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PREVIEW

**SPECIFICATIONS FOR SELECTED MAJOR
ITEMS OF SCHOOL SUPPLIES**

**This study determines the major items of school supplies
for which a greater portion of the supply budgets
are expended and makes available fundamental
specifications for selected major items**

By

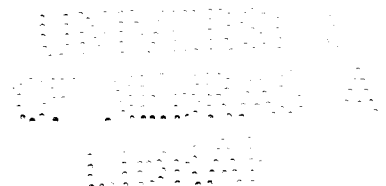
John Allen Jimerson

A THESIS

**Presented to the Faculty of
The Graduate College in the University of Nebraska
in Partial Fulfillment of Requirements for
The Degree of Doctor of Philosophy
Department of School Administration**

Lincoln, Nebraska

1940



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J. A. J.

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CHAPTER I
THE NEED FOR AUTHENTIC INFORMATION ON
PURCHASING SCHOOL SUPPLIES

General Discussion and Problems

The purpose of this study is to determine what items of school supplies entail the greatest expenditures of money allocated to the supply budget; to procure specifications for those items for which specifications have been written; to construct specifications for additional items where sufficient information is available upon which to base specifications; and to provide methods which will be helpful to the consumer in determining whether goods purchased are the kind and quality desired and specified.

The word "supply" will designate those articles in school use that are destroyed in the process of using, ordinarily in two years or less; also fragile articles broken with customary usage and small articles frequently lost in ordinary use.

A "specification" is a description of an article sufficiently exact to set a definite standard in relation to kind or quality, or to prescribe the limit within which the article may vary in kind and quality from a given standard.

"Major item" will be used to designate an item

demanding a considerable expenditure of money in comparison to the total supply budget.

The mounting costs of government, and the average taxpayer's income during the past few years, particularly in the drouth stricken areas, have caused a close scrutiny of all public expenditures. While income from production and services is again increasing, the increase has not been sufficient to prevent the curtailment of funds for many public enterprises and services.

The disposition to scrutinize more closely expenditures for public purposes, particularly for public education is evident. Especially where the expenditures come from revenue raised by taxation, there is apt to be a tendency toward drastic reductions. Since schools are supported so largely from the proceeds of direct taxes, the schools are especially affected by the demand for reductions of expenses.

Board members are accustomed to the large proportion of expenditures which go for personal services, and business officials are inclined to trust to a considerable degree the judgment of the school executives for guidance in this field. On the other hand, when money is spent for supplies, the board member can see definitely where every dollar goes. He is inclined to scrutinize most closely the expenditures for school supplies. Supplies

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must be constantly replaced. The board member is apt to believe that fewer supplies might be furnished, and that a product at lower cost might well replace the better article.

In purchasing school supplies, methods are used which are not in accord with general business practices. There is little uniformity as regards the official who does the purchasing. In many of the smaller schools, much of the purchasing is done by the superintendent, sometimes under the supervision of a supplies committee; in some schools by the secretary of the board of education; and too often the school custodian is allowed to purchase such supplies as he needs with little check or guidance. Lack of these ways is subject to criticism. Often in small towns the superintendent is inexperienced and untrained in business management. The secretary of the board is not familiar with the educational needs of the school. Janitors have ordinarily little training or experience which would justify their being assigned so great a responsibility.

Very often the local merchant is given the order without regard to quality or price of product. In other cases, some such arrangement as cost plus a specified percentage of the total amount is made. The latter plan places a premium on raising, rather than lowering, the cost to the consumer.

While many schools employ the better practice of submitting orders for considerable amounts to competitive bidding, even this practice has its disadvantages. Without specifications, there is wide divergence in quality. Typing paper may vary from a good quality of bond paper to cheap news print. In price there is equal variation. Liquid soap on competitive bidding, for what was supposed to be the same quality, has been known to vary from \$.68 to \$1.80 a gallon. The same firm has varied on successive quotations as much as 100 to 200 per cent on presumably identical articles.

