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Scope of Study: The personnel organization in the school shop is a relatively new method of teaching. It is an effort on the part of the school shop to break away from the traditional, authoritarian type of shop procedure. This study was made to determine how widely this method of shop teaching is being used, and the approval given it by shop teachers. In initiating the study, a personal comparison was made of the old and new methods. The personnel organization was used for two years, then compared with twelve years of traditional teaching. A survey was made among Oklahoma shop teachers to determine their methods of teaching and their opinion of the personnel organization. Suggestions from various authorities were studied.

Findings and Conclusions: Many of the values received from personnel organizations cannot be measured accurately, since they deal with attitudes and concepts of democracy. Practical experience is given in an organization approximating industrial organization. Distinct advantages of the organization are increased efficiency, safety-consciousness, better use of time, added teaching time for the instructor.

ADVISOR'S APPROVAL _____

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PERSONNEL ORGANIZATION

IN THE SCHOOL SHOP

PERSONNEL ORGANIZATION IN THE SCHOOL SHOP

by

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CHAPTER I

PERSONNEL ORGANIZATION AS A NEW CONCEPT

Man, by his very nature, is a planning animal. His ability to look ahead, plan, and organize is the major factor which differentiates him from the lower levels of animal life. This ability has been the outstanding factor in the progress of mankind.

As long as there is work to be done by more than one person there will be a need for organization of some degree. "It has been said," write Mayes and Casberg (9-p. 136), "that if three men attempt to dig a ditch it is necessary to make one of them foreman and give him both authority and responsibility, if the job is to be accomplished with efficiency."

Society, as it becomes more complex, demands higher forms of organization. Almost every phase of life now is organized in the interests of efficiency, increased production, and greater benefits for the people concerned. Schools have found it necessary to organize; further organizations are made within the departments and individual classes.

Origin of This Study. A study of personnel organization for the school shop will be conducted to satisfy a felt need. Since such an organization is a relatively new method of teaching shop subjects, its value needed to be ascertained.

Educators are always willing to adopt new teaching methods, which they feel will increase the schools' efficiency. After new methods are tried, the values of the old and new need to be compared. A study of the values of the personnel organizations will sustain or refute their improvement over the traditional, teacher-dominated methods of teaching.

Needs for the Study. In recent years the underlying principle of education has been subtly changing. A school is no longer a regimental situation for teaching facts. Subject matter and skills are not forgotten, and American schools do not advocate a "soft" education, as they are often accused of doing. A concerted effort is being made by educators to teach subject matter and skills, plus desirable attitudes and concepts for democratic citizenship.

The school shop must keep pace with this trend; the shop class is a unique situation, and cannot be taught as a composition or mathematics class could, but it has the same goals to reach as do other departments within a school. A personnel organization may be an instrument for teaching democracy.

Very little material has been written on shop personnel organization. Many authorities mention it briefly in their writing, and recommend it as an approved method of teaching. They do not, however, explain specifically such a plan.

It was felt that shop personnel organizations were becoming increasingly popular among shop teachers, and that a plan which was being widely used needed some study before it was completely acceptable.

Methods of Research or Investigation. Very little secondary research could be done on this problem, but the writings of Struck, Groneman, Friese, Ericson, and others were read on this subject. Their comments are of a brief and general nature.

A project of on-the-job research was undertaken. The traditional type of teaching was done for twelve years, then the personnel organization was introduced into the shop. From a purely personal point of view, the organization type of work was far superior to the other. Other opinions were

needed; and it was necessary to know to what extent this method of teaching was being used. Questionnaires were sent to Oklahoma shop teachers.

The questions asked concerned the use of personnel organization, the methods of choosing officers, length of terms of officers, standing or temporary committees, duty responsibilities and their assignments, and the purpose of using a personnel organization.

The response to the questionnaires was exceptionally good, and comprehensive answers were given to the questions asked. Many questionnaires contained additional information for which no request had been made.

This research is philosophical in nature, expressing the views of those who answered the questionnaire. Most of the information is subjective; subject matter taught may, to a degree be measured, but there is no way to measure the other values students may carry with them into adult living.

Predicted Views of the Results of This Investigation. As a result of heightened interest in personnel organizations, of which this study is an evidence, it seems likely that additional work on the values of personnel organizations will be done in the near future, and that increased attention will be given to them in texts and professional writings of all kinds.

Films would be a good medium for demonstrating this method of teaching; and shop teachers could give demonstrations to civic groups or by means of television.

Teachers should take available opportunities to explain the organization to other teachers or groups. Administrators or supervisors, after studying the organization, could encourage its use.

An Analysis of the Plan for Presenting the Materials. In presenting this study, it is necessary to understand the historical background of

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such an organization; and the philosophies underlying the teaching of practical arts must be understood. A study of the aims of education will show the direct relationship between the aims of the teaching of industrial arts and the broad aims of education. The values of a personnel organization must be thought of in terms of both the aims of industrial arts and the broad aims of education.

In the succeeding chapter, a brief discussion of the history of practical arts education is given. It is necessary to take this look at history because the present culture is but one level of a continuum.

CHAPTER II

HISTORY OF PERSONNEL ORGANIZATION

One of the earliest personnel organizations is described in the Bible. Moses was literally working himself to death trying to oversee all the needs of his people. His father-in-law, Jethro, suggested that Moses appoint men to help him in solving the problems of the people.

Moses chose men for specific jobs for which they were best suited. According to modern personnel organizations, he appointed foremen over the various jobs that were to be done. (7-p. 74)

In the middle ages, men had few personal rights. Many of them were employed in forced labor for landowners, and subsistence was in varying degrees of servitude, according to the individual landowner's disposition. Some were more fortunate; they could carry on a family trade. A man whose family had a trade became an apprentice to a member of his family, and his life's work was arbitrarily decided for him. Working conditions remained virtually the same, generation after generation.

Industrial Revolution. At the time of the Industrial Revolution, the practice of handing a trade down from father to son was, to a great extent, discontinued; although there are perhaps examples of this kind of training still in existence.

