1977

A Comparative Study to Determine Teacher Attitudes Toward Teaching Traditional Industrial Arts versus Industrial Arts Curriculum Project

Larry W. Hoskins Sr.
Old Dominion University

A COMPARATIVE STUDY TO DETERMINE TEACHER ATTITUDES TOWARD TEACHING TRADITIONAL INDUSTRIAL ARTS vs. INDSUTRIAL ARTS CURRICULUM PROJECT

A RESEARCH PAPER IN PARTIAL
FULFILLMENT OF REQUIREMENTS FOR
DEGREE OF MASTER OF SCIENCE
IN EDUCATION

by

Larry W. Hoskins, Sr.

This research paper was prepared under the direction of the instructor in Problems in Education, ECIMI 536. It is submitted to the Graduate Program Director for Secondary Education in partial fulfillment of the requirements for the Degree of Master of Science in Education.

Author

Approved, May 1977

David I. Joyner
Graduate Advisor

Murry Rudisal, Ph.D.
Graduate Program Director
Secondary Education

TABLE OF CONTENTS

Chapter 1

INTRODUCTION

Background Information

The Industrial Arts Curriculum Project (IACP) headquartered at the Ohio State University was a curriculum development effort undertaken in cooperation with the University of Illinois. The project was administered through the Ohio State University Research Foundation and was supported by the United States Office of Education with contracts and grants totaling over two million dollars. Additional financial support was provided by industrial and business concerns, professional associations, labor unions, and educational institutions.

The major objective of the IACP was to develop, refine, and institutionalize a new and relevant two-year instructional program in Industrial Arts which was The World of Construction and The World of Manufacturing. Curriculum materials for both courses were developed, including textbooks, laboratory manuals, teachers' guides, achievement tests, and related instructional visuals and hardware.

It was concluded from the Final Report that the administrators, teachers, parents and students considered the IACP curriculum a real improvement over traditional curriculum. Other authorities indicated the same results for students. Buffer (1:14)

In a study by Fazzini (4), "The Comparative Study to Determine the Efficacy of Two Industrial Arts Programs Approaches upon Pupils

Attitudes Toward Manufacturing Industry", it was concluded that the traditional program was more successful in fostering positive attitudes. However, a further analysis based on Industrial Arts cognition suggested that the conventional program may have taught attitudes which were predetermined to be positive while the innovative program encouraged the student to formulate his own attitudes based upon the course content and class activites.

Although there has been much research on the comparison of IACP vs. traditional Industrial Arts, there has been little on teacher attitudes, except what was concluded from the Final Report of the IACP project. Buffer (1:96)

Hypothesis

The attitude of Industrial Arts teachers toward teaching the IACP curriculum compared to the teaching of the traditional curriculum is that they prefer to teach the traditional program rather than the IACP program.

1. The Industrial Arts teacher who is certified to teach IACP and is teaching it prefers it over the traditional curriculum.

2. The Industrial Arts teacher who is not certified to teach the IACP curriculum prefers to teach the traditional curriculum.

3. The Industrial Arts teacher who is certified but is not teaching the IACP curriculum prefers to teach the traditional curriculum.

Significance of the Problem

The significance of this study is to determine teacher attitudes toward:

(A) Teaching the IACP program

(B) Teaching Conventional Industrial Arts curriculum

(C) A comparison of the above (A) and (B).

In the final report of the IACP report (Buffer, 1) it was concluded that the majority of the teachers who did the field testing of the program were in favor of the IACP program. In 1974, Newport News started a pilot program in The World of Construction at Dozier Intermediate School. The program was to be put into the other three Intermediate Schools in the following year. Teachers at each school were certified to teach The World of Construction, but as the records show only two schools and five teachers utilized the program. Most schools are still operating with the old curriculum.

In a study done by Mosley (7) "The Goals of the Industrial Arts Curriculum in the Middle Schools as Perceived by Selected Florida Educators", the Q-sort responses of Industrial Arts teachers, supervisors of Industrial Arts, principals, and counselors in the middle schools of Florida were compared to determine if there was agreement as to the role of Industrial Arts in the general curriculum. Mosley's study indicated that Florida remains oriented toward the traditional Industrial Arts curriculum.

