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ABSTRACT

The project described in this study was implemented in the Ocean Hill-Brownsville Demonstration School District, Brooklyn, to train teachers and paraprofessionals (parents from the community) to work within their present structures, using the principles of behavior analysis as a means for teaching children to read, for controlling behavior problems, and for conducting more efficient classrooms. The project was conducted in an inner city elementary school whose population was 85 percent black, ten percent Puerto Rican, and five percent white, the subjects being from five second grade classes. In experimental and control classes, data were collected by observation of the children for 20 minutes per day, five days per week. Five one-hour workshops were conducted for the teachers and paraprofessionals to introduce a motivational and behavioral management program, and to teach a contingency management system. Further training was provided by bi-weekly meetings to discuss progress and problems. Results showed an increase in the experimental classrooms of the average percentage of children working on their programed reading books, compared to no increases in the control classroom. Test formats and results, charts, and a bibliography are appended. (RJ)

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A CONTINGENCY MANAGEMENT PROGRAM IN URBAN SCHOOL CLASSROOMS

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UD 010410

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Presented at Eastern Psychological Association Convention, April, 1970.

The study which follows uses knowledge acquired from pure research, to meet the needs of inner-city children and teachers.

This project was implemented in an inner-city school and a program was established that was successful, self-sustaining and low cost.

The study carefully delineates the methods used for training and conducting workshops and presents clear results between the experimental and control groups. But this is only half of the story.

If one is interested in conducting a study of this type in an inner-city situation, he must be cognizant of other variables, which effect educational change, but never seem to be discussed in the psychological and educational literature.

In an attempt to fill this gap in the literature, the first author is writing a monograph, taken from his experience in the Ocean Hill-Brownsville School District, which delineates the community's needs, their internal politics and reactions to this type of educational project. He will discuss the problems encountered with teachers, administrators and the general logistical complications with the schools, board of education and other concerned parties. This is the other half of the story.

The delineation and analysis of these variables will serve as a guide for psychologists and educators who are interested in working to make change in inner-city schools and communities.

If interested in this area, please write Dennis Littky, 55 W. 42nd Street, Suite 648, New York, New York 10036, The Institute for the Advancement of Urban Education.

The science of applied behavior analysis is a relatively new field which was founded in the experimental laboratory. It has based its procedures on principles that have been developed through the experimental analysis of human behavior. It is only in the last ten years that these principles have found application in the broad area of child development. As young as the field may be, behavior analysis has developed a wide array of systematic techniques capable of developing and increasing desirable behaviors and extinguishing and decreasing undersirable behaviors in children. Lovaas, (1967) Hewett (1968), and Littky (1968) have shown these methods to be very successful in working with autistic children; Bijou (1968), Baer (1968), and Lindsley (1966) with retarded children and Cohen (1966) with delinquents have also shown equally impressive results.

Educators and psychologists have recently advanced from hospital and clinic settings to school settings in which behavioral techniques are being used to alter educational environments and accelerate the social and academic development of children. In recent studies, classroom behavior problems have been eliminated (Hall, Lund, and Jackson, 1968); motivation to study has been increased among pre-school children (Bushell, Wrobel, and Michaeleis, 1968) and among grade school children (Becker, Madsen, Arnold and Thomas, 1967); reading improvement has been increased among selected children (Whitlock and Bushell, 1967) and in small groups in special education classrooms (Hewett, 1967).

These studies have all contributed to the well documented proposition that through the careful management of the consequences of behavior, one can effectively change behavior in predictable ways.

The experimental work in school settings has limited itself to individual children or small groups of slow or problem children. With the recent advances in techniques and the abundance of documentation giving support to systematic contingency management systems, the author saw the opportunity to apply these principles to meet the needs of inner-city children and the schools in which they attend. With millions of inner-city children unable to read, the problem appeared too large to continue to work just with "individual children" or "small groups". Programs had to be developed that would make it possible for teachers to use the principles of behavior analysis to manage and teach these children within the present overcrowded classroom structures.

From this need, an experimental program was developed in the Ocean Hill-Brownsville Demonstration School District, in Brooklyn, New York. Its objective was to train teachers and paraprofessionals (parents from the community working in the school) to work within their present structures, using the principles of behavior analysis as a means for teaching the children to read, controlling behavior problems and conducting more efficient classrooms.

Method

The Setting

The project was conducted in an inner-city elementary school whose population was 85% Black, 10% Puerto Rican and 5% White.

The school was old, without adequate heat or lunches for the children. The size of the classrooms were physically inadequate for the number of children they were serving.

The teachers in this school were young and inexperienced, with 90% of the staff having less than three years of teaching experience and 50% of the staff working in their first year. This was also the first year in which parents from the community were working in this school.

The teachers had their students working on programmed materials during their reading period.

Subjects

There were five second grade classes participating in the experiment.

Class	Number of Teacher(s)	Years Experienced	Number of Paraprofessional(s)	Years Exper'd.	Number of Children
5	1	3 years	1	first year	31
4	1	4 years	1	first year	28
3	2	both first year	0	--	31
2	1	first year	1	first year	29
1	2	both first year	0	--	32

Data Collection

The teachers in the five classrooms conducted their reading classes by instructing each child to work independently on his particular programmed book.

