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ABSTRACT

The purpose of the study reported was to determine the effects of the use of daily newspapers by elementary school students on their general and newspaper reading skills. Five social studies teachers taught 50 50 minute lessons over a period of 10 weeks to homogeneously grouped pupils in grades 4-7, using three local dailies as the instructional materials. The lessons were designed according to the instructional objectives of the American Newspaper Publishers Association Foundation Newspaper Test (ANPAFNT); both the lessons and the test are rated at the junior high school level. The two participating schools were in rural Hancock County, Georgia; 90% of the pupils were black and scored below national norms in reading before the experiment. Students were pre-and post-tested with a nationally normed reading achievement test and with the ANPAFNT. The latter was also used 10 weeks after the instruction. Students scored significant gains on all of the post-tests, indicating that gains during the project were in basic skills rather than in quickly forgotten trivial information. (Author/DJB)

THE NEWSPAPER IN THE ELEMENTARY SCHOOL:

A RESEARCH REPORT

to

ANPA FOUNDATION

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September, 1971

Daily newspapers as instructional materials in the schools have long been used by teachers. For over a decade, the American Newspaper Publishers Association with the assistance and cooperation of member newspapers and the National Council for Social Studies, has made intensive efforts to improve the quality of instruction when newspapers are used.

Newspapers as instructional tools have been utilized primarily in junior and senior high schools. Tests developed by Educational Testing Service demonstrated that students at these grade levels show gains in important skills as a result of instruction in newspaper use.

Relatively little attention has been given daily newspapers as instructional materials for elementary school use. The project reported here was designed to determine whether elementary students would gain in skills in a systematic program of newspaper instruction.

Instructional objectives duplicated aspects of newspaper reading included in the ANPA Foundation Newspaper Tests. These aspects, generally accepted as important by educational authorities who are experienced in this topic, include:

1. Identifying main points.
2. Locating information quickly and rejecting points not made.
3. Identifying sources of information and judging their reliability.
4. Evaluating relative importance of several points.
5. Distinguishing between fact and opinion.
6. Assessing creditability of newspaper content.

7. Interpreting causation and predicting consequences of actions.
8. Reading maps, charts, and graphs.
9. Assessing advertisements.
10. Recognizing kinds of language in various kinds of materials.
11. Interpreting photographs and cartoons.
12. Criticizing various content.
13. Evaluating constitutional guarantees of a free press.
14. Using accurately basic technical terminology of newspapers.

To attempt to attain these objects, fifty lesson plans were designed that used daily newspapers as the instructional material. Plans did not vary for different grade levels. Each specified the desired objectives and the teaching procedures that were anticipated to produce student achievement. Students were informed of the behaviors they were expected to attain in each lesson.

The research site selected was Hancock County, Georgia, where grades four through seven (excluding one seventh grade section) in Hancock Central School and grades four through six in Sparta School were included in project instruction. During the ten week period from January 4 to March 12, 1971, daily newspapers and lesson plans were provided for the five social studies teachers in these departmentalized schools. Daily class periods of approximately fifty minutes as normally scheduled were utilized. Teachers were encouraged to use only newspapers, but were free to supplement them with standard texts or other teaching materials

if they choose. In only two class sections were other materials used extensively.

Class sections in Hancock Central continued to be homogeneously grouped during project instruction. Grade four at Sparta was homogeneously grouped into two sections; grades five and six each contained all students in the grade in one section. All students in Hancock Central and a majority of Sparta students were Black. Each of the five teachers was Black.

Three daily newspapers, the Atlanta Constitution, the Macon Telegraph, and the Augusta Chronicle, were provided, each for approximately one-third of the instructional period. These newspapers were selected because they are the three morning dailies that are regularly circulated in the county. No differences as to suitability for instructional use were observed among the three newspapers. Every student had access to his own newspaper during the class period.

Hancock County was selected as the site primarily because of the innovative tendencies of school administrators in the system. The project required a school system that viewed innovation as desirable, that was willing to have results reported, and that was not defensive about its educational history. The rural South has many students, regardless of their race, whose total life style fails to provide preschool learnings that contribute to academic achievement. Some parents place low value on education; of the heavy majority who value education highly, many do not know how to make effective parental contributions to the academic success of their children. Local funds

for education are limited by the available tax base. Historically, educational opportunities for Blacks in the South were deliberately limited. Educational achievement of rural Southern students, again regardless of race, has over the years consistently been substantially lower than national norms despite the higher dropout rates in the region. Hancock County shares many of the educational problems of the remainder of the rural South, including the withdrawal from public schools of a substantial proportion of white students.

Changing social patterns, availability of Federal educational funds, and freedom of all citizens to register and vote appear to be related to educational change in the region. Intensive in-service teacher education efforts, availability of supplemental reading and audio-visual materials, and an increasing concern among parents, teachers, and school administrators are but three examples of a new direction in rural education in the South. As documented in Annual Reports of the Hancock County School Improvement Project,[1] student academic achievement in Hancock County has increased substantially during the past five years, although achievement levels do remain lower than in the nation at large. For a variety of reasons, Hancock County faced problems and began to move toward solutions earlier than most other rural Southern school systems.

Results were determined by administering pretests and posttests of the ANPA Foundation Newspaper Test.[2] These tests provide thirty multiple

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[1]Hancock County Schools, Sparta, Ga., 1967-1971.

