CURRENT ADMINISTRATIVE PRACTICES IN SCHOOL BUILDING PROGRAMS IN THE STATE OF ARIZONA

by

R. P. Kiser

A Thesis

submitted to the faculty of the

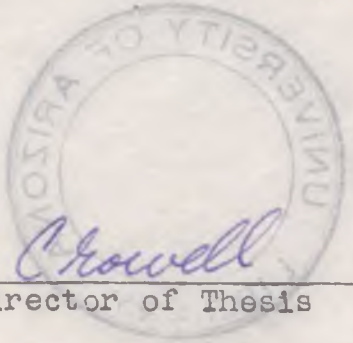
College of Education

in partial fulfillment of the requirements for the degree of

MASTER OF ARTS

in the Graduate College, University of Arizona

1952



Approved: R. A. Crowell, 5/13/52

Director of Thesis Date

TABLE OF CONTENTS

CHAPTER PAGE

LIST OF TABLES

CHAPTER I

INTRODUCTION

I. THE PROBLEM

Statement of the problem. The problem of this study was to determine the current administrative practices of boards of education in developing school building programs in the State of Arizona.

Limitations of the investigation. The study was confined to four stages of the development of a school building program. The four stages investigated were:

(1) The methods used to secure public approval of new building programs.

(2) Types of building surveys made to ascertain the need and the scope of a building program.

(3) The extent of professional services used by boards of education in developing school building programs.

(4) Current practices in financing new construction.

Method of procedure. The method used to collect data necessary for the development of this thesis was as follows:

(1) A questionnaire that revealed the practices of boards of education in developing school building programs was prepared, mimeographed, and mailed to one hundred forty-

six district school administrators in Arizona.

(2) One hundred ten school districts returned replies. These replies were summarized, tabulated, and used as a source of data in the development of the survey.

(3) From the tabulated data the report was outlined and written.

Development of the questionnaire. The questionnaire was designed to collect data on administrative practices in developing school building programs in Arizona. The techniques and methods used by other investigators were studied, and an attempt was made to design a questionnaire that would be applicable to the local situation. As school administrators are busy officials, the questionnaire was devised in a manner that would require a minimum of their time in searching the records of their offices for the information required to complete the questionnaire, and at the same time yield ample data for a descriptive survey of the practices used in their districts in building programs.

Scope of the sampling. Questionnaires were mailed to one hundred forty-six school districts in the state having a probable active enrollment of over one hundred students. A total of one hundred ten districts returned the questionnaire. This constituted a seventy-six per cent return. The districts assisting in the collection of the data for the development of this study reported that they had an active enrollment of 131,754 students.

It was noted that 97,200 were students in the elementary schools, 7,661 were reported as junior high school (7th-9th grades) students, and 26,893 were reported as high school pupils. Over thirty-seven hundred classroom teachers were employed by the districts from which the data for the development of this thesis was collected.

As the intent of this study was to survey the practices of school districts having an active enrollment of over one hundred pupils, seventeen of the one hundred ten districts that returned the questionnaire were found to have less than one hundred students, and are not included in the tabulation of the data of the study. The remaining ninety-three districts constitute the source from which the data was collected. However, from an observation of the tables compiled in the development of this survey, it will be noted that all of the ninety-three school districts did not reply to every question listed on the questionnaire from. In a few cases the answers to specific questions were not exact in their content and could not be used in the tabulation of the data. This accounts for an uneven number of replies used in each of the tables. The range of the sampling used in compiling the tables was from a low of fifty to a high of eighty-four districts.

Meaning of terms. The term "school building" as used in this study means any building owned by the school district and used directly or indirectly for instructional pur-

poses.

Practice. The term "practice" refers to usage, custom, or the "way things are usually done."

Administrative practice. By "administrative practice" is meant any official action on the part of the board of education or its legal agents.

Current practices. The term "current practices" refers to the acts of the boards of education in Arizona occurring after January 1, 1946.

School superintendent. The school superintendent means the person employed by the district board of education to supervise and administer the schools of the district.

