

file demonstration several times, with practice following each demonstration. The variation that affected probability of the correct response occurring was the length of sequence demonstrated before each practice period. Results indicated that the poorest performance, both during practice and on later tests, occurred when the entire task was demonstrated before allowing a practice period. The highest level of performance was achieved when the demonstration depicted a small segment of the total task with immediate practice and segments of the total task were presented in this procedure.

The main conclusion from this study is that a task presented in small segments of materials and manipulative skills can be learned more rapidly than a task presented in one large segment. This is one of the features common to programmed materials utilized in teaching manipulative type skills.

Psychological concepts relevant to the rate and size of instruction presented were reviewed by Carpenter (1971). He stated

Time is an independent factor in learning. Therefore, the rate of presentation of information in relation to the comprehension rate of students is a fundamental consideration. The presentation-comprehension ratio may vary, but these ratios interact with other variables. If these other variables are the amount of time in the lesson by the teacher, the quality and quantity of difficulty of the materials and the repetition. Therefore, the primary determination of the rate of presentation of a unit of information is a position which must be held for the instructional materials and methods.

These concepts should be considered by educators in the teaching process.

Therefore, it is suggested that the teacher present the material in small segments with immediate practice and segments of the total task were presented in this procedure. This study indicated that the poorest performance, both during practice and on later tests, occurred when the entire task was demonstrated before allowing a practice period. The highest level of performance was achieved when the demonstration depicted a small segment of the total task with immediate practice and segments of the total task were presented in this procedure.

but they never actually threaded a projector. A second group received three hours of individual laboratory instruction and practice on the projector. Results showed both groups to be equally proficient in threading the projector as measured by a performance test. However, the actual practice group took less time to perform this skill.

An application of the practice concept developed in these studies for shop, laboratory, or technical subjects cannot be overlooked by educators. Hoban (1960) stated:

The participation techniques studied in film research are closely related to feedback information on performance. Educational research has long since established the effects of knowledge of results in learning. When knowledge of results is added to participation, or otherwise incorporated in the methodology of film use, an increment in learning is generally observable.

Educators involved in the training of technicians, scientists, and skilled workers cannot neglect these emerging intellectual tools and their effect upon the teaching of manipulative skills.

In a study of visual aids in dental training, Yarb and Irlandsen (1960) taught part of the porcelain jacket and crown techniques by three methods: film alone, demonstration alone, film and demonstration together. The combined film and demonstration method was significantly better than the film alone method, a fact which might possibly be explained by the very small groups of eight or nine who saw the demonstrations, in contrast to the customary large demonstration groups.

Landwehr (1961) found that motion pictures, which can enlarge and slow motion, are a convenient way of demonstrating dental operations. Students who saw a film demonstration learned faster than the group instructed orally by the teacher.

Blair (1963) reported conflicting findings in the use of film. Large film demonstrations are superior to small groups at the high ability level.



Results showed that the film-loop class typed more rapidly, but that the control class typed more accurately; both differences were significant. The question posed by this experiment is: which is the desired goal in the teaching of typing.

Learning from Instructional Television

One of the most comprehensive surveys on the effects of learning from instructional television was reported by Schramm. (1962) He presented the findings of 425 experiments with adequate design, controls, and statistical treatments. In 393 of these experiments instructional television was compared with various forms of classroom teaching.

Evidence presented in these studies revealed that individuals learned efficiently from instructional television. An analysis of data comparing instructional television and classroom teaching revealed that in 85 percent of the cases there was no measurable evidence of the superiority of one or the other method, that in 21 percent of the cases students learned significantly more from instructional television, and in 14 percent of the cases significantly more was learned from classroom teaching.

Schramm's data presentation indicated that certain subject-matter areas were more appropriate to instructional television while others were taught more effectively by classroom teaching. He concluded that mathematics, science, and social studies were taught with a greater degree of effectiveness by instructional television than were history, the humanities, and literature. However, instructional television and classroom teaching produced about the same degree of effectiveness in health, language arts, and safety.

