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A Follow-up Study of 1977 Graduates from the Newport News Public Schools

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A FOLLOW-UP STUDY OF 1977 GRADUATES FROM THE NEWPORT NEWS PUBLIC SCHOOLS

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by

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TABLE OF CONTENTS

LIST OF TABLES

LIST OF FIGURES

Chapter 1

INTRODUCTION

This follow-up study will reflect the employment status of the graduating students in the Newport News School system as of June, 1977. One of the basic reasons for using a follow-up study is to determine if the Newport News School system is meeting the occupational needs and requirements of high school students. The information received and the data collected can be used to reevaluate the present vocational programs and also can serve to facilitate the implementation of new programs. It is imperative that the schools continue to improve the quality of vocational programs to insure maximum placement and a criterion of accountability. Thus, the results of this study can be used by the school system and community in future decisions involving vocational education specifically and education in general. This follow-up study could be a valuable assessment instrument for the Newport News Public Schools.

BACKGROUND INFORMATION

Follow-up studies are important in establishing public confidence and support among citizens, legislators and executives in government. They are done for particular reasons in education, which are to improve existing programs,

help develop new ones and to supply supportive data to the state department to insure proper funding. In a follow-up study conducted at a national level it was found that nearly all community colleges conducted some sort of follow-up study of former occupational-technical students. The purpose of the study was to evaluate the effectiveness of follow-up studies in measuring attainment of educational goals.[1]

In a follow-up study conducted in Virginia, for the Virginia Community College system, found that (VCCS) had served a rapidly increasing number of students in a variety of occupational-technical and transfer programs. By 1980 huge sums will be required to provide additional educational programs, staff and facilities for a projected enrollment of 86,500 students.[2] By use of a follow-up study and a questionnaire, valuable data was retrieved and analyzed so that future planning would be built on facts and not fiction.

The local school systems support state policies. One way to be accountable for the various program offerings is to have supportive data which will clearly indicate whether or not the vocational programs in local school divisions are in fact doing what is expected of them.

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[1]William G. Williams and Fred A. Snyder, Follow-up Studies of Former Occupational-Technical Students at Community Colleges. Research Report No. 1. Virginia State Department of Community Colleges. 1974, p. 36.

[2]Ted V. Gustilo Jr., A profile of Former Occupational Technical Students. Research Report No. 2. Virginia State Department of Community Colleges. 1974, p. 1.

Vocational programs help to provide certain students with a job entry skill and/or to prepare him to meet the requirements of his career objectives.[3]

The Virginia State Plan for Vocational Education states, "By June 1976 at least ninety percent of high school graduates not continuing formal education should have a job entry skill."[4] This makes it highly important that research be conducted to determine entry level skills for the various occupations in which the student may be employed.

SIGNIFICANCE OF STUDY

This is one of the first studies conducted in the Newport News School system to test the effectiveness of the Vocational and/or Industrial Arts programs in preparing the graduates for work in an area related to their previous training. At the present the school system relies on the statement of intent of students as to the nature of their plans after graduation. No attempt has been made to collect data by a follow-up study of the entire graduating class to determine exactly what they did after graduation and to what extent their

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[3]Anthony Cavallo, A Follow-up of Former Vocational Students from Roanoke City Public Schools. State Department of Education. p. 1.

[4]State Department of Vocational Education, Virginia State plan for Vocational Education (Richmond, Virginia; Division of Vocational Education, 1976) p. 1-138.

high school educational program assisted them.[5]

Educators are beginning to realize that reevaluation of programs is a continuous process.[6] Nearly a million youngsters drop out of school each year prior to completing high school and unemployment figures for young people are much higher than the national average.[7] By the passage of the Vocational Education Amendment of 1968, the Federal government made funds available to the state for the continual upgrading of vocational programs and initiating new ones.[8] The data collected in this study can increase the possibility for curriculum revision in the area of Industrial Arts and Vocational Education.

RESEARCH QUESTIONS

As part of an effort to survey the graduating students in the Newport News School system, to assess the needs of these students and to improve the curriculum in the area of vocational education and industrial arts: This study will seek answers to the following questions:

1. What are the percentages of those June 1977 high school graduates who successfully completed a vocational

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[5]Clifton L. Clark, Jr., Follow-up of 1975-76 High School Graduates of the Arlington Public Schools. Richmond, Virginia, State Department of Education.

[6]Clark, p. 3. [7]Spoker, p. 6.

[8]David S. Smoker, "Innovations Revolutionize Career Training." Vocational Education. National School Public Relation Association, (1971) p. 6.

program and are currently employed in a related area?

2. How do the percentages of employed and unemployed vocational education completors compare with industrial arts students who have completed two year unit courses at the 11th and 12th grade level who graduated in June 1977?

3. What are the percentages of employed and unemployed non-vocational education students that graduated in June 1977?

4. What are the percentages of those June 1977 high school graduates who felt adequately prepared for work in which they are engaged by their vocational training program?

ASSUMPTIONS

This study was based on the following assumptions:

1. That the graduating students studied will supply valuable information by answering all questions on the survey form.

2. That all the graduating students studied will be employed, seriously looking for a job, or planning on furthering their education by September, 1977.

LIMITATIONS

The following limitations were applicable to this study:

1. The capabilities of the computer to function

properly and to provide the necessary information when needed.

2. The funding which is needed on a proposed budget of between $2,700-3,000.

3. Only the graduating student in the Newport News Public High Schools, which includes Warwick, Ferguson, Menchville and Denbigh High Schools, will be studied.

4. The return of a minimum of at least 30% of the survey forms distributed.

DEFINITION OF TERMS

The terms listed within the study are interpreted to have the following meanings:

1. Newport News high schools - those high schools in the Newport News Public School system with a curriculum content applicable to grades 10 through 12.

2. vocational education - vocational education deals with knowledge, skills and attitudes that fit an individual wholly or in part, for a definite occupation or vocation the pursuit of which equips him for successful living.[9]

3. industrial arts - industrial arts is a program that prepares youth for the world in which they live, provides experiences that uncover, develop, release

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[9]Harold G. Silvius, and Ralph C. Bohn, "Organization of Vocational Education," Organizing Course Material for Industrial Education, (Bloomington, Illinois: McKnight & McKnight Publishing Company 1961), p. 73.

and realize individual potential.[10]

4. follow-up study - a follow-up study is normally done to confirm or validate findings of previous study or studies and to identify and evaluate possible changes.

SUMMARY

This chapter presented an introduction to the study and background information on the need for follow-up studies. The significance of the study was discussed and specific research questions were asked. The assumptions, limitations, and definitions of terms were stated to help clarify this study.

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[10] Industrial Arts Education Service, The Industrial Arts Curriculum K-12, Richmond, Virginia: State Department of Education, 1977. p. 3.

Chapter 2

LITERATURE REVIEW

The literature presented in this section will be categorized into the following groups: (1) information on follow-up studies and how to make them more effective; (2) past surveys; and (3) information relating to the vocational education of youths.

FOLLOW-UP STUDIES

Follow-up studies are important in establishing public confidence and support among citizens, legislators and executives in government. The findings, if accurately derived, translated, and applied can provide information that is of great value in the program and policy making decisions of institutions and even state systems of vocational education.[1]

In talking about the difficulty of a follow-up study, Gilli said:

> To implement the translated findings into the system so that vocational students are better educated and trained than their predecessors is the ultimate objective (and most difficult) of the entire follow-up effort. . . . It requires action beyond exhorting faculty and administrators to make changes.[2]

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[1]Angelo C. Gilli Sr., "Follow-up Means Feedback," American Vocational Journal, March 1975, p. 25.

[2]Gilli, p. 25.

It is common knowledge that the first years after graduation contribute much to the graduate's education. His education starts in the school, but continues long after he leaves. Follow-up for purposes of helping graduates adjust is and should be integral part of the educational services provided. Assistance in removing the cause of a new worker's dissatisfaction or helping him to determine what additional preparation he should seek are typical of this kind of support.[3]

Judgment about the effectiveness of education can be made only after the results are observable. The success of graduates, the wages they earn, the number engaged in the occupation for which they trained, and the extent to which they need further education are the type data that follow-up studies provide.