The question which now comes to mind is "Are Industrial Arts teachers who teach the IACP program really satisfied with it as compared to their feelings toward the traditional program"?

Limitations

This study will be limited to the Peninsula Industrial Arts teachers who teach in the Newport News, Hampton, and York County School Systems.

The instrument used was designed by the experimenter. It consisted of thirty-six questions covering 1. Text and Instructional Materials, 2. Student, and 3. Teaching. A five point summative scale (Likert-technique) ranging from strongly agree to strongly disagree was used.

Definitations

Traditional Curriculum - will be considered to mean a study of Industry and Technology in the following areas - woods, metals, electricity, electronic, and mechanical drawing.

IACP - Industrial Arts Curriculum Project - will be considered to mean the study of The World of Manufacturing and The World of Construction.

Chapter 2

REVIEW OF RELATED LITERATURE

Beginning in 1965 "the Industrial Arts Curriculum Project known as IACP, headquarters at the Ohio State University, was a curriculum development effort undertaken in cooperation with the University of Illinois. The project was administered through the Ohio State University Research Foundation and was supported by the United States Office of Education with contracts and grants totaling over two million dollars."

The major objectives of the IACP was to develop, refine, and institutionalize a new and relevant two-year instructional program in Industrial Arts for junior high school age students. The developmental efforts of the project focused on the study of "industrial technology", the knowledge men use to satisfy their wants for industrially produced goods. Men use this knowledge in two principal activities - construction and manufacturing.

While engaged in a study of The World of Construction, students learn how bridges, dams, roads, tunnels, and buildings are produced by a managed-personnel-production system. The importance of this is emphasized by activities.

A study of The World of Manufacturing is concerned primarily with developing an understanding of how a managed-personnel-production system produces and services manufactured goods. They produce goods using most of the activities mentioned above.

The undergraduate curriculum at the Ohio State University was revised to prepare teachers of Construction and Manufacturing and was begun in

the autumn of 1968. Other teacher education institutions have made adjustments in their teacher preparation programs. Summer orientation programs for inservice teacher preparation were conducted by the staff at OSU beginning in 1967 through 1971. IACP teacher preparation workshops were also conducted at 16 other colleges and universities in the summer of 1970, and 45 instructors conducted 72 IACP summer workshops in 1971. To insure the proper introduction of the instructional system, teachers initially received preparation on how to use the materials either at cooperating institutions of higher learning or through participation at inservice workshops taught by experienced IACP teachers in local school systems. Buffer (1:191)

In today's schools, Industrial Arts teachers have almost total freedom in planning the content of the course they teach. The research conducted by the author of this paper indicates that the biggest problem is the teachers. Those who do not understand the IACP program do not want to learn about it. The IACP program is only a more general and wider scope to the existing curriculum.

In Mosley's (7) study of "The Goals of the Industrial Arts Curriculum in the Middle Schools as Perceived by Selected Florida Educators", he indicated that the curriculum for the middle school of Florida remains oriented towards the traditional Industrial Arts Curriculum. The implications of this study indicated that "educators appear to agree that Industrial Arts will continue to play an important role in the general education of boys and girls during the middle school years." From this study it would appear that there is need for increased understanding and

communications between the four groups of educators: 'Industrial Arts teachers, supervisors of Industrial Arts, principals and counselors'. Where there seems to be little agreement is in the method with which this will be accomplished. The study reports a need for improvement in the development of consistent educational philosophy, internal communications and sound operating policies regarding Industrial Arts in middle school programs. This same problem exists in other school systems. If these differences are not worked out, and the reluctant teachers do not try these new concepts, then the goals of Industrial Arts will not be accomplished.