After the child completed an imbedded test in his book, of which there were four, the teacher would check his work and then give the child further directions. The teachers' options were as follows; if the child completed the test correctly, he/she was told to continue as instructed in the book. But if the child did not perform well on his test, the teacher would either tell the child to continue working on test; go back and study the last 10-20 pages in the book; or, again, continue on as instructed in book.

Before collecting baseline data, the teachers were asked to conduct their classes as usual.

Three observers recorded the children's behavior for the first week, until an 85% reliability between observers was achieved. This first week of observation was also to allow the children to adapt to extra persons in the classroom. The next two weeks of observation were conducted by one individual and the data recorded was used as a baseline.

The observer sat in the back of each classroom for two ten minute intervals during the one hour reading period.

A binary system was used for recording observations. Working and Not Working were the two categories in which the children would be placed.

Not Working was defined as any behaviors that disturbed others, gross motor behaviors, disruptive noise and verbalizations.

Working was defined as writing in programmed reading book, looking at material and not bothering others.

The children were observed in a fixed order for 20 minutes per day, five days a week (approximately 3,000 responses recorded per week for each class). Observers would begin with child one and go through child 30, in 30 seconds, recording W or N. Then after waiting 30 seconds, the procedure would be repeated. At the end of the two ten minute observation periods, the data was calculated and reported in terms of average percentage of children that were working at any one time during the reading period.

The same procedure for data collecting was used for the remainder of the study.

Overview of Training Procedures

There were five one-hour workshops conducted during a three week period. All ten teachers and paraprofessionals attended the workshops, where the contingency management system was explained.

The option was left to the teacher, after the required five workshops, if they wanted the program initiated in their class. Classes 4 and 5 wished to keep their classroom the same and not use the program. Classes 1, 2, and 3 wished to have program implemented in their classroom and have further training. This added training consisted of one week of intensive training in the classroom, plus bi-weekly meetings throughout the semester to discuss progress and problems.

Workshops #1, Questions to Ask Yourself

Objectives. To train teachers and paraprofessionals to critically study their teaching methods and their success or failures with their students. Prepare them to verbalize any existing problems and help they may need in the classroom. To briefly introduce a motivational and behavioral management program.

Background Information. The teachers were asked to bring their record books from their class to the workshop.

Procedure. A list of questions were passed out to the teachers and then discussed thoroughly. The questions follow:

(a) List each child's level of reading who is in your classroom (be specific), i.e. present book, page, skills learned.

(b) List the students who have been improving, remaining the same, and declining in their reading skills. (Be specific.)

(c) If some students have remained at the same level or have declined in their reading rate over the past two weeks, list what you have done. Has your intervention helped the child?

(d) List which children learn better with programmed materials? basal readers? individual attention?

Results. The teachers found themselves without many of the answers to the above questions and thus verbalized a need for methods of teaching that would enable them to answer these questions. They were ready to listen to to a description of a new program.

Workshop #2, What A Contingency Management Program Offers Teachers

Objective. To describe the program in detail; to show various ways a teacher and paraprofessional may apply principles of behavior analysis in the classroom; to convince teachers of the importance of a feedback system.

Procedure. The contingency management program was described in detail showing how the questions from the proceeding workshop could be answered if a systematic program was developed. Various alternatives and programs were described for the following cases: individual behavior problems; individual academic problems; entire class during changing

of activities, lining up, going to lunch, etc.; and the entire class with various subject areas.

The participants gave examples of problems in the classroom and the experimenter showed how a behavioral system could be used to solve them. The importance of feedback both to the child and the teacher was discussed. The ethics of rewarding children with points and prizes for good academic work was debated.

Results. The teachers all had an idea of what the program entailed and were convinced that some type of feedback system was necessary to make significant educational change, but many were still skeptical about using points and rewards.

Workshop #3, How to discover the students' strengths and weaknesses in reading and to group them to maximize instruction

Objective. To train the staff to study the students' performance in the programmed materials. After a thorough analysis, the staff was trained to group the students according to their reading abilities.

Background. A sample page from one of the programmed books is shown in Plate 1. The gray boxes at the top of the page introduce new words or sounds. There is no written response required from the child. These gray boxes are on the top of every 2nd to 5th page in the early books and 8th to 12th page in the more advanced books. The following eight boxes or frames on the page require responses from the child. The answers are to the left of the page and the student is instructed to cover them with a cardboard slider.

Procedure. Each teacher brought a sample of their students' materials to the workshop. These materials were studied, looking specifically at the children's errors, and learning rate and comparing that

to their oral performance in the classroom.

Styles, progress, strengths and weaknesses were looked at as a means for grouping children to maximize instruction.

Results. The teachers and paraprofessionals discovered many reading problems of the children that they had previously overlooked; i.e., children had been able to get through th programmed books successfully, but could not use their skills in other contexts. Many had learned how to match pictures and work the program, without mastering the specific code cracking skill. The staff began to have a better idea of all the information they should know about each child.

Workshop #4, How does the Contingency Management Program really Individualize Instruction?

Objective. To train the staff to teach their children to understand bar graphs. (See Plate 2) To train the staff in the techniques of setting different contingencies for individual children. To train the staff in the techniques of using group contingencies in the classroom.

Procedure. Emphasis was placed on using examples of children discussed in the last workshop and practicing the setting up of individual contingencies, i.e., how a teach sets contingencies for Edward, who is in book 2 and Tracy, who is in book 6.

Edward: after studying Edward's work, looking at his error rate, motivation, etc., the teacher decided that for every five correct written responses in his programmed book, Edward would receive one point. He would then be able to use his points for free time (playing checkers, drawing, dominos, etc.).