Regarding the effectiveness of using a follow-up study in education, Brantner stated:

> A critical public is requiring educators and educational institutions to justify their expenditures more assiduously than ever before. One measure of accountability applied to vocational education is how well its graduates fare in the world of work. . . . Follow-up studies conducted for the purposes of helping their graduates to adjust to work and to adult life can therefore provide schools with a useful accountability tool.[4]

In discussing the effectiveness and the specific type

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[3]Seymour T. Brantner, "Follow-up Studies: Who Benefits?," American Vocational Journal, March 1975, p. 26.

[4]Brantner, p. 27.

of information that is obtained through the follow-up study, care must be taken in its preparation and implementation. The most commonly used technique for conducting a follow-up study is the mailed questionnaire. The Guidance Handbook for the Virginia Schools states:

> The most widely used and in many instances, the most useful follow-up technique is the questionnaire. It is a device that required meticulous preparation. It is a difficult task to work questionnaires so that the person queried will know exactly what information is wanted. Care needs to be exercised to be sure that no important item is omitted, that each item is worded so that ambiguity is avoided and that answers can be easily tabulated.[5]

Experience has shown that such factors as the length of the questionnaire, the clarity of the item, and the ease with which they can be answered bear a significant relationship to the percentage of returns.[6] One important area of a follow-up study is to obtain a high percentage of return. In a study conducted by Douglas E. Scates, he was able to get a 99 percent return on questionnaires sent out by: (1) sending out reminders using post cards; (2) sending another copy of the questionnaire; (3) mailing letters asking for cooperation; and (4) mailing a mini-version of the original questionnaire.[7]

One of the main problems, according to Mouly, is that

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[5]State Department of Education, Guidance Handbook for the Virginia Schools, p. 130.

[6]State Department of Education, p. 131.

[7]Carter V. Good, "Descriptive-Survey Normative and Status Survey," Introduction to Educational Research, (2nd ed.) Appleton-Century-Crofts; New York, pp. 282-283.

there are always those individuals who fail to return the questionnaire on first contact, it is invariably necessary to institute the means to retrieve missing returns. Most of the time failure to return the form is nothing more than forgetfulness.[8]

Although the goal of 90 to 100 percent return has not been achieved generally in questionnaire surveys, definite progress is being made.[9] The mean percentage of questionnaire returns from a large number of survey investigations on master's thesis, doctoral dissertations, and research studies showed a low of 71 percent to a high of 81 percent.[10]

After it is decided that the mailed questionnaire is the most desired form, meticulous preparation must be made before it is sent out. An outline for conducting the follow-up study is stated by Tugwell:

> The technical aspects of conducting a follow-up study largely determines its effectiveness. Certain basic principles must be observed.
>
> 1. Selecting the class to be surveyed is the first consideration. Sufficient time must elapse between leaving school and after school adjustment, and yet not so long that meaning becomes distorted.
>
> 2. Assuring confidence in the study is essential.

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[8]George J. Mouly, "The Survey: Descriptive Studies" The Science of Educational Research, (wnd ed.), Van Nostrand Reinhold Company; New York, p. 257.

[9]J. R. Shannon, "Percentage of Returns of Questionnaires in Reputable Educational Research," Journal of Educational Research, Vol. 42: pp. 138-41.

[10]Shannon, p. 140.

3. The mailed questionnaire is not as good as the personal interview but it saves time and allows for a larger sample.

4. Selection of the items to be covered should be carefully studied by the planning committee.

   a. Personal data is interesting but of little value.

   b. Employment records are significant items.

   c. Educational experience after leaving school with an evaluation of the high school program will provide valuable information.

5. Consider the form carefully.

   a. Items should allow simple check-list answers with as little writing as possible.

6. Estimate and budget the cost of materials. Expenses should not exceed one hundred dollars per five hundred questionnaires.

7. All the results of the study are useless if they are not put into practice.[11]

SURVEYS

In education, particularly Vocational Education, follow-up studies are becoming popular. It is a way of getting support for old programs and initiating new ones. Many schools have, currently and in the past, done follow-up studies for this reason.

In a recent follow-up study conducted by the New River Community College, the 1974 graduates in occupational

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[11] William H. Tugwell, "A Follow-up Study of the Graduates of a City High School, Norfolk," (Masters Thesis, Old Dominion University, 1972), pp. 18-19.

and technical programs are studied in terms of: (1) their success in finding employment or transferring to other institutions; (2) their opinion of the programs and training at New River. In the 1974 graduating class, graduates in occupational-technical programs numbered 238. Ninety-five percent of the graduates were found to be either working or attending other colleges. Within the employed group 87 percent were working in a field related to their area of study. Results of questionnaires mailed to graduates showed favorable response to both the transfer and vocational programs at New River.[12]

A five-year follow-up study of 1969 Albemarle County High School graduates was made from July 1, 1974 to July 1, 1975. The purpose of this project was to gather data from one high school graduating class regarding their present job status, college attendance and high school training. This information was to be compared with their ability level while in high school to see if the vocational programs met the needs of the students of that particular year. According to the data found, the vocational programs of that year did meet the needs of those students enrolled in the program. Only fifteen students out of eighty-five majored in courses covered by vocational programs. Of the

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[12]Edith H. Carter, "Follow-up of 1974 Graduates in Occupational-Technical Programs." Research Report No. 3, Virginia State Department of Community College, Richmond, 1974, p. 2.

ninety-three graduates now working, fifty-three are working in areas served by vocational programs. This indicates that the vocational program is serving the students who are in it well, but needs to serve more students.[13] According to Eisner, most young workers who enter the job market straight from high school have few marketable skills.[14]

In a National Follow-up study conducted in the spring of 1972, surveyed 22,000 high school graduates in 1200 schools. Sixty-two percent of vocational-technical, 24 percent general education, and 12 percent of academic students indicated that they had received specialized training intended to prepare them for immediate employment upon graduation. Of those who had looked for work in areas where they could use their specialized training, about 80 percent of the vocational-technical and academic students and 77 percent of the general students found jobs. Prior job training in high school is a key factor.[15]

VOCATIONAL TRAINING OF YOUTH

Because many occupations are becoming increasingly

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[13]Suzanne T. Mawyer, "Five-year Follow-up Survey of Albemarle High School Graduates," Report No. VT-102-364, Albemarle County Schools, Charlottesville, Virginia, August 1, 1975, p. 17.

[14]Mary Eisner, "Training People to do Needed Work," The New Republic, Vol. 170, No. 9, March 2, 1977, p. 11.

[15]National Center for Education Statistic, "Effectiveness of High School Job Training," Bulletin No. 22, Eric Document ED 113-526, August 1975, p. 1.

complex and technical, specific occupational training such as that obtained through apprenticeship, junior and community colleges, post-high school vocational courses, and high school vocational education courses, is becoming more important to young people preparing for work.[16] Thus a high school graduate, who has acquired skills and a good basic education, is in a better competitive position in the job market than a non-graduate and will have a better chance for interesting work.[17]

SUMMARY

This chapter has presented a review of the literature related to follow-up studies. On the basis of the research found on this topic, some conclusions were drawn which relate to this study, they are:

1. Follow-up studies are used extensively in the area of education to provide a basis for curriculum revision and addition.

2. The questionnaire survey instrument is the most widely used instrument to gather data.

3. Vocational education courses improve the chances of high school students obtaining a job.

4. Students who have had vocational training, tend

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[16]U. S. Department of Labor Statistics, Occupational Outlook Handbook; 1976-77 ed., Bulletin 1875, Washington, Government Printing Office, p. 18.

[17]Occupational Outlook Handbook, p. 19.

to work in an area related to this training.

5. That those students who are working in an area for which they were trained felt prepared, but not adequately.

Chapter 3

THE DESIGN

A questionnaire will be prepared by this researcher and mailed to each student who will have graduated from the Newport News Public Schools during the school year 1976-77. A cover letter (Appendix A) explaining the purpose of the study will accompany the questionnaire, included will be a stamped, self-addressed envelope which should facilitate the return of the completed questionnaire.

The questionnaire when constructed, will be reviewed by a committee of three, consisting of; (1) industrial arts teacher; (1) industrial arts supervisor for the Newport News School system; and (1) computer programmer. Changes in the original content will be made as appropriate. A follow-up will be conducted to assure at least a 30 percent return of the number of questionnaires distributed.

INSTRUMENTATION

A questionnaire (Appendix B) is the research instrument that will be used. The questionnaire will be prepared in a manner that tabulation of the answers will be made by the computer on scanner sheets. This process is called optical scanning. This will enable us to retrieve data in several categories. The questionnaire will be prepared in a manner which will give specific answers necessary to retrieve information sought by the research questions stated

in chapter 1. Along with the development of a questionnaire, a new computer program will be developed specifically for this follow-up study.