As stated in the final report on the evaluation of the Industrial Arts curriculum project, Industrial Arts teachers for the first time, according to many IACP teachers, recognized significant and meaningful learning taking place in their students. In addition, most IACP teachers reported tremendous personal satisfaction from the contribution they were making to the education of boys and girls. The philosophy, rationale, and content of the IACP course had made 'believers' out of most IACP teachers; so much so that they indicated they would not like to return to teaching traditional Industrial Arts courses even though, admittedly, they had to work harder than usual. Buffer (1:193)

In Fazzini's (4) study "A Comparative Study to Determine the Efficacy of two Industrial Arts Programs Approaches Upon Pupils' Attitudes Towards Manufacturing Industry", it was found that a difference in attitudes toward manufacturing industry did exist among the three treatment groups with the traditional groups exhibiting the most positive attitudes. All scores were on the positive side of a continuum.

The existence of the IACP program has caused educators to examine the content of Industrial Arts at all levels. Many are convinced that Industrial Arts programs are in critical need of revision to bring them into focus with twentieth-century industrial technology.

After reviewing existing materials on the attitudes related to the IACP program there is little or no report of evidence on teacher attitudes. In the Final Report of the Evaluation of the Industrial Arts Curriculum Project (1), it is stated that the teacher who was in the experimental group was sold on the program. There is very little empirical evidence available to support the findings of the evaluation team of the Final Report of the IACP report.

Chapter 3

DESIGN OF THE STUDY

Population

The population used in this study consisted of all the Industrial Arts teachers on the peninsula. The peninsula includes three school systems: Newport News, Hampton and York county. In order to locate the teachers, the schools were selected and, by using the Virginia Industrial Arts Directory (9), the teachers names and adresses were compiled.

Development of the Instrument

The instrument being used in this study was developed by the researcher. The instrument was developed to measure the attitudes of Industrial Arts teachers who were teaching the traditional curriculum, and those who were teaching the Industrial Arts Curriculum Project Program. In order to measure the attitudes of the teachers, the instrument was designed to collect data in the following areas: text and teaching materials, students and teaching. The researcher used the Likert type of scale to collect the data needed in the experiment.

To construct a Likert type scale, the researcher used the following steps:

1. Collected a large number of favorable and unfavorable statements regarding the attitude object.

2. Selected from these approximately equal numbers of favorable and unfavorable statements.

3. Administered these items to a number of individuals, asking them to indicate their opinions regarding each statement by determining

whether they strongly agree, agree, undecided, disagree, or strongly disagree with each statement.

4. Carried out an item analysis to select those items that yield the best discrimination. Through item analysis one finds the correlation between the subject, total scores and their response to each item. Razavieh, Ary, Jacobs (8: 179)

There were a total of fifty-four questions designed to answer many questions. There were thrity-six questions designed by the Likert scale. The other eighteen were used to do two things: 1. As a check for the same questions asked on the Likert scale, 2. To gather information such as, Are you certified to teach The World of Construction?, If you had a choice would you teach or continue to teach the IACP curriculum?, etc.

After compiling questions and information using the procedure discussed previously, the experimenter mailed the questionaires along with the self-addressed, stamped envelopes. A copy of the questionaire is included in Appendix A.

Data-Gathering Instrumentation

There was a total of sixty-five teachers involved. They were mailed the questionaire along with a cover letter explaining how to answer the questions and the purpose of the questionaire. The response was good; within two weeks 45 percent had returned their questionaire. At the end of three weeks there was a 48 percent return. The total return, approximately 50 percent, was used to compute the analysis of variance.

Chapter 4

FINDINGS AND ANALYSIS

The purpose of this study is to determine if there are any significant differences in the attitudes of Industrial Arts teachers toward teaching the IACP curriculum compared to the teaching of the traditional curriculum. The null hypothesis as stated in Chapter One was that teachers prefer to teach the traditional program rather than the IACP program. The findings were obtained by the procedures outlined in Chapter Three and are presented in this chapter.

Figure 1

Source of variance	SS	df	MS	F	level of significance
Between groups	9.00	2	4.5	7.03	0.1
Within groups	66.70	105	.64		
Total	75.70	107			

The raw scores were used to compute the Analysis of Variance and F-test of significance. With the degree of freedom being 2 and 105 and a F-ratio of 7.03, which is greater than both the .05 and .01 level, we then reject the null hypotheses at the .01 level. Figure 1 contains the summary of the Analysis of Variance of the three groups.

