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An Analysis of Student Perception of the Goals and Objectives of the Junior High School Industrial Arts Course Offerings

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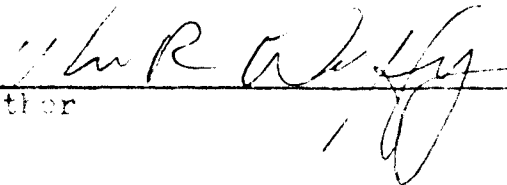
AN ANALYSIS OF STUDENT PERCEPTION
OF THE GOALS AND OBJECTIVES OF THE JUNIOR HIGH SCHOOL
INDUSTRIAL ARTS COURSE OFFERINGS

A Research Project
Presented to
The Faculty of the Graduate School
Old Dominion University

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

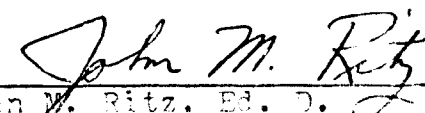
by
William R. Duffy
1979

This research paper was prepared under the direction of the instructor in Problems in Vocational Education, VIAT 606. It is submitted to the Graduate Program Director for Vocational Education in partial fulfillment of the requirements for the Degree of Master of Science in Education.



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Approved, July 1979



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Chapter 1

INTRODUCTION

Background Information

In June of 1976 and 1977, industrial arts students of Virginia Beach, Virginia who were enrolled in seventh grade World of Manufacturing, eighth grade Exploring Technology and ninth grade World of Construction courses were surveyed to determine their attitude toward course curriculum and classroom procedures. A total of 1979 students participated in 1976, and 2155 in 1977.

The survey instrument used was prepared by the Department of Research, Planning and Development, Virginia Beach City Schools. The data collected was computerized and a detailed report of the findings issued. (6, 7)

Although the survey answered many questions regarding the industrial arts programs, and was most valuable to the classroom teacher as well as to the Industrial Arts Curriculum Committee, no one has attempted until now to use this vast amount of detailed information to determine the students' perception of the goals and objectives of the junior high school industrial arts course offerings.

Statement of the Research Question

The purpose of this study was to determine:

1. What are the established goals and objectives for the industrial arts course offerings at the junior high school level in the Virginia Beach City Public Schools.

2. Are the goals and objectives established for the industrial arts course offerings being met in the junior high schools of the Virginia Beach City Public Schools, as perceived by the students of these classes.

Significance of the Question

The significance of this study is to determine if the classroom teacher is in actuality fulfilling the goals and objectives set for the course offerings as perceived by the students. If the students do not believe the goals/objectives are being met then it would indicate that:

1. the goals and objectives established for the course offerings are not realistic, or...

2. the classroom teacher is not teaching the prescribed curriculum, or...

3. the students have a misconception as to whether the goals and objectives are being met.

Limitations and Assumptions

Several limitations and assumptions were made during this study. They are listed as follows:

1. The goals and objectives used are those listed in the Virginia Department of Education publication Industrial Arts Program of Studies FY 1972. (2)

2. The survey instrument data were analyzed for responses to student attitudes surveys that were administered in all Virginia Beach City Junior High schools in June of 1976 and 1977.

3. It was assumed that the survey instrument that were prepared by the Research, Planning and Development Department of the Virginia Beach City Schools were valid.

4. It was assumed that the teachers administering the survey instrument properly followed the directions as to its use and intent.

5. It was assumed that the students comprehended the questions of the survey instrument and gave honest responses.

Definitions and Key Terms

Exploring Technology: Students make projects that consist of significant inventions that have advanced society and the work people do. Basic study units include tools and materials, power and energy, transportation and communication. (2)

World of Manufacturing: Students energize and operate a manufacturing company to explore careers and work habits typical of American industry from exploration to production. Students make projects in the "workroom" which can be built. Students experience the work of manufacturing and business, including positive operations from the manufacturing and marketing of other manufacturing products.

References: (2)

World of work... (2)

Practical Ant... (3)

Play... (4)

====

The type of... (5)

Schools were aware of to determine student attitude toward the industrial arts curriculum. This study utilized this data to determine the students' perceptions as to whether the goals and objectives of the industrial arts course offerings are being met. Additionally this study responds to the question, What are the goals and objectives for the industrial arts course offerings at the junior high level in the Virginia Beach City Public Schools?