The Industrial Revolution began in England in the last third of the eighteenth century, between 1760 and 1800. It had many stages, and it is impossible to determine the exact time of its beginning; however, state-supported industries existed in France a century earlier than the date of

the revolution's beginning in England.

The effects of the so-called "Industrial Revolution" were so quickly felt that it has been termed a "revolution", although strictly it was an evolution, since it sprang from far-distant causes and its process of development is still incomplete.

The beginnings of modern industry are like the beginnings of democracy or science. It would be absurd to assume that science began with Galileo or Descartes or that democracy did not exist before the American and French revolutions. However, the modern factory system actually came into its own in the age of the great technical inventions, the age of Hargreaves, Crompton, and Watt.

In the artisan's little room, where he was helped by two or three companions or by members of his family, little division of labor was necessary. Here the first machines were used; although they are usually termed "apparatus" instead of "machine", since they were manually operated.

After the beginning of the factory system, however, a task such as the making of pins had such divergencies of labor that perhaps as many as a dozen men were employed in the various operations. Machines were used which were operated by some power other than manpower.

A significant result of the factory system was that it changed places of habitation. Under the old, apprentice, family-inherited system, men could ply their work at any place they chose. After factories had been built, workers had to move their families to the location which had been selected for the factory.

Where a family or two or three men had worked together, hundreds now were closely associated in their work. A delegation of authority was

expedient.

Today the system of using machinery to produce goods, or articles of consumption not provided by nature directly, is so integral a part of our lives that we cannot conceive of life without it. In many phases of life the organization made necessary by the factory system carries over. In modern education, anyone in a supervisory capacity--a superintendent, a principal, a classroom teacher--has to understand that certain responsibilities must be given to those under his supervision, if for no other reason than as a means of helping them grow.

In modern organizations, industry or school, the very size makes necessary some sort of line organization.

Theories of Labor Relations. Labor problems seem to have had their beginning with the Industrial Revolution. There were four outstanding theories developed by employers prior to the personnel movement. These theories are listed by Scott, Clothier, and Mathewson (10-pp. 3-14), and are as follows:

- (1) The commodity conception
- (2) The machinery conception
- (3) The goodwill conception
- (4) The natural resource conception

In America, the labor problem has been dealt with in many ways since the Industrial Revolution. During the time the "supply and demand" or commodity conception was held, the laborer was given very little thought. The manufacturers' main concern was in producing. Workers were so plentiful that employers felt they were doing men a great favor by giving them work. The welfare of their workers was no concern of theirs! In this era labor

was considered as merely a commodity.

Later labor was thought of as equipment. When equipment breaks or wears out, it is discarded or replaced. Because of the many immigrants available for employment, laborers were of little value or concern to employers. The evidence of this is the "machinery conception."

Finally living and working conditions of working people brought the employers to realize that if their production were to continue to increase, their concern for workers must increase also. This awakening concern brought about the "goodwill conception."

Then the employer began to consider the fact that laborers were more or less like natural resources, and, unless conserved, would become more and more scarce; therefore, the "natural resource conception" was developed.

Those employers who believed that their employees were natural resources, not to be squandered, began giving the workers a voice in the policies of the factories; thus personnel organization became necessary. Personnel administration in manufacturing plants was necessary because of the acceleration of their industrial development.

Much has been written on personnel organization in industry, but little has been written on classroom personnel organization. The industry-type organization is too highly developed to be followed in the school shop.

Since the school shop is the place for students to work together, it is necessary for some sort of personnel organization to be in force to give the students the feeling that it is their shop. It is the purpose of this paper to set forth a workable plan of personnel organization for a school shop.

A personnel organization is the outgrowth of employers realizing the value of the individual in industry. The personnel organization in a school shop is indicative of the same line of reasoning; it is a democratic practice which the school follows from the lead of industrial organizations.

CHAPTER III

SCHOOL SHOP PERSONNEL ORGANIZATION

The teaching of industrial arts must fit into the overall program of the school. It is necessary to consider the general aims of education; the aims of industrial arts education logically follow the same pattern. The teacher of industrial arts must see his program in relation to the entire school; his philosophy must conform to the school's philosophy; he must never view his part of the school program in isolation, but as part of an organization.

Practical Arts Philosophy. Over two thousand years before the birth of Christ laws relating to useful learning were inscribed on stone, clay, and parchment. (3-pp. 1-26)

One of the earliest philosophers who advocated the teaching of practical arts was Plato (427-347 B.C.). In the Republic, he describes a community in which all persons work together for common purposes, each taking the place for which nature and training have suited him. He believed that all would achieve happiness and security through fitting employment of their diverse talents.

Comenius, who lived from 1592 to 1670, rebelled against the existing idea of education for only the aristocracy. He was a follower of Ratke's movement toward realism, and believed in pansophia, the doctrine of teaching students a little about a wide variety of subjects.

It was, of course, two centuries before Comenius's ideas were taken seriously. It was his beliefs that prompted Benjamin Franklin to establish

an academy in America in which practical arts were taught. Thomas Jefferson, when he founded the University of Virginia, held to Comenius's ideas of practical subjects; the idea was still so new that it created much discussion.

John Jacques Rousseau, who lived from 1712 to 1778, points out the practical aspects of education in Emile. This book was widely read in a world in which schools were Latin and Greek centered, and operated only for the children of aristocrats. A radical change advocated by both Comenius and Rousseau was teaching in the vernacular before teaching in Latin and Greek; it follows that practical subjects were a long way from actually being introduced into those kinds of schools. Rousseau was prosecuted by the government of France because of his novel, subversive approach to the problem of education.

Johann Heinrich Pestalozzi (1746-1827) followed Rousseau's teaching of individualistic education. He is known for using the object method of teaching. He believed that physical activity was the basis for learning.

Perhaps John Dewey's philosophy of education is the most widely accepted philosophy of modern educators, and shop teachers in general. A personnel organization is typical of the kind of education in which Dewey believed.

His theory, which he declined to call philosophy, was that education should be for life, and that situations should be set up in schools in which students could learn by participation. He did not advocate, as he has so often been believed to have done, that students could learn in a situation which they set up. They need the wisdom of a supervisor to help with that phase of their learning. He did believe that a student's following his

natural curiosity along directed lines was the essence of learning.