Having obtained a F^{o} value that is greater than the 2 and 105 degree of freedom, then it can be concluded that there is no significant

difference in the attitudes of Industrial Arts teachers who are certified and teaching the IACP, the teachers who are certified and not teaching IACP, and the teachers who are not certified and not teaching IACP.

A five-point summative scale (Likert-technique) as explained in Chapter Three was used to assess opinions. Thirty-six questions covering text and instructional materials, students and teaching, were asked to get teachers responses.

Figure 2

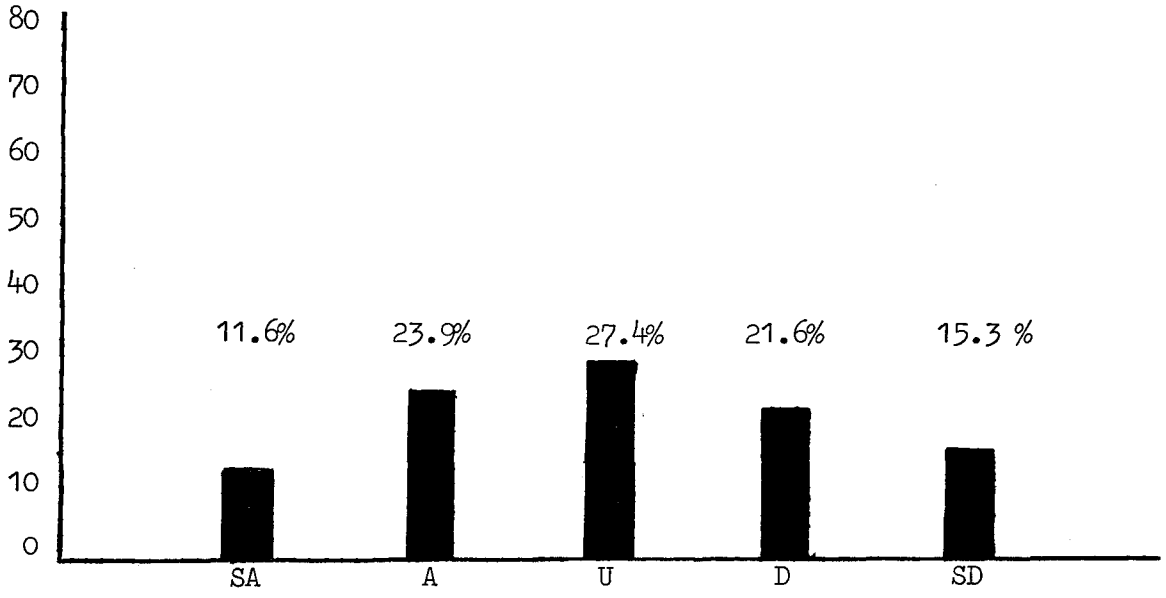

Figure 2 contains the overall comparison of the teachers certified and teaching IACP, teachers who are certified and not teaching IACP and teachers who are not certified and not teaching IACP. The overall percentages were calculated for the three groups to show the differences in agreement. These results can be compared by observing the histogram in figure 2. The histogram shows very little agreement between the respondents' reactions to each category on the Likert scale.