Board of education. When the term "board of education" is used, reference will be to the legal governing body of an active school district having a student population of over one hundred pupils.

The importance of the study. One of the most pressing problems confronting boards of education in the United States today is that of providing adequate housing for the increasing student enrollment.[1] This becomes evident when the

[1] "Report of the National Education Association," Research Bulletin, Vol. 24-26, 1946-48, pp. 161-165.

following factors are studied:

(1) Governmental regulations of critical building material.

(2) The increase in the student population due to the increase in birth rate.

(3) Migratory student populations due to the shifting of defense industries.

(4) The reluctance of the people to vote additional local taxes upon property when continuously faced with increasing Federal taxes.

(5) The consolidation of the smaller district units and the increased demand for pupil transportation.

(6) The inflation in the price of building material and increased labor costs.

As this study attempted to determine the current administrative practices in four stages of the building problem, it appears as practical research and useful on a state level. In the event information is needed to substantiate a state legislative program, this study may be used as a source of data. It can be determined from this survey how the various boards of education handled the problem. From the standpoint of state history this survey shows the action of boards during the critical years of 1946-1952.

Federal recognition of the problem. The Federal government has recognized the problem facing communities in which defense industries have been located. Limited funds have been

granted these districts for temporary relief of the building problem. Priorities to purchase critical building material have been approved in Washington. However, it will be noted that the policy of the Federal government in financing public education has been inconsistent.[2] Also due to the high expenditures for direct National Defense the policy of the Federal government may not change in the immediate future.

II. REVIEW OF RELATED STUDIES

The studies in Arizona. An examination of the research done in school administration at the University of Arizona revealed that no previous studies have been made that were directly related to practices in school building programs. However, a number of good studies were found to be indirectly related. Edens[3] made a study of Architectural Standards for Contemporary School Buildings for the State of Arizona that is very valuable in setting up standards for school plants. It will be noted that the standards set up by Edens applied to modern functional buildings which are especially adapted to the Southwest.

On the local level it was also found that Wendell P.

---

[2] Arvid J. Burke, Financing Public Schools in the United States (New York: Harper and Brothers, 1951), pp. 243-248.

[3] Thomas L. Edens, Jr., Architectural Standards for Contemporary School Buildings for the State of Arizona. (Unpublished Master's thesis, University of Arizona), 1941.

Turner[4] conducted a survey resulting in a proposal for a school building code for the State of Arizona. This study proposed an ideal code that would govern, in part, the administrative practices of boards of education in developing building programs.

The work of R. Izer Turner[5] was also examined. This investigation was based on the results of forty years of observation of the construction and design of school buildings. Turner stated that the last twenty years of this work were devoted to the study and practice of architecture. While this thesis affords some insight on administrative practices in the development of school building programs of the Southwest, it was primarily concerned with architectural design. However, it was noted that Turner's study did point out that boards of education construct buildings, and that far too seldom are professionally trained people consulted. Turner also pointed out that buildings are constructed without competent advice. Thus, it appeared from Turner's study that boards of education proceed with school building programs under the assumption that the board itself is capable of making decisions without the professional services of teachers, school administrators, and architects. Turner[6] stated that the problem was, "To

---

[4] Wendell P. Turner, A Proposed School Building Code for the State of Arizona, (Unpublished Master's thesis, University of Arizona), 1939.

[5] R. Izer Turner, American School Architect, (Unpublished Master's thesis, University of Arizona), 1929.

[6] Ibid. p. 5

teach boards that they do not know that they do not know." From Turner's work one is led to some extent to believe that in Arizona, boards of education have erected buildings without professional advice and services of trained personnel, and the buildings may not be adapted to the needs of the community and the school program.

Turner[7] pointed out a second difficulty in building programs. He asserted that the architects in general were ignorant of school needs; that they planned without advice from professional school men and sold boards of education a set of prints with "glib-talk" without the slightest study of grounds, environment, and the school curriculum.