SAMPLING

This study will emphasize the areas of Vocational Education and Industrial Arts. The students will consist of those graduating seniors from the Newport News high schools. This group will consist of approximately 1800-2000 students. The names and addresses of the individual graduates will be obtained from a computer read-out originating at the Newport News Administration Building.

DATA COLLECTION

The questionnaire will be mailed to the graduates of the Newport News high schools, by the first week in September, 1977 and the latest date for mailing being October 1, 1977. A follow-up card will be mailed between 2-3 weeks from the initial mailing. If this process of mailing fails to meet our 30 percent return of questionnaires; it may be necessary to contact the students by phone and/or in person.

DATA ANALYSIS

The answers to the questionnaire will be of the yes/no type and multiple-choice. The data as analyzed will be presented in a percentage relationship with respect to the responses to each question on the questionnaires

returned. Tables and figures will be utilized to portray the results of the analysis.

BUDGET PROPOSAL

This follow-up study will be funded in conjunction with the Vocational Education Research and Development Mini Grants. These grants state that the Division of Vocational Education is providing funds for a research and development mini grant program for the fiscal year 1977-78. Each mini grant will be limited to a maximum reinbursement of $3,000.00.[1]

The main purpose of the mini grant program is to give local educational agencies an opportunity to conduct small-scale research and development projects designed to develop new knowledge or procedures for increasing the effectiveness of various phases of the local vocational education program.[2] A complete budget breakdown as it pertains to this study is provided (Appendix C).

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[1]Melvin H. Garner, Director Vocational Education, State Department, Vocational Education Research and Development Mini Grants, Department of Education, Richmond, Virginia (Memo No. 8251).

[2]Garner, p. 2.

Chapter 4

Analysis Of The Data

This study sought to determine the effectiveness of the Vocational and/or Industrial Arts programs in preparing graduates for work in an area related to their previous training. This chapter attempts to answer the research questions as stated in Chapter 1. Each question will be treated separately in this chapter.

A total population of all June, 1977 Newport News high school graduates was used. Included also were those who graduated in summer school. Table 1, page 20, shows that 32% of those students returned the questionnaire.

Table 1

Total Population Studied
in Follow-up Study

Graduates	Number	Percent
Total Non Response	1184	68%
Total Response	562	32%
Total Population	1766	100%

After all questionnaires were returned, a total of 562, the answers from the questionnaire were transferred by hand to an eight response IBM answer sheet (Appendix D). The data was then hand tabulated and optically scanned by a computer.

Table 2

City of Newport News Questionnaire
Frequency Distribution of
Students Answers

Question Number	Answer A	Answer B	Answer C	Answer D	Answer E	Answer F	Answer G	Answer H
1	389	153	3	2	10			
2		1	49	451	55			
3	118	31	210	12	78	10	7	84
4	85	46	59	184	43			
5	180	366		1				
6	60	17	39	40	79			
7	26	67	19	42	62			
8	5	84	35	27	39	9	10	1
9	179	37						
10	8	7	3	2	25			
11	26	6	28		23			
12	81	111	13	7				
13	31	158	7	5	8	1		
14	14	34	68	68				
15	29	5	25	16	2			
16	50	79	1		1			
17	25	35	34	13	36			
18	28	20	19	30	25		1	
19	61	25	19	26	43	2		
20	40	1	6	4	1	63	102	
21	68	40	37	17	51			
22	66	5	196	22	12	17		
23	36	13	15	39	116			
24	45	5	12	15	130			
25	106	125			1			
26	26	31	49	1				
27	10	28	40	18	16	1		
28	173	201	21	1				
29	111	349	19					
30	112	242	32					
31		167	219	115				
32		85	209	125				
33			1	1				

Table 3

City of Newport News Questionnaire
Frequency Distribution of
Students Percentages

Question Number	Percent A	Percent B	Percent C	Percent D	Percent E	Percent F	Percent G	Percent H
1	69.8	27.4	0.5	0.3	1.8			
2		0.1	8.8	81.1	9.8			
3	21.4	5.6	38.1	2.1	14.1	1.8	1.2	15.2
4	20.3	11.0	14.1	44.1	10.3			
5	32.9	66.9		0.1				
6	25.5	7.2	16.6	17.0	33.6			
7	12.0	31.0	8.8	19.4	29.6			
8	2.3	40.0	16.6	12.8	18.5	4.2	4.7	0.4
9	82.8	17.1						
10	17.7	15.5	6.6	4.4	55.5			
11	31.3	7.2	33.7		27.7			
12	38.2	52.3	6.1	3.3				
13	14.7	75.2	3.3	2.3	3.8	0.4		
14	7.6	18.4	36.9	36.9				
15	37.6	6.4	32.4	20.7	2.6			
16	38.1	60.3	0.7		0.7			
17	17.4	24.4	23.7	9.0	25.1			
18	22.7	16.2	15.4	24.3	20.3		0.8	
19	34.6	14.2	10.8	14.7	24.4	1.1		
20	18.4	0.4	2.7	1.8	0.4	29.0	47.0	
21	31.9	18.7	17.3	7.9	23.9			
22	20.7	1.5	61.6	6.9	3.7	5.3		
23	16.4	5.9	6.8	17.8	52.9			
24	21.7	2.4	5.8	7.2	62.8			
25	45.6	53.8			0.4			
26	24.3	28.9	45.7	0.9				
27	8.8	24.7	35.4	15.9	14.1	0.8		
28	43.6	50.7	5.3	0.2				
29	23.1	72.8	3.9					
30	29.0	62.6	8.2					
31		33.3	43.7	22.9				
32		20.2	49.8	29.8				
33			50.0	50.0				

The results of this process are listed in Table 2, page 21, which gives the total number of students responding to each question on the questionnaire. Table 3, page 22, gives the percentage distribution for each of the responses. A copy of the computer print out is in Appendix D.

The first research question in chapter 1 deals with those graduates who completed a vocational program and are employed in a related area. To answer this question it was necessary to determine those program completors. Survey question number 9 does this and Table 4, page 23, gives these results.

Table 4

Vocational Education
Enrollees

Group	Frequency Response	Percent
Non Completors	37	17.1%
Completors	179	82.8%
Total Response	216	100 %

Table 4 shows that out of a total of 216 vocational students 179 or 82.8% had completed their vocational program. The second part of research question number 1, dealt with how many vocational students are employed in a related area to their training. Survey question number 17 identifies this group of students. Figure 1, page 24, gives these results.