Tracy: after the analysis of his work, it was decided that Tracy who had shown to be a faster and more efficient worker, would receive a point for every 10 correct written responses in his book. The purpose of setting different contingencies for each child, was to give each an equal chance to receive a point, regardless of his abilities. Setting these different contingencies for these two boys has individualized instruction in the following ways:

(a) Each student, depending on his present motivation and capabilities, is asked to accomplish different amounts of work in different books to receive one point.

(b) Since the reinforcers are varied (books, games, art work, etc.) and the child has a free choice in selecting his reward, each is motivated to work in his book and earn a point, by a reinforcer which is specific to his own needs and interests.

Group Contingencies. The directors demonstrated how teachers could get co-operative behavior from the class by using group contingencies. Examples were cited of how peers will tend to control each other's behavior when rewards of privileges are dependent on the entire group.

Results. The staff understood the principles and techniques behind the program, the logistics of handling various problems and were prepared for a demonstration (Workshop 5) of how to implement the program.

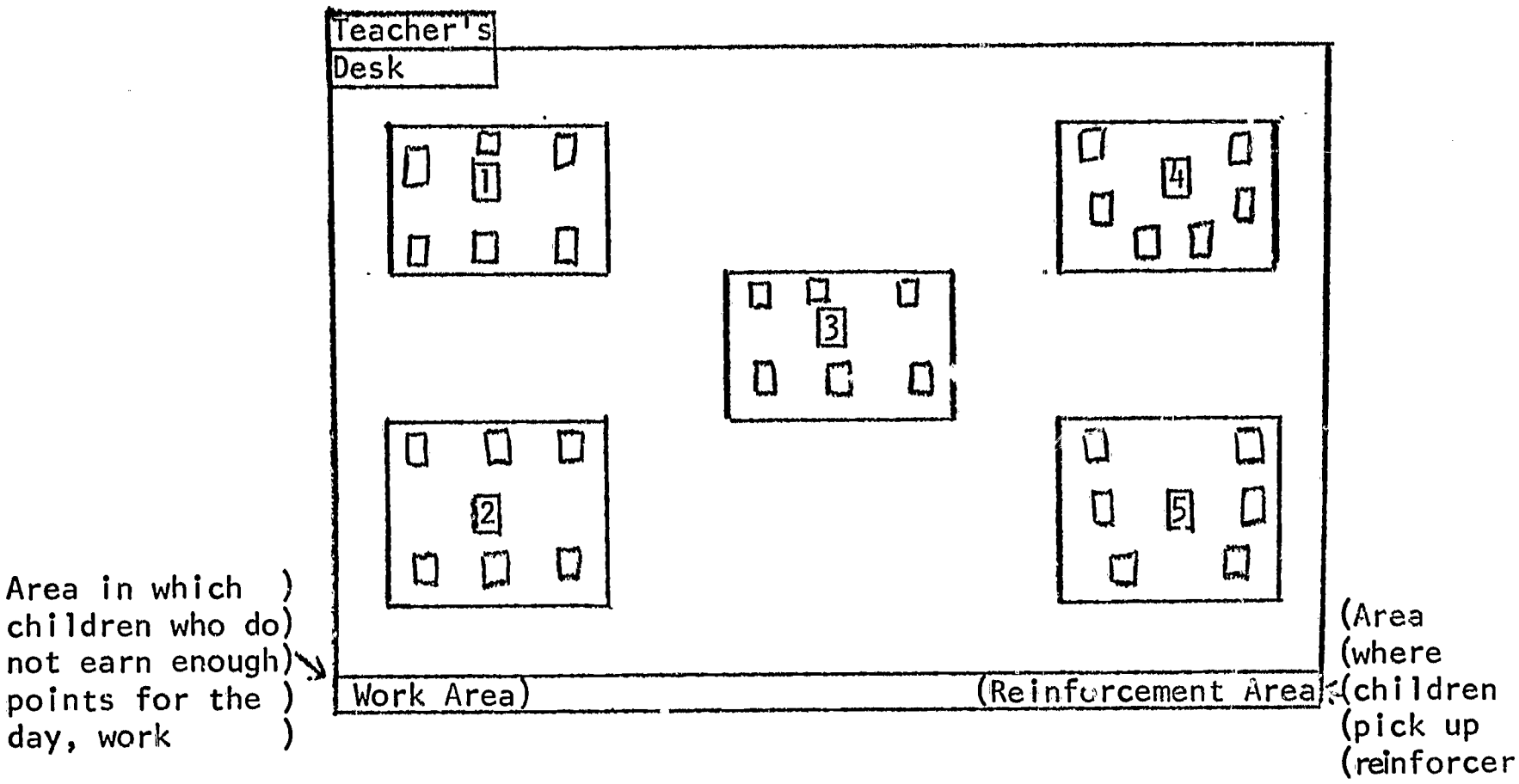
Workshop #5, Today, You See it Work

Objective. To train the staff to use in their own classrooms the various techniques, methods and ideas, learned in the previous workshops.

Procedure. A simulated classroom was set up with the experimenter as the classroom teacher and the trainees as the children. Each step,

from the passing out of the books, the grouping of children, the introduction of the program, the rewarding of students who earned enough points for free time and the assignment of additional work to those who didn't, was carried out.

Layout of a classroom.