Since Turner's work made these indictments against past boards of education, it will be interesting to note if the current administrative practices of the present boards of Arizona fall into these categories. Of all research done on a state level Turner's work appeared to be the most comprehensive and closely related to the problem of this thesis. In support of his argument for boards of education to accept professional service of school teachers, administrators, and reputable school architects, Turner[8] pointed to the high school building at Scottsdale, Arizona, as an example of cooperation that resulted in an acceptable and functional school building.

---

[7] Ibid. p. 6

[8] Ibid. P. 35

Further examination of research in school administration in Arizona revealed that Dixon,[9] upon completion of a study, wrote an administrative handbook for school board members and administrators of Arizona high schools.

Although not related directly to school administrative practices in school building programs, this handbook, if adopted by board members, would be highly useful. The relationship between the layman and the professionally trained teacher and the administrator is made clear in this manual.

Further review of related studies on the local level revealed a survey made by Wilson[10] relating to classroom lighting in the Safford Public Schools. One interesting item in this study was the polling of classroom teachers who expressed recommendations as to the type of windows desired, the type of lighting fixtures, and color combinations of the walls and ceilings. The poll showed the actual need and improvement in lighting that the teacher in the classroom would have the board of education incorporate into building standards.

While not entirely confined to administrative practices in building programs, a survey was made in Arizona by

---

[9] Ralph Bruce Dixon, An Administrative Handbook for School Board Members and Administrators of Arizona High Schools, (Unpublished Master's thesis, University of Arizona), 1946.

[10] Donald R. Wilson, A Study of Classroom Lighting in the Safford Public Schools, (Unpublished Master's thesis, University of Arizona), 1948.

Sorenson[11] dealing with the relationships of boards of education with city superintendents. Sorenson[12] found the following practices current at that time:

> Who determines the sites for new buildings? The replies showed that twenty-five per cent of the boards reserved this action for themselves and acted without the recommendations of professional men.
>
> Who recommends the sites for new buildings? The replies pointed out that eighteen per cent of the boards acted upon their own recommendations.

Thus, it can be noted from the Sorenson[13] study that professionally trained school executives are consulted and their recommendations accepted by boards of education in Arizona in approximately four cases out of five. It must also be noted that the above study was completed in 1930.

Summary of studies in Arizona. A summary of the research done on a state level shows that six studies were found to be related indirectly to the problem of determining current administrative practices in school building construction programs in Arizona. Three of the six dealt largely with architectural standards for buildings. One was related to a building code. Another proposed a handbook for board members and school administrators. Another study pointed out the relationship between board members and the superintendent. All

---

[11] Glenn Sorenson, The City Superintendent and the Board of Education, (Unpublished Master's thesis, University of Arizona), 1930.

[12] Ibid. pp. 44-45.

[13] Ibid. pp. 47-48.

other studies in school administration were so remotely related to the problem under investigation that they were not included in this discussion.

Related studies on the national level. The related studies on a national level were found to be numerous. Since school building programs are of such importance one would expect to find considerable research done and a trend in acceptable administrative practices fairly well outlined. In this discussion a number of the more recent outstanding studies will be considered as the most representative of their type.

The methods used to secure public approval of new building programs. In the above field Bliss[14] published a study that featured the value of publicity in a building program. He discussed the elements of a good public relations program and set up steps to be taken in getting the public interested in demanding new buildings. According to Bliss[15] the following data should be placed before the public largely through the newspapers:

> Data relating to present buildings and sites.
> Data relating to the present school population
> Maps, charts, and tables giving other data related to the proposed building program.

---

[14] Sidney M. Bliss, "Publicity and School Building Programs," American School Board Journal, Vol. 118, January, 1949, pp. 24-26.

[15] Ibid. p. 25

It appeared that Bliss[16] would hold the school administrator responsible for initiating public demand for the new building program. It was pointed out in this study that the newspaper was one of the most important avenues of school publicity. It was also mentioned in the Bliss[17] study that one "fine test" of a school superintendent was his capacity to win reporters and influence editors.