An interesting finding from this survey was that grade-level and subject-matter tended to influence the direction of significance. Schramm (1962) stated that:

In several cases, there appear to be interactions of importance between subject matter and grade level. Televised language skills have been found to be somewhat less effective than have other televised subjects at the early elementary-school level, although still, on an over-all basis, as effective as classroom teaching. Mathematics has been more effectively taught by television in the early grades than in high school. Televised social studies has been somewhat less effective in college than in the lower grades, and the humanities group also appears to have been taught less effectively on television at the higher-grade levels.

The evidence presented in Schramm's survey, learning from instructional television, indicated a wide variation in the effectiveness of learning subject-matter with reference to grade-placement. The nature of the subject-matter and the grade-placement of subject-matter were important factors in the effectiveness of learning from instructional television.

A number of studies conducted at the elementary and secondary levels favored teaching by television. When such differences exist they usually can be explained by conditions other than the mere fact of television transmission. Studies such as the Report of the National Experiment of Television Teaching in Large Classes," (1959) Teaching by Television," (1959) and Washington County Closed Circuit Educational Television Project (1959-60) are examples of studies where television did not carry the entire teaching load, but was used to augment regular classroom instruction. Therefore, television may reach its fullest potential when used to supplement regular classroom teaching.

Nacomber and Siegel (1957) investigated the novelty effect of television learning by students. Their findings indicated that students taught by television performed less effectively in comparison

with students taught by a conventional method in the second semester of a year-long sequence. There was no difference found in the achievement of students during the first semester. Kumata's (1958) study did not support these findings. He found that there was no difference in informational gain between students who had a prior course by television and those who were receiving this training for the first time. However, students with previous television experiences were significantly more favorable in their attitudes toward instruction by television.

Kanner (1960) conducted an interesting study regarding the intelligence levels of subjects and their ability to learn by television. He found that low-ability students learned more from television than from face-to-face instruction, while high-ability students learned more from face-to-face instruction. Studies by Klapper, (1958) and Pollack (1956) have produced mixed results about intelligence levels of subjects and their ability to learn. A plausible explanation for the differences is offered in the Cincinnati Study (1959) in which level of difficulty of subject-matter and instructor treatment are cited as possible determining factors. This study indicates the need for homogeneous ability-level grouping to prevent the loss of either high or low-ability students.

In a later study Kanner (1960) found "face to face" teaching to be superior to television in the immediate post-test situation. However, scores on retention tests, given a month later, revealed that the difference no longer existed. This study suggested that television-taught students retained proportionately more of what they had learned than conventionally taught students.

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(1950)

The "Bulletin on Higher Education" (1963) summarized an interesting study on the teaching of veterinary medicine. The School of Veterinary Medicine at Michigan State University found that television enhanced instruction in operative techniques. Operations on live animals and simultaneous surgery on cadavers, when alternately shown to large groups of students, resulted in greater medical dexterity for larger numbers in comparison with smaller numbers watching surgery at close hand. The same study revealed that diagraming procedures utilized with television presentations contributed to the superiority of learning by this media.

Learning from Variations in Instructional Media

One criticism of instruction through audio-visual media stems from its alleged reduction of participation and overt practice. Carpenter (1957) stated the following view on this criticism.

The criticism springs from lack of systematic thought about the full range of actions inherently involved in learning and the reinforcement of learning which results from these actions. Seeing and hearing are activities. Complex perception is activity. Thinking is action. Using symbols, abstracting, deducing, generalizing, inferring, and concluding are all activities intimately involved in learning. Learning is activity, but all forms of activity are not learning. Furthermore, different kinds of activity affect and facilitate or inhibit learning in different degrees. Covert activity may be more or less effective than overt activity depending on the level of development of the individual and the requirements of the learning task.

The following investigations indicate the nature of some of the research which attempts to answer this criticism.