He and his contemporary, Theodore Brameld, believe that children's interests are more nearly the same as adults' interests than many people believe. For example, children select toys imitative of adult life-- dolls, carpentry tools, irons, guns. A personnel organization in a junior or senior high school is imitative, to a great degree, of industrial organizations, and directly bears out Dewey's and Brameld's theory along this line. (11-pp. 111-125)

The president of Massachusetts Institute of Technology, John D. Runkle, used the term "manual training" for the first time in 1877. This term was not inclusive enough of the things that were taught in the course, so the term "manual arts" was first used by Charles A. Bennett in 1894.

Manual arts, in all its implications, was broadened, enriched, and modernized later by Charles R. Richards, Dean James J. Russell, and Dr. F. G. Bonser of Teachers College, Columbia University.

"Industrial arts", under that name, dates back to 1910-1916. The term was coined because "manual training" failed to meet the needs of industry. Personnel organizations in school shops developed after the importance of the school shop's relation to industry was realized.

Regardless of terminology, industrial arts, as we know it today, has been advocated as far back as records go; however, only in recent times has it gained an acknowledged, meaningful place in the school curriculum.

Practical Arts versus Vocational Education. Practical arts education, of which industrial arts is a part, is to develop the basic skills in, and the understanding and appreciation of, useful or practical arts. In

secondary schools, practical arts education is a part of general education. The controlling objective is to help the learner determine an interest or lack of interest in certain areas.

Practical arts is an area of general education, not one special subject. The entire area (1) serves as a challenge and inspiration to students who find joy in making objects with their hands, (2) vitalizes the curriculum through handwork which is representative of the world of industry and crafts, (3) develops insights and appreciations through a combination of manipulative work and of related reflective thinking, (4) provides opportunity for creative and self-expressive work and exploration through a variety of material (5) contributes to industrial intelligence and understanding through information, observation, and study of working conditions in representative occupations, (6) unifies learning and integrates education through creative work that draws upon content from a number of areas of instruction, such as English, social sciences, physical sciences, literature, art, architecture, homemaking, agriculture, business, and industrial pursuits. (12-pp. 136-142)

Industrial arts is part of the broad field of practical arts, and has as its aim the same general aim as the other areas in that field. Specific aims, obviously, will vary with the areas of practical arts which are being taught.

Industrial arts is often confused with vocational education. While the school shop is training for vocations, it is not so inclusive nor conclusive as actual vocational education.

On the next page, Table 1 is a comparison of practical arts and vocational education. The phase of practical arts compared here is that of industrial arts. (12-pp. 136-142)

TABLE I
PRACTICAL ARTS VERSUS VOCATIONAL EDUCATION

BASIS OF COMPARISON	PRACTICAL ARTS EDUCATION	VOCATIONAL EDUCATION
Purposes	Nonvocational General Exploratory	Fit for definite employment
Grade level of Learner	1-6 sometimes Often required for grades 7, 8, 9 Optional in the senior high school	Usually 10, 11, 12 Often people not in school Sometimes part-time, evenings
Time allotment per week	One or two periods, 45-60 minutes each	Half-days usually
Nature of equipment	Light Inexpensive Portable	Sturdy, as used in industry Expensive
Relative emphasis on skills	Standards sometimes low, because of immaturity of students, lack of time	Skills equal to trade skills expected
Place of instruction	School	School Home shops Industry
Federal Aid	Needed, not available	Aided by such acts as Smith-Hughes, 1917 George-Deen, 1936

Broad Aims of Education. In the report of the Commission on the Reorganization of Secondary Education, appointed by the National Education Association in 1918, the relationship between the individual and society is described in this way:

The purpose of democracy is so to organize society that each member may develop his personality primarily through activities designed for the well-being of his fellow members of society as a whole. (4-pp. 26-51)

Organized education is relied upon greatly to achieve this aim; and to achieve the goal set up by the same Commission. This goal was:

Education in a democracy, both within and without the school, should develop in each individual the knowledge, interests, ideals, habits, and powers whereby he will find his place and use that place to shape both himself and society toward nobler ends. (4-pp. 26-51)

The next step, after establishing a purpose and goal for education in a democracy was the setting up of specific objectives. These objectives, also set up by the Commission on the Reorganization of Secondary Education, have become known as the "Seven Cardinal Principles of Secondary Education." They are listed as:

1. Health
2. Command of fundamental processes
3. Worthy home membership
4. Vocation
5. Civic education
6. Worthy use of leisure time
7. Ethical character

Since 1918, these principles have been a criterion for judging the effectiveness of education. No list of aims of education has been evolved to replace them, and they seem to be almost all-inclusive when the ends

expected to be accomplished through education are considered.

Aims Realized through Industrial Arts. Friese (4-pp. 78-81) lists three commonly accepted manipulative aims. These are:

1. To provide opportunities for boys to make and do things they like to make and do.

This aim contributes to worthy use of leisure time. It is especially important in modern times, when many doctors are prescribing hobbies as necessities for their patients' well-being, and when men are coming to have more and more leisure hours. No one questions the desirability of a boy's or man's learning to make repairs or do some form of handwork.

2. To provide training in common skills everyone should possess.

This aim contributes to worthy home membership. Most boys will become partners in establishing homes. They need to know that continued effort is necessary to keep a house, its surroundings, and possibly a car, in good condition.

3. To provide trade exploratory or try-out experiences in typical trades to assist boys in finding and testing their interests and aptitudes.

This aim is a definite attempt to meet the fourth principle--vocation. Exploratory experiences may reveal to a boy general or specific aptitudes; these explorations are responsible for increasing or decreasing a boy's interests along a particular line.

Friese (4-pp. 81-94) also lists five justifiable and achievable non manipulative aims:

1. To provide training in industrial art and industrial art appreciation.

This aim also contributes to worthy use of leisure time. Art in this case is applied to utilitarian objects which surround us every day. This aim

is to produce consumers, not producers, of these beautiful, utilitarian objects.

2. To provide a natural medium for guidance, educational and vocational.

This aim contributes to the principle of vocation. An industrial arts teacher should be qualified and willing to discuss requirements necessary for entry into any field of work which may be represented in his classes.