Figure 1

Vocational Education Graduates
and Related Employment

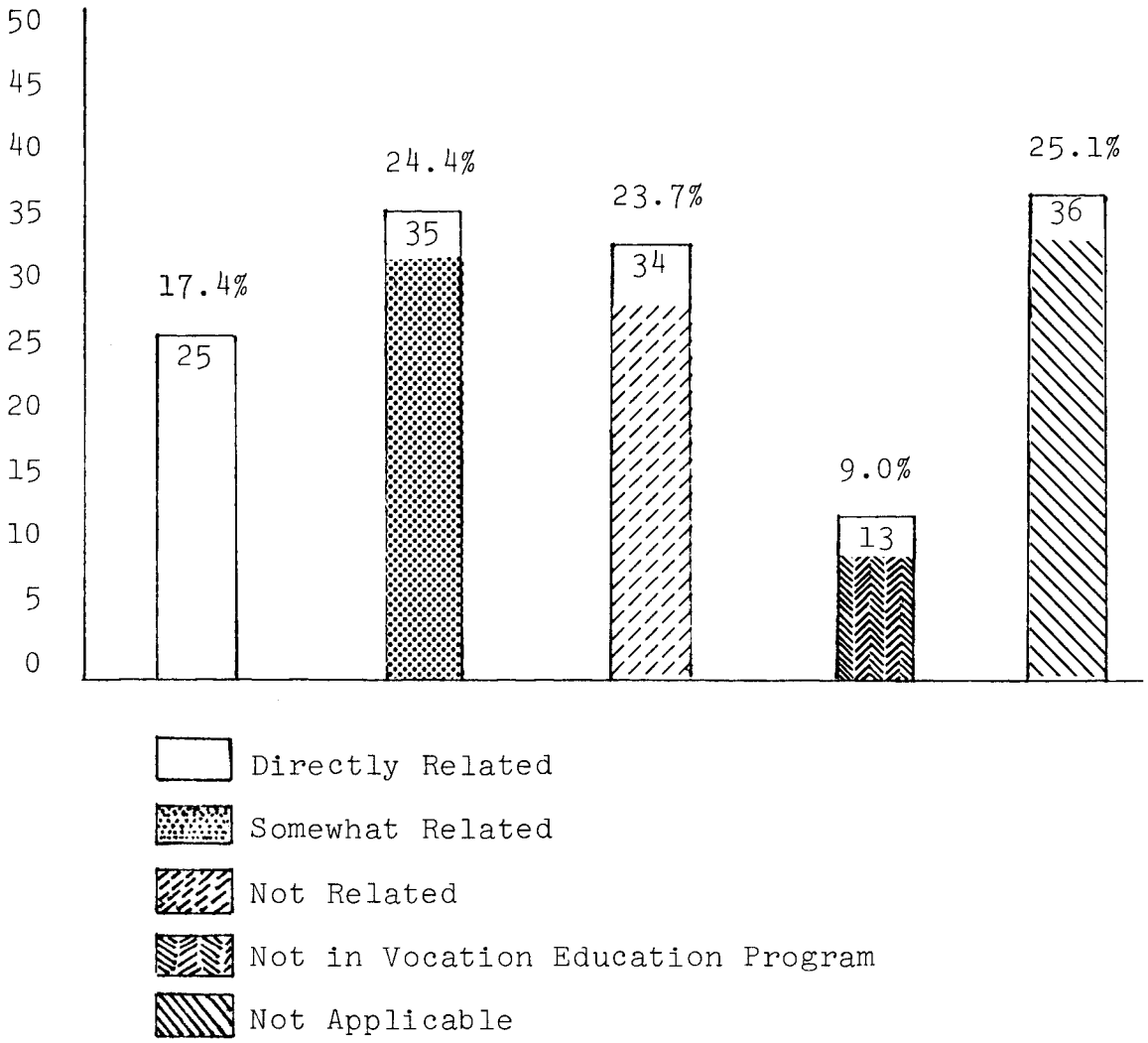


Figure 1, shows that out of a total of 143 students who responded to survey question number 17, 41.8% indicated that they were employed, either in a related area or somewhat related area. Only 34% of a total of 143 students indicated they were employed in an unrelated job.

The second research question dealt with the percentages of employed versus unemployed vocational education completors

compared with the employed versus unemployed industrial arts students who completed two year unit courses at the 11th and 12th grade level. Since this research question had several parts it was necessary to identify the two groups of students. Survey question number 9 again was used. These results are shown in Table 4, page 23. Figure 2, page 26, identifies the employment status of vocational education completors.

Information contained in Figure 2 was obtained by cross analysis. Those survey respondents replying affirmatively to question 9, Table 4, page 23, (Did you complete the vocational education program in which you were enrolled?) were isolated. Their current employment status was determined by their answers to questions 3, 21, 22 and 25. Out of a total of 179 students only 23.6% were found to be unemployed.

Those respondents indicating that they are enlisted in military service or serving as homemakers are considered employed. Those continuing their education full-time or doing so part-time and working part-time are not available for a 40-hour work week and, therefore, not considered unemployed.

Table 5, page 27, identifies the second group of students who completed a two year unit course in industrial arts at the 11th and 12th grade level (survey question number 7).