[2]1969 Experimental Edition sponsored by National Council for the Social Studies, Cooperative Tests and Services, Educational Testing Service, Princeton, N. J.

choice items that are based heavily on articles contained in a "dummy" newspaper. This newspaper was designed to approximate the content, vocabulary, and level of comprehension of a standard daily newspaper. These tests include items that may be broadly categorized into testing knowledge of information related to newspapers and into testing skills in newspaper usage. About two-thirds of the items on each test appear to this author to be related to skills, and about one-third to factual content. Little of the factual content can be learned simply from reading the "dummy" newspaper, but rather must be specifically taught. Forms J-1 and J-2 were used as pretest and posttest, respectively, to measure the extent of attainment of objectives. Forms J-1 and J-2 are intended for junior high school use. They were adapted from Forms S-1 and S-2, the senior high school tests, and differ importantly from them only in vocabulary.

These junior high tests were given because tests of this nature specifically designed for elementary students do not exist. Some items were not suited for use with elementary students. However, such items created a conservative bias; that is, they appeared to result in an underestimation of student achievement. In research that might produce substantial curricular change, it seems preferable to be as conservative as possible. Results of standard instruction are well known. Caution in estimating effects of innovations is therefore warranted; there should be a high degree of assurance that innovative methods or materials are more productive.

The newspaper test does not provide standardized scores. The raw score is the number correct of the thirty items. Since each item has four possible responses, any student theoretically should obtain a score of 7.5 by guessing. In practice, few students were observed to guess. While a complete item analysis was not conducted, the pattern of responses as observed indicated clearly that certain potentially distracting responses did in fact function. Full documentation cannot be provided without destroying test security, but one item perhaps will illustrate.

This item presents a moral dilemma that was recognized and answered correctly by a moderate proportion of seventh grade students. It seems logical that a higher proportion of senior high students might respond accurately. One of the distracting responses is quite practical and does not recognize a moral issue. Younger students consistently chose this response, apparently because of their immaturity. While most younger students answered incorrectly, their responses were not random. Observation of responses to this and to other items led to the assumption that, while some scores were lower than might be obtained by chance, gains made by relatively low scoring students were legitimate gains and could not be attributed to chance.

Another check on the effectiveness of project instruction was administration of pretests and posttests of a standardized reading test. Based partly on availability of the test within the school system and partly on the desirability for other purposes of comparing project students' scores with much older data, Sequential Tests of Educational Progress

in Reading were administered.[3] Forms used were 4A and 4B for grades four, five, and six and forms 3A and 3B for grade seven. Certain limitations of the test, for some poor readers involved in the project, created some problems in interpreting data. The test publisher warns that spuriously low scores may be obtained if the test is too difficult. Again, however, this appeared to be a conservative bias, with the test perhaps underestimating actual gains in reading for those students.

These tests include standardized scores which partially correct for guessing. It appeared that some students made raw score gains which were legitimate but which were not reflected in standard score gains. No more suitable STEP reading test for the affected students was available, and by the time scores were obtained and the problem detected, the instructional project was in process to be point that another reading pretest which did not include gains (or losses) from the project was impossible to administer. As a consequence, the research procedure may have discriminated against students of lesser ability, especially younger students. As noted above, conservative estimates of achievement seem preferable to overestimates.

Students responded to attitudinal items that were intended to determine their feelings about newspaper instruction. Replies were judged to be invalid since responses and observed behavior appeared to have little correlation in many instances.

Any instructional project and its accompanying research includes several limitations that either are inherent or present as a consequence

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[3]Cooperative Test Division, Educational Testing Service, Princeton, N.J.

of design. One inherent problem is the extent to which any results may be applicable to other groups. The project discussed here involved students in a particular school system, the appropriate teachers in that system, and a project designer with his own assumptions about desirable objectives and suitable lesson plans to obtain them. The students involved were disproportionately rural, poor, and Black, among other characteristics. Whether results obtained with such students can be generalized to predict equal or better success with other students is uncertain. Educational theory suggests that such generalizations might be valid.

The project teachers involved were Black females who tended (as a group) to be older, to have not attended college as recently, but to have had more recent in-service training, than the typical American teacher. Whether the results they obtained can be attained by other teachers remains to be seen. In the informal judgment of the project designer, they did seem to be more willing to follow lesson plans provided for them than typically could be expected. The lesson plans and newspapers were not "teacher-proof" but there did appear to be a distinct relationship between adherence to plans provided and student achievement, hardly an unexpected phenomenon when lessons and tests had congruous objectives.

Whether project results are considered desirable relies on whether the objectives for using newspapers in the classroom are considered acceptable and valuable. These objectives tend to be strongly skill oriented. There are those who see as more important and desirable

affective educational objectives that attempt to modify student attitudes who may be relatively unimpressed with skill improvement. The point is simply that the desirability of any particular student learning is a philosophical question. This project was based on the philosophical assumption that it is useful and desirable to be able to read efficiently newspapers in particular and printed matter in general.