The problem of purchasing is further complicated by the fact that the salesmen do not themselves know their products. Papers have been standardized into classes, but many salesmen do not know what grades of paper their firms carry. They have a conviction that their houses would handle only "quality" products, but the degree of quality seems to mean nothing to them. One janitor-supplies salesman, when asked by the writer to give the phenol coefficient of a disinfectant, which was listed in his catalogue, admitted that he did not know the meaning of the term. Another was unable to distinguish between a disinfectant and a deodorant.

Various methods of purchase have been proposed which are calculated to reduce in some measure the difficulties in purchasing supplies. Some have recommended that the

purchaser should order only from established and reliable firms. But many persons to whom the purchase of supplies has been delegated are inexperienced in buying and are not acquainted with the various firms dealing in school products. They must gain their experience at the cost of the district. Furthermore, buying from only one firm subjects the purchaser to the charge of favoritism, and often the impression is fostered by competing firms that there is collusion between the purchasing agent and the salesman to the financial advantage of each.

There are those who argue that you get "about what you pay for". They urge you to buy only "quality merchandise". This argument is often used to induce the purchaser to pay prices which are not warranted by the actual values of the products. Quality is hard to define in relation to a specific product for a specific use. No company is likely to admit its product lacks quality. Furthermore, most companies handle goods of different grades, all of which they insist are quality merchandise, but, nevertheless, intended to sell at different price levels. Obviously, the first quality should not be brought into competition with a competitor's second quality merchandise. Thus, without specifications, the price paid is no guarantee of either grade or quality.

An emphasis on quality, without adequate definition on the basis of specifications, may result in the purchase of a higher quality than is needed for a specific use.

Linn¹ states that the standard set for supplies should not exceed in quality the actual needs of the users.

It is evident that there is a deplorable lack of sound business procedure in the purchase of school supplies. A study of the literature relating to school supply purchasing reveals considerable information which should be of value to purchasing agents. A study of the problems connected with school supply purchasing indicates that the major problems of promoting economical business procedure in school purchasing may well be divided into the following parts:

(1) Designation of the official responsible for school purchasing.

(2) Standardization of supplies.

(3) Storing and distributing supplies.

(4) Method of purchasing.

(5) Methods of testing, or certification, of supplies.

Designation of Responsible Official

It is recognized that the official charged with the responsibility for the purchase of school supplies has an opportunity for effecting large savings in the school supply budget. It is not astonishing, then, that considerable space in professional literature is devoted to the

¹Linn, Henry H., "Practical School Economics", Chapter V

problem of selecting the official who is best qualified for this responsible duty. The literature reveals that the superintendent is most often designated as the purchasing officer. According to a report of the National Association of Public School Business Officials¹, of 100 cities studied, the superintendent of schools was the authorized purchasing agent in 47 cities. In 10 districts, the business manager did the purchasing. Conrad states,

"The Superintendent of Schools, or his duly authorized representative, should be responsible for the school supply management."²

Where the business official is the purchasing officer, he should not concern himself with the selection of supplies. He should, however, call attention to items of excessive cost where cheaper materials would supply the need. Grill³ believes that the responsibility of the purchasing agent is not to determine what should be bought, but his responsibility is to purchase supplies requisitioned in the regular manner by the various agencies who should determine the quality, amount, and kind.

¹

A report of the committee of the National Association of Public School Business Officials, "School Supplies, Purchase and Distribution", American School Board Journal, Vol 81, p 106, July 1930

²

Conrad, C. W., "School Supply Management", School Executive, Vol 50, p 416-17, May 1931

³

Grill, G. W., "Centralized Purchasing of School Supplies", School Executive, Vol 49, p 4-7, September, 1929

Standardization of Supplies

Standardization of supplies and method of purchasing usually results in considerable savings. The reduction of the number of items by standardization reduces the cost to the purchaser by giving him the benefit of quantity prices and reduces freight rates. O'Dell¹ reports that in Miami School, in Oklahoma City, standardization resulted in reducing the number of items used 47.3% and in reducing the cost per pupil 50.6%. According to a bulletin of the National Association of Public School Business Officials², 54.4% of 317 schools, in the United States and Canada, included in the study, reported the use of standard lists of supplies. According to the same report, 148 of the 317 schools developed standards of quality. Linn³ states that simplification through the reduction of brands, qualities, sizes, and designs of material would reduce manufacturing costs by reducing the number of items and increasing the quantity of standardized items.