Figure 2

Employment Status of Vocational Education Completors

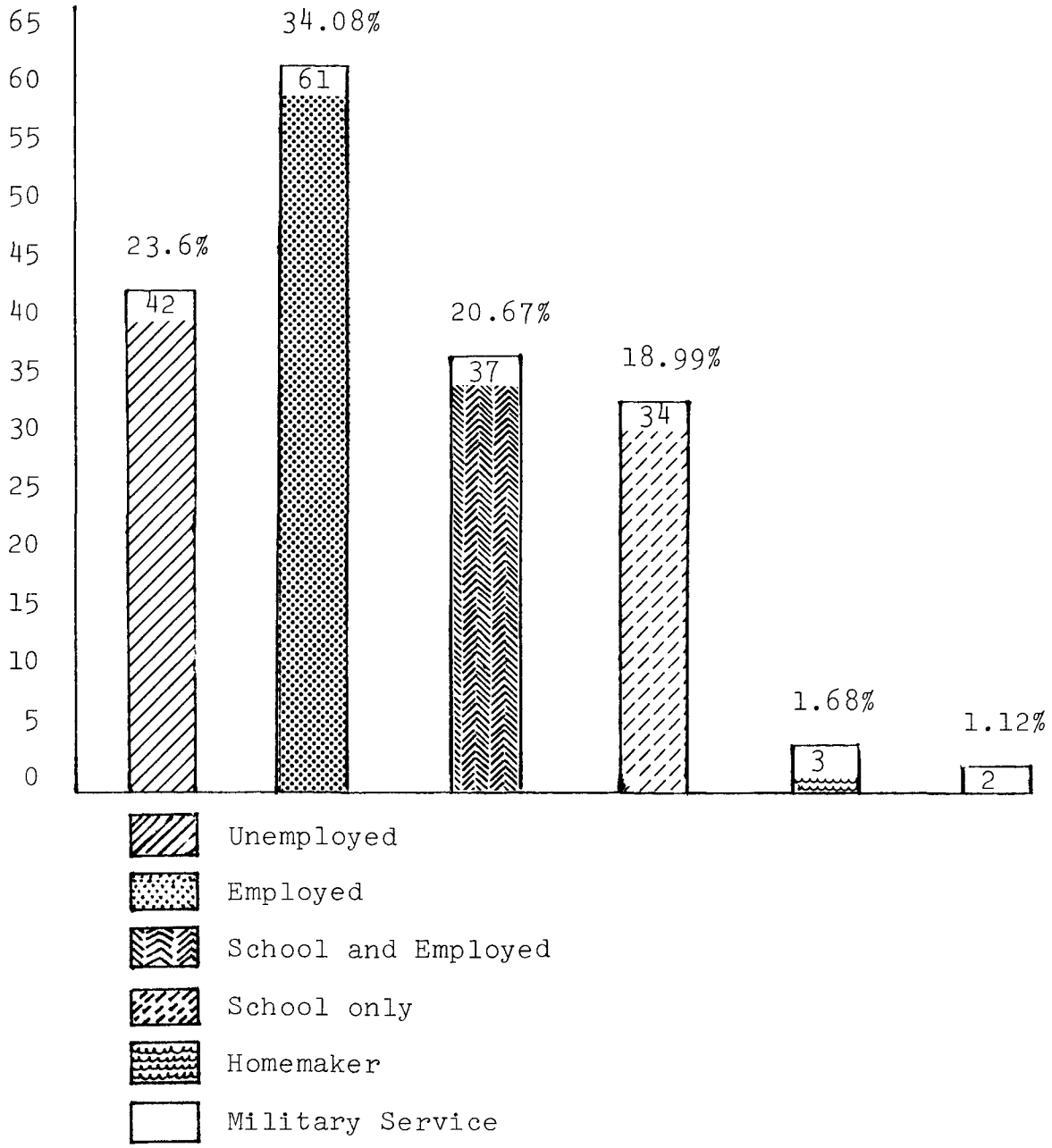


Table 5

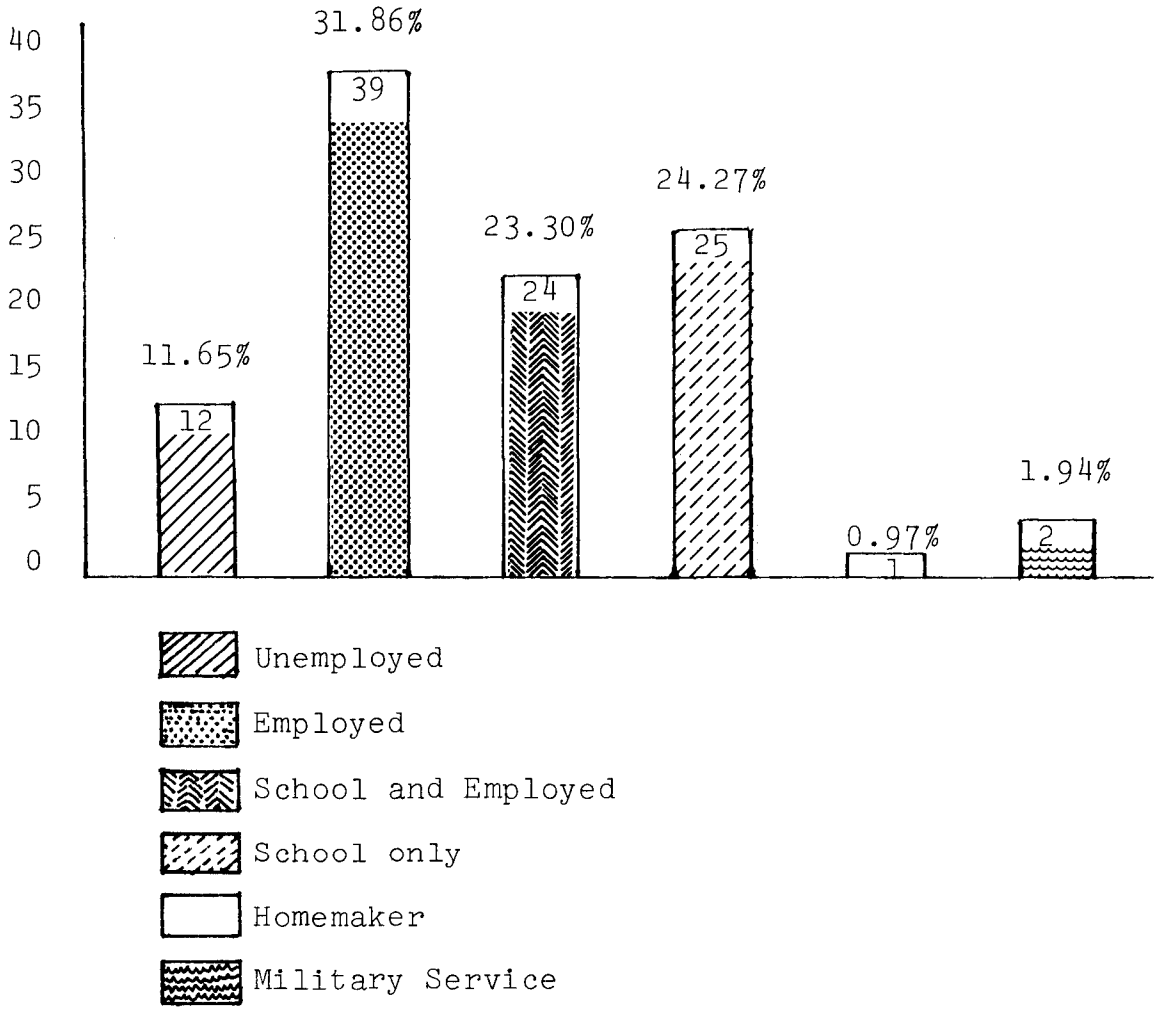
Industrial Arts Students
by Semester

Semesters	Students	Percent
1	26	12.0%
2	67	31.0%
3	19	8.8%
4	42	19.4%
5	62	28.6%

Figure 3, identifies the employment status of the two year block students of industrial arts.

Figure 3

Employment Status of Industrial Arts Block Students



Information contained in this graph was obtained by cross-analysis. Those survey respondents replying that they had taken 4, 5 or more semesters of industrial arts to survey question number 7, Table 5 page 27, isolated. Their current employment status was determined by their answers to questions 3, 21, 22 and 25. Out of a total of 98

students only 12 or 11.65% were found to be unemployed.

Those respondents indicating that they are enlisted in military service or serving as homemakers are considered employed. Those continuing their education full-time or doing so part-time and working part-time are not available for a 40-hour work week and, therefore, not considered unemployed.

The third research question as stated in Chapter 1, dealt with the employment status of the Non-Vocational education completors, survey question number 4. Figure 4, page 29 gives these results.

Figure 4

Employment Status of Non-Vocational Education Completors

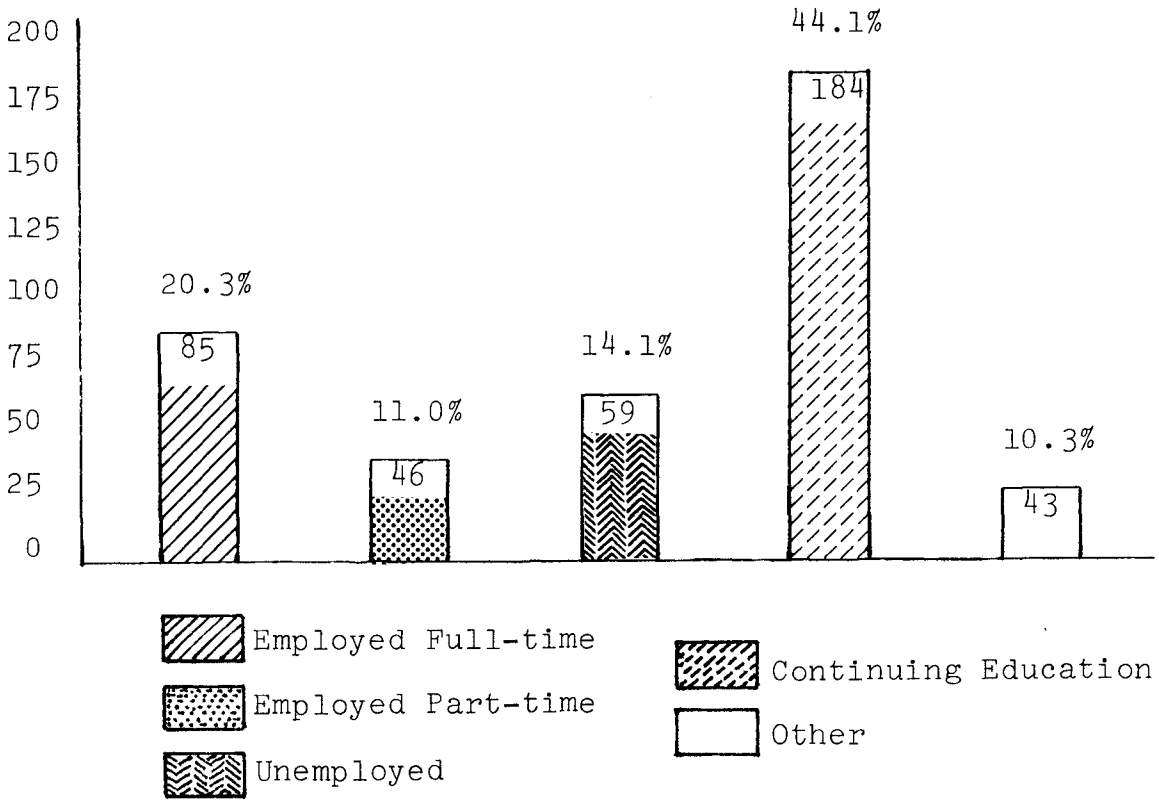


Figure 4, page 29, indicates that out of a total of 417 students responding to survey question number 4, 59 or 14.1% were unemployed.

The fourth research question in Chapter 1 dealt with the quality of vocational education toward employment. Figure 5 gives these results.

Figure 5

Quality of Vocational Education
Towards Employment

The results in figure 5, came from survey question number 12. Out of a total of 212 students responding to this question, 81 or 38.2% rated their training as very good in preparing them for work. A total of 111 students or 52.3% rated there training as good. A total of 20 or 9.4% gave a negative rating on this question.

Chapter 5

SUMMARY, CONCLUSIONS AND RECOMMENDATIONS

INTRODUCTION

This is one of the first studies conducted in the Newport News School system to determine the effectiveness of the Vocational and/or Industrial Arts program in preparing graduates for work in an area related to their training. The results of this study will be used as one of the instruments in updating the present five-year plan. This section attempts to summarize the procedures used in the study, draw conclusions about the findings of the study and make recommendations for further research.

SUMMARY

This study was done as part of an effort to survey the graduating students in the Newport News School system, to assess the needs of these students and to improve the curriculum in the area of vocational education and industrial arts. This study sought the answers to the following questions:

1. What are the percentages of those June 1977 high school graduates who successfully completed a vocational program and are currently employed in a related area?

2. How do the percentages of employed and unemployed vocational education completors compare with industrial arts students who have completed two year unit courses at the 11th and 12th grade level who graduated in June 1977?

3. What are the percentages of employed and unemployed non-vocational education students that graduated in June 1977?

4. What are the percentages of those June 1977 high school graduates who felt adequately prepared for work in which they are engaged by their vocational training program?