Murnin and associates (1954) investigated three methods of teaching principles of electricity to naval trainees. The three methods were: (1) lecture-demonstration; (2) "wiring board" method, which allowed subjects to practice exercises on a mock-up of an

2. Individual work with differentiating assignments for different ability levels.
3. Interaction in the group.

electrical system; and (3) the "diagram" method, which permitted students to practice exercises on drawings of the wiring board. For purposes of evaluation subjects were administered a (written) test designed to inventory their ability to solve electrical circuit problems and their ability in practical application of electrical testing meters.

Results showed no significant differences among the three methods on overall learning. However, the meter sub-test showed the diagram and wiring board groups to be superior to the lecture-demonstration method groups in both schools. These findings indicated that the nature of the content may be a factor influencing the effects of practice.

Emerson and Wulff (1957) investigated a paired-associate learning task which required students to learn the names of eight electrical circuits. Eight of the circuits consisted of four pairs in which members of each pair were almost identical and, thus, highly confusable. Unstructured self-study was compared with a formalized paired associate learning procedure in which the circuit diagrams were presented one at a time and the learner selected the correct circuit from a list of the eight named. Results of the experiment indicated that both methods of training were relatively inefficient because of the difficult learning task. However, the learning was considerably more rapid under conditions of unstructured self-study than for the paired-associate method. These results, like those of Newman's, (1957) emphasized the necessity for analyzing a learning task and ensuring that appropriate practice and clues are provided in a formalized learning sequence. Any attempt to develop and apply a science of teaching without a consideration of these concepts is to negate the performance attained.

experimental group scored higher than the control group. The groups did not differ significantly on the written test. The reinforced

Galpersin (1957) found that watching another person perform, with close attention, produced better orientation to a task than the individual trying it from the outset.

Jones (1959) found that specially prepared study guides used by individual pupils had the same practical value as the usual types of teacher-directed activities.

Johnston (1956) used one hundred and six college students in a course in general electricity over a period of two years to determine the superiority of teacher demonstrations over shop activities. Results showed that experiences in constructing models did not enhance final achievement in the subject.

Swanson and Aukes (1957) utilized six different treatments to teach fuel, hydraulic, and rudder control systems to aircraft maintenance technicians. Treatments consisted of: (1) operating mock-up; (2) non-operating mock-up; (3) cut-away mock-up; (4) animated panels; (5) charts; and, (6) symbolic diagrams.

Results showed no significant difference among the devices when a lecture was presented with them. However, when the lecture was omitted, significant differences were found in immediate recall for the hydraulic and rudder control systems, but not for the fuel system.

Newman and Highland (1956) investigated the teaching of technical material to Air Force trainees. Several classes were taught a five-day course in "Principles of Radio" by highly qualified instructors. A second group of classes were taught the same materials through the utilization of a tape recorder, and either a workbook or slides. In this experiment students taught by the tape-recorded lectures achieved levels of attainment similar to those of students taught by the instructors.

some of the gains favored the workbook group. No control group was employed and all subjects received immediate knowledge of results by different methods. In this study inexpensive materials seemed to

Summary

The teaching of manipulative activities by film, television, and programmed instruction was reported to be effective. It seems apparent from the studies reported that careful consideration must be given to the nature of the task to be learned. The learning of a certain task requires different types of observation and participation by the learner.

The most popular findings in the studies reported are that no significant differences were obtained among treatment comparisons. When significant differences were obtained, they seldom agreed with findings of other studies on the same problem.

Experimental evidence presented in this section indicates that learning takes place effectively under various kinds of instruction. Furthermore, in the area of visual display aids, the general indication from research is that picture and television have many advantages and applications in teaching manipulative skills. These methods of presenting information are considered in many studies for their relationship to learning theory. Developmental research is needed to bridge the gap between theory and practice.

Industry has found programmed instruction to be at least as effective as other methods of instruction. All the studies reported indicate that programmed learning results in less instructional time which to industry means a saving in man hours and money. This finding is important to those industries training individuals for any aspect of the world of work.

groups were taught by programmed instruction while the third group was presented the same material by the lecture-demonstration method. One programmed group used a text, while the other used a teaching machine.