☐ - child

[1], [2] - number of table used for group contingencies

Following are the quidelines for implementing a behavioral management program. These guidelines were extracted from the simulation.

1. Announce there will be a new game during reading period.

2. Explain that the children will still be working in their programmed books, but they will now receive points on their bar graph (distributed) for doing good work.

3. State that if a child receives 20 points on his graph during reading period, he will have 15 minutes free time to play with the games, toys, clay, books, etc. that are in the back of the room (these rewards are shown to the children).

4. Explain that if some children do not receive 20 points for the day, they will continue working for 15 minutes, but will have a chance the next day to earn their points and rewards.

5. Emphasize that each child should work as hard as he can because if he earns 125 points during the week, he can go on a special trip Friday.

6. Explain how the children can earn points. They can earn points by reading correctly and filling in the right answers in their programmed books. Each child will be told how many pages or frames he needs to do to earn a point.

7. Emphasize three rules and how each child may earn points for obeying these rules; sit in your seat, work quitely, raise your hand when you have a question.

8. Demonstrate how each child will fill in the page number in which they begin work for the day on their graph. As they work, the graph will sit next to them on the table. The teacher will give them points for good work and obeying the rules by marking off sections of their graph. (The teachers will always verbally reinforce the children, i.e. very good work, you are working quietly, keep up the good work, at the same time that they are giving points.)

9. Explain how each child will sit in certain seats during reading. The children will be grouped by tables according to their reading skills. One table should consist of children who the teacher feels can work well by themselves. These children are told to work in their book and complete a certain number of pages (20, 30, 40 etc.) and then raise their hand and they will receive points accordingly. In most cases, the children will work for 1/2 to 3/4 of the hour before reaching their quota and needing attention. The children who succeed in this situation continue; those who are having trouble are moved to another table, where they may receive more help and attention. At other tables, groups are working on their materials with different contingencies, and are instructed to raise their hand for assistance and checks when they come to a gray box in their reading book (this frame indicates new material).

10. Emphasize how each child should raise his hand when they come to a gray box in the reading book. The teacher listens to the child read the new material and helps him if necessary. The teacher will then spot check orally the previous pages worked by the child and give the student points on his graph for work done correctly.

11. Explain to the class how each group of children will have a number in the middle of their table, which will be filled in by the teacher when the whole table is doing good work and following the rules. The table that gets their number filled in first, will win a prize for being the best table.

12. The teachers must move around the class quickly, giving adequate attention to all.

13. Explain how after one hour of reading time, the reading period will end. Each child will close his book and count his points and compare his progress with his previous day's work.

14. Special emphasis should be placed on the meaning of the points. Discuss the fact that points represent good reading, that a child has accomplished something for the day. Attempt to train children to look at themselves daily and evaluate their work.

15. Announce that the children that have earned 20 points or more may go to the back of the room and get material (rewards; books, games, etc.) to bring to their seat for 15 minutes free time. Those who have not earned their quota for the day will go to a section of the room and work on other assignments prepared by the teacher.

Methods for Working with Problem Children

1. When a child breaks a rule, he/she should be ignored if possible and another child close by who is obeying the rules, should be rewarded. The teacher usually says to the child she is rewarding, "this is a point for working quietly and/or doing your work well."

2. If a child continues to break the rules and disturb others, he is told to close his book and count to 60 silently, then he should open the book and begin. This is a short time out period from earning points. Work is thought of as privilege and the child may lose this privilege by disturbing others.

3. With the group contingencies in effect, another method can be used when a child disturbs others. Reward another table for their good work and then the other members of the group which have the disturbing child, take care of the child their own way.

These 15 rules plus methods for working with problem children are just for the beginning of the program. The children's daily and weekly graphs must be studied and continuous modifications in the children's programs must be made accordingly.

Implementation in Classroom

The major purpose of the five workshops was to familiarize teachers and paraprofessionals with the theory and broad methodology of a behavioral system approach.

In-the-class training was where the teachers gained the necessary skills to conduct a successful contingency management program.

Background. The teachers have grouped their children by tables according to their reading skills. Also, all students have learned how to read and interpret bar graphs.

Day 1. The experimenter and co-director conducted the class, explaining the new program to the children. (The main emphasis was on the areas discussed in Workshop #5.)

While the E was conducting the class, the regular teachers and paraprofessionals observed from the back of the room. The period lasted one and a half hours.

Follow-up Discussion. The teachers saw their children respond enthusiastically to a program. Many logistic and specific procedural questions were asked by the teachers. Also, explanations were given by the experimenter for variations in the procedure during the day.

Day 2. Again, the experimenter and co-director conducted the class using the contingency management program described in workshops. Teachers and paraprofessionals observed for the first half hour, then one staff member began working with the program in the classroom,

along with the E and co-director. The other staff member continued to observe.

Follow-up Discussion. Specific modifications in the program that were made to meet the needs of class were discussed, i.e., seating arrangements, regrouping of children.

Day 3. The E and co-director, plus both staff members conducted the class together. One of the staff members began the period and directed the program for the day. The experimenter faded out of the workings of the classroom and observed from the back of room.

Follow-up Discussion. The difference between the staff's previous method of conducting the class and the present system was discussed. Strong points of the contingency management program were stressed. Slight modifications were made in the procedures for the following day.

Day 4. The two staff members (teacher and paraprofessional or two teachers) conducted the class, with the help of the program's co-director. Half way through the reading period the co-director faded out and observed along with the experimenter. Help was given to the teachers when problems occurred.