The study used a mail survey approach to gather data from students. A questionnaire was developed by the researcher. The questionnaire was divided into six sections to make the retrieval of information pertaining to the four research questions more reliable.

The questionnaire contained twenty-seven multiple choice questions which composed the first five sections. In section six there were four questions asked, seeking additional information about future participation in another type follow-up study.

A total population was used, consisting of all Newport News graduates in June 1977. A total of 1756 questionnaires were mailed on October 6, 1977. In addition to a postage paid return envelope, a personalized engraved, sharpened pencil was sent with "1977 N.N. Graduate" engraved on it. Five hundred, sixty-two, or thirty-two percent, were returned. A reminder post card (Appendix F), was mailed on October 19th, 1977, two weeks after the initial mailing to increase the rate of return.

The data was transferred from the returned questionnaire by hand onto an eight response IBM answer sheet. Once this was done, the data was hand tabulated and also tabulated

using the computer. This process is called optical scanning. A frequency distribution and percentage relationship were used in this tabulation. The results were detailed in Chapter 4.

CONCLUSIONS

Based upon the findings of this study and the effectiveness of the questionnaire, several conclusions can be drawn from the data provided in Chapter 4. Of the 216 students who responded to question number 9 on the questionnaire, 179 or 82.8 percent indicated they had completed a vocational program. Of those students who responded to question number 17, 41.8 percent indicated their employment was either directly related to their vocational training or somewhat related to it.

Of the total students who were classified as vocational program completors, 23.6 percent were found to be unemployed. Of the students who were classified as industrial arts students, completing two or more years course work, such as wood working; only 11.65 percent of these students were unemployed. It can be concluded that a lower percentage of industrial arts students are unemployed.

Of a total of 444 students responding to question number 4 on the survey questionnaire, 59 or 14.1 percent indicated they were unemployed.

The majority of the non-vocational education students indicated they were either employed full-time, part-time

or continuing education.

Of a total of 215 students responding to question number 12 on the questionnaire, 192 or 90.5 percent of the students rated their vocational training as adequately preparing them for work.

RECOMMENDATIONS

The writer recognizes the need for further research in the area of vocational and industrial arts program outcomes. Supplemental analysis of the data already collected could provide helpful information. Other questions could be dealt with fully only by collecting and analyzing additional data. Based on the results and procedures used in this follow-up study, the following research recommendations are made:

1. That the length of the questionnaire be reduced to retrieve only the necessary data.

2. A mini-version of the full questionnaire should be developed for mailing to late respondents or for completion through telephone interviews.

3. That an additional follow-up study be made to survey the employers of those working students who responded to this survey, so that a comparison could be made between both studies.

4. That these students who responded to this survey be studied in succeeding years.

5. That each high school within the Newport News

School system be studied separately.

6. That a budget be recommended and approved every year to deal specifically with planning a follow-up study in the area of vocational and industrial arts programs.

BIBLIOGRAPHY

Brantner, Seymour T., "Follow-Up Studies: Who Benefits?," American Vocational Journal, March 1975, pp. 26-27.

Carter, Edith H., "Follow-Up Of 1974 Graduate In Occupational-Technical Programs," Research Report No. 3, Virginia State Department of Community Colleges, Richmond, 1974, p. 2.

Cavallo, Anthony, A Follow-Up Of Former Vocational Students From Roanoke City Public Schools. State Department Of Education, p. 1.

Clark, Clifton L. Jr., Follow-Up Of 1975-76 High School Graduates Of The Arlington Public Schools, Richmond, Virginia, State Department Of Education.

Eisner, Mary, "Training People To Do Needed Work", The New Republic, Vol. 170, No. 9, March 2, 1974, Old Dominion University, p. 11-12.

Garner, Melvin H., Director of Vocational Education, State Department, Vocational Education Research and Development Mini Grants, Memo No. 8251. State Department Of Education.

Gilli, Angelo C. Sr., "Follow-Up Means Feedback," American Vocational Journal, March 1975, p. 25.

Good, Carter V., "Descriptive Survey Normatives and Status Survey." Introduction To Educational Research, Appleton-Century-Crofts, New York, pp. 282-283.

Gustilo, Ted O. Jr., A Profile Of Former Occupational-Technical Students. Research Report No. 2. Virginia State Department Of Community Colleges. 1974, p. 1.

Industrial Arts Educational Service, The Industrial Arts Curriculum K-12, Richmond, Virginia; State Department Of Education, 1977, p. 3.

Mawyer, Suzanne T., "Five-Year Follow-Up Survey Of Albemarle High School Graduates," Report No. VT-102-364, Albemarle County Schools, Charlottesville, Virginia, August 1, 1975, p. 17.

Mouly, George J., "The Survey: Descriptive Studies," The Science Of Educational Research, (2nd ed.), Van Nostrand Reinhold Company; New York, p. 257.

National Center for Education Statistics, "Effectiveness Of High School Job Training," Bulletin No. 22, ERIC Document ED 113-526, August 1975, p. 1.

Shannon, J.R., "Percentage Of Returns Of Questionnaires In Reputable Educational Research," Journal Of Educational Research, Vol. 42: pp. 138-41.

Silvius, Harold G. and Bohn, Ralph C., "Organization Of Vocational Education," Organizing Course Material For Industrial Education, (Bloomington, Illinois: McKnight & McKnight Publishing Company 1961), p. 73.

Smoker, David S., "Innovations Revolutionize Career Training," Vocational Education. National School Public Relation Association, (1971) p. 6.

State Department Of Education, Guidance Handbook For The Virginia Schools, p. 130-131.

State Department Of Vocational Education, Virginia State Plan For Vocational Education (Richmond, Virginia; Division Of Vocational Education, 1976) p. 1-138.

Tugwell, William H., "A Follow-Up Study Of The Graduates Of A City High School, Norfolk," (Masters Thesis, Old Dominion University, 1972), pp. 18-19.

U. S. Department Of Labor Statistics. Occupational Outlook Handbook, 1976-77 Edition, Bulletin No. 1875. (Washington: Government Printing Office).

Williams, G. William and Snyder, Fred A., Follow-Up Studies Of Former Occupational-Technical Students At Community Colleges. Research Report No. 1. Virginia State Department Of Community Colleges. 1974, p. 36.

NEWPORT NEWS PUBLIC SCHOOLS
12465 WARWICK BOULEVARD
NEWPORT NEWS, VIRGINIA 23606

August 5, 1977

Dear Graduate:

It is my pleasure to invite you to participate in a follow-up study of the quality of various programs offered at your high school. Educators need more information to determine which programs are in students' best interests.

Information regarding your experiences since graduation will aid us in improving and developing a more meaningful curriculum. The survey information will be confidential, and your name will not be revealed in any of the reports.

Please take the time to complete the questionnaire and return it in the enclosed business envelope.

Good luck in your present endeavors, and best wishes for a successful year.

Sincerely,

Don R. Roberts
Superintendent
Newport News Public Schools

NEWPORT NEWS PUBLIC SCHOOLS
12465 WARWICK BOULEVARD
NEWPORT NEWS, VIRGINIA 23606

August 4, 1977

FOLLOW-UP QUESTIONNAIRE

General Instructions: Name _____

Enclosed you should find: (1) Follow-up Questionnaire (2) Letter of Explanation (3) Self Addressed Envelope.

Once you have checked the envelope for these supplies, begin by reading the letter of explanation. Your help is important so please take the time (approximately five minutes) to complete the questionnaire as accurately and completely as possible.

Instructions for Completing the Questionnaire

Please put your name on the questionnaire in space provided.

The questionnaire is divided into six sections. Please read each section carefully and answer the appropriate questions. The questions are all multiple choice and require only one answer. Circle one letter per question directly on the questionnaire. Feel free to write on this questionnaire.

Once you have completed this questionnaire, place the questionnaire in postage paid self-addressed envelope.

This information will be treated as confidential.

Sample Question: Circle letter or write answer in space provided (see example a).

Example (a):
Are you seeking employment? (choose one answer only)

a. yes
b. no
c. other (specify) **write your answer if you choose this choice**

Begin Answering Questionnaire Using Pen or Pencil (Choose One Answer Per Question)

Section I: This section for everyone.