Figure 3

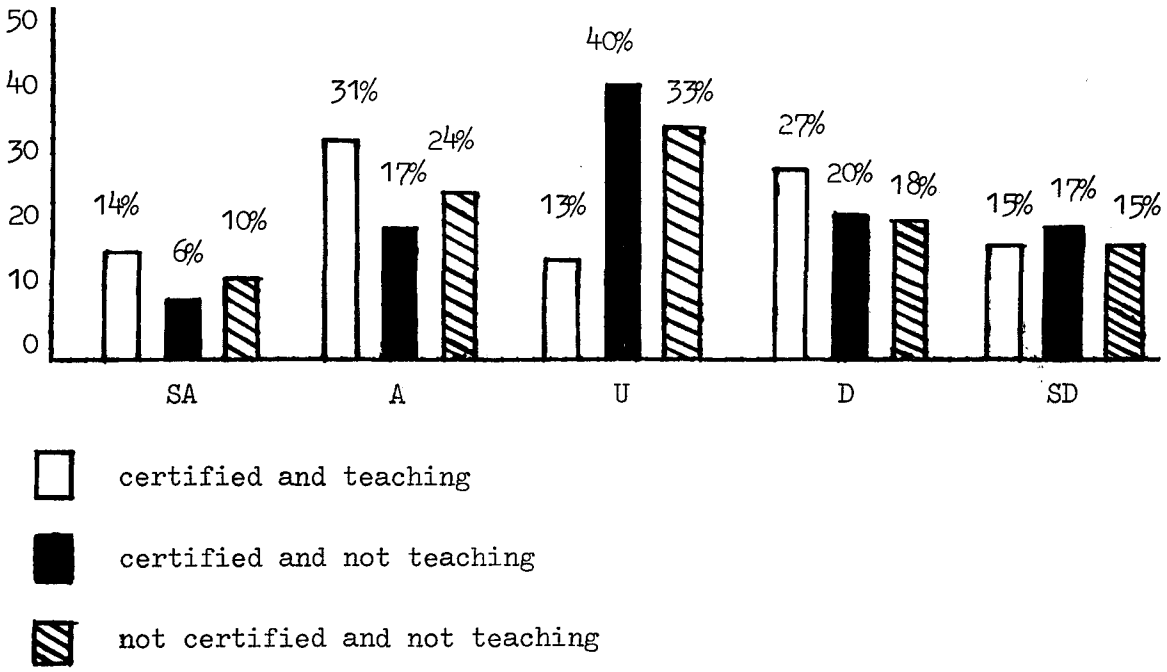

Figure 3 contains the comparison of all teachers certified and teaching IACP, teachers who are certified and not teaching IACP, and those not certified and not teaching IACP. The percentages were calculated for three groups to show the differences in agreement. These results can be compared by observing the histogram in figure 3. There is some differences shown between the groups in the agree and uncertain answers.

There were two other important questions answered on the questionaire. The first question was, "If you had a choice, would you teach or continue to teach the IACP curriculum?" The answers were 41% yes and 59% no. The experimenter further broke it down into the three following percentages: group that is certified and teaching IACP courses, 50% yes and 50% no, group certified and not teaching IACP, 23% yes and 77% no,

group that is not certified and not teaching IACP courses, 50% yes and 50% no. From this we can conclude that 50% of the teachers who are now teaching the IACP courses are undecided about where they stand, but from the Analysis of Variance and F-ratio we concluded that there was no significant difference in their overall attitude. In another yes-no question, "Do you feel that the IACP curriculum will replace the traditional Industrial Arts?", the response was 19% yes and 81% no.

In view of the data presented, the null hypothesis as stated in Chapter One, that the attitude of Industrial Arts teachers toward teaching the IACP curriculum compared to the teaching of traditional curriculum is that they prefer to teach the traditional program rather than the IACP program, is rejected.

Chapter 5

SUMMARY, CONCLUSIONS AND RECOMMENDATIONS

This research was done to study the following: The attitude of Industrial Arts teachers toward teaching the IACP curriculum compared to the teaching of traditional curriculum is that they prefer to teach the traditional program rather than IACP program. There are three separate areas into which the overall hypothesis was broken:

1. The Industrial Arts teacher who is certified to teach IACP and is teaching it prefers it over the traditional curriculum.
2. The Industrial Arts teacher who is certified to teach IACP but is not teaching IACP prefers to teach the traditional curriculum.
3. The Industrial Arts teacher who is not certified to teach the IACP curriculum prefers to teach the traditional curriculum.

All Industrial Arts teachers on the peninsula which includes Newport News, Hampton and York county were used in this study. Approximately fifty percent of the population returned the survey. This research study was conducted during the 1976-77 school year.

The Problem

The purpose of this study was to find out teacher attitudes toward teaching traditional Industrial Arts vs. the IACP program. On the data collected the null hypothesis was rejected.