Results on the ANPA Foundation Newspaper Tests published by Cooperative Tests and Services, Educational Testing Service, and the Reading Test from the Sequential Tests of Educational Progress from the same publisher are reported below. On newspaper tests, Form J-1 was utilized at the pretest and is designated as Newspaper I in each table. Form J-1 was administered prior to the ten-week unit of instruction. Form J-2 was used for each of the two posttests. The first posttest was administered immediately after the conclusion of the instructional unit and is designated as Newspaper II in the tables. The second posttest was given ten weeks after conclusion of the instructional unit and in the tables is designated as Newspaper III. In analyzing data from any two tests, scores for all students who took those tests were utilized. The mean score reported for any given test may therefore vary slightly from table to table.

The newspaper tests were designed for junior high school students, and as noted above, appeared to include some items that discriminated

against elementary school students because of the students' lack of maturity. Further, some items appeared to be alien to rural, Southern elementary students. Therefore, results obtained on the newspaper tests, if not reliable estimates of real progress, appear to underestimate actual gains. Actual gains seem to be at least as great as test scores indicate.

Form 3-A of the STEP Reading test was administered as the pretest for grade seven; Form 4A was given in grades four, five, and six. Forms 3B and 4B, respectively, were used as the posttests. Pretests and posttests are designated in the tables as Reading I and Reading II.

Scores for several sections of each grade in Hancock Central School are available. Sections are homogeneously grouped for each grade. In the tables, sections are identified by grade and level. The first number indicates the grade; the second shows the section number. A lower section number is a higher ability group. For example, 4-1 designates the highest ability section of the fourth grade; 5-5 indicates the lowest ability section of the fifth grade. Sections were not created especially for the newspaper instructional unit, but rather were a consequence of the normal practice of the school for all academic instruction.

The smaller Sparta School had only one heterogeneous section for grades five and six (indicated in tables as 5S and 6S) and two homogeneously grouped sections of the fourth grade (indicated as 4AS and 4BS for higher and lower sections, respectively, in the tables). No social studies course was offered in grade seven in Sparta School during the academic quarter that the newspaper unit was taught.

Results for the newspaper pretest (Newspaper I) and the first posttest (Newspaper 2) for the seventh grade are depicted in Table 1.

TABLE 1

Seventh Grade Newspaper Test: Pretest and Posttest I Results

	Newspaper I Mean Score	Newspaper II Mean Score	Mean Difference	t	df	level
7-1	7.41	12.82	5.41	6.36	16	.0005
7-2	7.41	9.95	2.54	4.47	21	.0005
7-3	4.92	9.40	4.48	7.43	24	.0005
7-4	6.92	8.79	1.87	2.10	23	NS

Mean scores and mean differences are based upon newspaper test raw scores. The maximum possible score is thirty. National tryouts in 1969 of the newspaper tests in junior high school yielded scores of 51% (a raw score of just over 15) for junior high school students who had newspaper training.[4] Seventh grade results from Table 1 cannot be compared directly with these results since age or maturity of the students appears to influence results. It seems likely that students involved in the project scored somewhat lower than a national sample of seventh graders with comparable instruction might score, however.

Gains for three of the four sections were significant at the .0005 level. Values for t were computed for these and for all other groups by a "difference method" as recommended by Garrett.[5] According to probability theory, a t value significant at .0005 can occur by chance only five times in ten thousand. The chance of obtaining such t values for

[4] The ANPA Foundation Newspaper Test, Educational Testing Service, Princeton, N. J. (undated)

[5] Henry Garrett, Statistics in Psychology and Education. New York: Longmans, Green, and Co., 1958, p. 227.

most of the sections involved in the project is very slim indeed; a high level of confidence that gains obtained resulted from instruction is warranted. A confidence level of .01 (one time in one hundred that an event might occur by chance) is usually regarded as a high level of confidence in educational research.

The "7-4" (lowest ability) section of the seventh grade was judged by its teacher to be having difficulty with newspaper instruction after less than three weeks of instruction. Thereafter, this group received part time instruction in newspaper use. This section, one other that received part-time newspaper instruction, and one that received full-time instruction were the only three that did not achieve significant gains at the .005 (five times in one thousand that the gain might occur by chance) level or better between the newspaper pretest and first post-test.

The highest ability section of seventeen seventh grade students was not included in project instruction. This section scored an insignificant reading gain. The second highest ability group (identified as 7-1 in the tables) closed the substantial reading gap between the two sections as a result of their gain while using newspapers. The highest ability section's teacher did use newspapers as supplementary materials during the ten week period and the group scored a significant gain on the newspaper test. The greatest gains were recorded by those students who scored extremely low on the pretest; pretest and posttest correlation was -.70. It seemed clear that the teacher effectively diagnosed individual's problems and provided instruction that corrected them.

Results for sixth grade sections are shown in Table 2. One sixth grade section that did receive full time instruction in newspaper use failed to attain a significant gain. Each of the other four sections' gain was highly significant.

TABLE 2

Sixth Grade Newspaper Test: Pretest and Posttest I Results

	Newspaper I Mean Score	Newspaper II Mean Score	Mean Difference	t	df	level
6-1	7.62	12.41	4.79	7.04	28	.0005
6-2	6.86	8.62	1.76	2.00	28	NS
6-3	5.37	8.67	3.30	5.00	26	.0005
6-4	5.23	8.08	2.85	4.19	25	.0005
6-S	5.09	11.14	6.05	5.76	21	.0005

Table 3 illustrates a significant gain at the .0005 level for all sections of the fifth grade. During the course of the project, the Hancock Central fifth grade teacher was judged to follow the lesson plans more carefully than other project teachers. Gains made by her students during the course of the project were substantial.

