SUGGESTIONS TO TEACHERS

The subject of clothing and the proper method of wearing clothes — called style — are of vital importance to every one for the following reasons:

(1) Proper clothing or costume gives us a feeling of dignity and self-confidence; improper clothing gives us a feeling of depression that goes with a lack of confidence. We all have more or less the proper desire to conform to the standards of dress called fashion. But one should try to be becomingly and appropriately dressed as well as fashionably dressed.

(2) In addition, every one has an honorable ambition to make a pleasing impression. Such an impression is due in a large degree to the pleasing appearance which can be best developed through the proper use of clothes.

(3) From ten to twenty per cent of our income is spent on clothing. With a limited amount to be spent thus, — and clothing an important item in our success,— it follows that the question of clothes presents a serious problem. How to buy economically and conserve the clothing we purchase is one of the most important matters in our personal and financial success.

If these things are true, why is the subject of clothing and style difficult to teach, even when students realize its importance? Because the subject is based upon some of the principles of (a) efficient production, (b) efficient distribution, and (c) efficient consumption of clothing, which in turn depend upon certain principles of biology, physics, chemistry, art, sociology, psychology, economics, etc. These, like all technical principles, are uninteresting and abstract unless they are the outgrowth of experience. In other words, in order to make them interesting, there must be an apperceptive basis or a background of experience.

To illustrate: the principles of the various sciences, etc., that are used in the proper understanding of clothing are:
I. Biology. (a) How to develop the best growths of cotton, wool, silk, etc.; (b) why wool from the dead sheep's back is not so good as wool from a live sheep's back; (c) the destructiveness of moths and moulds, and how they may be prevented, etc.

II. Physics. Characteristics of the raw fibers made into cloth that is adapted to meet the needs of human life; the absorbing power of perspiration, elasticity of silk, luster, softness, strength, power to protect from cold, warmth, etc.

III. Chemistry. Characteristics of the raw materials that allow them to be bleached or washed; removal of soil and stains; laundry operations, etc.

IV. Art. The effect of lines on the figure, artistic points of the human anatomy, etc.

V. Sociology. Principles of human nature that explain the needs of clothing and changes of style. Political, social, and religious differences that influence clothing, etc.

VI. Psychology. Principles that explain the effect of line, color, dress, on the mind of the wearer and of the observer, etc.

VII. Economics (Science of business). Principles that explain the best ways of making, buying, and selling clothing.

It may be asked, What is the most interesting manner of presenting the subject of clothing to a class of beginners?

This question can be answered intelligently only by considering the various methods of presenting such a subject.

There are two methods: (1) study of abstract principles followed by observation, illustrations, experiences, and (2) thinking about the illustrations and experiences in such a way as to bring out the principles.

The first method may, for want of a better name, be called the logical method of presenting the subject. It begins with the individual principle and illustrates it. It may be used to some degree in colleges and higher grade technical schools where the students are a selected group with the ability to do abstract thinking and preparing to become experts, research workers, etc. But this method has no place in technical or vocational schools of secondary grade, where the students are beginners and many distinctly motor-minded, and where power of thinking in abstract terms is very limited.

The second method may be called the psychological arrangement,
because it starts with an experience or a situation familiar to the student, and not with an abstract principle. It is the most effective and the one recommended in teaching clothing and other technical subjects.

Since the psychological method is the best for beginners, the next question is, How shall we arrange the topics according to this method? By means of a trade analysis of the subject of clothing. That is, by making a careful study of all parts of clothing and noting the practices, principles, sciences, etc., involved in the manufacture, design, and use of wearing apparel. Then listing all these principles and arranging them in order. Then selecting experiences or observations or tasks, called projects, each one involving as far as possible an actual trade or clothing practice.

These projects, "jobs," or plates are to be arranged in definite progressive teaching order, so that each is an outgrowth of the previous one. If any project or plate is too difficult for a student to perform, then simpler projects or jobs must be substituted, so that the student may be able to accomplish each project with a degree of success in order to inspire confidence in himself and develop his reasoning powers. Such a list of projects, jobs, or plates for a course in trade is spoken of as Trade or Occupational Analysis.

Each project or job must be carefully analyzed to determine the principles of (1) manipulative skill, (2) art, (3) mathematics, (4) chemistry, (5) physics, (6) biology, (7) economics, (8) history, (9) psychology involved.

With the introduction of these projects, etc., we are able to join the practical knowledge with the technical knowledge and thereby provide the training for intelligent use of the manipulative skill.