NEW INSTRUCTIONAL APPROACHES USED IN VOCATIONAL-TECHNICAL EDUCATION

Experimentation or research in public vocational-technical education in the area of instructional techniques and/or the learning process is limited in nature. Although the present study was limited to the machine trades and related areas, the investigator felt the need to explore in greater detail how educational media are being used to train individuals for the world of work. The following training programs are using some form of individualized instruction:

- Adult Basic Education
- Job Corps Centers (men's and women's)
- Adult Education
- Community Action Programs
- Work-Experience Projects
- Neighborhood Youth Corps
- MDTA Programs
- Vocational Education Programs
- Technical Education Programs
- Community College

The purpose of this section of the study is to describe in detail the nature of three of these programs and how they utilize individualized instruction in their training programs.

North Carolina's Fundamentals Learning Laboratories System (1960)

North Carolina has established nineteen Learning Labs. Each is a part of the adult education services of an institution in the Community College System, and all but three are located in campus buildings.

Most students are enrolled in the Learning Lab to prepare themselves for the high school equivalency examination or to gain educational improvement or for remedial work.

In a second study by Hughes (1962) subjects were taught maintenance of the "083 Sorter" by programmed instruction and learned significantly more than subjects taught by the conventional

It seems worthwhile to review three of these studies which have implications for the present investigation of how educational media is being used in vocational-technical education. The first was presented by Jacoby and Nichols in 1952. The subject matter was of a motivational verbal type dealing with defense against atomic attack. Students were allowed to respond actively during predetermined intervals of the film through the device of a question and answer insertion during film competition intervals. Written responses were utilized rather than oral responses and feedback which followed the student's response was accomplished by announcement of the correct answer to each question rather than by picking from an oral piece showing

The study was concerned with the following three aspects of the media effect: (1) motivational response practice effects; (2) active response versus responding; and (3) the importance of feedback in the case of response correction. The major aim of the practice portion was demonstrated by comparing the results of the practice and non-practice groups with those of the active response groups. The results of the experimental groups with the given film active responses were compared to the control response effects and the to motivational effects in practice. The results were significantly different. The target of a lesson is demonstrated in all aspects of the practice response and the results of the practice and non-practice groups of giving the

film demonstration several times, with practice following each demonstration. The variation that affected probability of the correct response occurring was the length of sequence demonstrated before each practice period. Results indicated that the poorest performance, both during practice and on later tests, occurred when the entire task was demonstrated before allowing a practice period. The highest level of performance was achieved when the demonstration depicted a small segment of the total task with immediate practice all segments of the total task were presented in this procedure.

The main conclusion from this study is that a task presented in small segments of materials and manipulative skills can be learned more rapidly than a task presented in one large segment. This is one of the features common to programmed materials utilized in teaching manipulative type skills.

Psychological concepts relevant to the rate and size of instructional segments were reviewed by Carpenter (1957). He stated

This is an independent factor in learning. Therefore, the rate of presentation of information in relation to the comprehension rates of students is a fundamental consideration. The presentation-comprehension rates are not only related but these rates interact with other variables. If these other variables are the demands made on the learner by the material, the complexity and subjective difficulty of the material are most important. Therefore, the problem of determination of the rate of presentation of a body of information is a problem which must be solved for all instructional materials and methods.

These concepts should be considered by educators in the design of instructional materials and methods.

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Evidence presented in these studies revealed that individuals learned efficiently from instructional television. An analysis of data comparing instructional television and classroom teaching revealed that in 65 percent of the cases there was no measurable evidence of the superiority of one or the other method; that in 21 percent of the cases students learned significantly more from instructional television, and in 14 percent of the cases significantly more was learned from classroom teaching.

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Summary

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The first part of the document discusses the importance of maintaining accurate records of all transactions. It emphasizes that every entry should be supported by a valid receipt or invoice. This ensures transparency and allows for easy verification of the data.

In the second section, the author details the various methods used to collect and analyze the data. This includes both manual and automated processes. The goal is to ensure that the information is both reliable and comprehensive.