Method of Procedure

The name and addresses of the participants used in this study was secured from the Virginia Industrial Arts Directory (9). There was a total of fifty-four questions designed to answer many questions. For

instance, there was no way to know who was certified to teach IACP so the questionaire was designed to provide this information. After compiling questions and information the experimenter mailed sixty-five questionaires along with self-addressed stamped envelopes for return. The response was very good. The experimenter received thirty-two completed questionaires. Out of the ones returned, he had nine who are certified and teaching IACP, ten who are certified and not teaching IACP and thirteen who are not certified and not teaching IACP. The Analysis of Variance and F-ratio was used to compare the three groups. The F-ratio was used to show no significant difference in the attitude of Industrial Arts teachers compared to teaching IACP vs. traditional Industrial Arts.

Histograms were used to show the difference between the groups. A histogram was made for comparison of the total answers on a five point summative scale (Likert-technique) ranging from strongly agree to strongly disagree. A histogram was also used to compare each group.

Conclusions

There was a significant difference in the degree of freedom within the groups more than there was between the groups. Using the histogram as a means of comparison, the teachers who were certified and not teaching the IACP and the teachers who are not certified and not teaching the IACP courses agree at the same level. In the comparison of the group that was certified and teaching the IACP and the group certified and not teaching the IACP, the most significant difference was shown when the undecided answer was given.

Another significant difference was on the question, "If you had a choice would you teach the IACP courses?" The certified but not teaching IACP showed a significant difference with 23% yes and 77% no. The other two groups indicated 50% yes and 50% no.

Recommendations

Some suggestions for future study on the comparison of teacher attitudes toward teaching IACP vs. traditional Industrial Arts are:

1. Design the instrument to gather the information needed only, and make it shorter.
2. Design the instrument with one type of answer.
3. Mail instrument at least two months before the information is needed. This allows time for follow-up if the participant does not return the questionaire.

After doing this study the experimenter wonders what turns Industrial Arts teachers off to IACP. The experimenter recommends that teachers who are certified and not teaching IACP should try some of the methods on an experimental basis. They may then have a different attitude towards the IACP program.

APPENDIX A

February 8, 1977

Dear Participant:

This questionaire is being sent to you to find out how you feel about the Industrial Arts Curriculum Project (World of Manufacturing and World of Construction) and the traditional curriculum. In order for me to get accurate statistics on your feelings there are other questions I must ask. I would appreciate you filling the questionaire out and returning it at your earliest possible convenience in the addressed and stamped envelope. Thank you very much.

Sincerely,

Larry W. Hoskins

PLEASE COMPLETE AND RETURN AS SOON AS POSSIBLE IN THE STAMPED AND ADDRESSED ENVELOPE

The purpose of this questionaire is to find out your attitudes toward the New Industrial Arts Curriculum Project (known as The World of Manufacturing & The World of Construction) compared to the Conventional Industrial Arts (Metals, Wood, Mechanical Drawing, Electricity, Electronics, etc.).

This questionaire will be divided into three areas: 1. Text and Instructional Materials 2. Students 3. Teaching. I will appreciate the time and effort you spend completing this questionaire. Thank you very much.

WHAT WAS YOUR MAJOR IN COLLEGE _____

WHAT WAS YOUR MAJOR EMPHASIS _____

HOW MANY YEARS HAVE YOU BEEN TEACHING _____

HOW MANY YEARS HAVE YOU TAUGHT IN THE FOLLOWING AREAS

METALS _____
WOODS _____
MECHANICAL DRAWING _____
ELECTRICITY, ELECTRONIC _____
GRAPHIC ARTS _____
WORLD OF MANUFACTURING _____
WORLD OF CONSTRUCTION _____
WORLD OF TRANSPORTATION _____
WORLD OF COMMUNICATION _____
EXPLORING TECHNOLOGY _____
MODERN INDUSTRIAL TECHNOLOGY _____