Marshall[18] developed a plan for community participation in the total school program as a method of securing public demand for school buildings. Marshall[19] pointed out that people who have participated in determining the extent and the scope of the general school program need no prodding when plant needs are noticeable; that they were already aware of the need of new buildings and no publicity was necessary to secure their support.

An examination of the work of Hedlund[20] tends to confirm the idea that "support for a building program is assured when citizens help to develop it." It was claimed by Hedlund[21]

---

[16] Ibid. p. 25

[17] Ibid. p. 26

[18] John E. Marshall, "Community Participation in Planning," School Executive, Vol. 67, December, 1947, p. 41.

[19] Loc. cit.

[20] Paul A. Hedlund, "Support for a School Building Program," Nation's Schools, Vol. 44, December,1949, pp. 51-52.

[21] Loc. cit.

that by the assistance of lay citizens:

> A better school building program was likely to result. The school building program was more likely to be approved by the voters of the district.

Types of building surveys made to ascertain the need for and the scope of the building program. In this field Whitehead[22] has outlined a plan of school building survey techniques that appear highly practical. This plan called for the organization of a general steering committee with sub-committees assisting. By a series of logical steps the reports of these committees terminated into an acceptable survey that more or less gave the general public a feeling of having participated in the school building program.

A survey was also noted in the field of cooperative planning by Briscoe.[23] It was interesting to note the application of research techniques in solving the community building in this study. The four major topics investigated were:

(1) What are the natural school boundaries of the school district?

(2) What are the statistics bearing upon population predictions?

(3) What are the social factors affecting the district?

(4) What are the possible solutions to the housing problem?

---

[22] Willis A. Whitehead, "School Building Survey Techniques," The American School and University, 1948-49, Vol. 20, pp. 102-108.

[23] William S. Briscoe, "Cooperative Planning," The American School and University, 1948-49, Vol. 20, pp. 231-235.

From an examination of the related studies made in the field of school building surveys it appeared that the four topics listed above are included in all surveys of major importance.

The work of Strayer and Englehardt[24] is outstanding in relation to building surveys. Although these studies were made prior to 1927, Strayer and Englehardt, by a series of problem solutions have worked out a method of conducting school building surveys that has been widely accepted as a standard.

The extent of professional services used by boards of education in developing school building programs. An examination of the literature in this field revealed a trend which may be summarized as follows:

The larger the building program, the more likely boards of education will use professional services. That is, architects, engineers, school superintendents, and principals who use the building will be consulted and their advice considered. Thus, a board in a moderate size city would have a battery of experts at its service and would draw recommendations as needed and without hesitation.

The smaller the school district and the smaller the building program the more inclined the board will be to think

---

[24] George D. Strayer and N. L. Englehardt, School Building Problems, (New York: Bureau of Publications, Columbia University, 1927), pp. 1-150.

of its own wisdom and its authority as being sufficient and the less likely will it be to request professional service.

This appears unfortunate since it is the smaller districts that usually need the greater amount of professional service. To substantiate the above summary an examination was made of the trends observed by Whitehead.[25] This study definitely showed the business-like practices of the boards of education of larger school districts. The same trend is apparent upon examination of the Twenty-seventh Yearbook of the American Association of School Administrators.[26]

Current practices in financing new construction. The related studies in this field showed that practices in financing new construction are in general limited to the ability of the district to float a bond issue.

Increasing operating costs have absorbed balances and revenues from the current budgets. The remaining alternative is to finance by creating bonded indebtedness. A trend toward the state sharing a portion of the cost of construction was noted and apparently this development may assist in alleviating the problem. As of January 1, 1949, nineteen states had provided some type of financial assistance to local boards of education undertaking to develop building

---

25 Willis A. Whitehead, "Educational Service in Planning School Buildings," Educational Research Bulletin, 25-26, Ohio State University, October, 1947, pp. 179-185.

