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THE PROSPECT OF THE INTRODUCTION
OF THE VIRGINIA INDUSTRIAL ARTS CURRICULUM,
EXPLORING TECHNOLOGY INTO THE
NORFOLK PUBLIC SCHOOL SYSTEM

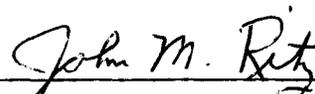
A Research Paper
Presented To
The Faculty of the School of Education
Old Dominion University

In Partial Fulfillment
of the Requirements for the Degree
Master of Science in Education

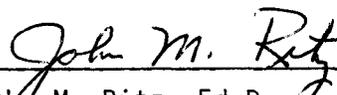
by
Christopher A. Canty, B.S.
Norfolk, Virginia
April 28, 1980

This research paper was prepared under the direction of Dr. John M. Ritz, Graduate Advisor. 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.

Approved, April 1980

A handwritten signature in cursive script that reads "John M. Ritz".

John M. Ritz, Ed.D.
Graduate Advisor

A handwritten signature in cursive script that reads "John M. Ritz".

John M. Ritz, Ed.D.
Graduate Program Director
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CHAPTER I

INTRODUCTION

Industrial arts has long been a part of general education. And, as with any aspect of education, industrial arts must change with the changing times. The following information is a research study that has to do with the need and possible implementation of change in the industrial arts program at the junior high school level in the Norfolk Public School system.

Statement of Problem

The problem of this study was to develop a model of implementation for the introduction of the Exploring Technology curriculum into the industrial arts program of the Norfolk City junior high schools. The city of Norfolk is located in the southeastern Tidewater region of the state of Virginia.

Research Questions

A reference point must be established before introduction and implementation can take place. The following research questions were posed to build such a reference point:

1. Did the physical plants of each junior high school lend themselves to the realistic teaching of the Exploring Technology curriculum?
2. Were the present instructors of industrial arts qualified to teach the Exploring Technology program?
3. Were the attitudes and feelings of the present teacher personnel conducive to the teaching of Exploring Technology program.

4. How could the Exploring Technology program be implemented?

Background and Significance of the Study

One will find only a handful of the seventeen state approved industrial arts curriculums being taught in the Norfolk Public Schools. The few programs that are being taught are only on the high school level. The questions arise, What is being taught at the junior high level?, Why are these program being taught?, Why have not approved state industrial arts program for the junior high/middle school been introduced in the Norfolk Public Schools? To answer these questions, one must have a more than adequate background for the initiation of the following study.

If industrial arts is to remain relevant in today's process of general education, then a path for change should be mapped out by those involved in the teaching process. This path has been established through the Industrial Arts Curriculum Committee that started in 1971. One of the outcomes of this committee was the 1978 Industrial Arts Guide to Exploring Technology. (1.)

The foundations and the mission in teaching Exploring Technology came from the efforts of Dr. Donald Maley of the University of Maryland. To understand the exploring technology program one should have an understanding of the purpose of industrial arts. From Maley's book, The Maryland Plan, one can gain some insight into the mission of industrial arts including the following objectives.

1. To enable the student to interpret, to discuss, or to describe the organizations, problems, products, processes, and contributions of industry and technology.

2. To enable the student to explore and to realize his potential as an individual.
3. To enable the student to use his mind in order to develop his intellectual growth.
4. To enable the student to develop skills and habits in the areas of problem solving and social functioning, as well as in manual and mental manipulation.
5. To enable the student to describe and interpret the changing nature of industry and technology, and their impact on his goals. (2.)

From these objectives one can progress to the document for Exploring Technology and see the specific intent of this middle or junior high school curriculum. The following is a list of the goals for the Exploring Technology program.

These include:

- the integration of mathematics, science, communications, and social sciences into industrial arts activities;
- the maximum use of community resources extending from the total school, state, national, and international sources;
- the wide range use of reading materials at all levels of difficulty and sophistication;
- the extensive use of inquiry, problem-solving, and experimentation in arriving at solutions and procedures to follow;
- the effective and meaningful use of "role-playing" as a technique for greater direction by the student;
- the broad-range use of student activities and experiences that will permit a diversity of involvement; a better use of the individual's special abilities; and a greater display of talents; and
- the development of experiences concerning the behavioral characteristics and development tasks of youth. (1.)