3. To provide interesting technical information about the occupations represented in the school shop and other closely allied occupations.

This aim again fulfills the fourth cardinal principle. Individual inquisitiveness is encouraged in students in their seeking to understand principles of construction and manipulation.

4. To provide studies in vocational economics closely related to everyday life.

If this aim is met, it may develop civic education. Specific economic problems between employers and employees, producers and consumers, may be studied. Employees' relationships among themselves may also make an interesting study.

5. To provide organized training in reasoning and problem solving.

Industrial arts gives boys a unique opportunity to build on their past knowledge and experiences and to achieve each time beyond former attempts. This makes for civic education.

No specific goal has been set up for teaching health or ethical character. Teaching of health in secondary schools is done simply as the need arises and for specific purposes. Obvious principles of health, such as regulation of air flow in the room, correct room temperature, and clean-

liness of the room itself, are incorporated in any teacher's routine duty.

Ethical character is not taught by precept; it is better taught by example. Boys learn from each other, especially if there is an organization through which the boys operate the class under their teacher's guidance.

One good means of teaching ethical character in the school shop is to teach the dignity of work. The idea that everyone has his own particular niche in the world, must perform his fair share of the world's work, and that widely different areas of work must be done, is not a new one. An industrial arts teacher has an unusual opportunity for training in cooperation and coordination of effort.

The freedom of movement and speech in a shop may make it necessary for a teacher to make it known that he will tolerate no profanity nor vulgarity. Again, example would play a leading role; boys quickly know which things are acceptable and which are not to a teacher.

Objectives Realized through Personnel Organization. A personnel organization in a school shop helps directly in the realization of three of the cardinal principles of education--vocation, civic education, and worthy home membership.

A personnel organization is based somewhat along the lines of organizations in industry, although it is much less complex. The sense of responsibility which a worker in industry must feel, is developed through a personnel organization. Boys learn the necessity of each one's fulfilling his responsibilities in order for the entire organization to function properly. They learn an independence as well as an interdependence.

Civic education and worthy home membership are taught almost without separation, since the home is the smallest unit of our culture. Boys learn

through the personnel organization to share responsibility, to accept suggestions and corrections from their peers, to provide leadership, and to be intelligent followers.

Development of proper attitudes is fostered through the personnel organization. Webster defines attitude as "state of mind, behavior, or conduct regarding some matter." Cooperation, dependability, self-reliance, honesty, orderliness, industry, and safety-consciousness are definite, desirable attitudes. (6-pp. 2-3)

These attitudes have unlimited possibilities from the personnel organization for development. Each boy must work with the others in the class; he must be depended upon to do his share, and at the same time he alone is responsible for performing his specific duties. He develops orderliness by being made to realize that each tool or piece of equipment has a place, and must be returned to that place after he uses it. He develops industry by being encouraged and aided in doing work of which he can justly be proud. Such habits are not developed overnight or even during one semester; "habits are developed and strengthened by practice." (6-p. 6)

Some basic values that may be drawn from a personnel organization are:

1. It broadens the pupil's development. He views the shop class from the viewpoint of a foreman, a tool checker, a clean-up worker, and from various other positions during the course of the year's work.

2. It increases interest in work. It is a student-operated organization not a teacher-dominated class which follows a set procedure and allows the boys no voice in its operation. A pride of participation in something worthwhile is established.

3. It relieves the instructor of routine work, and allows more time for actual instruction. This is an incidental value, since no teacher is likely to use a personnel organization merely to free himself from routine work.

4. It shows the pupil the value of responsibility. It is a working, sharing way of teaching responsibility. Many hours of lecturing could not approximate the worth of a group's cooperating in a real sharing of responsibility.

As a means of examining the feelings of other teachers of industrial arts on the value of a personnel organization, and of the extent of usage of the organization, a survey was made among Oklahoma teachers. The results indicated that most teachers used some form of personnel organization, depending upon physical factors involved, class sizes, and the preferences of the individual teachers. However, a fairly close pattern was followed.

The study of the history of education, and the perusal of philosophies of practical arts education, indicate that a personnel organization in a school shop is a step toward the fulfillment of the needs of American youth. It is a real working opportunity for life experience.

CHAPTER IV

PLANS FOR PERSONNEL ORGANIZATIONS

Webster defines "personnel" as the "body of persons employed in some public service, as the army, the navy, or in a factory or office." He defines the word "organization" as "the executive structure of a business; the personnel of management, with its several duties and places in administration; the various persons who conduct a business, considered as a unit."

Combining these two definitions, personnel organization could be defined, in relation to the school shop, as a managerial structure of students within the shop.

Part A

Suggested Shop Organizations

According to Groneman (5-p. 9) "there are as many variations of pupil-personnel plans as there are instructors who believe in such plans." The majority of these plans have approximately the same make-up or form. Generally it is the instructor's choice as to which plan or combination of plans he uses. The two plans to be presented are based upon general procedures used by most instructors.

Below is the roster of officers used in most programs:

- (1) General Superintendent
- (2) Assistant Superintendent
- (3) Recording Clerk
- (4) Tool Checker
- (5) Maintenance Engineer
- (6) Safety Engineer
- (7) Stock-Room Clerk
- (8) Finishing-Room Engineer
- (9) Librarian

Plan A. The instructor, in most cases, should appoint the officers of the organization during the first week of each semester. Possibly the only argument against this procedure is the fact that a new teacher, going into a school for his first year, would not know his boys well enough to place them in responsible positions. In this case he should solicit the help of those whose records show some qualities of leadership. Those selected hold office for four weeks, after which they are elected by the class during regular class period. In doing this they will be learning the procedure in exercising what will soon be their constitutional right, the right to vote.

The majority of each class will soon see the benefit of the organization and consider it their duty to help select the most capable persons to these responsible positions. Practically all students will have a chance to hold office and prove their ability as leaders. The officers may be elected for longer periods of time. This is considered a desirable variation.