26 "Report of American Association of School Administrators, American School Buildings," Twenty-Seventh Yearbook, 1949, pp. 20-35.

programs.[27]

Harold F. Clark[28] studied the increase in the index of the cost of school building. It appeared from his study that contractors were inclined to increase their bids monthly. His study also showed that bond interest rates declined during the period and that as long as easy credit was available building conditions would not improve.

As of March, 1951, Clark[29] noted no improvement in the building problem. On the contrary, the conditions had grown worse. Clark[30] claimed the conditions are due to the actions of the Federal government and the price trends of individual building materials are "erratic."

Another factor can be noted in the release of a study by Harry Hewes,[31] Information Officer, Housing and Home Financing Agency, Washington, D. C. This report showed that on June 30, 1950, a backlog of two hundred and thirty-one applications for Federal assistance had been approved by his

---

27 "Report on School Plant Trends in Financing the School Plant," The American School and University, Vol. 21, 1949-50, p. 159.

28 Harold F. Clark, "School Building Cost and Bond Prices," School Executive, Vol. 69, August, 1950, p. 40.

29 Harold F. Clark, "School Building Cost and Bond Prices," School Executive, Vol. 70, March, 1951, p. 15.

30 Loc. cit.

31 Harry Hewes, "Federal Assistance in School Planning," School Executive, Vol. 69, August, 1950, pp. 41-44.

agency. This study also revealed that the State of Arizona received an advance planning allowance of $75,600.00 during this period. It was apparent from an analysis of these Federal reports that the practice of boards of education in general was to plan ahead for their needs with the hope that in the future actual building may become a reality. It appeared that even in the face of unstable building conditions prevailing that many school districts had attempted construction and formulated future building programs.

From a study made by Cocking and Hopper[32] it was found that since 1945, four hundred and twenty-five outstanding school buildings had been completed. Sixty-seven per cent of these buildings were for elementary instruction. Thus, the problem of financing school buildings remains acute and warrants continuous research.

Summary of related studies of a national level. A summary of the related studies on a national level showed a trend in current administrative practices as follows: The methods used to secure public approval for new buildings form a trend toward community planning with steering commitees assisting and laymen called in for frequent consultation. Newspaper and radio programs were the main avenues of reaching the general public. The school, through the

---

[32] Walter D. Cocking and Robert L. Hopper, "America's Outstanding School Buildings," American School and University, Vol. 22, 1950-51, pp. 175-206.

child, also has a definite and effective method of approach to the public.

In the field of building surveys on a national level a trend toward careful scientific planning was noted. No longer are building programs developed by the impulsive thinking of an individual board member. Even in small districts this practice has decreased. School building programs have become big business and have in general adopted big business methods.

On a national level the related studies showed a trend for boards of education to avail themselves of professional services extensively in developing school building programs. The larger the district and the larger the building program the more professional service used. There appeared to be a trend to even consult the classroom teacher as to the functional and practical standards of the individual classroom.

The related studies on a national level in financial practices revealed a continuous increase in building cost with many local boards of education floundering. In general comparatively little construction was financed from current tax receipts. Revenues from the sale of bonds continued to be the current practice.

A trend toward closer supervision of bond issues on the part of state departments was found. Also a trend for the state sharing a part of the cost of construction of new building programs was observed. The policy of the Federal

government in providing financial assistance was found inconsistent and of a temporary nature. Also need for continuous research and study of the entire building problem was observed and is apparently urgently needed.

CHAPTER II

THE METHODS USED TO SECURE PUBLIC APPROVAL OF NEW BUILDING PROGRAMS

I. METHODS USED IN ARIZONA

The methods used by ninety-three school districts in Arizona to secure public approval of new building programs were tabulated from the returned questionnaire. The methods used most frequently by school districts constitute a trend in administrative practices prevailing in the state. In the development of this chapter, and in following chapters, it may be observed that all of the ninety-three districts did not respond to every question listed on the questionnaire form. This accounts for the uneven number of cases found in the various tables. Thus, Table I was compiled from a total of sixty-four answers received in response to a question relative to the methods used by school districts to secure public approval of building programs. The same procedure was followed in compiling subsequent tables.