To show the importance of related technical knowledge, let us consider the project of making a costume. Let us consider first the raw materials of the costume — raw cloth. Of what is the cloth composed? — Fibers, or short lengths of fibrous material from the seeds of plants (cotton), stems of plants (flax, hemp, jute), fibers and soft hairs from the coverings of caterpillars (silk), backs of sheep, goats and camels. These fibers differ in quality, growth, softness, warmth, curling, felting, etc. — properties which can be explained only in the terms of the science of living forms — biology and physics.

These fibers are drawn out and twisted into yarn, and then woven
SUGGESTIONS TO TEACHERS

into cloth of different kinds. They are then dyed or colored to appear more beautiful. The principles of the drawing, twisting into yarn and weaving into cloth, etc., strength, elasticity, applying luster, coloring, and processing can be explained and understood only by aid of a knowledge of physics.

The action of stains and laundry processes depend upon the principles of the chemistry of the fiber and the structure of the cloth.

The lines, color, and luster of the costume influence to a marked degree its attractiveness on the wearer, and this influence can be explained only in terms of psychology.

The principles of the design of the fabric and costume, called art, explain why fabrics and costumes appear beautiful to us.

The history of clothing and fabrics shows that the style of fabrics and clothing has been influenced by historical events (such as the French Revolution) both political and social, by various monarchs, etc., and by the religious beliefs of races of peoples.

Since everyone desires to obtain the most out of clothing and to receive the maximum value for each dollar spent, the influences that determine the manufacture, cheapness, and utility of fabrics and costumes are of great interest to all. These can be explained only through the principles of economics.

Mathematical principles are utilized in the drafting and grading of patterns, straight and curved lines, etc., in addition to calculating costs, shrinkage, etc.

We might say that a course in clothing embodies really the principles of art, chemistry, physics, biology, economics, history, psychology, and mathematics underlying the manufacture, design, and fabrics of costumes, and is really the related technical knowledge of the practice of making clothing. Therefore, a study of clothing provides for not only technical intelligence, but also, as a by-product, general education — some principles of art, physics, economics, psychology, etc.

To illustrate let us consider the project of making a fall suit for a stout blond girl, seventeen years old, who works in an office and earns fifteen dollars a week.

The project analysis to be arranged as follows:
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The ideal way of considering and studying the related technical knowledge is to provide this instruction parallel to the practical work, so that in addition to the personal habits — neatness of dress, etc., — or more general habits — working neatly, planning and executing the work systematically — there will be developed a thoughtful way of doing the practical task. That is, there will be a reason in the student's mind for each operation.

The subject of each lesson may be imparted either by the lecture or development method.

The lecture method may consist of reading or dictating notes, or presenting the subject in an oral manner. While it is possible by this method to impart information quickly, it is effective only if the students have a background of experience that will serve as a foundation for the information of the lecture, that is, an apperceptive basis. It may be used with some degree of success in colleges where students are mature and are able to think and discuss subjects in the abstract. It may also be used to some extent in evening classes of those already engaged in the trades, but as a rule the lecture method is not effective to a class of beginners. Dictating notes is a waste of time — it is far more economical to give out printed or mimeographed paper.

A better and more effective method of presenting a subject to beginners is to begin with the experience of the students, and, by means of questions, bring out information pertaining to the subject based upon
past experiences by well-directed questions and objective teaching. That is, the teacher begins by showing the importance of the subject (to gain interest), then by well-directed questions brings out the students' experiences. The answers are arranged, supplemented, and summarized, and then applied to the new situation. This method is called the development method, and while it is slower than the lecture method, it is far more effective with the average beginner.

Technical information, regardless of its value, is uninteresting and difficult to understand by the beginner. Therefore, it should be imparted in a form that will hold interest and that can be easily assimilated. This means that the principles will not be taught completely as outlined in the unit system of instruction, but in fragments, as required in the spiral system of teaching. To illustrate: In teaching the subject of the structure of fabrics it would be far more effective to teach simple notions of woven, knitted and felted fabrics (spiral arrangement), before teaching the complete types of weaves, simple and complex (unit arrangement).

The subject of clothing may be taught in an (a) organized or (b) unorganized manner. If the syllabus or course of study sets aside a definite time or period of day for the study of clothing, then the subject is spoken of as an organized course. Such a course allows for complete study and drill work. On the other hand, the course of study may allow for sewing and dressmaking and the related technical knowledge. In that case it must be presented in an incidental way as the occasion demands. For example, if the sewing or dressmaking course calls for a definite number of projects, then the related knowledge of clothing may be taught after or with each project. To illustrate: make a list of projects arranged in progressive order for teaching as shown on page xi and present the related technical knowledge of clothing as the student is working or has completed the project.