Three methods of standardization are suggested. Merchandise may be standardized on the basis of brand names or "equal"; by purchasing from selected companies of good repute; and by the use of specifications. The

¹ O'Dell, Clyde H., "School Supplies, Standards of Use and Cost", Published by Colorado State Teachers College, Greeley, Colorado, 1935

² "School Supplies, Selection, Storage in Small Cities", and "Use of Specifications in the Purchasing of School Supplies and Equipment", Hibbert and Others, National Association of Public School Business Officials, Bulletin No. 6, p 16, Pittsburgh, Pennsylvania

³

use of brand names as a means of standardization is undesirable in that it tends to eliminate competition, since it is difficult to determine products of "equal" grade. Competition also is reduced when goods are purchased from only a few selected companies. The use of specifications as a means of standardization, in spite of recognized difficulties, is generally conceded to be the best plan. Further discussion of the use of specifications will be found later in this chapter.

Storing and Distributing Supplies

One source of waste in the purchase of school supplies has resulted from an attempt to effect savings on quantity orders. It has often resulted in over-stocking of supply rooms. Interest on capital investment and depreciation have resulted in losses equal to or greater than the savings resulting from quantity discounts. Eymann¹ recommends annual purchases under carefully controlled specifications for bidding conditions. Wynkoop² states that annual purchasing of standard supplies is the most economical. Conrad³ believes that each school building should have a store room large enough to carry supplies for one year.

¹ Eymann, R. M., "Co-Operative Plan for Selecting and Purchasing School Supplies," American School Board Journal, Vol 31, p 39-40, August 1935

² Wynkoop, J. B., "Purchasing and Distributing School Supplies", School Executive, Vol 31, p 402-3, May 1932

³ Conrad, C. W., "School Supply Management", School Executive, Vol 30, p 416-17, May 1931

Kelty states,

"Buy what is needed and no more. Attempting to buy bargains often results in over-supply."¹

Provisions must be made for the storage of such supplies as may be in the possession of the school at any time. Storage in central store houses seems to be the general practice. An investigation made by the National Association of Public School Business Officials² revealed that 80 out of 100 of the cities studied maintained a central store house for receiving and delivering school supplies. Kline³ states that supplies should be delivered to central supply houses rather than directly to the schools.

Essential to any system of storing and distributing supplies is an adequate system of records. Record systems should include a plan for filing catalogues, price lists, direct price quotations, and correspondence concerning supplies. Provision should be made for a constant inventory, or for one which may be arrived at periodically. Provision should be made for recording all materials stored in the supply room and for the requisitioning of materials. The purchasing officer should be able to

¹
Kelty, C. V., "Buying School Supplies", American School Board Journal, Vol 81, p 43-4, July 1930

²
A report of the Committee of the National Association of Public School Business Officials, "School Supplies, Purchase and Distribution", American School Board Journal, Vol 81, p 106, July 1930

³
Kline, O. K., "Some General Criteria for School Supply Purchases", American School Board Journal, Vol 84, p 28, May 1932

trace by the records any item of supplies from the time it was requisitioned by the teacher until it was consumed in school use. In the larger schools a full-time supply clerk is considered desirable.

Method of Purchasing

There is general agreement among authorities that school supplies should be purchased on competitive bids based on specifications sufficiently rigid as to eliminate inferior merchandise, but general enough to insure fair competition among competing products of comparable quality. Purchasing on the basis of competitive bids is recognized as sound practice by most large industrial firms. It is required in many government departments. No item of equipment, purchased for a school with the aid of a F. W. A. grant, may be purchased except under competitive bidding. It is required by law in many states. Reeves¹ states that the standards of quality for educational materials should be written in the form of specifications. The specifications enable both the purchaser and the seller to know definitely the qualities that are demanded of the equipment and supplies.

