention Span . . .	_____	Attention Span.	_____
Social Competence. .	_____	Social Competence . . .	_____
		General Health.	_____
		Hearing & Speech Problems	_____

III. Problems as Stated by Teacher

No Problem... _____ Aggressive..._____
Hyperactive.. _____
Hypoactive... _____
Withdrawn.... _____

IV. October Pre-test

	Wooden Puzzle	Playdough	Coloring Sheet	Number Peg Game
Game Preference Ranks	_____	_____	_____	_____

Past Contact with Cartoon: Yes. . . . ._____
No . . . . ._____
Unknown. . ._____

Knowledge of Cartoon's Activities:

No Response. . _____
Don't Know . . _____
Response:
1. Identified it as a "cartoon". . . . . _____
2. What cartoon does:
   a. Affect on child:
      1) Good. . . . . _____
      2) Bad . . . . . _____
   b. Kinds of Action of Character:
      1) Happy/Good. . . . . _____
      2) Frightening/Bad . . . . . _____
      3) Mischevious . . . . . _____
      4) Has a task to do. . . . . _____
      5) Friend/Helper . . . . . _____
      6) Authority Figure. . . . . _____

Attitude toward Cartoon:
Like. . ._____ None. . ._____
Dislike ._____ Unknown ._____

Number of letters known. . . . . _____
Number of words correctly associated with letters_____

V. Regular Tests

	Test taken by child						
	1st	2nd	3rd	4th	5th	6th	7
Game Preference Ranks							
Wooden Puzzle. . . .	____	____	____	____	____	____	____
Playdough.	____	____	____	____	____	____	____
Cartoon/Alphabet . .	____	____	____	____	____	____	____
Coloring Sheet . . .	____	____	____	____	____	____	____
Number Peg Game. . .	____	____	____	____	____	____	____
Number of letters tested	____	____	____	____	____	____	____
Number of correct letters.	____	____	____	____	____	____	____
Number of correct words.	____	____	____	____	____	____	____

VI. Teachers Comments on Cards

Attitude toward Alphabet:
- Eager . . . . . ____
- Like coloring, but passive about alphabet . . . . ____
- Dislike . . . . . ____

Attitude toward Cartoon:
- Attracted . . . . . ____
- Repulsed. . . . . ____
- Neutral . . . . . ____

Work with Group:
- No comment by teacher . . . . . ____
- Leader. . . . . ____
- Follower. . . . . ____
- Disruptor. . . . . ____
- Supporter . . . . . ____
- Competitor. . . . . ____

VII. Worksheet

Number of letters with which child worked . . . . . ____
Number of different letters of alphabet on which child colored the spaces within the letter. . . . ____
Number of times colored the picture/cartoon . . . . . ____
Number of times used second sheet . . . . . ____
Neatness: generally tried to stay within the lines. . ____
not try to stay within the lines. . . . . ____
Number of times marked on the back of the sheet . . . ____
scribbled ____ letters ____
pictures ____ words ____
Number of times wrote letters on sheet. . . . . ____
Number of times wrote words on sheet. . . . . ____

Most frequent number of colors on a page:

1____ 4____
2____ 5 or more____
3____

Mode of coloring consistent:
1. Yes . . . . . ____
2. Careful/Not careful . . . . . ____
3. Light/Heavy . . . . . ____
4. Small or straight strokes/Large or circular strokes . . . . . ____
5. Few colors/Many colors. . . . . ____
6. General manner letters, pictures, and spaces are colored on page . . . . . ____

Pictures/Cartoon colored according to reality:
- All the time. . . . . ____
- Over two-thirds . . . ____
- About one-half. . . . ____
- Less than one-third . ____

VIII. Final Examination

	Wooden Puzzle	Play-dough	Cartoon/ Alphabet	Coloring Sheet	Number Peg Game
Game Preference Rank	____	____	____	____	____

Attitude about Cartoon:

No Response. . . . . ____
Don't know . . . . . ____
Like it or Ollie on it . . . . . ____
Play with it . . . . . ____
Ollie: Happy/Smile . . . . . ____
Ollie: Watch you color . . . . . ____
Ollie: Friend/Helper . . . . . ____
Ollie: Mischevious/Playmate. . . . . ____
Ollie: Authority Figure. . . . . ____
Liked other things on page . . . . . ____

Knowledge of Cartoon:

