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ABSTRACT

The document is the final report of a project designed to make the public and students aware of the possibilities available in vocational education in the Wise County Schools in Virginia. The objectives of the program were as follows: (1) to provide materials to be used for career guidance, (2) to make the public aware of the total vocational programs in the division, (3) to renew dropout interest in vocational training, and (4) to make adults aware of the retraining possibilities. A slide-tape presentation was prepared and used in six secondary schools prior to preregistration for the 1975-76 school year. After each showing, students and teachers were asked their reactions. Plans are in progress for presentations in public places such as bank lobbies, city hall, and the county fair. Included in the report is a copy of the script used with the slides pertaining to the Wise County vocational program. (Author/NJ)

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FINAL REPORT

PUBLIC INFORMATION ON VOCATIONAL EDUCATION

Conducted Under
Part C of Public Law 90-576

Project Director

Linville G. Reed

WISE COUNTY SCHOOLS

Division of Vocational Education
Virginia State Board of Education
Richmond, Virginia 23216

June 17, 1975

VT-102-304

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I. Introduction

This project entitled, Public Information on Vocational Education was directed by Linville G. Reed, Director of Vocational Education for the Wise County Schools. This project was designed to make the public and students aware of the possibilities available in Vocational Education in the Wise County Schools.

II. Statement of the Problem

A minimum effort has been made to date to make the public and students aware of the possibilities available in vocational education. Students have been assigned to vocational courses by guidance counselors without any real understanding on the part of the student, as to what options were available. More effort is needed to generate new interests on the part of dropouts. Adults need to know that our facilities are available for re-training or for refresher courses in many services in which they are presently employed. All of the above mentioned problems are present to some degree in our system.

With the proposed information campaign, we plan to make the public, students in our secondary schools, dropouts, and employees who need refresher courses or advanced training aware of our vocational program in six secondary schools and one vocational-technical center.

III. Analysis and Findings

This project was completed near the end of the 1974-75 school year. Our first use of it was during the pre-registration period for the six secondary schools. After each showing in the schools we would have students and teachers come by and tell us how much help this was toward explaining the total vocational program. Some students told us this had changed their attitude toward vocational education and had planned to enroll in some courses.

It took most of this year to get slides made of the various aspects of our program. Therefore, we are just beginning to set up presentations in public places, such as bank lobbies and city hall where several people will see it during a day.

We plan to use it in a display booth at the county fair this fall. This is an excellent way for exposure in our area.

IV. Conclusions and Recommendation

It is the opinion of the director and those who have assisted him, that this project has met all three objectives listed in the original application.

It is recommended that his slide-tape presentation be kept up to date and used every time there is an opportunity to do so.

V. Supplemental and appendix material

We have enclosed herewith a copy of the transcript used with the slides made which pertain to our school division. No slides are enclosed because each division would have to make slides relevant to their vocational program.

VI. Abstract

This Project entitled, Public Information on Vocational Education was directed by Linville G. Reed, Director of Vocational Education for the Wise County Schools. The director was assisted by the chairman of the business education teachers, the chairman of the home economics education teachers, the supervisor of distributive education, and the assistant principal of the Wise County Vocational-Technical School.

The contracting agency was the Wise County Schools. The approval date was June 3, 1974.

The objectives for this project were as follows:

1. Provide materials to be used for career guidance
2. Make the public aware of the total vocational programs in the division
3. Renew dropout interest in vocational training.
4. Make adults aware of the re-training possibilities.

A slide-tape presentation has been completed and was used in each of the secondary schools this year just prior to pre-registration for the 1975-76 school year. This slide-tape presentation is so designed that it can be up-dated annually.

This project was designed to make the public aware of the various vocational services available in the county and where they may obtain more information pertaining to their interests.

Vocational Education in the Wise County Schools

The Board of Education for the Wise County Schools and Superintendent, Harley Stallard, and his assistants, Mr. Jim Graham and Mr. J. P. Dorton would like for you to know more about the Vocational Education program in Wise County. Therefore, we shall present some facts about vocational education that we thought you might like to know.