A comprehensive statement of the advantages of specifications has been made by F. J. Schlink,

¹Reeves, Stanley Newman, "Tests of Quality for School Equipment and Supplies", Doctor's Thesis, George Peabody College for Teachers, Nashville, Tennessee, 1934

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"Broadly speaking, the advantages of standards and specifications in so far as they affect the purchaser are the following:

They expedite business processes, shortening the time required for delivery, and, by stabilizing the operation of procurement, make it safe to build up stock for future production.

Standards eliminate purely traditional practices, and tend to put all procurement operations upon a rational basis, rather than to continue following along the grooves set by custom.

Standards and specifications accelerate the rate at which the benefits of research and development work are made available in production and consumption by affording a definite point of departure at which improvements in selection, adaptation and use can begin. The use of standards constantly brings forward the need of new facts in order to determine what is best and most economical, and the recognition of a need for a new knowledge, in purchasing as in other enterprises, is the beginning of wisdom.

Specifications simplify the buyer's problems, and raise the standard of salesmanship by focusing attention upon fundamentals and tend to wipe out useless costs due to ignorance of requirements on the part of either party to the purchase and due to inefficient processes in production and distribution.

Standards greatly mitigate and reduce the number of difficulties bound to arise from time to time in connection with deliveries and charges for goods, because standards tend to place the whole transaction upon a basis of essentials, eliminate minor and irrelevant variations, and set up means by which the adequacy and satisfactoriness of the deliveries can be made manifest to anyone concerned. Obviously, standardization favors speed and uniformity of productions by assuring raw and semi-finished materials of a steady and dependable quality, and this in turn comes from the possibility of employing the best tools, materials, processes and technical control.

Standardization reduces investment in raw materials, semi-finished and finished stock and repair parts, and saves expense on every hand in maintenance, distribution,

and inventory of stocks of materials, patterns, molds, jigs, templates, tools, dies, gages, instruments, and special machines and devices. It decreases storage equipment, and the personnel, and space required for their handling. By permitting the salvaging of standard parts from obsolete, rejected, or worn out tools or equipment, it minimized losses due to depreciation and obsolescence.¹

Difficulties Encountered in the Use of Specifications

In spite of the definite advantages of the use of specifications, practical difficulties have prevented many schools from using them. Specifications have not been made available to purchasing agents of small schools. Such "specifications", as are in general use, are not sufficiently specific to be of practical benefit. The writer consulted the National Association of Public School Business Officials in an attempt to secure the names of schools which used specifications in buying. Letters were then sent to 30 schools. Copies of the specifications used in only 9 of these schools were secured. It was found that very few schools were using specifications at all. Such specifications as were used, with the exception of a very few items, did not furnish descriptions or definitions of quality adequate enough to enable the vendor to determine the grade of product desired. It is evident that specifications not sufficiently rigid as to shut out inferior merchandise result in unfair competition

¹ Schlink, F. J., "How Specifications Bring Savings", Bulletin, Page 1, Consumer's Research

and penalize the honest merchant.

A study by Brown and Byall resulted in the compilation of specifications for a very few items. The authors state,

"It is thought that for some items this goal has been achieved in this study; but for many of the items it has not even been approached. . . Much additional study must be made before entirely satisfactory specifications will be found for school supplies."¹

Organization of the Study

Chapter I introduces the problem and shows the need for the study. It acquaints the reader with the practices and principles of school supply management as revealed by a study of the literature and personal investigation by the author. Chapter II describes the method of selection of the significant items in the major supply list and summarizes in tabulated form results of that portion of the investigation. It contains the major list of school supplies for which specifications were secured. Chapter III outlines the procedures used in constructing and compiling the specifications for the major items of school supplies. It contains specifications for use in ordering supplies. Chapter IV gives methods by which the consumer of school supplies may take steps to determine whether supplies received are of a quality and kind consistent with the requirements of his order. Chapter V

¹ Brown, Edwin J. and Byall, Russell D., A "Consumer's Research" in School Supplies, Kansas State Teachers Bulletin of Information, Emporia, Kansas, September, 1936

contains a summary of the study, conclusions and recommendations, and suggestions for the use of the study. A bibliography follows. The appendix contains suggested forms which will be of use to purchasers of school supplies.

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