Follow-up Discussion. Teachers and experimenters began studying the children's performance and discussing program and contingency changes for following week.

Day 5. The two staff members conducted the class by themselves. The experimenter and co-director observed.

Follow-up Discussion. The week's experience and results were summarized. Each group continued planning and making changes for the

following week.

Following weeks. The experimenter met with the teachers and paraprofessionals regularly two-three times per week to discuss data and help make appropriate changes in the program. Individual and group modifications were being made continually. The E took a lesser role in making changes as the weeks progressed and the staff continued to plan and make changes independently. Observations continued throughout semester.

Results

Two weeks previous to the start of the in-class training procedures, baseline data were collected (see figure 1) which showed for each class, the average percentage of children working on their programmed books during the one hour reading period (class efficiency).

The results.

Class 1 27%

Class 2 34%

Class 3 42%

Class 4 43%

Class 5 40%

After the two-week baseline data were collected, control and experimental classes were selected. In the experimental classrooms (1, 2 and 3), in-class training was conducted for one week following the workshops in which the E conducted the class for two days and then worked together with the teachers in conducting the class for the remainding three days. The average percentage of children working on their programmed materials increased as follows (see figure 1).

Class 1 27% to 72%

Class 2 34% to 65%

Class 3 42% to 65%

On the other hand, the average percentage of students working on their programmed materials in the control classes, which did not adopt program after workshops, remained approximately the same.

Class 4 43% to 42%

Class 5 40% to 40%

There was thus a 23 to 45 percentage point increase in class efficiency in the three experimental classes during the one week intensive in-class training compared to a 0 to 1 percentage point decrease in class efficiency in the two control classrooms.

During the next five weeks in which the teachers of the experimental classroom conducted their classes without the presence or steady help of an experimenter in the classroom, the average percentages of children working on their programmed materials increased slightly over the high level of efficiency attained during intensive in-class training. The data follows (see figure 1). Class 1 - 27% (baseline) to 72% (in-class training) to 79% over a 10-week period after training. Class 2 - 42% (baseline) to 65% (in-class training) to 75% over a 9-week period after training. Class 3 - 42% (baseline) to 65% (in-class training) to 75% over a 5-week period after training.

The control classes' efficiency, again remained relatively the same (see figure 1). Class 4 - 43% (baseline) to 42% (week of in-class training) to 43% during remaining 10 weeks. Class 5 - 40% (baseline to 40% (week of in-class training) to 40% during remaining 10 weeks.

In summary, in the experimental classes, the average percentage of children working in their programmed books during reading period increased from 33 to 49 percentage points over a 5-10 week period, while in the two control classes there was only a one percentage point increase over the 10 week period.

In addition to an overall increase in average percentage of students working with their programmed material, in the experimental classrooms, individual academic performances of the children improved. Figures 2 and 3 are weekly progress sheets of two students summarized from the daily graphs kept by the children, teachers and paraprofessionals, which show how staff recorded academic responses, set varying contingencies, and made instructional changes accordingly. Two anecdotal records written by the teacher, which correspond to the graphs, follows -

John (described in figure 2) was working on the first book in the reading series and was known to be a troublemaker. He spent little time working on his programmed book during the reading period. His teacher decided to give John two points for each page worked correctly in his reading book. During the first three weeks, John did not respond to the program and showed signs of rebellion. The fourth week, I (the teacher) began to give John shaping points to get him more involved in his work. John responded and began working well. The following week I (the teacher) began fading the shaping points, and John continued to respond well and worked hard and fast at his reading. Around the eighth week, he was cognizant of his improvement and watched his daily reading behavior. During the ninth week, the contingency was changed to 1 1/2 points per correct page. John worked

harder and read more and earned more points the following week. He changed from a child who spent weeks and weeks bothering other children and not progressing, to a student who not only worked hard for the entire hour but carefully watched and discussed his personal reading improvement. This added confidence gained during the reading period, showed up in math and science, where he no longer feared asking questions and began working instead of annoying those around him.

Mary (described in figure 3) was a tempermental child, working when she felt like it. A loner in the sense that she did not have friends in the classroom. When the program began, she totally rejected it and acted as if she didn't care about receiving points. Her reading performance decreased over the first three weeks of system. I (the teacher) began to give her shaping points (for sitting in her seat and looking at book, etc.). When I (the teacher) began to fade the shaping points, the child's performance was at the same low as during the first three weeks. The problem was discussed with the child and it was discovered that the child did not like her materials she was working with. She was bored. I (the teacher) then switched Mary to a new programmed series (more colorful and exciting). That was all that was needed; the child began to respond beautifully. She worked hard on her reading and spoke highly of the point system.

Discussion

The increase in the experimental classrooms of the average percentage of children working on their programmed reading books compared to no increases in the control classrooms, says much in itself about the program.

All teachers and paraprofessionals participated in the workshops, which seemed to give the teachers added knowledge, but without a willingness to change and intensive in-class training, change does not take place.

Much of the methodology learned by the experimental teachers and behavior work habits learned by the children, generalize beyond the one-hour reading period. Unfortunately, there is no clear cut data showing this, but a few anecdotals may support the reasoning behind thinking generalization on the part of the teacher and child did take place.

One of the experimental classes, which was known throughout the school as the "wildest and hardest to handle", won for the first time the "best behavior award" during an assembly. They had been asked to leave the auditorium early because of their misconduct three out of the five previous times in the auditorium.