1. What is your race?
   a. white
   b. black
   c. oriental
   d. spanish
   e. other (specify) _____

2. How old are you?

   a. 15 c. 17 e. 19 or older
   b. 16 d. 18

3. Choose the item which best describes your present status:

   a. employed full-time (30 hours or more)
   b. employed part-time (fewer than 30 hours)
   c. continuing education (in school full-time)
   d. continuing education (in school part-time)
   e. continuing education and working (any condition)
   f. military service
   g. homemaker
   h. unemployed

4. If you were **not** in a vocational program in high school, what is your present status? (See question no. 8 for types of vocational programs)

   a. employed full-time (30 hours or more)
   b. employed part-time (less than 30 hours)
   c. unemployed
   d. continuing education
   e. other (specify) _____

5. Were you enrolled in an industrial arts courses while in high school?

   a. yes
   b. no

6. If you were enrolled in one or more of the choices below, indicate the one in which you had the most time.

   a. woodworking
   b. metalworking
   c. electricity/electronics
   d. drafting
   e. other (specify) _____

7. How many semesters were you enrolled in an industrial arts course in above choice?

   a. 1 semester
   b. 2 semesters
   c. 3 semesters
   d. 4 semesters
   e. 5 or more semesters

Section II: This Section is for Those Who Were Enrolled in a Vocational Program.
(If you were not enrolled in a Vocational program, **do not** complete this section)

8. What was your major vocational program in high school?

   a. agricultural education
   b. business education
   c. distributive education
   d. trade and industrial education
   e. industrial cooperative training (ICT)
   f. home economics
   g. health occupations

9. Did you complete the vocational program in which you were enrolled?

   a. yes
   b. no

10. If no, please indicate the reason for terminating the program before completion.

    a. change of occupational objective
    b. disliked the vocational program
    c. transferred to another school
    d. financial reason
    e. other (specify) _____

11. If you are employed in an area unrelated to your training, indicate the reason.

    a. could not find a job in my area of training
    b. found a better paying job in another area
    c. prefer to work in another field
    d. would not move from my present residence
    e. other (specify) _____

12. How would you rate your vocational training in preparing you for work.

    a. very good
    b. good
    c. poor
    d. very poor

Section III: This Section is for Those Now Working on a Job.
(If you are not working **do not** complete this section)

13. How were you trained for your work?

    a. high school vocational program
    b. on-the-job training
    c. apprenticeship program
    d. industrial arts courses
    e. area vo-tech center

14. Did your industrial arts training, received while in high school, help you on your present job?

    a. yes, directly related to industrial arts training
    b. yes, somewhat related to industrial arts training
    c. no, unrelated to industrial arts training
    d. not in industrial arts courses

15. If industrial arts training helped you get your present job, what is your present work status?

    a. employed in a related area full-time (30 hours or more)
    b. employed in a related area part-time (less than 30 hours)
    c. employed in an unrelated area full-time
    d. employed in an unrelated area part-time

16. If you were enrolled in a vocational program, did your vocational training help you get your present job?

    a. yes
    b. no

17. If you were enrolled in a vocational program, is your present position related to your area of vocational training received while in high school?

    a. yes, directly related to vocational training
    b. yes, somewhat related to vocational training
    c. no, unrelated to vocational training
    d. not in a vocational program
    e. question does not apply

18. Do you feel your vocational training adequately prepared you for work in which you are now employed?

    a. yes, adequately prepared
    b. yes, but needed more skill development
    c. yes, but needed more technical training
    d. no, inadequately prepared
    e. other (specify) _____

19. How often do you use the knowledge and skill acquired from your training on your present job?

    a. frequently (use most of time)
    b. occasionally (use only some of the time)
    c. seldom (use only rarely)
    d. never
    e. question does not apply

20. Who helped you the most in getting your first job?

    a. vocational teacher
    b. other school personnel
    c. school job placement service
    d. state employment agency
    e. private employment agency
    f. relative and/or friend
    g. self

21. What is your average weekly pay before taxes?

    a. under $75.00
    b. $75 - $99.00
    c. $100 - $124.00
    d. $125 - $149.00
    e. $150.00 or above

Section IV: This Section is for Those Enrolled in School or College
(If you are not enrolled in school or college **do not** complete this section)

22. What is the type of institution in which you are presently enrolled?

    a. two-year junior or community college
    b. public post-secondary technical institute
    c. four-year college or university
    d. private vocational or business college/school
    e. area vocational school
    f. other (specify) _____

23. If you were in a vocational program, how related is your present educational program to the vocational course you took in high school?

    a. same field
    b. highly related
    c. only slightly related
    d. not related
    e. question does not apply

Section V: This Section is for Those Not Working
(If you are working **do not** complete this section)

24. What is your major reason for being unemployed?

    a. unable to find work in field
    b. physically unable to work
    c. cannot meet work requirements
    d. lack of transportation
    e. other (specify) _____

25. Are you looking for a job?

    a. yes
    b. no

26. If yes, how long have you been looking?

    a. less than a month
    b. between one and two months
    c. more than two months

27. What have you done most recently to look for a job?

    a. checked with school placement service
    b. checked with public/private employment agency
    c. checked directly with employers
    d. checked with friends or relatives
    e. placed or answered newspaper ads

Section VI: This Section is for Everyone

1. Please rate the following services of your school by marking one of the spaces in each case.

Very Good	Average	Poor	
_____	_____	_____	Vocational instruction
_____	_____	_____	All other instruction
_____	_____	_____	Vocational shop or laboratory
_____	_____	_____	Guidance and counseling
_____	_____	_____	Job placement

2. If you would like to participate in another follow-up study, so that we may gain more information about your present employment, please print the following information:

   Name of employer: _____

   Street or box no. _____

   City, State, Zip: _____

   Name of your job supervisor: _____

   Your job title: _____

3. So that we may up-date our record, please fill in information below:

   Name: _____

   Address: _____

   Telephone: _____

4. Graduate of _____ High School.

Commonwealth of Virginia
Division of Vocational Education
State Department of Education
Richmond, Virginia 23216

APPLICATION FOR APPROVAL OF MINI-GRANT PROPOSAL

The City of Newport News Public Schools hereby requests
(School Division, Regional Voc. Agency, or Other Agency)

approval of the research or development project and financial assistance as described in this application.

Title of Project: A Follow-Up Study of 1977 Graduates from the Newport News Public Schools

Proposed starting date: July 1, 1977 (Date)

Proposed completion date: March 10, 1978 (Date)

Estimated total cost of project: $ 2,495.00

Amount of financial aid requested: $ 2,195.00

Project initiated by: Dr. Jean Epps
Telephone Number: 599-4411
Project Director: Paul Cummings
Telephone Number: 599-4411

Signed Don R Roberts (Sponsoring Educational Agency) Title: Superintendent

Date: 5-31-77

The application is approved for reimbursement not to exceed $_____ for the proposed Mini-Grant.

Date _____ Signed _____
(Coordinator, Vocational Education Research and Statistical Information)

Note: These forms are available from the Vocational Education Research and Statistical Information Service upon request.

Commonwealth of Virginia
Division of Vocational Education
State Department of Education
Richmond, Virginia 23216

BUDGET FOR MINI-GRANT

Title of Project A Follow-Up Study of 1977 Graduates from the Newport News Public Schools **Initiator** Dr. Jean Epps

Institution or Agency _____ **Beginning Date:** July 1, 1977 **Ending Date:** 3/10/78

		Federal Funds (Reimbursed Share)	Local Share
I.	DIRECT COSTS		
A.	Personnel Charles Tuel, Coordinator; Joe Pink, Instructor; Dolores Donnell, Secretary		$300.00
B.	Travel Paul Cummings, Supervisor Ind. Arts/Ind. Ed. TRAVEL to Arlington, Va. and local travel	$ 200.00	
C.	Supplies and Materials Printing	$ 600.00	
D.	Communications Phone$15.00 Postage $680.00	$ 695.00	
E.	Services Computer Service	$ 700.00	
F.	Other Direct Costs		
II.	TOTAL COSTS	$2195.00	
III.	COST SHARING (GIVE PERCENT)		14%

Note: These forms are available from the Vocational Education Research and Statistical Information Service upon request.