TABLE 3

Fifth Grade Newspaper Test: Pretest and Posttest I Results

	Newspaper I Mean Score	Newspaper II Mean Score	Mean Difference	t	df	level
5-1	1.79	11.82	10.03	12.70	27	.0005
5-2	3.31	7.45	4.14	6.79	28	.0005
5-3	4.96	8.04	3.08	4.05	25	.0005
5-4	1.77	7.27	5.50	9.48	21	.0005
5-5	2.86	8.14	5.28	9.96	28	.0005
5-S	5.22	9.43	4.21	5.28	23	.0005

Pretest scores for the fifth grade were extremely low; most fifth graders simply could not cope with a newspaper at the beginning of the project.

Fourth grade students also had quite low pretest scores and many showed evidence during the test administration that they could not use a newspaper effectively. Posttest scores for fourth graders were at approximately a level that might be obtained by randomly marking each of the thirty answers. Observation of the students during the test administration and observation of items marked correctly, as well as noting tendencies to select a single wrong answer for certain items, led to the belief that results did not occur by chance. Since scores are rather low after instruction, use of the daily newspaper in a systematic instructional program in fourth grade may be debated legitimately. As will be seen later, gains continued to accrue during the ten-week period after instruction in newspaper use ceased. It seems likely that skills can be taught in fourth grade that continue to improve with normal school instruction.

Table 4 indicates significant gains for all sections that utilized newspapers full-time. The section that used newspapers only part-time scored an insignificant loss.

Table 5 includes results by grade total, teacher total, school total, and for all students. Each combination scored gains significant at the .0005 level. These results indicate clearly the effect of newspaper instruction for large groups of students. While any given student might or might not profit from such instruction, a highly positive response was elicted from elementary students as a whole.

TABLE 4

Fourth Grade Newspaper Test: Pretest and Posttest I Results

	Newspaper I Mean Score	Newspaper II Mean Score	Mean Difference	t	df	level
4-1	4.00	8.17	4.17	3.11	22	.005
4-2	1.65	7.17	5.52	13.80	22	.0005
4-3	1.65	5.39	3.74	6.13	22	.0005
4-4	1.64	6.40	4.76	5.88	24	.0005
4-5	1.44	6.52	5.08	9.58	24	.0005
4-6	2.25	6.50	4.25	5.28	19	.0005
4AS	5.00	7.78	2.78	3.56	26	.005
4BS	5.39	3.94	-1.45	1.60	17	NS

TABLE 5

Newspaper Test: Pretest and Posttest I Results

	Newspaper I Mean Score	Newspaper II Mean Score	Mean Difference	t	df	level
Grade 7	6.34	10.13	3.47	9.38	87	.0005
Grade 6	6.11	9.76	3.65	10.43	132	.0005
Grade 5	3.29	8.72	5.43	19.39	156	.0005
Grade 4	2.84	6.58	3.74	14.38	183	.0005
Teacher A	2.06	6.72	4.66	15.03	118	.0005
Teacher B	5.16	8.26	3.10	7.21	89	.0005
Teacher C	3.19	8.82	5.63	19.41	133	.0005
Teacher D	5.69	9.16	3.47	10.12	130	.0005
Teacher E	6.34	10.13	3.47	9.38	87	.0005
Hancock Central School	4.17	8.34	4.17	26.06	471	.0005
Sparta School	5.16	8.26	3.10	7.21	89	.0005
All Students	4.32	8.32	4.00	26.67	561	.0005

Teachers "A" and "C" in Table 5 above were the two judged as most frequently adhering to lesson plans. Teacher "B" was judged as most creative and innovative, and appeared to attempt to take maximum advantage

of student interests. Relevance as a key to improving achievement thus seems questionable, at the least.

Ten weeks after systematic instruction in newspaper use ceased, the newspaper test was again administered. The intent, of course, was to determine whether gains persisted. If gains during the course of the project had been primarily the result of recall of information, a decline in scores could be anticipated. Conversely, if the original gain were influenced by skill development, then the gain should persist. Only two of the twenty-three sections (the lowest ability group of the seventh grade and the highest ability group of the fifth grade at Hancock Central) showed a loss during the ten-week period following instruction. Every other section showed a gain, although most gains were not statistically significant. For the student group as a whole, a significant gain was recorded. Regression effect and practice effect on scores obtained on the second posttest are undetermined. However, there is reason to believe that the use of daily newspapers in these elementary schools resulted in the learning of skills that are retained or even enhanced over extended periods of time.

Table 6 includes results for all sections and combinations for data obtained in the two posttests.