Then one day, after the program had been running for three weeks, the teacher was absent. In these situations, the school procedure was that an extra teacher would take over the class. It was dreaded, when this teacher was absent, because his class was so disorderly and hard to handle. This time, to the amazement of the teacher filling in, the class worked quietly on their work and were orderly the entire day.

The substitute teacher could not stop commenting on the change that he had seen.

Also, although there again is no data, the experimental teacher was more relaxed and successful at teaching the other subjects during the day and was often seen using many of these techniques learned (minus the giving of points) in controlling his class.

In the other experimental classes, similar types of behaviors were seen. In one class, the teacher extended the system to various other periods during the day and used points for reinforcing children for arriving on time, lining up quickly, not fighting, etc.

One last incident which may indicate a trend of generalization of the children's behavior, occurred again when one of the experimental teachers was absent.

In this case there was no teacher to conduct the class, so the children were sent in groups of five to other classrooms. When this usually happens, it is very disruptive because five added children in a class with a strange teacher and nothing to do, usually causes chaos. But this time it was different, different enough to have three teachers comment on how well behaved and orderly the children were. All three teachers described the children as entering class, sitting down and working on their books without disturbing others.

These anecdotes are just a few of the reasons why the experimenter feels that a generalization of learned behaviors from the reading period took place. The experimental teachers seem to have developed new techniques and a different style of working with their children. They seemed more aware of what they were doing and tended to be more systematic in their work.

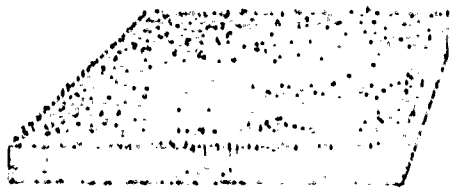
The children also seemed to develop certain habits. As they began

to change during reading, they began to change during other periods of the day. Once children begin yelling and running around room, it is hard for them to change and sit down and do concentrated work. On the other hand, once the children are under control and working in a pleasant environment, they tend to remain that way.

man

mat

man



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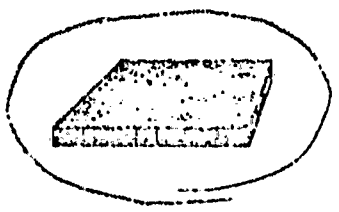

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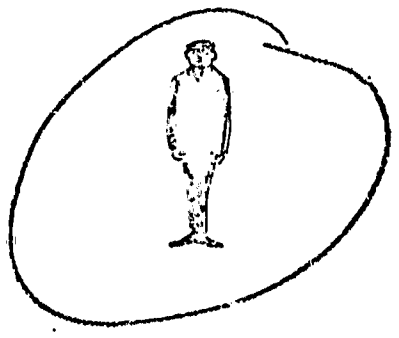

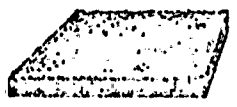

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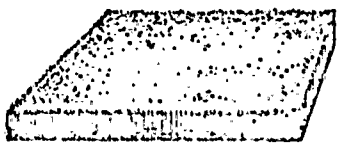

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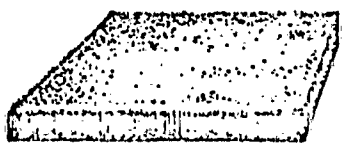

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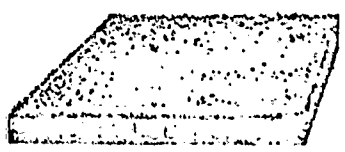

M at

(PLATE 1)

Time

POINTS EARNED

60
55
50
45
40
35
30
25
20
15
10
5

M T W Th F

Book Pages

START

END

(PLATE 2)