Plan B. This plan gives the students no voice in the election of officers. The teacher uses a rotation type assignment plan in which each student accepts his responsibilities according to the designation of a chart. This chart may take varied forms; a satisfactory form, Figure 1, is illustrated on the next page. It is a rotation type chart, made from a plywood disc, with a plywood backboard. The numbers are placed between the radials for the inner disc to accommodate the number in the largest class. These numbers are assigned to students according to their alphabetical roll number.

The outside circle contains assignments arranged to match numbers on the center disc. Numbers are used instead of students' names because of

A ROTARY TYPE RESPONSIBILITY BOARD

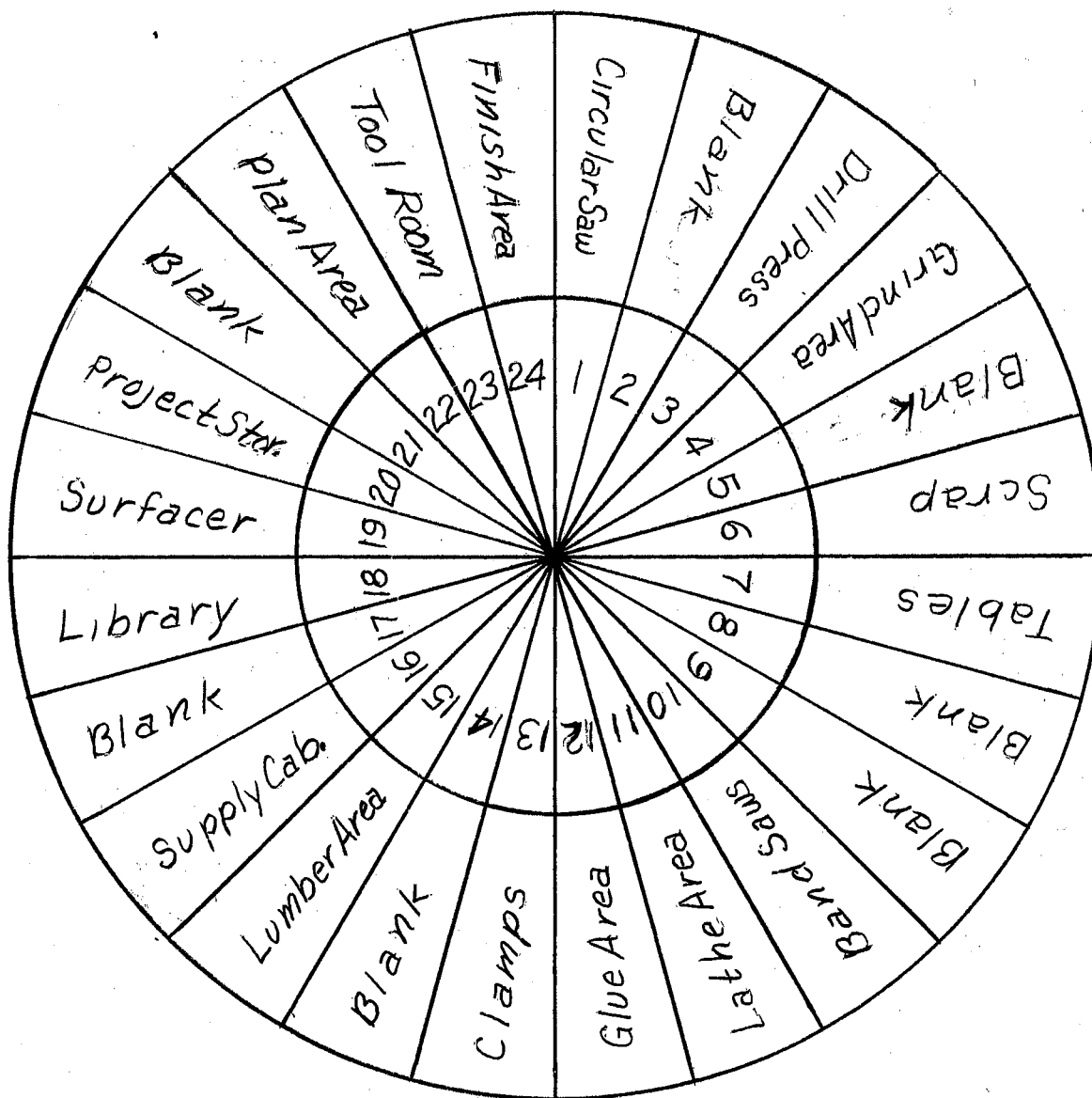


FIGURE 1

the lack of space. The disc is rotated in order to change responsibilities. An idea to use, which appeals to the play instinct of students, is to spin the disc, letting it stop at will; the students accept the resulting responsibilities. The rotation period is determined by the teacher and usually is weekly, bi-weekly, or monthly.

Officers and Duties

Each officer should understand the extent of his duties. He may be given a printed list of these duties; he cannot be expected to be conscientious in the performance of duties which are vaguely defined.

General Superintendent. He should devote a portion of each period to seeing that all officers are aware of their responsibilities, and are performing their duties as designated. He also assists the instructor whenever help is needed. Most of the responsibilities lie with the General Superintendent. He will probably be the last one to start work and the first one to stop, as his duties are to keep check on the other officers and report to the instructor anything that has occurred beyond the usual shop work pattern.

Specific duties to be performed by the General Superintendent may include:

- (1) General supervision over the other officers, and other members of the class.
- (2) Change the Assignment Responsibility Clean-Up Chart at the beginning of each designated period of time which the instructor selects. This will probably be weekly, bi-weekly, or monthly.
- (3) Report weekly grades for all officers on the General Superintendent's report card.

(4) Preside at Grievance Committee hearings.

(5) Confer with the instructor on matters pertaining to the welfare of the class.

(6) Act as receptionist to greet visitors to the shop, and to show them around.

Assistant Superintendent. This boy's duties are to assist the General Superintendent in all of his duties and to assume his responsibilities in case the General Superintendent is absent.

Recording Clerk. The Recording Clerk's duties are clerical in nature, and are performed at a time each day which conforms to the general policy of the school and department. These are his duties:

(1) Keep all required class attendance and tardy records, and file them in the office or on the desk of the instructor.

(2) Keep sufficient forms available for all officers to make their reports.

(3) Assist the instructor in keeping the progress chart up to date.