With both the mission of industrial arts and the objectives of the Exploring Technology curriculum in mind, we will move to an overview of what is being taught at present in the junior high school of the Norfolk Public Schools.

To broadly define the total industrial arts program in the Norfolk schools one would start and end with the phrase "out dated". Specifically at the junior high, the program ranges from course offerings such as drafting, wood working, metal working, graphic arts, and basic electircity. In some schools these programs are more advanced. Color photography is one such offering that is limited to one school. There are great differences between facilities in the junior high schools of Norfolk. The older schools may provide classes in rooms that had once served as standard classrooms, but now have industrial arts laboratories in them. A third point of discrepancy is the equipment variance from school to school. It is not known at this time the total number of course offerings in the area of industrial arts due to a revision process that was supposed to take place this year, however, the 1978-79 offerings outnumbered the total number of industrial arts instructors in the school system. Here again appears a great degree of possible inconsistency among what one student may recieve from one school that may be totally different in another school of the same level in the same system.

Although the Exploring Technology curriculum guide provides direction in the teaching of Exploring Technology, it does not provide a day by day lesson plan format that is to be adhered to by the instructor. It is pointed out in the guide's introduction that its purpose is just that, a guide. In considering the instructor in the implementation of the Exploring Technology curriculum it must be established that the purpose of the Exploring Technology program is to

provide direction to the total program of industrial arts at the junior high schools of Norfolk and not to provide a program that will allow little creative input by the instructors, no deviation from the program text, or watchdog evaluation by means of daily programmed points of reference.

Limitations of the Study

This study is limited to the public school system of Norfolk, Virginia and to the nine junior high schools of that system. The major limiting factor will be the response to the survey by the industrial arts instructors of those nine schools. The study will not include special facilities such as the Madison Alternative Education school. The reason for this exclusion is the purpose of the Exploring Technology program may be considered to be based in general education. The outcome of this study will be to make suggestions as to a plan of implementation for the Exploring Technology program. To do this the junior high schools of Norfolk will be characterized which will not allow for the use of this study in other situations. However, it will be possible to construct a similar study for the use in other systems using this particular format.

Basic Assumptions

It must be assumed that all industrial arts instructors of the junior high schools of the Norfolk Public Schools will receive and respond to the survey within the limitations of written, phone, and personal visit follow-ups on non-responders.

Procedure for Collecting Data

Data was collected through a survey type questionnaire. This questionnaire, along with a cover letter and stamped return envelope, was sent to all instructors of industrial arts at the junior high schools. A school mailing list was provided by the supervisor of Industrial Arts Education in the Norfolk Public Schools, Mr. Robert Beauter. This list provided up to date address information as well as teaching duties positions. The questions of the survey were directed to answering the research questions of personnel qualifications, physical environment, available equipment and resources, and the feelings of the instructors to the Exploring Technology curriculum as it would pertain to their teaching situations.

Procedures for Treating Data

Teacher qualifications will not be broken down according to individual teachers but will be treated as general numbers representing the teachers on a whole. The purpose is not who is qualified, but how many are and how many are not qualified.

The teachers will be asked to sketch their classroom/shop relationship to the other shops in the school. Along with this sketch the instructors will be asked to provide the number of students they can accommodate in both the classroom and the laboratory if both are provided. Other questions will be asked in order to gain a picture of what type of facilities and equipment each instructor has to work with in his particular program. With this information a needs assessment may be done and presented in the narrative form in the section of the research calling for recommendations.

The teachers' attitude will be categorized into areas of first, whether they were familiar with the Exploring Technology program, second, do they view the current junior high program as needing a change and if so, would the Exploring Technology program be appropriate.

The data will be presented in the form of descriptive narrative, illustrations depicting present and possible future facilities, and charts characterizing the qualifications of the instructors and the present resources available to the teacher and his/her students. Following this will be a proposed plan to see Exploring Technology implemented in the Norfolk City Schools.