OTHERS LIST _____

_____

Are you certified to teach the world of manufacturing? _____
Are you certified to teach the world of construction? _____
Are you teaching the world of manufacturing at this time? _____
Are you teaching the world of construction at this time? _____
WHAT ARE YOU TEACHING AT THE PRESENT TIME? _____

The following is an explanation of the abbreviated answers:

SA-Strongly agree	U-Undecided	SD-Strongly Disagree
A-Agree	D-Disagree	NA-Non Applicable

TEXT & INSTRUCTIONAL MATERIALS

1. I think the textbooks are suited for eighth through tenth graders.

SA _____ A _____ U _____ D _____ SD _____

2. I feel the structure of the IACP courses are adequate.

SA _____ A _____ U _____ D _____ SD _____

3. I feel IACP programs cost more than traditonal Industrial Arts.

SA _____ A _____ U _____ D _____ SD _____

4. I have ample storage for projects and materials in the world of construction.

SA _____ A _____ U _____ D _____ SD _____

5. How do you think the materials of the IACP are structured.

WELL _____ ABOUT AVERAGE _____ TOO STRUCTURED _____

6. I feel that you should go strictly by the materials in the text and laboratory manual.

SA _____ A _____ U _____ D _____ SD _____

7. I have the necessary equipment to teach the IACP courses.

SA _____ A _____ U _____ D _____ SD _____

8. I have the necessary supplies needed to accomplish the IACP course objective.

SA _____ A _____ U _____ D _____ SD _____

9. I use the workbook published for the IACP courses.

YES _____ NO _____ SOMETIMES _____

10. I feel that the IACP curriculum will replace the traditonal Industrial Arts Curriculum.

YES _____ NO _____

11. Do your students pay any fees?

YES _____ NO _____ NA _____

12. How does the guidance department feel about the IACP curriculum?

ENTHUSIASTIC _____ ACCEPTED _____

13. Do you order the supplies for your classes?

YES _____ NO _____ SOMETIME _____

14. Do you find it difficult to get supplies on time?

YES _____ NO _____

15. My administration thinks the IACP curriculum is meeting the needs of our students.

SA _____ A _____ U _____ D _____ SD _____

STUDENTS

1. I feel that discipline problems are less in IACP than traditional.

SA _____ A _____ U _____ D _____ SD _____

2. What are the maximum number of students allowed to enroll in your classes?

_____

3. I think the IACP curriculum is beneficial to my classes.

SA _____ A _____ U _____ D _____ SD _____

4. It is my feeling that students who complete the IACP curriculum have a better understanding of career opportunities than those completing the traditional program.