Chapter 2

REVIEW OF RELATED LITERATURE

A review of literature pertinent to this study has been made. A summary of the findings are discussed in the following paragraphs.

The objectives for industrial arts have undergone an evolutionary process since its beginning, more than one hundred years ago. From the earliest years industrial arts has been defined as a practical arts course. Roberts describes practical arts as "not designed to prepare a worker for a vocation but to provide him with general knowledge, skills, and attitudes to enable him to find a degree of satisfaction in everyday life and meet his responsibilities as a citizen." (3)

Otto Salomon in 1936, in describing the Floyd system gives an objective, "It gives a taste of rough labor as distinguished from clerical accomplishments; it cultivates manual dexterity, self reliance, accuracy, carefulness, patience, perseverance, and especially does it train the faculty of attention and develop the powers of concentration." (4)

In 1952 Shoemaker offers a listing of nine major objectives of industrial arts. (5) They are:

1. to help each student understand American industry.
2. to provide vocational education so that each student will be able to understand, and eventually contribute to, the development of industry.

3. to develop the wise use of leisure in constructive pursuits and to enjoy the satisfaction derived from useful creativity.
4. to help each student understand the world of work and himself with aims of realistic selection of occupational choice.
5. to encourage each student to think through problems, plan procedures for solution, test conclusions and make recommendations.
6. to develop personal-social qualities through democratic practices in the shop or laboratory.
7. to develop safe work habits and concern for the safety of others.
8. to develop an aesthetic appreciation for creative ability and to practice aesthetic values in daily living with reference to form, color, texture, design, styling and function.
9. to develop skills in the use of tools, equipment, and materials in a technological age.

The objectives of industrial arts as seen by Wilber in 1959 when he wrote his Industrial Arts in General Education (2) were given as follows:

1. to explore industry and American industrial civilization in terms of its organization, raw materials, processes and operations, products and occupations.
2. to develop recreational and avocational activities.
3. to increase an appreciation for good craftsmanship and design, both in products of modern industry and its artifacts from the material cultures of the past.
4. to increase consumer knowledge to a point where students can select, buy, use, and maintain the products of industry intelligently.
5. to provide information about, and -in so far as possible- experience in, the basic processes of many industries, in order that students may be more competent to choose a future vocation.

- 6. to encourage creative expression in terms of industrial materials.
- 7. to develop desirable social relationships such as cooperation, tolerance, leadership and followership and tact.
- 8. to develop safe working practices.
- 9. to develop a certain amount of skill in a number of basic industrial processes.

A somewhat more brief list of objectives as suggested by Cronman and Feirer (1) when they wrote in 1938 that the student will:

- 1. develop an interest in industry.
- 2. develop an awareness of career opportunities related to industry.
- 3. develop safe working habits.
- 4. develop an appreciation of good design, quality workmanship, and consumer knowledge of how to select industrial products wisely.
- 5. develop orderly procedures.
- 6. develop hand and machine-tool skills. These skills can help in home maintenance and provide enjoyment of a worthwhile hobby.

It is evident that there are probably as many variations in the lists of objectives for industrial arts courses as there are industrial arts instructors. In spite of the numerous differences, there is evidence of certain key objectives that appear in nearly all lists. These core objectives as listed in the Industrial Arts Program of Studies (2) are that industrial arts can help the student to:

- 1. gain an understanding of industry
- 2. discover interests and talents

3. develop techniques in problem solving.
4. develop basic skills in the safe use of tools and machines.
5. make informed and meaningful occupational choices.
6. acquire interests in avocational pursuits and hobbies.
7. develop safe working habits.
8. apply other school subjects.
9. become a wiser consumer.
10. develop creativity.
11. develop pride in work well done.
12. work cooperatively with others.

Summary

Although vast amounts of material have been written on the objectives for industrial arts course offerings, there was available that dealt with the students' perception as to how the course objectives were being met. It is the intent of this study to make a first step in this area by researching and correlating the junior high students of Virginia Beach, Virginia City Schools.