The third part of the report focuses on the results of the analysis. It shows a clear upward trend in the data over the period studied. This suggests that the implemented measures are having a positive impact on the overall performance.

Finally, the document concludes with a series of recommendations for future work. It suggests that further research should be conducted to explore additional factors that could influence the results. This will help to refine the current model and improve its accuracy.

THE HISTORY OF THE UNITED STATES

The history of the United States is a story of growth and change. It begins with the first people who lived on this continent. They were hunters and gatherers who lived in small groups. Over time, they learned to farm and raise animals. This led to the development of permanent settlements and the growth of civilizations.

In the 15th century, European explorers discovered the Americas. They brought with them new technologies, including sailing ships and firearms. The Europeans established colonies in North America. These colonies grew into independent states. In 1776, the United States declared its independence from Great Britain.

The new nation faced many challenges. It had to build a government and a legal system. It also had to deal with conflicts with Native Americans and other European powers. Despite these difficulties, the United States emerged as a powerful and influential nation.

In the 19th century, the United States expanded its territory. It acquired new lands through purchase and conquest. This led to the development of the West and the growth of the economy. The United States became a world power and played a major role in the American Civil War.

In the 20th century, the United States became a superpower. It led the world in science, technology, and industry. It played a key role in the defeat of the Axis powers in World War II. The United States also became a leader in the space race and the development of nuclear energy.

The United States has a rich and diverse culture. It is a melting pot of different ethnicities and religions. This has led to the development of a unique American identity. The United States is known for its freedom, democracy, and innovation.

The United States has made many contributions to the world. It has led the way in the development of the airplane, the automobile, and the computer. It has also been a leader in the fight for civil rights and social justice.

The United States is a country of opportunity. It has attracted millions of immigrants from all over the world. These immigrants have helped to build the United States and make it a better place for everyone.

The United States is a country of hope. It has the potential to solve the world's problems and create a better future for all. We must continue to work together to make this vision a reality.

MATHS

Binomial Theorem
Combinatorial Measurement of the
Roots of Equations
Applied Electricity
Boiler Work
English Grammar
Plot of a
Local Problems in Algebra
Ship Work Book 1
Safety

Ship Work Power of Ten
Field Sketching Practices
Reading Engineering Drawings II
How to Read Codes
Work Cutting
Beginning Work with Equations
Translation & Transfer
Boiler Work Book
General Practice

PHYSICS

Reading Engineering Drawings
Reading Engineering Drawings II
Combinatorial Measurement of the
English Grammar - Translation &
Applied
Boiler Work
Boiler Work Book
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Safety
Local Problems in Algebra
Ditto Book Questions
Mechanical Applications & Special
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GENERAL OFFICE CLERKS

Effective Business Letters

Effective Letters

Business Math

Reading & Evaluating Financial Reports

English Grammar

Spelling

Spelling Improvement

Basic Bookkeeping

Quick & Accurate Shorthand

Life Insurance

The Accounting Process

Safety

First Aid

Income Tax

Filing Skills

Vocabulary (office)

Cutting Office Costs Through Work Simplification

Payroll Record Keeping

Cash Register Operation

Principles of Accounting (Management Edition)

Improving Your Writing

How to Follow the Stock Market

How to Get Along With Your Bank Statement

Personal Hygiene

FEDERAL MACHINE OPERATOR

Binary Math

Computer Math

Computer Programming

Algebra I

Business Math (Payroll)

Business Math (Bank & Finance)

English Grammar

Spelling

100 Computer

100 Dependence

100 Computer

100 Computer

Introduction to Data Processing Systems

The Accounting Process

Advanced Computer Programming

Computers: Business & Scientific Applications

Safety

First Aid

Filing Skills

Applied English

Personal Hygiene

How to Follow the Stock Market

How to Get Along With Your Bank Statement

CRAFTSMAN

Algebra I	Visualization & Transfer
Algebra II	Applied Electricity
Plane Geometry	First Aid
Applied Trigonometry	Safety
Reading Engineering Drawings	Solid Geometry
Logarithms	Sections Drawings
Slide Rule Fundamentals	Sheet Metal Layout
Mechanics	Beginning Work with Equations
Verbal Problems in Algebra	Venereal Disease
Field Sketching	Creativity