(4) Keep various types of permission forms on file for operation of machinery, accident reports for the Safety Engineer, and other shop forms.

(5) Collect notebooks, reports, and other related materials when they are due, and place them on the instructor's desk.

(6) Report to the General Superintendent when the detailed duties have been completed.

(7) Return to assigned work station or bench for dismissal.

Tool Checker. At the beginning of the hour, he sees that all tools are in their proper places. He helps the students in finding and checking out, perhaps by numbers, slips, or tokens, the proper tools. At the end

of the hour, he makes sure that all tools have been returned, and are in good condition. If tools are damaged, he must report minor damages to the maintenance engineer who makes repairs, and major damages must be reported to the instructor. He also should help the instructor in checking out or handling special tools. His specific duties include:

(1) Check tool panels or storage to see that all tools are in proper places at the beginning of the class period.

(2) Assist students in securing the proper tools when they need them. If a tool room is maintained, it will be necessary to have each student either fill out a slip for a tool, or bring in a number token which is hung in place of the tool which has been checked out. The technique of checking out tools will depend on the method of storage of tools employed by the instructor. If the open panel is used, it will only be necessary to see that the tools are in proper working condition.

(3) Check the tool panel or tool room at the close of the period to make certain that all tools have been returned and placed in their proper places.

(4) Report to the General Superintendent any tools which become damaged during the period, or which are not returned at the close of the class session.

(5) Make minor repairs, and adjustments on tools during the class period when called upon.

(6) Assist the instructor in checking out or handling special tools which are not stored in the tool room or on the tool panels. They may be special tools for machines, delicate machine tools and jigs, or forms used for special purposes.

(7) Sharpen and keep all tools in efficient working condition. This applies especially to one who is assigned to a tool room, and is not permitted to work on his project during the times he serves as Tool Checker.

Maintenance Engineer. The clean-up routine is his responsibility. He may help any student requiring assistance in his construction activities. His duties, specifically, are:

(1) Help any student requiring assistance or individual attention in his construction activities in the shop.

(2) Instruct each student in his specific duties in the clean-up routine. Take time out, if necessary, during the period, to demonstrate how an assignment should be performed.

(3) See that each student performs his duties in cleaning up the laboratory or shop at the close of the period in preparation for the next class.

(4) Make minor repairs on damaged tools.

(5) Have the General Superintendent and Recording Clerk assign a substitute for an absentee on the clean-up schedule for the day.

Safety Engineer. Lighting and ventilation are the Safety Engineer's responsibility. He should assist in fire drills, first-aid, and be alert for carelessness and dangerous work habits. He should check the shop, and especially the finishing room, at the end of the period. A detailed list of his duties includes:

(1) See that laboratory or shop is lighted, shades adjusted or blinds regulated, and lights turned off or on as necessary.

(2) Regulate window ventilation.

(3) Study and learn fire drill regulations for shop students. Be

ready to assist the instructor on fire drill routine.

- (4) Assist the instructor in first-aid treatments.
- (5) Explain safety posters to the class.
- (6) Be on the alert for dangerous work habits or careless workers.
- (7) Enforce laboratory or shop rules pertaining to general safety precautions.
- (8) Report all accidents to the instructor immediately.
- (9) Report in writing the cause and details of any injury received by a student.
- (10) See that all students wear aprons, have sleeves rolled, ~~and~~ neckties tucked in, *and have on safety glasses*
- (11) Change the safety posters on the bulletin board at least once a week.
- (12) See that all guards on equipment are used properly.
- (13) See that tools are kept off the floor.
- (14) See that all files being used have handles.
- (15) See that all obstructions, such as bench drawers, cabinet and locker doors, are kept closed.
- (16) Be on the alert for hot soldering coppers and hot metals left out in the open where someone might get burned.
- (17) See that defective tools are not used. Report defective tools, loose handles, and mushroom heads on cold chisels to the Tool Checker.
- (18) Inspect the laboratory or shop at the close of the period. Also check the finishing room for discarded oil and stain rags.
- (19) Check to see that metal waste containers are emptied daily.

Stock-Room Clerk. This boy keeps records of materials in the stock

room. He issues materials and supplies, and keeps the stock room neat and orderly. His duties follow this outline:

(1) Supervise the issuance of materials and supplies to the students in the class. If the instructor has a check-out system for materials and supplies, it will be necessary to make out the required form.

(2) Maintain the stock room or stock area in a neat and orderly manner.

(3) Call the attention of the instructor to the matter of materials and supplies which are running low.

Finishing Room Engineer. It is his duty to keep finishes on hand and to help students in finding finishes and equipment. He must see that the equipment is in excellent condition. He is also responsible for seeing that all finishing work is done in the finishing area. He must leave all brushes in a neat and orderly arrangement at the end of the hour, and must be sure that all oily or stain rags are in a safe place. His duties are these:

(1) Keep regular finishing material containers full at the beginning of each period. It will be necessary to check with the instructor for securing additional finishes to replenish the standard stock containers. Standard stock will include varnish, shellac, stain, fillers, alcohol, turpentine, lacquer, lacquer thinner, standard enamels in colors, and lacquer in colors.

(2) Assist any student who wishes to obtain finishing material or special equipment.

(3) See that equipment such as the spray gun, compressor, varnish, and paint are in excellent condition.

(4) See that all finishing is done in the finishing room or in the assigned area.

The extent of each officer's duties will depend upon how closely these details are followed. If these details are adhered to, the time of the instructor may be used for instructional purposes instead of tool checking, janitorial duties, and safety checking.

Possibly the only officer who will have a full time job will be the Tool Checker; that is, if the tool room system is used. When this system is used, the instructor usually provides some related work such as tool arrangement, care, and repair. When the tool panel system is used, the tool checker's duties are limited to seeing that tools are replaced at the end of the period and reporting any broken or missing tools before the end of the period. This gives him a chance to work on his individual project.

The overall purpose of a personnel organization is to promote maximum efficiency of all individuals concerned, with the very minimum of wasted time and effort.