NEWPORT NEWS PUBLIC SCHOOLS

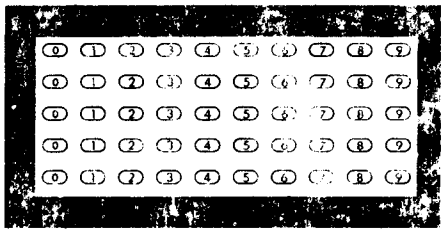
SCHOOL _____

APPENDIX D

DATE _____

QUESTIONNAIRE
IDENTIFICATION _____

OFFICE USE ONLY

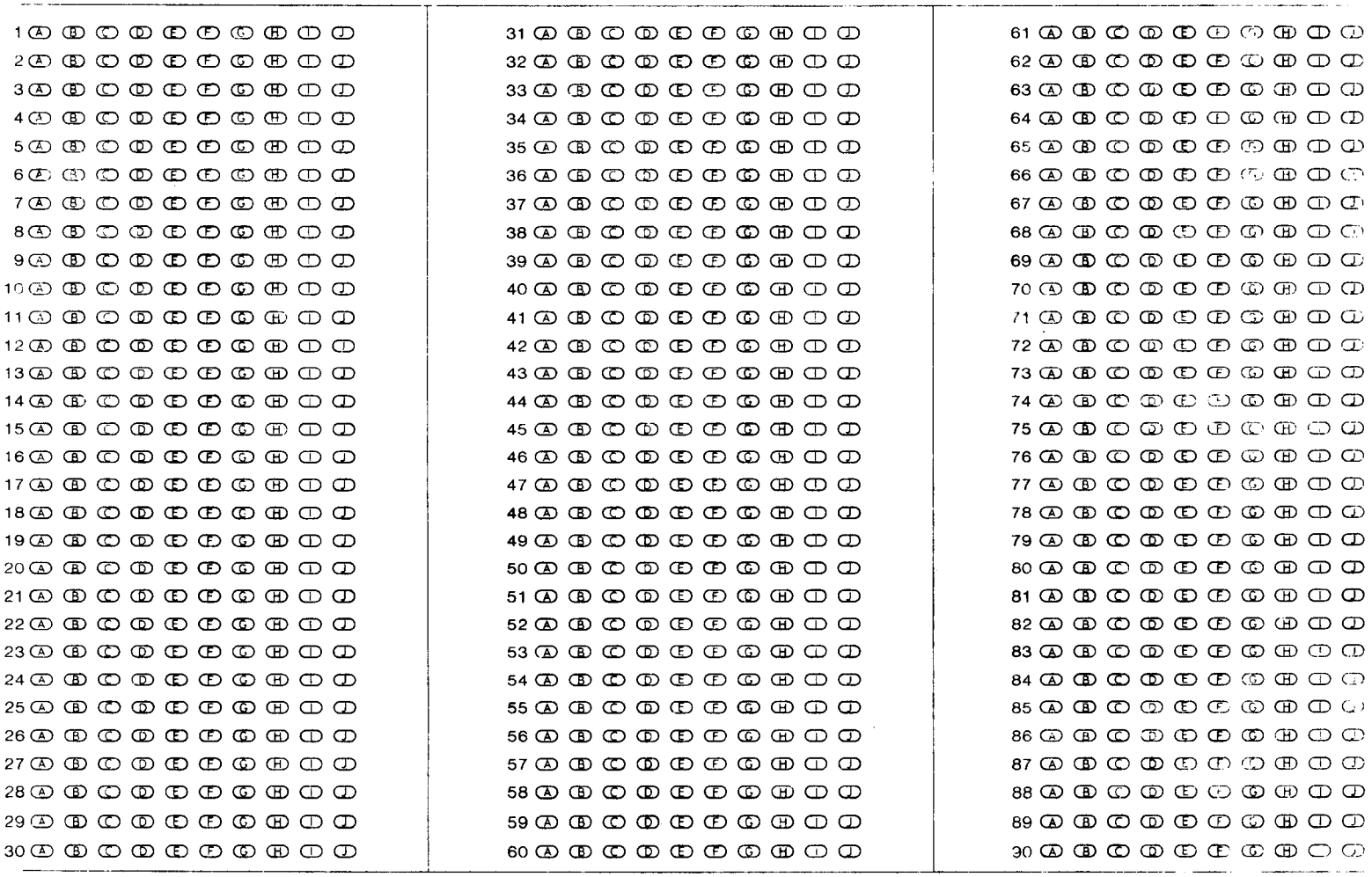


MARKING INSTRUCTIONS

USE A NO. 2 PENCIL ONLY. DO NOT USE A BALLPOINT PEN. BE SURE YOU FILL THE SPACE FOR YOUR ANSWER WITHOUT GOING BEYOND THE LINES. IF YOU WISH TO CHANGE AN ANSWER, BE SURE YOU ERASE YOUR ORIGINAL ANSWER. DO NOT BEND, FOLD OR MUTILATE. THIS FORM WILL BE MACHINE PROCESSED.

ANSWER SHEET

RESPONSE AREA



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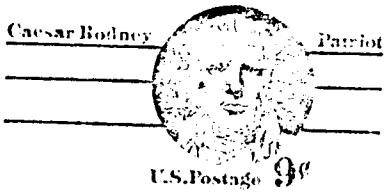
CITY OF NEWPORT NEWS
QUESTIONAIRE REPORT
TOTALS

QUESTION NUMBER	ANSWER A		ANSWER B		ANSWER C		ANSWER D		ANSWER E		ANSWER F		ANSWER G		ANSWER H	
01	389	69.8%	153	27.4%	3	0.5%	2	0.3%	10	1.8%						
02			1	0.1%	49	8.8%	451	81.1%	55	9.8%						
03	118	21.4%	31	5.6%	210	38.1%	12	2.1%	78	14.1%	10	1.8%	7	1.2%	84	15.2%
04	85	20.3%	46	11.0%	59	14.1%	184	44.1%	43	10.3%						
05	180	32.9%	366	66.9%			1	0.1%								
06	60	25.5%	17	7.2%	39	16.6%	40	17.0%	79	33.6%						
07	26	12.0%	67	31.0%	19	8.8%	42	19.4%	61	28.2%	1	0.4%				
08	5	2.3%	84	40.0%	35	16.6%	27	12.8%	39	18.5%	9	4.2%	10	4.7%	1	0.4%
09	179	82.8%	37	17.1%												
10	8	17.7%	7	15.5%	3	6.6%	2	4.4%	25	55.5%						
11	26	31.3%	6	7.2%	28	33.7%			23	27.7%						
12	81	38.2%	111	52.3%	13	6.1%	7	3.3%								
13	31	14.7%	158	75.2%	7	3.3%	5	2.3%	8	3.8%	1	0.4%				
14	14	7.6%	34	18.4%	68	36.9%	68	36.9%								
15	29	37.6%	5	6.4%	25	32.4%	16	20.7%	2	2.6%						
16	50	38.1%	79	60.3%	1	0.7%			1	0.7%						
17	25	17.4%	35	24.4%	34	23.7%	13	9.0%	36	25.1%						
18	28	22.7%	20	16.2%	19	15.4%	30	24.3%	25	20.3%			1	0.8%		
19	61	34.6%	25	14.2%	19	10.8%	26	14.7%	43	24.4%	2	1.1%				
20	40	18.4%	1	0.4%	6	2.7%	4	1.8%	1	0.4%	63	29.0%	102	47.0%		
21	68	31.9%	40	18.7%	37	17.3%	17	7.9%	51	23.9%						
22	66	20.7%	5	1.5%	196	61.6%	22	6.9%	12	3.7%	17	5.3%				
23	36	16.4%	13	5.9%	15	6.8%	39	17.8%	116	52.9%						
24	45	21.7%	5	2.4%	12	5.8%	15	7.2%	130	62.8%						
25	106	45.6%	125	53.8%					1	0.4%						
26	26	24.3%	31	28.9%	49	45.7%	1	0.9%								
27	10	8.8%	28	24.7%	40	35.4%	18	15.9%	16	14.1%	1	0.8%				
28	173	43.6%	201	50.7%	21	5.3%	1	0.2%								
29	111	23.1%	349	72.8%	19	3.9%										
30	112	29.0%	242	62.6%	32	8.2%										
31			167	33.3%	219	43.7%	115	22.9%								
32			85	20.2%	209	49.8%	125	29.8%								
33					1	50.0%	1	50.0%								
34																

APPENDIX F



BEASLEY KATHERINE ANN
86 WENDFIELD CIR
NEWPORT NEWS, VA.

Dear Graduate:

A couple of weeks ago, we mailed a survey questionnaire to you in hopes of learning about the value of your high school training. Your questionnaire was not among the ones returned to us.

If you complete our form, we will be in a much better position to improve our course offerings.

We need your help. Thank you, and my best wishes for success in your endeavors.

Sincerely yours,

Joseph E. Pink

Joseph E. Pink
Industrial Arts, Teacher