Definition of Terms

It would be advantageous to the reader to become familiar with the terms that much of this report has been based. Exploring Technology is a State Department of Education approved curriculum for industrial arts at the junior high/middle school. Industrial arts is a part of general education having the mission "...to assist each student to develop understanding about all aspects of industry and technology, and aid in the discovery and development of individual potential" (Industrial Arts, 1978, p. 1). The Industrial Arts Guide For Exploring Technology is a curriculum publication published by the Industrial Arts Education Service of the Department of Education Commonwealth of Virginia. Contained within this guide is the definition of technology that this study has used. It reads as follows: "utilization of materials, tools, machines, human ability and knowledge for the changing of man's life and environment" (Industrial Arts, 1978, p. 6).

Summary

The preceding chapter has dealt with the introduction of the possibility of teaching the program of study, Exploring Technology, in the junior high schools of Norfolk. The study is designed to answer the questions of acceptance of the program by those who may be involved in its teaching and to characterize the facilities in which the program will be taught. This first chapter has brought out the mission of the Exploring Technology program as well as the mission of industrial arts. It has been established that the junior high schools of Norfolk will be the limiting factor in the scope of this study and that much of the success of the study has rested in the willingness of the surveyed teachers to respond to the questionnaire. This section has pointed out that the data will be collected and tabulated in a manner that is fitting a descriptive study such as this. With is basic overview in mind, the study will proceed to the chapter concerning review of relevant literature.

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CHAPTER II

A REVIEW OF LITERATURE

This research has been aimed in the direction of eventual implementation into the Norfolk City Schools, therefore, implementation is a large part of the direction of this paper. Related literature in the areas of curriculum, its development and its evaluation can be found at some time or another in most educational journals. There are scores of books on curriculum in most educational libraries, but when the researcher narrowed his search for related literature in the area of curriculum implementation in industrial arts, primary sources became hard to come by. Apparently the process of implementation has been given only minor treatment in the area of curriculum development. It is the researcher's contention that implementation is the most critical step between those that design and write, and those that must teach what has been written. This is especially true in the educational area of industrial arts where the nature of the subject matter lends itself to many different methods of treatment. The need for change in the Norfolk system is answered by this research.

Waldrop (5) writing in *Man/Society/Technology*, views change in the area of industrial arts as an ongoing process where the material we are working with today is respected and that there is continuing effort to change for the future. Much of the article is devoted to an example that illustrates how the innovative classroom teacher can improvise and develop material that represents modern processes in industry. Without such attempts to update teaching methods with new materials the teacher will fall short on teaching new curricular.

In 1973 the Pennsylvania State Department of Education (4) suggested a change in the direction of the 7th and 8th grade industrial arts offerings. This document did not offer plans for implementation of the suggestions. The direction of the paper was more toward a new philosophy in industrial arts in these grade levels. The document placed need in three areas: (1) Visual Communications, (2) Power and (3) Industrial Materials. With industrial arts developed in these areas, several different outcomes were to be expected. The major change would be the increase emphasis on the study of technology, how it applied to modern man, and how it applied to the student's lives. It is this increase in technology awareness that sets apart new material in industrial arts from the more traditional material.

In an article published five years after the Pennsylvania paper, Glen Fuglsby (3) holds many of the same philosophies in his writings. As technology expands and becomes more a part of the average man's daily life, man will have to know more about the technical aspects of the world around him. In education industrial arts must and should continue in the direction of changing to educate man to the expanding technical nature of his world. This point of view means that industrial arts will use different approaches in teaching and new materials and methods of instruction in the lab/classroom. Skills in visual communication will be an area of industrial arts that will need to be emphasized in the changing realm of IA. The skill of problem solving has always been taught in the shop setting and should be valued and taught even more in the new times. This should also be a major task of the industrial arts instructor, to develop the student's full potential of problem solving abilities.

One other area of recent development is the use of the unit or cluster method of teaching the new technology in the industrial arts classroom. Myron Bender (1) in a research report on North Dakota Secondary Schools Industrial Arts program suggests the extensive use of the cluster approach to teaching one phase of junior high school programs. The concept is meant to expand the teaching of technology and industry used in the United States into the classroom of the North Dakota Schools.

In any ongoing program care must be taken in implementing new teaching techniques. English (2) has pointed out several of the problems and solutions that must be dealt with when introducing new curriculum materials into a system that already involved in the daily teaching process. New curriculum elements are only introduced through the classroom teacher. It is this person that must have a full grasp of the materials to be taught. Through in-service programs the classroom teacher is educated to the new matter and if change is to be complete, the teacher must be given a means of feedback to the curriculum developer. English further suggests that curriculum change should initially stem from the teacher.