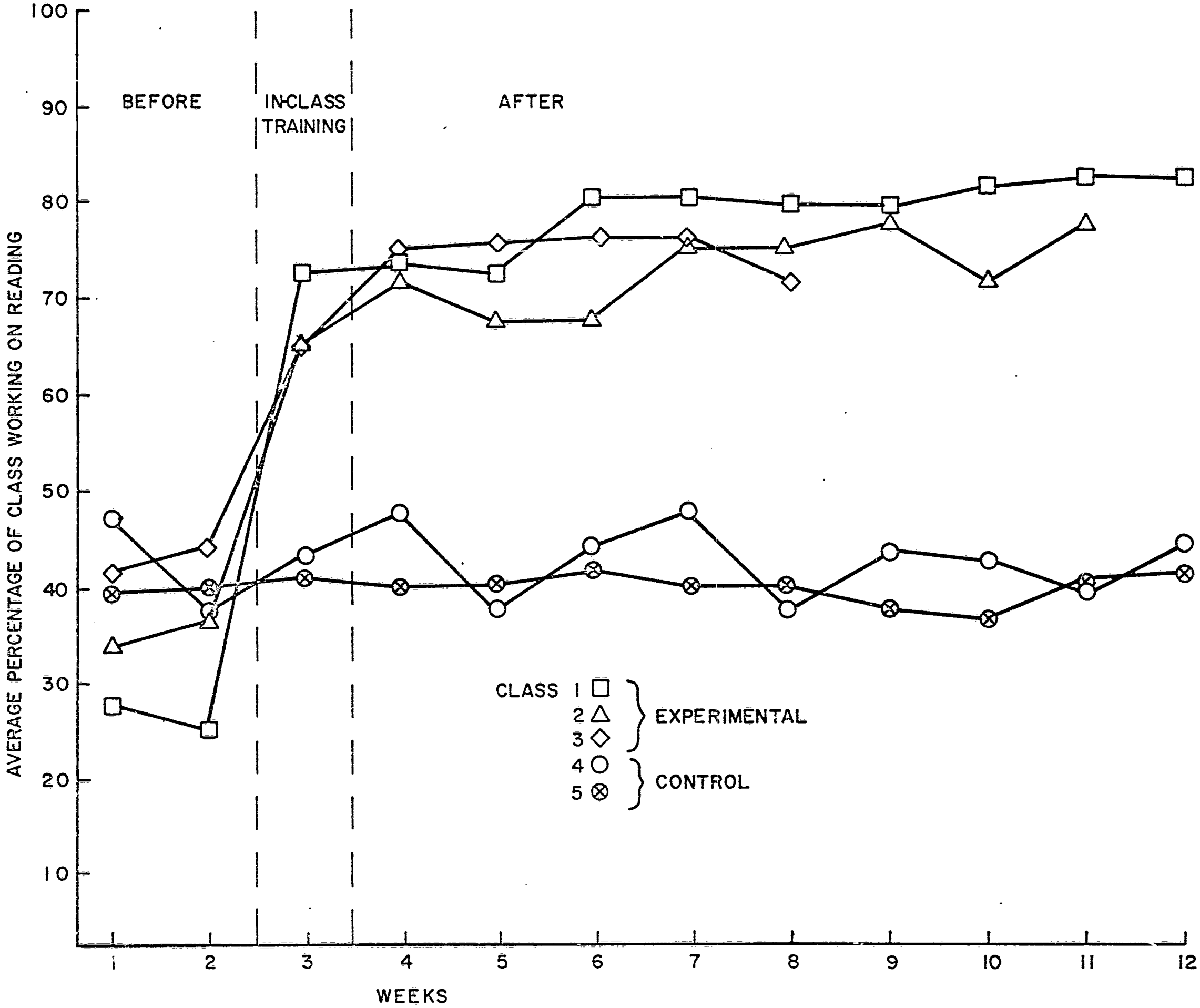

FIG. 1 PERCENTAGE OF CLASS WORKING ON READING PER WEEK

NAME: JOHN
BOOK LEVEL: 1,2,3,4,5,6
CONTINGENCY: 2 POINTS PER CORRECT PAGE IN PROGRAMMED READER -- 9th WEEK-1 $\frac{1}{2}$ POINTS PER PAGE