The appearance of the class tends to boost class morale. It is not necessary to have uniforms, but if the class members have aprons alike, the group will look one hundred per cent better. Officers should wear some designating pin or card so everyone will know what their offices are. Other class members may wear cards with their names on them.

When a student assumes new responsibilities, he simply reverses his name card or covers it with his officer's card. Those who go out of office may reverse their cards and again wear the industrial arts insignia.

Part C

Mechanics of the Organization

All the members of the class need to be involved in the tasks to be done. Everyone needs to have a definite assignment; this contributes to his feeling that he is part of the organization, and that his participation is necessary to the operation of the shop.

Responsibility Assignment. As there will not be offices for each member of the class, those who are not elected or appointed to an office are to cooperate in the job of cleaning up the shop.

Cleanliness is a factor in student morale, and it is necessary to insist that the shop be clean at the end of each working period. It is the duty of each unassigned student to help keep his portion of the shop clean. These clean-up assignments can be made in various ways. Either the instructor or the General Superintendent may make the assignments, which may be for these areas in the shop:

- (1) Glue area, including hanging of bar and hand clamps
- (2) Supply area, replacing containers of screws, nails, and brads
- (3) Area of saws, jointer, shaper, surfacer, and drill press
- (4) Lumber area (within the shop)
- (5) Grinder and oil stones area
- (6) Lathe area

A workable class roll and responsibility board is shown in Figure 2. The board was developed several years ago by C. L. Hill, who is now Acting Head of the Industrial Arts Department at Oklahoma State University, Stillwater, Oklahoma. It was made for usage in the Daniel Webster High School, Tulsa, Oklahoma. It is in use there at this time.

CLASS ENROLLMENT AND RESPONSIBILITY BOARD

	PER. 1	PER. 2	PER. 3	PER. 4	PER. 5	PER. 6	IN	IN
	WOOD	WOOD	ELECT.	MATH	DRAW.	WOOD		
1	COLE	SMITH	HORNE	KENNEDY	SAMS	McELHAN	. 1 .	
2	BURNER	BERRYHILL	BURNER	ARTHURS	ROGERS	BARNETT	. 2 .	
3	COZORT	DENTIS	FULTON	BERRY	CARTER	BONN	. 3 .	
4	CARTER	ELSNORTH	GORM	BOZONE	DAVIS	CONTE	. 4 .	
5	2	HART	HAMM	CAMPBELL	ELLS	DAKT	. 5 .	
6		INGRAM	HOWELL	EAGLES	FAWN	EAGLES	. 6 .	
7			HURN	FOREHAND			. 7 .	
8				FULTON			. 8 .	
9				HORNE			. 9 .	
10				JACKSON			. 10 .	
11				MOUNT			. 11 .	
12				POWELL			. 12 .	
13				SMITH			. 13 .	
14				WILLIAMS			. 14 .	
15							. 15 .	
16							. 16 .	
17							. 17 .	
18							. 18 .	
19							. 19 .	
20							. 20 .	
21							. 21 .	
22							. 22 .	
23							. 23 .	
24							. 24 .	
25							. 25 .	
26							. 26 .	
27							. 27 .	
28							. 28 .	
29							. 29 .	
30							. 30 .	
31							. 31 .	
32							. 32 .	
33							. 33 .	
34							. 34 .	

59 1/4"

47 1/2"

1/2"

SECTION F-F

SCALE 1/8" = 1"

FIGURE 2

This board contains a vertical row of numbers on the left side, which show immediately the number in each class. Following are six vertical columns made up of several rectangular blocks which can be moved upward or downward. On each block is a small name card holder into which a small card, containing the student's name, station number, and office held, if any, is inserted. The General Superintendent and the Assistant Superintendent occupy the top two positions and are not rotated as the rest of the members of the class are.

Between each two name columns there is a blank strip upon which tape is put opposite the students' names. On these strips the various jobs are listed. Each class had its own job listing. This prevents necessary jobs going undone.

The strips containing the jobs are movable. By merely slipping the strip upward, it can be removed, giving access to the blocks for rotating them. These strips are so constructed that they are easily removed. The holes are made like an inverted keyhole. By pushing the strip into place on the screw head and downward, it locks. Only the instructor and the General Superintendent are permitted to operate the board.

On the extreme right hand side of the board is a strip containing two vertical rows of paired holes. A short length of dowel is used to place in each hole to check the attendance of the class. Above these holes a small block, upon which the word "In" is written, is on a wire so that it may be moved from one column of holes to the other, thus making the board ready for the next class check-in.

At the beginning of the semester each student is given a number which he keeps throughout the semester. This number serves as his check-in and

tool check number. Even though his name rotates through the length of the board, his number remains the same.

Selection and Training of Officers. Probably the most democratic system of placement of officers is simply to let the class elect them; therefore, the class needs to know the necessary qualifications for each office. The class may make a list of qualifications from their own ideas and experience; this list could be left on the board until the next day when elections are held. Special considerations should be given in the selection of a superintendent as he will be the leader.

Some instructors appoint their officers. This is a somewhat autocratic method, but there are arguments for it. The instructor knows the boys in the classes, and is able to choose leaders, whereas immature students would be likely to elect officers of less capabilities. The instructor, by appointing them, is assured of having persons with whom he can work. His appointments will probably be students who are in the habit of regular attendance at school, and who are from permanently established homes in the community.

In an article written by Carlton Dwight, of Central High School in Binghamton, New York, a novel plan is described. (2--pp.275-276) The list of positions is given to the class, and a description of the duties of each.

Each student is asked to study the jobs carefully, then select the one for which he considers himself best qualified, and in which he is most interested. Then he writes a letter of application.

The instructor considers the written applications carefully and selects the best three for each office. He discusses with each of those whose letters were not chosen, the reasons for their not being selected.

Personal interviews are held with the applicants for shop manager, or

General Superintendent, or whatever the title of the key position is. After his selection, he and the instructor jointly conduct interviews with other applicants, and selections are made.

This method follows the pattern of industry. It gives the boys valuable experience in writing letters of application, and the added experience of personal interviews. It does, however, take valuable time from the actual shop work the boys could otherwise be doing.

Mr. Dwight also discusses the training of personnel, which he considers a very important matter which should be taken seriously by the students and teacher if the organization is to operate smoothly and effectively.