No Response or don't know. . . . . ____
Happy (Smile, Laugh) . . . . . ____
On Alphabets . . . . . ____
Friend/Helper. . . . . ____
Watches you. . . . . ____
Interpretation of action on sheets . . . . ____
(Tease, Naughty)
Affects child, Good. . . . . ____
Affects child, Bad . . . . . ____

Number of Correct Letters ____
Number of Correct Words ____

IX. Recall Test

	Wooden Puzzle	Play-dough	Cartoon/ Alphabet	Coloring Sheet	Number Peg Game
Game Preference Rank	____	____	____	____	____

Number of Correct Letters ____

Number of Correct Words ____

APPENDIX C

"A CARTOON HISTORY"

by

Robert Gill

A CARTOON HISTORY

Pictures as Communication

We think in pictures; we dream in pictures. A child can recognize and interpret a visual image long before he has reached the stage where he can learn to read. Vision ignores the barriers of language; a picture needs no translators explanation to Eskimoes or Swahilis. The old saying, "A picture is worth a thousand words" will never be outdated as a visual consciousness within our society continues to develop with every passing year.

In this present age of intense visual communication, when the television screen dominates broadcasting, and the Nikon 35-mm camera rules the picture magazine pages, there is a tendency to think of the conjunction of illustration and the printed word as a fairly recent phenomenum. Such an impression appears to be confirmed by a search through the old files of some English newspapers. Before the invention of the half-tone block, and in many cases long after, the pages seem to present a grey acreage of acid type, unrelieved by any graphic design. Until recent years it was the policy of a number of "quality" newspapers to publish editorial pictures very rarely, such vulgarities being left to the advertisers and the gutter journals. Such was the hangover of a Victorian tradition of literacy which decreed pictures to be unrespectable--a form of neo-Puritanism. Pictures were too easy. They did not demand the same intellectual effort as words to make their communication. They encouraged mental laziness which could, in time, lead to more serious moral collapse. With their passion for compartmentalizing, the middle-class Victorians let the Illustrated London News take care of the week's news pictures and Punch the humorous ones. It is easy to see how these attitudes influenced all areas of printed communication including traditional school books and materials which I remember in school to be very dull and boring with only a few pictures to flavor what was otherwise very unmotivating.

Yet graphic illustration has a long history. The earliest known images created by man, scrawled in Palaeolithic times on the walls of caves in the Dordogne, show in the fluid force of their line an awareness, in simple, stylized drawing, of the power to communicate a religious or a magical idea. The great watershed of cartoon and caricature, which was to lead in time to the modern comic, occurred in the eighteenth century, the age of Hogarth and, later, Thomas Rowlandson. William Hogarth brought the novel, a new literary form then

rampant in England and the theatre together in printing. His great satires, painted in series--"A Harlot's Progress," "Marriage a' la Mode," "A Rake's Progress," "Industry and Idleness"--founded the narrative sequence style in art. Engravings of these were hawked to an eager public, and pirated by unscrupulous copiers anxious to take advantage of Hogarth's popular reputation.

The modern comic strip is a visual communication medium of equal influence. The products of American syndication are seen by more than 200 million people in sixty countries every day. Why should comics and cartoons be so popular? Obviously, the function of the newspaper strip is entertainment--a diversion from news, features and advertisements. It is an added dimension to the coverage of the newspaper carrying it. American newspapers take strips for granted: only the New York Times and the Wall Street Journal do without them. There are approximately 160 weekly strips in color available for the special Sunday supplements, and more than 250 daily strips produced by the syndicates.

A comic strip can take many forms. Fundamentally, however, it must consist of a sequence of narrative pictures featuring a regular cast of cartoon characters. A daily newspaper strip has three or four of these in frames, either forming a complete incident--the "gag strip"--with a joke in the last frame, or as an episode in a continuing serial. The American Sunday page can inflate the day's episode to a dozen panels, or provide a complete gag sequence.

The comic book, from which newspapers tend to dissociate themselves, is a magazine with a page size of ten inches by seven; it features one or more complete stories told in strip form throughout its pages. The British children's comic, a form of publication unknown in America, is a periodical containing an assortment of gag strips, serial strips, stories and other matter. With few exceptions, there is no interchange between newspaper strips, comic books and children's comics. Comic-strip forms are also used in advertising and in magazines featuring cartoon humor such as Punch and the New Yorker.