The analysis of data from the newspaper pretest and the second post-test that was administered ten weeks following the conclusion of news-paper instruction revealed that twenty of the twenty-three sections had gained in scores at the .0005 level of confidence. Another had a gain

TABLE 6

Newspaper Test: Posttest I and Posttest II Results

	Newspaper II Mean Score	Newspaper III Mean Score	Mean Difference	t	df	level
7-1	12.81	13.87	1.06	1.09	15	NS
7-2	9.50	12.15	2.65	3.35	19	.01
7-3	9.22	9.52	.30	.53	22	NS
7-4	8.79	8.58	-.21	.28	23	NS
6-1	12.46	13.36	.90	1.27	27	NS
6-2	8.54	10.64	2.10	2.57	27	.01
6-3	8.67	8.96	.29	.43	26	NS
6-4	7.75	7.83	.08	.11	23	NS
6-S	11.38	11.48	.10	.09	20	NS
5-1	11.82	9.68	-2.14	3.57	27	.005
5-2	7.43	8.39	.96	1.33	27	NS
5-3	8.17	9.42	1.25	1.87	23	NS
5-4	7.10	9.05	1.95	2.47	19	NS
5-5	8.08	8.28	.20	.43	24	NS
5-S	9.23	10.09	.86	.75	21	NS
4-1	8.17	9.00	.83	1.14	22	NS
4-2	7.09	7.18	.09	.13	21	NS
4-3	5.39	7.65	2.26	3.01	22	.005
4-4	6.65	7.22	.57	.55	22	NS
4-5	6.67	8.96	2.29	3.23	23	.005
4-6	6.50	8.30	1.80	1.91	19	NS
4AS	7.78	9.44	1.66	2.06	26	NS
4BS	3.88	6.35	2.47	2.46	16	NS
Grade 7	9.86	10.73	.87	2.35	82	.01
Grade 6	9.74	10.49	.75	2.08	127	NS
Grade 5	8.72	9.13	.41	1.37	146	NS
Grade 4	6.63	8.10	1.47	5.07	178	.0005
Teacher A	6.79	8.02	1.23	3.62	114	.0005
Teacher B	8.25	9.49	1.24	2.48	86	.01
Teacher C	8.63	8.96	.33	1.14	124	NS
Teacher D	8.97	10.02	1.05	3.09	126	.005
Teacher E	9.86	10.73	.87	2.35	82	.01
Hancock Central School	8.19	9.05	.86	5.06	465	.0005
Sparta School	8.25	9.49	1.24	2.48	86	.01
All Students	8.44	9.36	.92	5.75	536	.0005

significant at the .005 level. The two sections that had utilized the newspaper only part-time had nonsignificant gains. All combinations by grade, by teacher, by school, and the total group of students showed gains significant at the .0005 level of confidence.

As evidenced by Table 7, instruction in newspaper use of these elementary students produced highly significant gains on the newspaper test utilized in the project. The gains were shown to persist for a period of time sufficient to justify the assumption that the gains resulted from skill acquisition, and were not simply a consequence of drilling students on factual information contained in the test. Even fourth grade students, after instruction, read newspapers more effectively than did seventh grade students before instruction.

No elementary school norms for the test exist; therefore, no direct comparisons are possible. Indeed, the test itself was not designed for elementary school use. There appears to be a high probability that some test items require more maturity and general experience than elementary students possess. Nevertheless, significant gains occurred. Seventh grade students scored approximately four points lower than a national sample of junior high school students who had had newspaper instruction. Since maturity appears to influence scores, it seems probable that this margin might be considerably reduced if the project seventh graders were compared with a national sample of seventh graders. Success in using newspapers, as will be illustrated below, has some relationship to general reading ability. Students involved in this project read at levels substantially below national norms. Despite reading

TABLE 7

Newspaper Test: Pretest and Posttest II Results

	Newspaper I Mean Score	Newspaper III Mean Score	Mean Difference	t	df	level
7-1	7.31	13.87	6.56	6.19	15	.0005
7-2	7.10	12.15	5.05	6.82	19	.0005
7-3	5.00	9.52	4.52	6.11	22	.0005
7-4	6.80	8.44	1.64	1.59	23	NS
6-1	7.57	13.36	5.79	6.98	27	.0005
6-2	6.82	10.64	3.82	5.31	27	.0005
6-3	5.37	8.96	3.59	5.28	26	.0005
6-4	5.38	7.83	2.45	3.37	23	.005
6-S	5.00	11.36	6.36	7.07	21	.0005
5-1	1.79	9.68	7.89	12.93	27	.0005
5-2	3.62	8.38	4.76	7.10	28	.0005
5-3	4.75	9.42	4.67	6.69	23	.0005
5-4	1.90	9.00	7.10	11.45	20	.0005
5-5	2.59	8.33	5.74	9.41	26	.0005
5-S	5.39	10.43	5.04	5.73	22	.0005
4-1	4.00	9.00	5.00	5.10	22	.0005
4-2	1.55	7.18	5.63	9.10	21	.0005
4-3	1.65	7.65	6.00	10.00	22	.0005
4-4	2.04	7.29	5.25	8.46	23	.0005
4-5	1.52	9.04	7.52	14.75	24	.0005
4-6	2.24	8.19	5.95	5.72	20	.0005
4AS	5.00	9.44	4.44	5.48	26	.0005
4BS	5.42	6.37	.95	.86	18	NS
Grade 7	6.48	10.66	4.18	9.50	83	.0005
Grade 6	6.10	10.48	4.38	12.88	128	.0005
Grade 5	3.31	9.17	5.86	20.93	151	.0005
Grade 4	2.91	8.09	5.18	19.19	183	.0005
Teacher A	2.15	7.06	5.91	19.06	116	.0005
Teacher B	5.19	9.52	4.33	10.07	90	.0005
Teacher C	2.94	8.95	6.01	20.72	128	.0005
Teacher D	5.29	9.59	4.30	12.29	127	.0005
Teacher E	6.48	10.66	4.18	9.50	83	.0005
Hancock Central School	4.14	9.31	5.17	30.41	458	.0005
Sparta School	5.19	9.52	4.33	10.07	90	.0005
All Students	4.32	9.35	5.03	31.44	548	.0005

problems, the project students as a group learned to use newspapers significantly more effectively.