Grace Williams (6) is the author of an accelerated program used in the Memphis City Schools that combines both areas of industrial arts and home economics. As with most recent I.A. curriculum works of the 1970's, the theme of man and technology is included. The combined program gives these two areas new validity in the total picture of education. The Memphis plan presents occupational exploration and education as the main objective of this special junior high school program. Specific details

in occupational education include such things as job descriptions, job titles, educational requirements, and desirable personal traits. The Exploring Technology curriculum would provide this to all students in the Norfolk City Schools. As in cities like Memphis, Norfolk must educate its future adult residents to the world of work. The Memphis plan centered around the gifted student, but the Exploring Technology curriculum is designed to include all junior high school students.

Summary

The lack of literature on the research topic did not pose a problem to the actual research. It is evident by the review that man's world of technology is a world that should be taught in our schools. The junior high school has proven to be the point in a child's education that this exploration of technology should be taught.

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CHAPTER III

METHODS AND PROCEDURES

Population

This study was designed to provide information that could be used as a foundation to introduce the Exploring Technology curriculum into the Norfolk Public School System. The survey's population is comprised of the junior high school industrial arts teachers in the Norfolk Public Schools. At the time of the research there were 31 full time industrial arts teachers in the junior high schools. Of these 31, two were long term substitutes filling in for teachers that had left the system during the school year. It was felt by the researcher that having two persons serving in a substitute capacity would not affect the results of the survey. These 31 instructors teach in 9 junior high schools in the system.

Mr. Robert Beuter, supervisor for Industrial Arts Education in the Norfolk Public Schools, provided the 1979-80 listing of industrial arts teacher assignments and school addresses to the researcher. This listing also provided the industrial arts area that each instructor was teaching.

To insure optimum validity of this research study all junior high industrial arts instructors had to reply to the questionnaire. To follow-up on those who did not return the mailed questionnaire, the Norfolk Public School Personnel Directory was employed to contact Non-responders at home.

Type of Data to be Collected

Three profiles were constructed from data received through the questionnaire. The first area concerned the instructor's teaching qualifications and experience with the Exploring Technology curriculum. The second area was concerned with the opinion the instructor had of the Exploring Technology curriculum and its teachability in the system. The last area of concern for this research was a profile of the existing facilities that the Exploring Technology program would have to be taught in and how they were being used at the time of the study.

Procedures for the Collection and Treatment of Data

The three above mentioned areas of research were developed into a twenty question survey (see example questionnaire and cover letter in appendix). This questionnaire, along with an appropriate cover letter, was sent out to the school address of all the junior high school industrial arts teachers in Norfolk. Each questionnaire was accompanied with a stamped return address envelope. To determine those instructors that did not respond to the survey each questionnaire was labeled with the instructor's full name. To tabulate the information about the actual facilities in each school the school name was placed on each survey. The researcher allowed six mail working days for the survey to reach the instructor, be filled out, and then return to the researcher's home address in the city limits of Norfolk. After this time period, the researcher, using the school system directory, called non-responders at home.

For the first two areas of data a chart was designed to summarize each response next to a number that stood for an anonymous instructor.

This allowed for easier handling of the data where conclusions were drawn. The last area to be profiled, the area of the physical plant, was handled by breaking down the data school by school.

CHAPTER IV

FINDINGS OF THE STUDY

It was the purpose of this research to ascertain the number of instructors that would be interested in starting the Exploring Technology curriculum in the Norfolk Public Schools and of these instructors, who was qualified or had had prior background with the curriculum. The second area of interest of this study was the actual facilities that each of the nine junior high schools had to offer. With these points in mind Chapter IV uses two tables to represent the collected data.

Table I was concerned with the professional qualifications and opinions of each responding instructor. As one can see, not all of the 31 instructors that were surveyed chose to respond. Each responding instructor was randomly assigned a number and his/her responses were placed under the corresponding abbreviated item from the questionnaire.