Chapter 3

DESIGN OF THE STUDY

Method of Study

The population of this study consisted of all junior high school students of the Virginia Beach City Schools. A total of 4,128 survey responses were utilized. These students were surveyed in June of 1976 and 1977.

Date Gathering Instruments

A survey instrument was prepared by the Research, Planning and Development Department, Virginia Beach City Schools. The questions incorporated in the survey instrument were prepared by the members of the Industrial Arts Education Committee. The author of this report was a member of that committee at that time. The instruments used were essentially the same in both survey situations.

The completed survey instruments were forwarded from the individual junior high schools to the Department of Research, Planning and Development of the Virginia Beach City Schools where they were analyzed on the basis of schools and schools. Student response to individual questions was reported on tables contained in the report indicating percentage of yes and no answers, by schools. (see Tables A - F in Appendix)

Analysis

An analysis of the collected raw data was made by computing the mean of the percent of affirmative answers for each of the six survey items. Responses from the students of the seven junior high schools surveyed were used in ascertaining the mean. An affirmative response of 70 percent was established as the minimum criterion in making the determination as to whether each survey item (goal/objective) is being satisfactorily met.

Goals/Objectives to be Tested

The industrial arts goals/objectives that were surveyed in this research paper are as follows:

The industrial arts student will be able to:

1. Gain an understanding of industry and technology.
2. Become a wiser consumer.
3. Make informed and meaningful occupational selections.
4. Develop safe work habits.
5. Acquire interests in avocational pursuits and hobbies.
6. Develop basic skills in the safe use of tools and machines.

Survey Instrument Questions

1. Is there enough time given to comparing class work with work performed in industry?
2. Do you feel the course has helped you become a better consumer?

3. Would you pursue as a career any of the topical units presently included in your course?
4. Were safety and safety rules taught and enforced?
5. Would you pursue as a hobby any of the topical units presently included in your course?
6. Do you feel that the knowledge you gained in the course is useful to your present life?

Summary

The industrial arts students of the seven junior high schools of the Virginia Beach City Schools were surveyed to determine their attitude toward the industrial arts curriculum. From this data, a determination was made of the student perception of whether the established goals and objectives for the industrial arts course offerings were being met. An affirmative response level of 70 percent was the established criteria used for determination of a satisfactory level of compliance with the goal/objective of each of the six survey items.

Chapter 4

FINDINGS AND ANALYSIS

The purpose of this study of the junior high school students of the Virginia Beach City Schools was to determine the answer to two questions.

1. What are the established goals and objectives for the junior high school industrial arts students of the Virginia Beach City Schools?

2. Are the goals and objectives being met, as perceived by the students, enrolled in industrial arts course offerings in the Virginia Beach City Schools?