Further research in the effects of newspaper use in the elementary school is necessary to demonstrate conclusively that such use is warranted since no single study can provide almost certain assurance that favorable results will be obtained. However, the levels of significance of the gains obtained here offer perhaps as much evidence of the efficacy of newspapers as an instructional tool as may be demonstrated by any single research study.

Pearson product-moment correlations were calculated[6] between the newspaper pretest and first posttest, pretest and second posttest, and the two posttests. Results are depicted in Tables 8, 9, and 10, respectively. Correlations between the pretest and each posttest are extremely low for repeated measures using two forms of the same test. The low correlations appear to be indicative of lack of competence of students on the pretest. Many students seemed to have great difficulty prior to instruction, probably because of little or no prior experience in reading newspapers. Further, what prior knowledge of newspaper use that did exist seemed to bear little relationship to the "teachability" of the students. As noted later, the correlations between the newspaper pretest and the reading pretest were also very low, which suggests that using a newspaper effectively does not automatically result from learning general reading skills. Correlations between the two newspaper posttests were somewhat higher, but are nevertheless quite low for a repeated measure on the same test.

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[6]According to Garrett, Ibid., p. 143.

TABLE 8

Correlations for Newspaper Pretest and Posttest I

Section	r	Section	r	Section	r	Section	r
7-1	.33	6-1	.17	5-1	-.14	4-1	-.21
7-2	.56	6-2	-.14	5-2	-.35	4-2	.16
7-3	.47	6-3	.18	5-3	-.10	4-3	.36
7-4	-.02	6-4	.30	5-4	.08	4-4	.07
		6-S	.31	5-5	-.51	4-5	-.28
				5-S	.19	4-6	-.04
						4AS	-.21
						4BS	.34

Grade	r	Teacher	r	School	r	Total	r
7	.17	A	.10	Hancock	.29		.23
6	.20	B	.16	Sparta	.16		
5	-.11	C	-.24				
4	.00	D	.33				
		E	.17				

TABLE 9

Correlations for Newspaper Pretest and Posttest II

Section	r	Section	r	Section	r	Section	r
7-1	.04	6-1	.15	5-1	-.11	4-1	-.17
7-2	.10	6-2	.19	5-2	.21	4-2	-.01
7-3	.31	6-3	-.04	5-3	.19	4-3	-.02
7-4	-.04	6-4	.17	5-4	.08	4-4	.44
		6-S	.09	5-5	-.15	4-5	.12
				5-S	.38	4-6	-.50
						4AS	.05
						4BS	-.06

Grade	r	Teacher	r	School	r	Total	r
7	.16	A	.13	Hancock	.26		.23
6	.22	B	.04	Sparta	.04		
5	.18	C	.04				
4	.09	D	.18				
		E	.16				

TABLE 10

Correlations for Newspaper Posttest I and Posttest II

Section	r	Section	r	Section	r	Section	r
7-1	.44	6-1	.40	5-1	.33	4-1	.29
7-2	.14	6-2	-.15	5-2	-.17	4-2	-.14
7-3	.33	6-3	.23	5-3	.12	4-3	.22
7-4	.22	6-4	-.09	5-4	-.05	4-4	-.03
		6-S	.39	5-5	.44	4-5	-.30
				5-S	-.11	4-6	.04
						4AS	.01
						4BS	.20

Grade	r	Teacher	r	School	r	Total	r
7	.43	A	.28	Hancock	.35		.36
6	.39	B	.38	Sparta	.38		
5	.16	C	.21				
4	.17	D	.38				
		E	.43				

To determine whether reading skills were influenced by newspaper instruction, STEP reading tests were administered before and after instruction. As a whole group, students involved in the project fall substantially below national norms. Some individuals had extremely high scores, but the top sections of homogeneously grouped classes approximated national norms for their grade, while lowest sections were barely above the minimum scores attainable. It should again be noted that the tests were too difficult for some students and therefore produced spuriously low scores for them.

As illustrated in Table 15 below, all grades, students of each teacher, both schools, and the total group scored significant gains in

reading during the instructional project. Tables 11-14 show that seventeen of the twenty-three sections showed a significant gain. One of the two sections that used newspapers part-time was the only section to decline in scores on the reading test.

TABLE 11

Seventh Grade Reading Test: Pretest and Posttest Results

	Reading I Mean Score	Reading II Mean Score	Mean Difference	t	df	level
7-1	252.82	259.47	6.65	3.33	16	.005
7-2	243.48	248.86	5.38	3.66	20	.005
7-3	238.08	239.71	1.63	1.10	23	NS
7-4	242.17	239.74	-2.43	1.46	22	NS

TABLE 12

Sixth Grade Reading Test: Pretest and Posttest Results

	Reading I Mean Score	Reading II Mean Score	Mean Difference	t	df	level
6-1	257.48	260.93	3.45	1.82	28	NS
6-2	245.82	248.46	2.64	1.39	27	NS
6-3	237.04	240.43	3.39	2.95	27	.005
6-4	232.39	234.87	2.48	1.73	22	NS
6-S	243.23	251.50	8.27	3.85	21	.0005