The area of school facilities data was also set up in a table form. The school is listed on the left side with the abbreviated survey item listed at the top of the page. It was not necessary to list each individual instructor's response in this table because with a rare disagreement due to question interpretation, there was the same response for all of the instructors responding from one school. All of this physical plant data was listed in table II.

A TABLE SUMMARY OF QUESTIONNAIRE ANSWERS ON INSTRUCTOR QUALIFICATION AND OPINION ON EXPLORING TECHNOLOGY

1	Y	Y	N	N	N	Y	N	B	2	N	N	Y	Y	Y	Y	Y	Y	Y	Y	Y	N
2	Y	N	N	N	N	Y	N	C	1	Y	Y	Y	-	N	N	Y	Y	Y	Y	Y	N
3	Y	Y	N	N	N	Y	N	C	2	Y	Y	Y	Y	Y	N	Y	Y	Y	Y	Y	Y
4	Y	N	N	N	N	Y	N	C	1	Y	Y	N	N	N	Y	Y	Y	Y	Y	Y	Y
5	Y	Y	N	N	N	Y	N	C	2	Y	Y	Y	Y	Y	N	Y	Y	Y	Y	Y	N
6	Y	Y	N	N	N	Y	N	A	1	N	N	N	N	N	Y	Y	Y	Y	Y	Y	Y
7	Y	Y	Y	N	N	Y	N	A	2	N	N	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y
8	Y	Y	Y	Y	Y	Y	N	C	1	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y
9	Y	Y	Y	Y	Y	Y	N	C	1	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y
10	Y	Y	Y	N	N	Y	N	B	2	N	N	Y	Y	N	Y	Y	Y	Y	Y	Y	N
11	N	Y	Y	N	N	Y	N	C	2	N	N	Y	Y	N	Y	Y	Y	Y	Y	Y	N
12	Y	Y	Y	N	N	Y	N	C	2	N	N	Y	Y	N	Y	Y	Y	Y	Y	Y	Y
13	N	Y	Y	N	N	Y	N	C	1	N	N	Y	Y	N	Y	Y	Y	Y	Y	Y	N
14	Y	Y	Y	N	N	Y	N	C	2	N	N	Y	Y	N	Y	Y	Y	Y	Y	Y	Y
15	N	Y	Y	N	N	Y	N	C	2	Y	Y	Y	Y	N	Y	Y	Y	Y	Y	Y	Y
16	N	Y	Y	N	N	Y	N	A	2	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y
17	Y	N	Y	Y	Y	Y	N	B	1	N	N	Y	Y	N	Y	Y	Y	Y	Y	Y	N
18	Y	Y	Y	N	N	Y	N	B	2	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y
19	Y	Y	Y	N	N	Y	N	A	2	Y	Y	Y	Y	N	Y	Y	Y	Y	Y	Y	Y
20	Y	Y	Y	N	N	Y	N	C	2	Y	Y	Y	-	Y	Y	Y	Y	Y	Y	Y	Y
21	Y	N	Y	Y	Y	Y	N	A	2	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y
22	Y	Y	N	N	N	Y	N	C	2	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y
23	N	Y	N	N	N	Y	N	C	2	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y
24	Y	Y	N	N	N	Y	N	C	1	N	N	Y	N	N	Y	Y	Y	Y	Y	Y	N
25	Y	Y	N	N	N	Y	N	A	1	N	N	Y	Y	N	Y	Y	Y	Y	Y	Y	Y

FAMILIARITY WITH EXPLORING TECHNOLOGY CURRICULUM

WILLINGNESS TO TAKE A METHODS COURSE

TAKEN A METHODS COURSE IN EXPLORING TECH.

PREVIOUS TEACHING EXPLORING TECHNOLOGY EXPERIENCE

HAS COPY OF STATE CURRICULUM GUIDE

TEACHES IN MORE THAN ONE SHOP DURING DAY

NUMBER OF YEARS TEACHING *

NUMBER OF 7TH GRADE CLASSES TAUGHT PER DAY

VIEWS CLASS ENROLLMENT AS A PROBLEM TO I.A.