This training can be done during the class session. At this time all the students can participate in the routine procedures and make the training program simpler. Having all the students present during the personnel training will serve a double purpose--that of training the present officers and of training those who will be officers in the future.

If each officer can take his assigned station during the training period, and actually perform his duties, it will help him learn the system much more quickly. While they are going through their duties, the rest of the class should be at their stations of work watching the procedure.

Personnel can also be trained, during idle periods, one at a time, although this would take up much of the teacher's time. If all officers could be assembled during an idle period, it would be to the advantage of all concerned.

An after school meeting could also be held, although this may not be considered the best policy. Most young people resent having their free time taken up by school business. However, if a teacher does a good job of selling the program to the students, after school meetings may be held,

and the students will cooperate.

During the training period, it is advisable to explain the various assignment systems and have students help select the one they consider the most beneficial. At the same time, officers' report cards can be explained. The officers should understand the significance of the cards--the fact that the training they receive in keeping these cards may lead to an executive position in later life.

In the personnel training period a teacher should not become impatient with the students. Point out their mistakes in a constructive and friendly way. This is one of the best ways to gain the confidence of the students.

If possible, the teacher should obtain written information on personnel organization in industries and businesses located in the community in which the students are likely to be employed later. This information can be presented as evidence to the class of the practicability of good personnel training.

It seems evident that a personnel organization is part of the American ideal of training for life. It is a means of finding leadership in the schools, and developing that leadership. It is a tying-in of school and real life situations; it is also the most economical method of shop operation, from the standpoint of both teacher's and pupils' time.

CHAPTER V

SUMMARY

Studies of a school shop personnel organization lead to the conclusion that the school shop program is more efficiently administered through the organization.

The need for such organization is evident from the nature of human beings, whose ability to plan and organize distinguishes them from lower levels of animal life. Organizations are made for efficiency, for the experience of working cooperatively, and from a functional need.

A survey made among Oklahoma shop teachers indicates that most of them are successfully using some form of personnel organization, and believe that it is beneficial to them. They listed as the benefits:

1. Developing leadership and responsibility
2. Setting up situations similar to industrial organizations
3. Freeing the teacher from routine duties
4. Giving students a feeling of importance and belonging
5. Creating interest, fellowship, and lessening discipline problems.

A study of the history of personnel organizations reveals that they have been in use in various forms since the earliest times of which we have records.

The Industrial Revolution, which was the beginning of modern industry, was also the beginning of the need for personnel organizations. It brought great numbers of men together. Some kind of line organization had to be devised, and the men had to learn to cooperate in their work and to coordinate their efforts.

A study of the philosophy of practical arts, of which industrial arts is a part, reveals that practical arts education has long been thought to be necessary for training for life. Plato, in the Republic, sets forth the theory that maximum happiness can be attained by everyone's training for the work for which he is best suited by nature.

Comenius and Rousseau, in the seventeenth and eighteenth centuries, also rebelled against the idea of education for only the aristocracy, and consisting largely of the teaching of Latin and Greek.

Pestalozzi, in the latter part of the eighteenth century, was famous for the object method of teaching, a method used widely by teachers of practical arts.

John Dewey, who died only a few years ago, was an ardent believer in the school's furnishing real life situations. Theodore Brameld, currently a professor of philosophy at the University of Puerto Rico, also believes that children's interests closely parallel adult interests.

Although practical arts is often confused with vocational education, their aims are different. Practical arts, or specifically industrial arts, is taught to younger students, and less time is allotted to its teaching. The courses in practical arts are nonvocational and exploratory; vocational education fits for employment. In vocational education, industrial, heavy equipment is used; in industrial arts the equipment is usually light, portable and inexpensive. Vocational education is aided by federal funds, and practical arts courses are not.

The broad aims of education are:

1. Health
2. Command of fundamental processes

3. Worthy home membership
4. Vocation
5. Civic education
6. Worthy use of leisure time
7. Ethical character

The teaching of industrial arts helps in the fulfillment of all of these aims.

The specific aims of industrial arts may be divided into two sections: manipulative and non manipulative. Manipulative aims include:

1. Opportunities for making and doing things boys like to make and do
2. Training in common skills everyone should possess
3. Exploratory experiences

Non manipulative aims include:

1. Industrial arts training and appreciation
2. Educational and vocational guidance
3. Information about occupations represented in the shop
4. Studies in vocational guidance and economics
5. Organized training in reasoning and problem solving

Each of these aims--manipulative and non manipulative--may be placed under the heading of one of the broad aims of education. This list of aims is also fulfilled through the personnel organization of the shop.

Specifically the personnel organization:

1. Broadens a pupil's development
2. Increases interest in work
3. Relieves the instructor of routine work
4. Shows pupils the value of responsibility

A personnel organization is a managerial structure of students within the shop. The officers may include:

General Superintendent

Assistant Superintendent

Recording Clerk

Tool Checker

Maintenance Engineer

Safety Engineer

Stock-Room Clerk

Finishing Room Engineer

Librarian

The officers may be appointed by the teacher, or they may be elected by the class. Many teachers use a combination of the two plans--some of the officers are appointed by the teacher and some of them are elected.

Each officer should be given a detailed list of his duties, so he will know exactly what is expected of him. Members of the class who do not serve as officers are expected to participate in clean-up and routine shop duties.

The assignments of these clean-up duties may be rotated regularly. The terms of class officers may also be determined by the teacher. Usually the General Superintendent's term is a semester or an entire year in length.

Various devices have been made for the rotation of duties. A wheel and a responsibility board are described and illustrated in Chapter IV.

Personnel should be selected carefully. If elected, they should be qualified for holding their offices. A careful explanation of qualifications

should be made to the class before elections are held.

Personnel may be trained by the teacher or may learn their duties as they perform them.

From the studies made, the conclusion to be drawn is that the consensus of shop teachers is that school shop personnel organization is worthwhile and a valuable method of operating a shop. It conserves pupils' time, since organization prevents confusion. It conserves a teacher's time in relieving him of routine duties. An organization in the school shop makes the shop a laboratory in which cooperative living is practiced.

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