ELECTRICAL APPLIANCE REPAIR

First Aid	Electrical Language
Safety	Reading Engineering Drawings
Basic Electricity	Construction Measurements Skills
Elementary Electronics	Shop Math - Algebra
Fundamentals of Electricity	Basic Transformers
Applied Electricity	Generation of Electricity
Basic Electronics	Beginning Work with Equations
Static Electricity	
Auto Service - Electrician	Systematic Trouble Shooting for Refrigeration & Air Conditioning Systems
Algebra I	Basic Hand Tools
Slide Rule Fundamentals	Venereal Disease
Basic Electricity	Original Electrical Trouble Shooting

AUTO SERVICE CENTER & AUTO MECHANIC

First Aid	Gears - Spur Gears
Safety	Gears - Gears Ratios
Business Math - Algebra	Gears - Installation
Shop Math - Area & Volume	Gears - Worm & Worm Gears
Basic Engine Lubricants	Gears - Bevel Gears
Engine Component Concepts I - II	Chain Hoists
Electrical Language	Beginning Work with Equations
Generation of Electricity	Basic Hand Tools
Torch Cutting	Venereal Disease
Engines	Principles of Hydraulic & Pumps
Oxyacetylene Welding	Basic Hydraulic Fuel Pumps
Civil Service Mechanic	

BUILDING MAINTENANCE

Reading Engineering Drawings	Field Sketching Practices
Construction Measurement Skills	How to Read Scales
Basic Math Measurement	How to Measure Board Feet
Applied Electricity	Gas Welding
English Grammar	Torch Cutting
Spelling	Civil Service - Carpenter
First Aid	basic Hand Tools
Verbal Problems in Algebra	Tapes and Squares
Shop Math - Area & Volume	Business Math - The Pay Check
Shop Math - Algebra	Pipefitting
Safety	Venereal Disease
Basic Math	

AUTO BODY

First Aid

Safety

Torch Cutting

Oxyacetylene Welding

How to Read Scales

Ratios & Proportions

Business Math - Payroll

Vocabulary Growth

Chain Hoists

Venereal Diseases

Basic Hydraulic Fuel Pumps

Principles of Hydraulics & Pumps

LANDSCAPES

First Aid

Safety

Field Sketching

Basic Math

Construction Measurement Skills

How to Read Scales

Venereal Diseases

An Integrated Experience Approach (Oakland Community College) (1967-1968)

Oakland Community College has established a unique "systems approach" or "integrated approach" to learning. Emphasis is placed on student learning rather than on the mechanisms of teaching. It requires that a major portion of the learner's time be spent in independent study and only a minimum amount of time spent in traditional group learning. The program requires the staff in a particular area to identify as clearly as possible those responses, attitudes, concepts, ideas, and manipulatory skills to be achieved by the student. The staff then designs a multi-faceted, multi-sensory approach which will allow the student to direct his own learning activities to attain these objectives.

The responsibility for learning is on the individual student as he maintains close personal contact with the instructor. The learning activities are organized in such a way that students can proceed at their own pace, filling in gaps in their background information and omitting the portion of the program which they have covered at some previous time. However, students must meet designated evaluation periods. The nature of this approach lends itself to the use of every type of educational media available and attempts to align the exposure to these learning experiences in a sequence which will be most effective and efficient. The kind, number and nature of the media involved depends on the nature of the subject under consideration.

This system differs from the written programmed instruction and the conventional lecture laboratory approach in several important ways:

"1. Most subjects require that a student receive a variety of learning experiences to become properly informed about them. The conventional teaching system recognizes this requirement and attempts to fulfill it through the scheduling of lectures, laboratories, recitations, etc. In the integrated experience system, these activities can be organized in a stepwise fashion with a reduction in the disassociation in time and space encountered in the conventional approach, while at the same time the logical learning progression characteristic of written programmed instruction is retained. Further, the learning events need not be limited to the vicarious participation of the student through his reading only, as in written programs. Hour-long lectures of necessity cover several units of information. Some of these topics are covered more meaningfully when there is associated with them, student involvement through experimentation, observation, textbook reading and other appropriate activities. The limitations of time and physical facilities make this kind of integration unfeasible under the conventional system but are clearly practical under the integrated experience system utilizing audio tape programming.