SEE NEED TO CHANGE PRESENT 8/9TH GRADE I.A. PROGRAM

WOULD LIKE TO SEE 7TH GRADE PROGRAM EXPANDED TO FULL YEAR

VIEWS DEPARTMENT AS HAVING GOOD RAPPOR

WILLINGNESS TO TEACH EXPLORING TECHNOLOGY

WILLINGNESS TO PARTICIPATE IN PILOT PROGRAM

SEES NEED FOR CHANGE IN PRESENT PROGRAM.

* A 2 years or less
 B 3 to 5 years
 C 6 or more years
 Y YES
 N NO

TABLE II

PROFILE OF INDUSTRIAL ARTS FACILITIES IN EACH JUNIOR HIGH SCHOOL OF THE NORFOLK PUBLIC SCHOOL SYSTEM

SCHOOL	CENTRALLY CLUSTERED LABS	WOODS	METALS	ELECTRICITY	GRAPHIC ARTS	DRAFTING	GENERAL I.A. LAB	NUMBER OF TEACHERS IN SCHOOL	NUMBER OF FORMAL I.A. DEPT. MEETINGS *
AZALEA GARDENS	YES	YES	YES	YES	YES	YES	NO	4	0
BLAIR	NO	YES	YES	YES	YES	YES	NO	3	F
CAMPOSTELLA	NO	YES	YES	YES	YES	NO	NO	2	0
JACOX	YES	YES	YES	YES	NO	YES	NO	4	0
LAKE TAYLOR	YES	YES	YES	YES	YES	YES	NO	4	0
NORTHSIDE	YES	YES	YES	NO	YES	YES	NO	3	0
NORVIEW	YES	YES	YES	NO	YES	YES	NO	3	0
ROSEMONT	YES	YES	YES	YES	YES	YES	NO	4	F
RUFFNER	NO	YES	YES	YES	YES	NO	NO	3	0

* F Frequently
 0 Occasionally
 N Never

CHAPTER V

SUMMARY, CONCLUSIONS AND RECOMMENDATIONS

Summary

In the area of familiarity with the Exploring Technology curriculum a large majority of the responding teachers knew about the program. Most of these teachers would be willing to take a class in the methods of teaching the curriculum. Five out of the total twenty five responding teachers had had the methods course at some point prior to this study. Only one teacher out of the total responding population had taught the class in some other school system. Though most of the teachers were familiar with the curriculum, not all had a copy of the state guide.

When questioned about opinion toward teaching the program, eighteen teachers were willing to try the curriculum in their present situation and a slightly larger number were willing to try the curriculum under a pilot program. When questioned about change in the overall program as it existed at the time of this study, five out of every six teachers voiced a need for change. The question suggesting extending the present 7th grade program to a year offering from the nine weeks offering under the present system was received negatively. This response was curious considering the nature of the Exploring Technology curriculum that would automatically extend any industrial arts offering to at least eighteen weeks.

The industrial arts teacher profile consists of nearly two thirds of the teachers being veterans of six or more years in the classroom.

The remainder of the teachers were evenly split between three to five years experience or two years or less experience in the classroom. About three quarters of the responding teachers teach two bells of 7th grade exploratory class in their daily teaching duties. There was an even split over the question asking if the teacher viewed dwindling class enrollment as a problem that is seriously threatening the future of industrial arts in the system. Six out of the twenty three responding to the question on the need for change in the 8th/9th grade offering felt that the program should remain unchanged. The vast majority of instructors felt that their present department had good rapport among its members.

Out of the nine junior high schools in the Norfolk system, six had shops that were considered centrally located to one another. Blair and Ruffner were the only two schools that reported having shops that had once served some other school function. All six of these schools offered woods, metals, and graphic arts. At the time of the study, Northside did not offer electric shop. No regular junior high school in Norfolk employed the general shop concept in their school program although one did exist in the alternative school setting. With the exception of Jacox, all the junior high schools use three to four industrial arts teachers per day. Only Rosemont and Blair held departmental meetings more than occasionally.

Conclusions

It should be kept in mind that the research was done for the possible proposal of the Exploring Technology curriculum into the Norfolk Public Schools. These are the conclusions drawn from the study:

1. At the time of the study there was only five instructors in the Norfolk Public School system that were qualified to teach the Exploring

Technology curriculum and of those five only one had ever done so in some other system.