There are four vocational services in Wise County which are as follows: Business Education, Distributive Education, Home Economics Education, and Trade and Industrial Education. We have approximately 3500 students in high school, of which, 2900 are enrolled in one of the four vocational programs. This is good since 80% of the jobs available today are for people with saleable skills.

Let's take a look at each service individually, starting with Business Education. Business education is taught in each high school in Wise County. There are nineteen teachers employed to teach 1300 students. This is the largest vocational department in the division. Courses taught in the division are as follows: beginning typewriting, beginning shorthand, general business, stenography I and II, clerk typist I and II, accounting and personal typing.

Those students who complete a business education program will have a saleable skill.

Those students who have chosen a vocation which requires a college education find this program helpful, too. Some of the business education students are on a work-study program. This means the students are employed part time and are getting experience while in the training program.

Distributive education is taught in all the high schools in Wise County and at the Wise County Vocational Technical School. There are approximately five hundred students involved in this program which is taught by ten teachers. There is an exploratory program in each high school along with a cooperative program. Those students in the coop program receive on the job training along with their classroom instruction. These students are paid for their services by companies who wish to participate in our training program.

D. E. students in Wise County will earn approximately \$175,000.00 per year.

Distributive Education also offers a comprehensive adult program in the County. Emphasis is placed on the marketing, merchandising, and management fields with course offerings at the employee and employer level.

Consumer Home Economics is taught in each of the six high schools in Wise County and Occupational Home Economics - Clothing services and Occupational Home Economics - Food services are taught at the Wise County Vocational-Technical Center. The occupational home economics classes are used to teach saleable skills while the consumer home economics are more for a general education. However, the training and knowledge gained in consumer home economics provides an excellent background for some jobs.

There are approximately 500 students enrolled in Home Economics and there are eight teachers available to help with this program.

Employment opportunities are excellent in the Occupational Home Economics Service.

The Wise County Vocational Technical Center houses the Pre-Vocational Educational Program for the Disadvantaged youth. There are approximately 160 students enrolled in this program. These students aren't necessarily slow learners but are experiencing some difficulty in achieving success in the regular high school program. The difficulty they are experiencing in learning has caused the students to drop behind their classmates one or more years. This program is completely separated from the Trade and Industrial Education program. They have their own labs and classrooms and are on the campus all day.

There is another program on the campus called CETA (Comprehensive Education Training Act) which is for adults. These adults start their training at 2:00 p.m. with classroom instruction. At 3:00 p.m., after the shops are free of the Trade and Industrial Education students, the adults use the labs which were used by the high school students in the Trade and Industrial Education program during the day.

Enrollment for this program is made through the Virginia Employment Office.

The Wise County Trade and Industrial Education services is located at the Vocational Technical Center in Wise. It is an extension of each of the six high schools in Wise County and all thirteen trades taught at the center are available to all students, sixteen years old or older. It is recommended that students plan to start their technical program at the beginning of their junior year with two exceptions. Cosmetology should be started in the 10th grade and the licensed Practical Nursing program is for seniors only.

The Trade and Industrial Education program has enrollment of approximately 500 students in the first and second year courses. There are eighteen teachers for the thirteen trades. These teachers are used to teach the first and second year courses with second year students being taught in the morning and the first year students being taught in the afternoon. Let's take a closer look at each of the trades available.

Air Conditioning and Refrigeration is taught at the Wise County Vocational-Technical School in a new and modern laboratory. This course requires 510 clock hours (170 days of instruction per year) of instruction and lab work for two units of credit. The course objective is to familiarize trainees with the tools and materials of the trade to a degree that will give a decided advantage for successful employment in the field of refrigeration service.