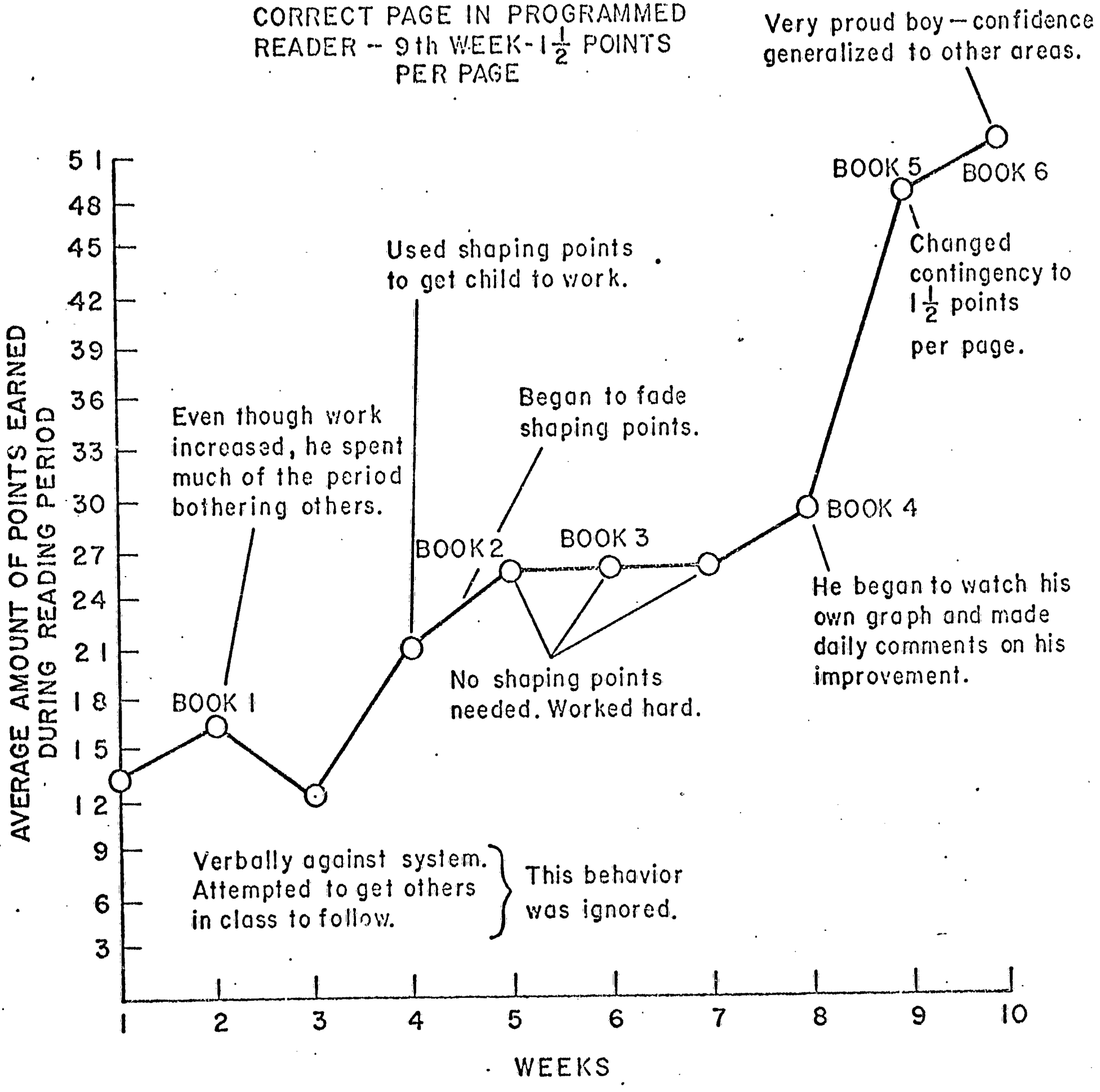

FIG. 2 WEEKLY PROGRESS CHART FOR A SECOND GRADE STUDENT

NAME: MARY
BOOK LEVEL : 7,8
(M.H.) 8,9,10
POINTS: I POINT PER CORRECT
PAGE IN PROGRAMMED READER

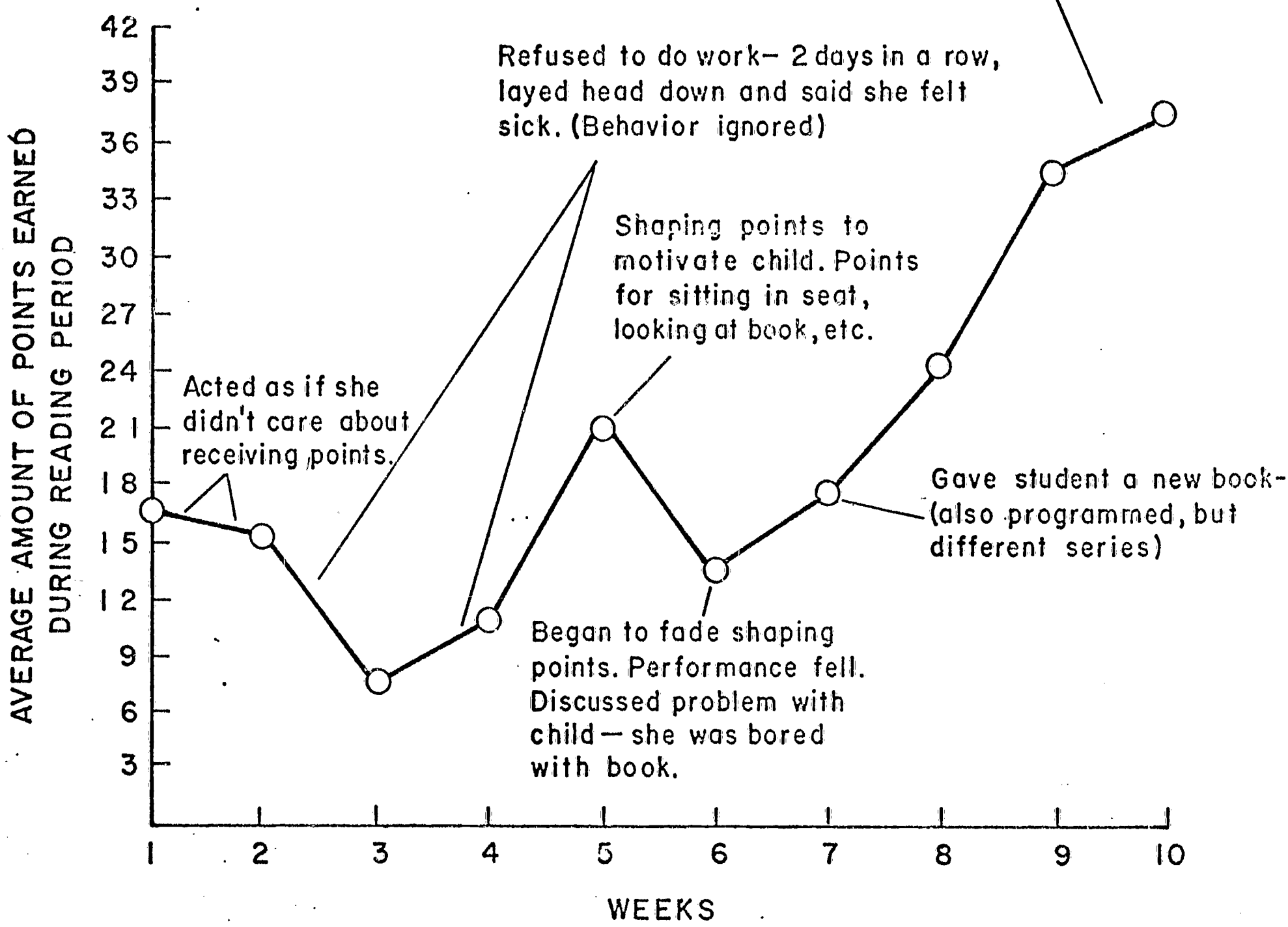

FIG. 3 WEEKLY PROGRESS CHART FOR A SECOND GRADE STUDENT

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