2. Over two thirds of the responding instructors expressed a willingness to teach the program.

3. The greater majority of teachers viewed the present industrial arts program as needing change.

4. There are six junior high schools in the system that would provide centrally clustered and multiple laboratories that could be used for the teaching of the Exploring Technology curriculum. Azealea Gardens, Lake Taylor Junior and Rosemont were three schools that offered five different laboratories including drafting, electricity, graphic arts, metals and woods.

Recommendations

Based upon the findings and subsequent conclusions of this study, the researcher submits the following recommendations:

1. At least one pilot program should be set up by the 1980-81 school year using Azeala Gardens, Lake Taylor Junior High or Rosemont as the site of the program.

2. A letter inviting any interested instructor who may want to participate in the pilot program should be sent out to all industrial arts personnel in the system. This communication could be used to introduce the Exploring Technology curriculum to the system as well as inviting instructors to take part in a pilot program.

3. An in-service program should be set up for the month of August, 1980, to introduce the curriculum to those instructors that will be participating in the pilot project. The State Department of Education would be invited in to help with the introduction of the curriculum.

4. The first year should be used to develop a system-wide introduction for Exploring Technology by the 81-82 school year. For teacher certification, Norfolk Public Schools would offer tuition reimbursement for the methods course that could be set up with Old Dominion University's Department of Vocational and Industrial Arts Education.

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APPENDIX

1223 Westover Ave.
Apt. 5
Norfolk, VA. 23507

March 12, 1980

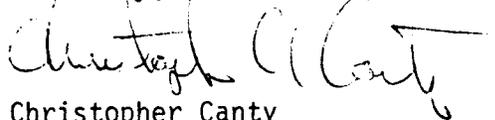
Dear Fellow Industrial Arts Instructor,

Once again you are asked to participate in another research study. Unlike many surveys, this survey concerns you as a junior high school industrial arts instructor in the Norfolk Public Schools.

As you are well aware of, Norfolk Public Schools have been witnessing a dramatic drop in the student population during the past few years. This trend is predicted to continue into the 1980's. We in the industrial arts area know that our jobs depend on keeping up class enrollment from year to year. One possible direction to maintain high enrollment is through the introduction of new curriculum into our junior high program. The Exploring Technology Curriculum approved by the state board of education may be a solid investment for continued prosperity for our industrial arts program. It is the intent of the following survey to establish a frame-work to work with for the introduction of new material into our present system.

The final results and recommendations from the survey will be available to any person with an interest in the project. If you have any questions concerning the survey and its result please do not hesitate to contact me at Lake Taylor Junior High School or by phone at home (622-1459). In order for the survey to have validity it is imperative that all teachers respond. Thank you for your valuable time and consideration.

Sincerely,



Christopher Canty

FEASIBILITY STUDY SURVEY ON THE INTRODUCTION OF THE EXPLORING TECHNOLOGY
CURRICULUM INTO THE NORFOLK PUBLIC SCHOOLS

This study is designed to provide information about the junior high schools of Norfolk Public Schools. This information will be used to suggest methods of implementing the state approved industrial arts curriculum Exploring Technology into the junior high schools.

Please respond to as many questions as applies to you and your teaching situation. Circle or underline your response.

- | | | |
|---|--------------|-----------------|
| 1. Are you familiar with the Exploring Technology curriculum? | YES | NO |
| 2. Would you take a class on the methods of teaching Exploring Technology if the school system paid tuition? | YES | NO |
| 3. Have you already had the methods of teaching Exploring Technology course as undergraduate/graduate credit? | YES | NO |
| 4. Have you ever taught the Exploring Technology curriculum in another school system? | YES | NO |
| 5. Do you have a copy of the state curriculum guide for Exploring Technology? | YES | NO |
| 6. Are the Industrial arts labs clustered in one central area in your school? | YES | NO |
| 7. Please list the shops used at your school. | | |
| 8. Including yourself, how many industrial arts teachers teach at your school? | 1 | 2 3 4 5 6 |
| 9. Do you teach in more than one lab during the day? | YES | NO |
| 10. Do you teach in a lab that has been converted from some other use? | YES | NO |
| 11. How many 7th grade exploratory classes do you teach during the school day? | 1 | 2 3 4 5 |
| 12. How many years have you been teaching Industrial Arts? | | |
| 2 years or less | 3 to 5 years | 6 or more years |