2. In the audio-tutorial booth the voice of the instructor provides timely information, definitions and parenthetical expressions with minimal effort for the learner. These helpful aides are often omitted from a student's study because of the inconvenience involved in looking up words, and because such thoughts seldom fit well as a part of a written text. The tone of voice places emphasis on important points and expresses authority not sensed through reading the written word." (1964)

INSTRUCTIONAL MODEL - The instructional model is made up of three elements (assemblies, learning laboratories, and progress evaluations) maximizing three principles of learning (motivation, activity, and knowledge of results) and is designed to produce learners who will complete the specified requirements.

LEARNING LABORATORIES - Laboratories and faculty members are available to the student as he learns to follow the instructional sequence directed by the faculty. Maturity and independence must be exercised by the student in using these laboratories. There is

always the opportunity for close personal contact with the faculty and is a major feature of the approach.

LEARNING RESOURCES CENTERS - These provide resources and facilities to supplement the instructional program. Available are printed and audio-visual materials.

OBJECTIVES - 1. To provide the first two years of college parallel to the requirements of four-year institutions.

2. To provide post-high school vocational and technical training.

3. To provide community services meeting the educational, cultural, and recreational needs of the Community College District.

4. To provide general education for the development of a broadly educated person who is capable of thinking and communicating effectively, making relevant judgments, distinguishing among values, and making appropriate applications.

5. To provide opportunity for higher education for promising students with scholastic or subject deficiencies.

6. To assist students in self-evaluation and to direct them into their area of maximum potential thru counseling and guidance services.

PROGRAMS -

Transfer programs provide the first two years toward a bachelor's degree.

Associate of Arts Degree for students entering:

Education-elementary, secondary, special education
Engineering-chemical, civil, electrical, mechanical
Liberal Arts - economics, fine arts, law, political science,
social sciences, etc.
Science- biological, mathematical, physical, and later
pre-professional work

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The proposed center would be established within the context of the program in continuing technical education sponsored by the State Department of Technical Education and the University of Illinois. Such a center would have the following advantages:

- 1. The center directly affiliated with a graduate research program in education is in a unique position to conduct the development of the materials of distributed and design and test materials of the program.
- 2. The center directly associated with all the technical and professional programs in continuing technical education would be responsible for the development of the materials and procedures for the development and testing of distributed materials.
- 3. The center developed with the cooperation of the State Department of Technical Education and the University of Illinois would be in a unique position to conduct the development and testing of distributed materials.
- 4. The center developed with the cooperation of the State Department of Technical Education and the University of Illinois would be in a unique position to conduct the development and testing of distributed materials.

Individuals from the State Department, University of Connecticut, Central Connecticut State, and vocational-technical schools

Such evaluation would require the designing of research to assist in answering the questions related to the effectiveness of

various instructional approaches. This study would be an important function of the advanced graduate study of students

majoring in the various aspects of vocational-technical education. That the staff of the instructional materials resource center

should cooperate with the instructors of the various subject areas in determining the kind of materials needed, review

existing materials, purchase new materials, and edit teacher prepared materials. Instructors from the various subject fields

should be given time during the school year and summer to work with the staff of the center in developing materials.

The instructional materials center should be organized to provide the support and facilities needed to conduct experiments, research for the testing of instructional materials developed

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4. That the instructional materials resource center should start in the fall of 1967 and limit its operation to the development of materials in one subject area (automotives, electricity, etc.). The new center should also concentrate on developing materials related to the teaching of manipulative skills required in the selected shop area. The first effort could be patterned after the automated equipment laboratory used by the School of Education, University of Connecticut to teach students how to operate audio-visual equipment

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