TABLE 13

Fifth Grade Reading Test: Pretest and Posttest Resultsz

	Reading I Mean Score	Reading II Mean Score	Mean Difference	t	df	level
5-1	244.43	251.86	7.43	4.70	27	.0005
5-2	234.93	240.50	5.57	4.76	29	.0005
5-3	233.08	237.13	4.05	3.11	23	.005
5-4	228.14	230.95	2.81	2.40	20	NS
5-5	229.32	234.00	4.68	5.51	27	.0005
5-S	240.77	246.41	5.64	3.10	21	.005

TABLE 14

Fourth Grade Reading Test: Pretest and Posttest Results

	Reading I Mean Score	Reading II Mean Score	Mean Difference	t	df	level
4-1	233.91	241.39	7.48	3.76	22	.005
4-2	229.38	236.71	7.33	5.51	20	.0005
4-3	227.82	230.57	2.75	2.56	22	.01
4-4	228.12	230.20	2.08	2.57	24	.01
4-5	228.32	230.96	2.64	3.22	24	.005
4-6	228.00	232.26	4.26	4.02	18	.0005
4AS	237.85	243.52	5.67	4.81	26	.0005
4BS	228.89	233.21	4.32	3.96	18	.0005

TABLE 15

Reading Test: Pretest and Posttest Results

	Reading I Mean Score	Reading II Mean Score	Mean Difference	t	df	level
Grade 7	243.47	245.93	2.46	3.08	84	.005
Grade 6	243.81	247.96	5.15	6.36	129	.0005
Grade 5	234.34	239.48	5.14	9.70	152	.0005
Grade 4	229.26	233.78	4.52	11.67	181	.0005
Teacher A	229.81	234.14	4.33	9.41	116	.0005
Teacher B	237.98	243.99	6.01	7.61	89	.0005
Teacher C	234.34	239.39	5.05	9.35	130	.0005
Teacher D	241.45	244.65	3.20	4.21	126	.0005
Teacher E	243.47	245.93	2.46	3.08	84	.005
Hancock Central School	236.75	240.63	3.88	12.13	459	.0005
Sparta School	237.98	243.99	6.01	7.61	89	.0005
All Students	236.95	241.18	4.23	14.10	549	.0005

Scores on the reading posttest were low as compared with national norms despite the gains that were made. There is no magical formula for newspaper use or any other method of instruction that immediately

can countervail the cluster of factors that influence the educational process. However, in Table 16, a comparison of the gains made during the project with the difference between grade levels on the reading pretest does suggest that reading skills may have been improved more by newspaper use than the ordinary instructional processes that occur in the involved schools.

TABLE 16

Hancock Central Students

	Pretest Reading Scores	Superiority Over Next Lower Grade	Posttest Reading Score	Gain During Project
Grade 7	245.73*	1.92*	245.93**	2.46**
Grade 6	243.81	9.47	247.96	5.15
Grade 5	234.34	5.08	239.48	5.14
Grade 4	229.26	N/A	233.78	4.52

* Includes 17 higher ability students not involved in the project.
** Excludes these 17 students not involved in the project.

Students vary, of course, and it cannot be assumed that the superiority of one grade to the next lowest grade is necessarily a valid measure of reading improvement during the past school year. Seventh and fifth grade students gained more during a ten week period than their advantage over the next lower grade on pretest scores. The sixth grade scored a gain that was more than half of its advantage over the fifth grade. Evidence is not conclusive, but there is reason to hypothesize that with normal instruction, relatively little reading gain occurs

after grade five in this school. (The advantage of sixth grade students over fifth graders indicates gain during the fifth grade.) Since newspaper use produced the gains shown in Table 16 in only ten weeks, it would be of high interest to ascertain what gain might be made in a full thirty-six week school year.

Pearson product-moment correlations for reading pretests and posttests were slightly lower than typical but reasonably consistent with expectations for repeated measures with one notable exception. Scores for students of Teacher C correlated at .46. Observation of the gains of individual students suggested that many students with reasonable ability but also with reading problems found solutions during the period of newspaper instruction with this teacher. Table 17 contains correlations of the two administrations of the reading test.

TABLE 17

Correlations for Reading Pretest and Posttest

Section	r	Section	r	Section	r	Section	r
7-1	.80	6-1	.56	5-1	.74	4-1	.65
7-2	.64	6-2	.44	5-2	.18	4-2	.50
7-3	.09	6-3	.64	5-3	.40	4-3	-.38
7-4	.24	6-4	.41	5-4	.13	4-4	.47
		6-S	.75	5-5	.64	4-5	.83
				5-S	.73	4-6	.06
						4AS	.77
						4BS	.25

Grade	r	Teacher	r	School	r	Total	r
7	.69	A	.68	Hancock	.64		.65
6	.64	B	.79	Sparta	.79		
5	.50	C	.46				
4	.74	D	.81				
		E	.69				

Tables 18 and 19 show correlations of the reading pretest and the newspaper pretest, as well as the reading posttest and the newspaper posttest given at the conclusion of the instructional period. Pretest correlations were quite low, suggesting that reading ability had little relationship to competence in using a newspaper effectively before students were taught how to use a newspaper. Correlations were moderately high on the posttest. In short, better readers read newspapers better, provided that all have been instructed in newspaper use. But being better readers did not necessarily result in these elementary students being able to cope with newspapers prior to newspaper instruction. Again, no single study is ever conclusive, but there is reason to hypothesize that specific instruction in newspaper use may be necessary to attain competence in its use. Findings of Educational Testing Service[7] which show that high school students who have received newspaper instruction are superior to those who have not tend to strengthen the hypothesis' potential validity. In short, it seems probable that students who do not receive instruction in newspaper use will become adults whose competence to read and evaluate newspaper content will be significantly less than need be the case. The question of whether adults in a democracy should be competent to assess and evaluate news and discussion of public affairs is a philosophical question not within the scope of this research, but most are likely to find a common and obvious answer.