Air Conditioning and Refrigeration introduces the student to all phases of Air Conditioning maintenance and installation. The course will consist of theory and practice of basic refrigeration principles, temperature and pressure relationships, basic electricity, electric motors, electric controls, and shop safety. Trouble shooting techniques are a very important phase of the training.

The auto mechanics program is taught at the Wise County Vocational Technical School. It is a two year program. However, students may take a third year for more specialized training. The course content is covered over a two year period with the theory learned put into practice on cars provided by the students. The cars should be family owned cars.

Those students choosing to attend for three years will do specialized work the third year. Two units of credit are earned for each year in the program. Placement is excellent and we aren't able to fill all the request for trainees in auto mechanics.

Approximately 50% of the students time is spent in the classroom studying related materials to the following:

1. Basic hand tools
2. General service procedure
3. Engine theory and service
4. Fuel system
5. Engine lubricating systems
6. Cooling system
7. Ignition system
8. Starting system
9. Charging system
10. Diagnosis and tune-up
11. Manual transmission and clutch assembly
12. Automatic transmission fundamentals
13. Drive line and rear axle assembly
14. Brakes
15. Suspension and steering
16. Ventilation system
17. Accessories
18. Body service
19. Career management

While the remaining time is in the lab working on live related projects.

Auto Body Repair is a two year program and is taught at the Wise County Vocational Technical School. Two units of credit are earned per year. The course content is covered over a two year period with what was learned in the classroom put to practice on cars provided primarily by the students. Cars may be provided by the schools, if necessary, for those who need one. Placement is excellent.

Approximately 40% of the student's time is spent in the classroom studying related materials pertaining to the following headings:

1. Use and care of tools
2. Welding and cutting
3. Techniques of shaping metal
4. Body filler and fiber glass repairs
5. Body and Frame
6. Removing and replacing of damaged parts
7. Basic automotive electricity
8. Upholstry and glass
9. Refinishing
10. Shop management

The remaining time is spent applying what was learned in the classroom to live projects under the direction of the instructor.

Bricklaying is a two year program. However, some students will register for a third year for specialized training and more practice on live projects. Two units of credit are awarded for each year of training. This course is taught at the Wise County Vocational-Technical School.

Employment opportunities are excellent.

Approximately 40% of the students time is spent in the classroom studying related materials and procedures. The remaining time is spent putting to practice what was learned in the classroom. Some of the topics covered as follows:

1. Introduction to concrete masonry
2. Materials in concrete masonry construction
3. Tools and equipment
4. General construction procedures
5. Types of concrete masonry construction
6. Reading construction drawings
7. Estimating materials and jobs

Carpentry is a two year program and is taught at the Wise County Vocational School. Some students may elect to take three years of carpentry with the last year being a more specialized program. Two units of credit are awarded for each year of training. The work of the carpenter is active and sometimes strenuous, but exceptional physical strength is not required.

The carpenter works both inside and outside. Employment opportunities are excellent.

Approximately 40% of the students time is spent in the classroom studying related materials pertaining to the following headings:

1. Orientation
2. Blueprint reading
3. Hand and portable power tools
4. Foundations and forms
5. Floor and wall framing
6. Roof framing
7. Roof covering
8. Exterior wall finishes and trim
9. Insulation, interior wall and ceiling finishes
10. Interior trim

11. Stair building
12. Pre-employment

The remaining time is spent applying what was learned in the classroom to live projects under the direction of the instructor.

Cosmetology is a three year program consisting of 2000 hours starting in the tenth grade to insure completion of the program before graduation. Students may acquire 510 hours of training per year for three years. Five hundred additional hours are required in related subjects such as math, science and anatomy which are taught at the high schools. After the student completes the required hours of training they must pass a written and practical test given by the State Board of Examiners. Those students who pass this examination must apply for a Registered Professional Hairdresser license from the state before practicing in the state. Students are required to wear uniforms while in training. Employment opportunities are excellent.