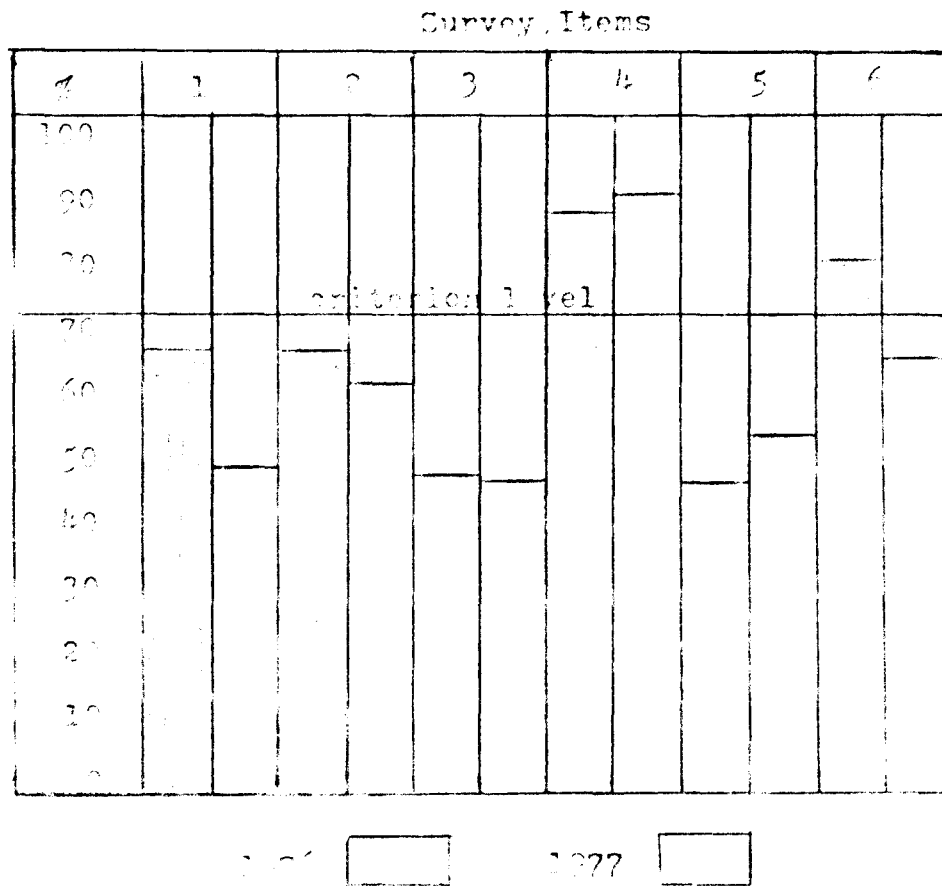
The goals established for the industrial arts course offerings in the Virginia Beach City Schools are those goals and objectives determined to be appropriate by the Industrial Arts Education Service, Department of Education, Commonwealth of Virginia. (2) A review of the related literature established these goals and objectives as worthwhile and valid for the industrial arts courses offered in the Virginia Beach City Schools.

An analysis of the collected data was used to determine if the goals and objectives of the industrial arts course offerings were being met, as perceived by the students. The mean of the percentage of affirmative responses was calculated for each course offering. The mean for each item was compared with the criterion of 70 percent as the minimum acceptable

level considered as within the goals and objectives.

Appendices A through F contain the raw data information placed for each school and each survey question. An analysis of the findings are summarized in the table below.

TABLE 1
A GRAPHIC REPRESENTATION OF PERCENTAGE OF AFFIRMATIVE RESPONSES TO SURVEY QUESTIONS.



Notes:

The goals and objectives accepted for the district are... (2)

The goals and objectives presented in Table 10 by the industrial arts students are those where the percentage of affirmative answers met or exceed the criterion of 50 percent.

Chapter 5

SUMMARY, CONCLUSIONS AND RECOMMENDATIONS

This research study of the junior high school industrial arts students of the City of Virginia Beach was undertaken to determine what are the established goals and objectives being met, as they perceived them. The determination was based on responses to student attitude surveys that were administered to all junior high students in 1976 and 1977. The survey instruments were prepared and tabulated by the Department of Research, Planning and Development, Virginia Beach City Schools.

The Research Question

The purpose of this study was to determine:

1. What are the established goals and objectives for the industrial arts course offerings at the junior high level in the Virginia Beach City Schools.
2. Are the goals and objectives established for the industrial arts course offerings being met in the junior high schools of Virginia Beach City Schools as perceived by these students.

Method of Procedure

Student response to six individual survey questions that correlated with six goal/objectives established by the

State Department of Education. He attempted to determine if the goals and objectives of the industrial arts course offerings were being met, as perceived by the students.

The mean of the percentage of affirmative responses was calculated for each survey question. The mean for each item was compared against the criterion of 70 percent as the minimum acceptable for determination of satisfactory compliance with that survey item.

Table 2 shows the mean score of the percentage of affirmative answers for each of the six survey questions.

TABLE 2
MEAN SCORES OF AFFIRMATIVE RESPONSES
FOR SURVEY ITEMS

Questions	Percentages
1	58.26%
2	62.60%
3	44.40%
4	91.11%
5	49.11%
6	70.05%

In only two instances did the percentage of affirmative responses meet or exceed the acceptable criteria of 70 percent affirmative responses established as the minimum acceptable for determination of fulfillment of the goal/objective of that item. It must be concluded that the industrial arts course offerings were not met, as perceived by the students, in

of the six survey questions.