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[7] The ANPA Foundation Newspaper Test, op. cit.

TABLE 18

Correlations for Reading Pretest and Newspaper Pretest

Section	r	Section	r	Section	r	Section	r
7-1	.13	6-1	.05	5-1	-.09	4-1	.17
7-2	.25	6-2	.12	5-2	.14	4-2	-.18
7-3	-.03	6-3	-.21	5-3	.07	4-3	-.04
7-4	.26	6-4	-.01	5-4	.06	4-4	.02
		6-S	.36	5-5	.05	4-5	.17
				5-S	.38	4-6	-.06
						4AS	-.32
						4BS	-.29

Grade	r	Teacher	r	School	r	Total	r
7	.24	A	.25	Hancock	.20		.19
6	.25	B	.11	Sparta	.11		
5	.08	C	.00				
4	.19	D	.24				
		E	.24				

TABLE 19

Correlations for Reading Posttest and Newspaper Posttest I

Section	r	Section	r	Section	r	Section	r
7-1	.69	6-1	.22	5-1	.21	4-1	.39
7-2	-.03	6-2	.15	5-2	.08	4-2	-.13
7-3	.33	6-3	.27	5-3	.45	4-3	-.15
7-4	.26	6-4	.13	5-4	-.23	4-4	.41
		6-S	.64	5-5	.22	4-5	.22
				5-S	-.15	4-6	.27
						4AS	.34
						4BS	-.02

Grade	r	Teacher	r	School	r	Total	r
7	.51	A	.31	Hancock	.49		.51
6	.51	B	.48	Sparta	.48		
5	.36	C	.46				
4	.31	D	.51				
		E	.51				

In summary, it was concluded that:

1. Elementary students, including those with low reading ability, scored highly significant gains in use and understanding of daily newspapers as a result of ten weeks of instruction. Gains persisted for an additional ten weeks following instruction.
2. These elementary students scored significant gains in reading. Reading gains in ten weeks for many students appeared to approximate those normally attained in a full school year.
3. General reading skill did not assure competence in reading newspapers. Following instruction in newspaper use, better readers were also better newspaper readers. Fourth graders were better newspaper readers after instruction than were seventh graders prior to instruction.
4. Standard daily newspapers were useful as instruction materials in the elementary school. It was not necessary to abstract newspaper content, to use newspapers as supplementary materials, or to "play" with newspapers.
5. Adherence to provided lesson plans appeared to produce results superior to deviations intended to capitalize on student interests.
6. Provision of lesson plans to teachers did not result in uniform results, even when plans were followed carefully.
7. As estimated by teachers, student interest was as high or higher than during normal instruction. Newspapers in the classroom did not assure interest of every student.

8. Objective measures of student attitude were judged to be unreliable and inconsistent with observed behavior.
9. Teachers were judged to show high levels of concern at abandonment of traditional content.

This project was completed with the cooperation of the American Newspaper Publishers Association Foundation, the Department of Social Science Education of the University of Georgia, Hancock County, Georgia Superintendent of Schools W. M. Andrews, the principals and faculty of Hancock Central and Sparta Schools, the Atlanta Constitution, the Augusta Chronicle, and the Macon Telegraph.

The Newspaper in the Elementary School:
A Research Report
to
ANPA Foundation

Summary

Determining the effects of using daily newspapers as teaching materials in elementary schools was the basic purpose of this instructional and research project. Using lesson plans prepared by the project designer and daily newspapers, elementary school teachers attempted to improve basic general reading skills and specific newspaper reading skills in a series of fifty lessons.

The research project was conducted in grades four through seven in two schools in rural Hancock County, Georgia. As a consequence of a cluster of factors, rural counties in the Southeast typically have students whose school achievement is substantially below the national average. Students included in the project, about 90% of whom were Black, averaged well below national reading norms at the beginning of instruction. Tests also indicated that few were effective newspaper readers.

After initial testing, the fifty lessons were taught, using the Atlanta Constitution, Augusta Chronicle and Macon Telegraph, the three morning daily newspapers that regularly are circulated in the county. Standardized reading tests and newspaper use tests were again administered.

Students scored significant gains on both tests. Even fourth grade students were better newspaper readers after instruction than were seventh graders at the beginning of the project. Some classes registered more reading gain in the ten week period of newspaper use than they were projected to gain during a full school year of normal instruction. Ten weeks after completion of project instruction, tests were again administered. Newspaper reading skills continued to improve slightly, indicating that gains during the project were in basic skills rather than in quickly forgotten trivial information.

While it is uncertain whether results can be duplicated elsewhere, newspapers were shown by test scores to be an extremely valuable teaching tool for these elementary school students. It seems likely that students elsewhere can also profit from instruction in newspaper use.

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