In the three year program for cosmetology the following will be covered:

1. General laboratory orientation
2. Manicuring and Pedicuring
3. Shampooing and Rinsing
4. Scalp treatments
5. Hair Styling
6. Hair cutting
7. Permanent waving and hair styling
8. Care and styling of wigs
9. Thermal waving and curling
10. Hair coloring and bleaching
11. Skin care and makeup
12. Salon Management

Drafting is a two year program and is taught at the Wise County Vocational-Technical School. Two units of credit are awarded for each year of training. The first year of drafting is a general course where basic drawing procedures are taught. By the end of the first year the students will elect machine drafting, architectural drafting, or civil drafting for their second year.

The following course description is for the first year of drafting. Each student will have some drafting experience by the end of the first year which will help them decide on one of the three options available for them before making a decision for the second year.

The general drawing course will have units covering the following:

1. Introduction to drafting
2. Drafting fundamentals
3. Geometric construction
4. Lettering and media
5. Orthographic projections
6. Dimensions and notes
7. Shop process and materials
8. Conventional practices and sectioning
9. Auxiliary views
10. Fasteners
11. Working drawings
12. Pictorial drawings
13. Intersection and developments
14. Charts and graphs
15. Cams and gears

Some exploratory drawing is done on structural drawing, architectural drawing, electrical drawing, piping drawing, and civil drawing. This is done to help the student decide what area to specialize in during the second year.

The second year course outline will be discussed in class before the students must decide on the area in which they want to specialize.

Electricity is a two year program and is taught at the Wise County Vocational Technical School. Two units of credit are awarded for each year of training. The employment opportunities are excellent in Wise County.

Approximately 40% of the students time is spent in the classroom studying related materials and procedures. The remaining time is spent in the shop working on experiments to verify principles learned in the classroom. The first year is spent on learning the fundamentals of electricity.

Some of the topics are as follows:

1. The atom
2. Dynamic electricity
3. Ohm's law
4. Electrical circuits
5. Magnetism and electromagnetism
6. Simple electrical generators
7. Direct current
8. Alternating current principles
9. Electric motors
10. Transformers
11. Voltage regulators
12. Power rectifiers.
13. Electrical measuring instruments

The second year of construction wiring and electric motor repair.

Some of the topics for the second year are as follows:

1. Introduction to the electric codes and standards,
2. Residential blueprint reading
3. Methods of wiring
4. Switching circuits
5. How to make electrical connections
6. Remote control wiring
7. Residential furnace controls
8. Installing service equipment
9. Grounding for safety
10. Remodeling wiring
11. Estimating electrical wiring

The Electronics program is a two year program which is taught at the Wise County Vocational Technical School. Students will earn two units of credit per year. Those students completing this course will be trained to do radio and T.V. repair and will have a good background for industrial electronics.

Good color vision is desirable.

Approximately 50% of the students time is spent in the classroom learning codes, symbols, and theories. The other 50% is in the lab constructing test projects. Other lab projects will consist of A.C. and D.C. circuits, build a radio receiver, construct power supplies, construct amplifiers, construct oscillators and construct various projects using printed circuit boards and semi-conductors (including intergrated circuits.)

The second year of electronics is taught by using live components with actual defects. The T.V. system is the basic training aide. Students must learn to use a wide variety of test equipment to troubleshoot the circuits.

Approximately 50% of the student's time is spent studying theory and circuitry in greater depth than electronics 1. They learn to troubleshoot, adjust, and repair the T.V. sets, test instruments, audio visual aids, and tape players. Students are taught to read schematic diagrams and study resistors, condensers, vacuum tubes, transistors, amplifiers, and transformers.

Machine Shop I is taught at the Wise County Vocational-Technical Center in a modern building that was completed in 1972. The shop is equipped

with 20% of the students' time. The student receives credit for his satisfactory completion of 100 hours in Machine Shop.

In Machine Shop I the students are taught bench work (the use of hand tools), layout work, inspection, sawing, lathe work, drill press operation, scraping and surface grinder operations. The student spends about 25% of his time studying shop theory, blueprint reading, and shop math.