SA _____ A _____ U _____ D _____ SD _____

5. Most students react enthusiastically to the IACP curriculum.

SA _____ A _____ U _____ D _____ SD _____

6. I find that students like the IACP curriculum better than the traditional.

SA _____ A _____ U _____ D _____ SD _____

7. There should be time for students to build an individual project of his own choice in the IACP curriculum.

SA _____ A _____ U _____ D _____ SD _____

8. I have seen a change in the motivation of students.

SA _____ A _____ U _____ D _____ SD _____

9. I have seen a change in enrollment since offering the IACP curriculum.

SA _____ A _____ U _____ D _____ SD _____

10. The demand for the IACP curriculum is greater than for the traditional Industrial Arts.

SA _____ A _____ U _____ D _____ SD _____

TEACHING

1. What length of time do you feel the IACP courses should be? _____

2. Do you offer traditional Industrial Arts in your school?

YES _____ NO _____

3. The IACP courses are harder to teach than the traditional.

SA _____ A _____ U _____ D _____ SD _____

4. If you had a choice would you teach or continue to teach the IACP courses?

YES _____ NO _____

5. I enjoy teaching the IACP curriculum.

SA _____ A _____ U _____ D _____ SD _____

6. The IACP curriculum requires more time to prepare than the Traditional curriculum.

SA _____ A _____ U _____ D _____ SD _____

7. I have more money per student to spend in the IACP curriculum, than I did in the Traditional.

SA _____ A _____ U _____ D _____ SD _____

8. I choose to teach the new IACP curriculum.

SA _____ A _____ U _____ D _____ SD _____

9. My school system paid my tuition so I could get certified to teach the IACP curriculum.

SA _____ A _____ U _____ D _____ SD _____

10. I feel we should do away with traditional Industrial Arts.

SA _____ A _____ U _____ D _____ SD _____

11. My students feel that the IACP curriculum is the best program going.

SA _____ A _____ U _____ D _____ SD _____

12. On what grade level should the world of manufacturing be taught?

_____

13. On what grade level should the world of construction be taught?

_____

14. The IACP curriculum has been adopted for the entire school system.

YES _____ NO _____ EXPERIMENTAL _____

15. How many teachers teach the IACP curriculum in your school? _____

16. I find teachers from other area enthusiastic about the IACP curriculum.

SA _____ A _____ U _____ D _____ SD _____

17. I like teaching traditional Industrial Arts better than IACP curriculum.

SA _____ A _____ U _____ D _____ SD _____

18. Additonal time after school hours are required in order to teach the IACP program correctly.

SA _____ A _____ U _____ D _____ SD _____

19. My school system is behind me, and provides adequate money to teach the IACP curriculum.

SA _____ A _____ U _____ D _____ SD _____

20. I have found Industry willing to help with information and materials in the IACP curriculum.

SA _____ A _____ U _____ D _____ SD _____

21. I have a supervisor or director of Industrial Arts.

YES _____ NO _____

22. My supervisor was very helpful in implementing the IACP curriculum.

SA _____ A _____ U _____ D _____ SD _____

23. I feel the IACP curriculum lends itself to more individualized instruction than the traditional Industrial Arts.

SA _____ A _____ U _____ D _____ SD _____

24. I feel more enthusiastic about teaching the IACP curriculum than the traditional.

SA _____ A _____ U _____ D _____ SD _____

25. I find the parents prefer the IACP curriculum over the traditional Industrial Arts.

SA _____ A _____ U _____ D _____ SD _____

26. On what grade level do you feel traditional Industrial Arts should be taught?

_____

27. I feel that Industrial Arts should be taught in elementary grades.

SA _____ A _____ U _____ D _____ SD _____

28. Has the IACP curriculum caused the teachers in your department to work together.

YES _____ NO _____

29. I feel like we should do away with the IACP program as it is now.

SA _____ A _____ U _____ D _____ SD _____

ANY OTHER COMMENTS THAT YOU MAY HAVE ARE WELCOMED.

BIBLIOGRAPHY

Buffer, James J. "A Junior High School Industrial Technology Curriculum Project. A final Evaluation of the Industrial Arts Curriculum Project." U.S. Department of Health, Education, and Welfare, (August 31, 1971).

Dilendik, John R. "Attitude Similarity and the Covert Curriculum." The Journal of Educational Research, (April, 1976), 304-309.

Dugger, William Edward Jr. "A Study of the Comparison of the Achievement of Industrial Arts Curriculum Project Students with Traditional Industrial Arts Students." Unpublished Ph. D. dissertation, The Ohio State University, 1970.

Fazzini, Phillip Albert, "A Comparative Study to Determine the Efficacy of Two Industrial Arts Program Approaches Upon Pupils' Attitude Toward Manufacturing Industry." Unpublished Ph. D. dissertation, The Ohio State University, 1970.

Gaite, A. J. H. "Teachers' Attitudes," Instructor (May, June, 1975), 30.

Gross, David E., and Kaplan, Robert M. "Teacher Attitudes Toward Implementing Career Education in The Classroom." The Journal of Educational Research (November, 1975), 106-107.

Mosley, Samuel Napoleon, "The Goals of the Industrial Arts Curriculum in the Middle Schools as Perceived by Selected Florida Educators." Unpublished Ph. D. dissertation, The Florida State University, 1970.

Razavieh, Asghar, Ary, Donald, and Jacobs, Lucy Cheser, Introduction to Research in Education, New York, Holt, Rinehart, and Winston, Inc., 1972.

State Department of Education, Virginia Industrial Arts Directory, Richmond, Virginia, 1976.