DOCUMENT RESUME

ED 110 623 CE 004 397

TITLE Industrial Arts Education: Purposes and Principles.
INSTITUTION New York State Education Dept., Albany. Bureau of Industrial Arts Education.
PUB DATE 72
NOTE 12p.

EDRS PRICE MF-$0.76 HC-$1.58 Plus Postage
DESCRIPTORS Educational Objectives; Educational Philosophy; *Educational Principles; *Guidelines; *Industrial Arts; *Program Design; Program Development; *State Programs; Teaching Methods; Trade and Industrial Education
IDENTIFIERS *New York

ABSTRACT

The New York State industrial arts education bulletin outlines four purposes, four principles, five program characteristics, five grade levels of the program's scope, six steps for designing a program, two instructional objectives, five instructional methods, and five organizations serving the industrial arts education needs of the State. (BP)

INDUSTRIAL ARTS EDUCATION

purposes and principles

The University of the State of New York
THE STATE EDUCATION DEPARTMENT
Bureau of Industrial Arts Education
Albany, New York 12224
1972

THE UNIVERSITY OF THE STATE OF NEW YORK

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Technology as a means - - -

It is imperative that education take the leadership in developing a new life style — a life style that is firmly rooted in the process of humanization — a life style which will free youth to discover and devote their intellectual and creative capacities to a system of learning which will mold a humane society ... a life style which will enable young people to develop the ingenuity needed to establish, in our society before it is too late, a fiduciary obligation to preserve our national resources and environment for generations to come ... a life style which will enable youth to couple the tools of industry and technology with the ethical and social vision to control the factors governing the destiny of mankind.

Commissioner of Education

March 10, 1971

This bulletin outlines purposes and principles that serve as a foundation for industrial arts education in New York State.

DEFINITION

Industrial arts education as a program is the study of the technology of our industrial society.

It is organized into a variety of courses which include learnings relating to planning and design, manufacturing, servicing, communications, power, and construction. It has a prime focus on tactile experiences that are relevant to the learner and consistent with identifiable needs of an individual.

PURPOSES

The curriculum includes those kinds of knowledge, experiences, and concepts which develop the learners' capacity to interpret and manage the technological society of the future rather than knowledge and experiences peculiar to a time or place. Industrial arts education, therefore, is predicated on the following:

- The need to understand and to manage the systems and products of technology.
- The need to include motivational activity in the process of education.
- The need to be informed, productive, and involved as citizens.
- The need to have a positive sense of self, which relates to good mental health and personal well being.

PRINCIPLES

A principle is defined as a distinguishable ingredient that imparts a characteristic quality. Those principles relating to the unique characteristics of industrial arts education are:

- The learning process with a focus on the 3-dimensional approach utilizing tools, materials and processes involves all of the individual's senses.
- Major components of content are derived from an analysis and synthesis of technological functions of industry.
- Manipulative experiences serve to fulfill the learner's inherent urge to build, construct, assemble and/or operate.
- The laboratory approach to learning provides a dynamic atmosphere that is characteristic of the world of work.

PROGRAM CHARACTERISTICS

The administrative organization of industrial arts education is an outgrowth of purposes and principles as established for a total program. A well developed, balanced program should have these characteristics:

- A breadth of offering to provide the best possible program for the individual learner.
- A learning climate that encourages innovation and experimentation.
- Instructional media for the efficient and effective presentation of lesson content.
- Sufficient time allocations for learning and student involvement at all levels.
- Coordination of the administrative supervisory, guidance, and instructional services for the implementation of program purposes.

SCOPE OF PROGRAM

Industrial arts as an educational program serving boys and girls, men and women, from early childhood to adult life, represents an organization of learnings and experiences of a technological nature. At each level, experiences are classified with consideration for age, grade and/or maturation level of the individual:

- The primary level correlates information and activity with man's functions as a worker and communicator.
- The intermediate level focuses upon the broad technologies of power, construction, and transportation.
- The early secondary level provides foundational experiences with tools, materials, and processes for the development of basic psychomotor skills, cognitive generalizations and favorable affective behavior.
- The secondary level presents indepth experiences in selected technologies to capitalize on the interests and maturity of the student and his need for identity with adult endeavors.
- Continuing education, professional or avocational, is offered for adults with varying needs, interests, and abilities.

IMPLEMENTATION OF PROGRAM

Instructional planning is based upon the purposes and principles. To have an action plan for implementation of a program design; it is essential to:

- Organize a program of studies that is flexible and responsive to changing needs.
- Develop program tracks so that students may achieve at their own level of ability.
- Provide opportunities for each student to individualize his own educational plan and to change as necessary to maximize potential.
- Emphasize direct, real and relevant tactile experiences with opportunity for problem solving and decisionmaking.
- Build facilities that are open and flexible with adequate and easily available resources.
- Evaluate the learning environment and learner performance to assure accountability at all levels.

INSTRUCTIONAL OBJECTIVES

A functional curricular design for industrial arts should include a sharply defined series of objectives. These objectives should be a planned component of a course or unit of instruction:

- Objectives should be stated in specifics that are measurable and achievable within established time limits.
- Objectives should be defined in behavioral terms and in words appropriate to the level of the learner.

INSTRUCTIONAL METHODS

Industrial arts education emphasizes opportunities for individual student involvement with materials, forces, and processes representative of a technologically oriented society. Implementation of instruction is based on the premise that all resources, tools, machines, materials, manipulation, and activity are considered as means or methods to be used in a shop/laboratory or other work environment. Particular attention is directed to learning through practical application, establishment of personal goals, and development of attitudes. The means or methods will culminate in the following:

- Promotion of self-confidence by fostering pride of accomplishment.
- Enrichment of the career guidance process through better understanding of our industrial society.
- Development of dexterity with tools and materials in performing fundamental processes.
- Interpretation of industry and its products to promote intelligent consumer understanding.
- Exploration of student interests, attitudes, and abilities in respect to work with tools and materials.

ORGANIZATION OF SERVICES

The total program of industrial arts education in New York State is served by the following:

- The State agency for the administration and supervision of industrial arts education is the Bureau of Industrial Arts Education, State Education Department.
- The teacher education centers for industrial arts education are located at City College of the City University of New York; New York University; State University College at Buffalo, and State University College at Oswego.
- The statewide organization for industrial arts educators is the New York State Industrial Arts Association chartered by the Board of Regents.
- The regional industrial arts associations affiliated with the State Association serve the professional interests of the individual teacher at the local level.
- The industrial arts programs at the local level are served by a professional corps of teachers and supervisors.