In Machine Shop II the students review and practice what they have learned in Machine Shop I, plus they are taught milling machine operation, tool & cutter grinding, and heat treating. The student spends about 15% of his time studying Shop Theory, blueprint reading, and Shop Math.

Mine Machinery repair is open to 10th graders. However, it is recommended that students not enroll until their junior year in high school.

This course is taught at the Wise County Vocational-Technical School and two units of credit are awarded for each year of training. The employment opportunities are excellent in Wise County.

During the first year, general mining procedures are covered which includes first aid, ventilation, explosions, fire prevention, roof control, and use and care of hand and power tools to name a few items.

Modern machines are powered hydraulically. Therefore, considerable time is spent studying the hydraulic system. Some of the topics covered are as follows:

1. Introduction to hydraulics
2. Hydraulic fundamentals
3. Hydraulic pumps
4. Hydraulic motors
5. Hydraulic controls
6. Hydraulic Power Transmissions
7. Hydraulic fluids
8. Hydraulic accessory equipment
9. Application of hydraulic power to mining equipment

About 50% of the students time is spent in the classroom and the remaining time is used to work on actual mining machines provided by local coal companies.

The study of Economics and Related Occupations
This course gives the improvements in personal, family and community
living through the development of leadership as it relates to home and
family living.

Participation in these efforts is encouraged during school hours with
the specific purpose of fostering social development in the students as
well as skill development in their trade areas.

In addition to skill training and social development, another aspect
of the educational experience exists at the Vocational-Technical School.
This newly created student service is called the counseling and placement
office.

Counseling services at the Vocational-Technical School are designed to
assist students achieve educational, vocational, personal and social
goals. These services are directed toward increasing one's self-
understanding and optimum use of one's abilities.

Placement services on campus are twofold. First, the counseling and
placement officer will assist students to enter the skills training that
are most appropriate for them. Second, the service will aid employers
in selecting properly trained personnel. Students will be advised and
counseled in how to prepare for and to make the most of the employment
interview. Arrangements will be made for company representatives to
interview graduating students and contacts will be maintained with a wide
variety of potential employers.

In summary, the combination of skill training, social development and
student services provided to students at the Wise County Vocational-
Technical School is indeed unique. Where else can a high school student
accumulate marketable skills before completing his/her high school
education.

You are cordially invited to visit any of the Vocational Programs housed
at the high schools or at the Vocational-Technical School at your con-
venience when they are in session.

The Wise County Vocational-Technical Center offers a course in Practical Nursing which involves a total of 18 months training. The course is divided into two parts. The first part is called the Pre-clinical part and is taught for three hours per day for nine months during the students' senior year. The clinical part of the second part and is done after graduation. The student will be assigned to a hospital for nine months where they will get actual on the job training under the supervision of a Registered Nurse, hired by the county. They will train for eight hours a day during this nine months. Upon successful completion of the 18 months training the student becomes a Practical Nurse and is required to take a State Board Examination in order to become a Licensed Practical Nurse.

Welding is taught at the Wise County Vocational-Technical School. It is normally a two year program with an additional year for those students interested in a specialized type of welding. Two units of credit are awarded for each year of training. Employment opportunities are excellent.

Approximately 40% of the students time is spent in the classroom. The remaining time is used experimenting and practicing welding using both arc and gas methods.

In addition to the skill trades being offered on campus, another aspect of the educational experience which differs slightly from the regular school environment, is the co-curricular emphasis on three professional clubs: VICA, DECA, and HERO.

VICA, which stands for Vocational Industrial Clubs of America, is organized mainly for the development of leadership qualities on the part of trade, health, and technical students. It also deals with the development of character, responsibility and citizenship.

DECA is Distributive Education Clubs of America and deals mainly with preparing students for future employment in distributive and retail occupations while developing leadership qualities.