The most probable cause of the low rate of affirmative responses is a lack of student comprehension as to the meaning of some questions in the survey questionnaire.

Conclusions

It is concluded from the research data that the surveyed students do not appreciate the contribution to their education that the industrial arts course offerings make. Several explanations can account for this. First, it is probable that the student has not been made knowledgeable of the goals and objectives of the industrial arts course offerings. Secondly, it is probable that the word usage in the survey questions confused or misled some students. There is no readily discernible explanation for the large disparity in the number of affirmative answers between the first year survey group and the second year survey group.

Recommendations

It is suggested that improved statistical data could be obtained if the industrial arts student:

1. Were given clear and concise explanations as to the goals and objectives of their course offerings.
2. Were given explanations of what specific terms mean in the survey questionnaire. (ie a consumer)

It is also recommended that the present industrial arts course should be reviewed to see that information be provided to the student as to the specific goals/objectives of industrial arts.

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APPENDICES

Appendix A

Survey Question #1

Is there enough time given to comparing course work with work performed in industry?

Goal/Objective Surveyed

The industrial arts students will be able to gain an understanding of industry and technology.

TABLE 3

School	Survey year 1976	Survey year 1977
1	67.00	48.50
2	60.50	43.00
3	62.50	52.50
4	61.50	49.50
5	64.50	57.00
6	56.50	44.00
7	72.00	38.50
Mean Scores	64.22	47.71

Statistical Data - Numbers represent percentage of affirmative responses.

Appendix B

Survey Question #2

Do you feel the course has helped you become a better consumer?

Goal/Objective Surveyed

The industrial arts student will be able to become a wiser consumer.

TABLE 4

School	Survey year 1976	Survey year 1977
1	69.50	67.00
2	55.50	56.00
3	58.50	58.50
4	65.00	60.50
5	68.50	62.00
6	67.50	55.00
7	65.00	52.00
Mean Scores	64.21	59.00

Statistical Data - Numbers represent percentage of affirmative responses.

Appendix C

Survey Question #3

Would you pursue as a career any of the topical units presently included in your course?

Goal/Objective Surveyed

The industrial arts student will be able to make informed and meaningful occupational choices.

TABLE 5

School	Survey year 1976	Survey year 1977
1	49.88	49.88
2	41.67	50.00
3	41.00	49.00
4	41.89	42.00
5	47.31	40.45
6	47.45	47.00
7	43.78	35.00
Mean Scores	44.68	44.16

Statistical Data - Numbers represent percentage of affirmative responses.

Appendix D

Survey Question #4

Were safety and safety rules taught and enforced?

Affirmative Responses

The industrial arts student will be able to develop safe work habits.

TABLE 6

School	Survey year 1976	Survey year 1977
1	85.50	85.50
2	82.50	80.50
3	87.00	85.00
4	86.00	84.00
5	82.00	80.67
6	84.00	86.67
7	86.00	81.33
Mean Scores	84.81	82.17

Statistical Data - Numbers represent percentage of affirmative responses.

Appendix E

Survey Question #5

Would you pursue as a hobby any of the topical units presently included in your course?

Goal/Objective Surveyed

The industrial arts student will be able to acquire interest in avocational pursuits and hobbies.

TABLE 7

School	Survey year 1976	Survey year 1977
1	49.89	59.84
2	41.67	47.50
3	41.00	37.10
4	41.89	61.89
5	47.11	54.80
6	47.45	41.30
7	49.73	60.37
Mean Scores	44.69	51.54

Statistical Data - Numbers represent percentage of affirmative responses.

Appendix F

Survey Question #6

Do you feel that the knowledge you gained in the course is useful to your present life?

Goal/Objective Statement

The industrial arts student will be able to develop basic skills in the safe use of tools and machines.

TABLE 9

School	Survey year 1976	Survey year 1977
1	84.00	73.00
2	86.00	69.00
3	72.00	65.00
4	65.00	58.00
5	83.00	61.00
6	75.50	56.00
7	74.00	61.00
Mean Scores	78.12	62.88

Statistical Data - Numbers represent percentage of affirmative responses.