For the most part, strips attempt to fulfill no high-flown social purpose, any more than gossip columns do. They are pure light relief, using fantasy, adventure, slapstick, or satire to create a dramatic, usually comic, effect. Some of the recent strip arrivals have commented satirically on serious social problems and have become some of the most popular among the syndicates and their clients. The strips have, therefore, become a lively and usually accurate mirror of the times we live in; the world they show may be watered down or exaggerated, but it is portrayed with a firm grip on the taste of the

moment. The strips themselves can influence fashions: expressions like "heebie-jeebies", "goon", and "twerp" derive from them; so too do films, plays, musicals, ballets, radio and television programs. Even popular events may result: Sadie Hawkins Day is taken from Li'l Abner and at one time was celebrated at 500 schools and colleges. The strips have also influenced serious art, particularly in the works of the pop artists Lichtenstein and Warhol; they have influenced the cinema, most notably in France; they have actively propagated the American way of life throughout the world. Before the war Mussolini banned American strips from Italian newspapers; yet even a Fascist dictator had to yield to the public clamour for Popeye.

The strips are ephemera. But this is an age when higher premiums are beginning to be placed on the ephemeral arts. They more honestly represent their time than the work which is deliberately created to last, and which will perhaps be scorned by succeeding generations--like Victorian genre paintings, for example. But it would be absurd to pretend that the strip is high art, nor should this even be debated. It is not, any more than the front-page lead in a newspaper is great literature. It is commercial art, turned out with due regard to the pressures of space, time and taste. Some examples will be poor, others magnificent of their kind. But their interest to the social historian is considerable.

What sort of evaluation can be made of cartoons and comic strips? Wishing to define the face of "the American who does not read the comics," E. Robinson and Manning White made a survey of the better educated groups, in the belief that this was the natural place to find him. They discovered that the practice of always conducting these surveys among children and illiterates was a mistake, since they supplied only children's and illiterates' answers (a fact that is known but always forgotten). They discovered among educated people a very lively interest in the comic strip, a respect for comic strips as a genre and as a means of expression, and a clear-cut opposition to sweeping condemnations of them.

The same authors then launched (in 1962) a national survey, using a scientifically measured sampling that covered the entire country. Its results are particularly interesting. The reading of the comics reaches a peak between the ages 30-39, and then gradually declines. The highest proportion of readers is found in the white-collar class. The comics are closely associated with childhood memories, but more than 50 per cent of those interviewed stated that the reading of the comic strips was not an idle pastime but rather a positive pleasure. Hostile answers varied between only 4 per cent and 10 per cent. As regards the attitude of educated people, the results of a

previous survey were confirmed: these people feel they are betraying culture; they are afraid of seeming backward because they believe they are exceptional in their group. They imagine that the greatest reading of the comics is done by quasi-illiterates: "Contrary to the general notions of the adult population about comic strip fans, readers in the most highly educated group are the rule rather than the exception." The lessening of interest after age 40 is more likely to signal a nascent intellectual sclerosis than the flowering of maturity. At the same time, other surveys confirmed that of all the features in the newspaper the comics are the most widely read (13.2 per cent of the total against 8 per cent for war news); 58.3 per cent of the men and 56.6 per cent of the women stated that they particularly read the comic strips. Proportionally, they are twice as effective as the sports pages. On the whole, visual forms accompanied by a text constitute one-fifth of the features and claim half of the reading time.

As part of a study in 1949, Leo Bogart noted the pleasures in the comic strip experienced by the very average people he observed. The comics introduce variety and fantasy into monotonous lives. They supply a useful but limited outlet; they are an amusement, a silent show in a conventional language, offered to millions of isolated individuals in their reading, not to an assembled and electrified crowd. Being a neutral subject familiar to everyone, they provide a topic of conversation, a friendly opening gambit between people who are not well acquainted with each other, "a ready-made satirical imagery, immediately applicable to real people and problems." Yet many readers suffer feelings of guilt and shame if forced to admit that they read them. Is this a hangover in the racial subconscious of the Victorian equation of pictures with illiteracy and ignorance, a combination of snobbery and Puritanism? Some psychologists and educators have tried to blame many social ills on the pernicious effects of comics on the developing imaginations of children. The strips are not meant to be serious, even if they portray tragic events. Cartoonists have often come across in dialogue with their readers the type of person who takes the whole thing seriously enough to write a letter of sympathy when a character in a strip dies. But for most people the strip is a miniature, encapsulated form of entertainment, available at times when films or television would be impractical. To be ashamed of taking advantage of such opportunities would seem to be irrational and unnecessary. It also seems to be very impractical for the field of education to not take advantage of such a communication vehicle to its greatest extent in the motivation and education of children.

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