Personal contact with the voter. Apparently personal contact with the voter of the school district is the most often used method of securing public approval of new building programs. Twenty-four school districts reported that they used this method more frequently than the other means

listed. This was thirty-seven and one-half per cent of a total of sixty-four districts that responded to the question.

It appeared that in using the personal approach to the voter, Arizona school administrators were in accord with the practices advocated by recognized schoolmen in the field. Bliss[33] stated in his study that: "One of these methods (and the most effective of all in the opinion of the writer) is person-to-person interviews with the voters of a school district."

Mass meetings with the voters. An examination of the returned questionnaires revealed that a mass meeting with the voter was used most often by thirteen school districts as a method of securing public approval of new buildings. Twenty per cent of the sixty-four districts that responded to the question reported that they used this method most often.

The press. The use of the press as a means of influencing voters of the school district ranked high in the number of times it was most often used. A total of thirteen school districts reported that in reaching the voter they used the newspaper more often than any other method. Apparently the press and mass meetings with the voter are of equal use in the state. Each was used in thirteen districts as the most

---

[33] Sidney M. Bliss, "Publicity and School Building Programs," American School Board Journal, Vol. 118, January, 1949, p. 26.

preferred method.

Printed material circulated as handbills. A total of eight districts reported use of the handbill more often than any other method in conveying information as to the elector in order to gain his support of building programs.

The radio. As a method most often used in appealing for the support of the voter in school building elections, the radio was not listed by a single district within the state. Probably frequency of its use was so negligible that it was not listed first by any school administrator.

Other methods. Six school administrators reported that they devised and most often used their own methods applicable to their respective districts.

An examination of these miscellaneous methods showed that in three cases citizen advisory committees were appointed to assist in securing public approval for building programs. One district reported that meetings with the Parent-Teacher Association was the most common approach. One district stated that it employed the petition technique in reaching the voter. And one district stated that since a copper company owned most of the property, it was wise to approach the company officials before planning building programs.

TABLE I

METHODS MOST OFTEN USED BY SCHOOL DISTRICTS IN ARIZONA TO APPEAL FOR PUBLIC SUPPORT OF SCHOOL BUILDING PROGRAMS

No. Districts Reporting	Method Most Often Used
24	Personal contact with voter
13	Mass meeting with voter
13	The press
8	Handbills
0	The radio
6	Other methods
64	

II. INDIVIDUALS INFLUENCING PUBLIC OPINION

The school superintendent. The superintendent of the district schools was credited by forty districts as the individual assisting most in influencing public approval of school building programs. The scope of the superintendent's influence in administrative practices in school building programs in Arizona is indicated by the number of times he was credited as the individual assisting most in influencing public approval of new building programs in the district.

In compiling the returns of seventy-six districts it

was noted that the superintendent received fifty-one per cent of the total listed. This practice appeared to be in accord with those observed by the American Association of School Administrators.[34] This organization reported: "The superintendent must play a large part in keeping the board informed about community thinking and school practice."

The president of the school board. The influence of the president of the local school board must not be overlooked in developing school building programs. Seventeen districts within the state listed the president of the board as the individual assisting most in influencing public opinion on school building matters. The president of the board ranked second on the list of influential individuals on school matters within the district. Only one other individual was credited with exerting more influence, namely, the superintendent of schools.

The principal. Administrators serving in the capacity as principals of various schools within the district apparently exert considerable influence. In twelve districts of the state the principal was the individual credited with assisting most in influencing public opinion.

The principal ranked third within the state among individuals influencing public approval of building programs.

---

[34] "Report of American Association of School Administrators," Thirtieth Yearbook, 1952, p. 119.

It was noted from an analysis of the administrative organization in the twelve districts reporting the influence of their principal that in these districts the principal is the chief school administrator of the district. In relatively small districts this type of organization is common. When acting in such a capacity, the principal actually is a superintendent although his legal title is principal.[35]

The president of the Parent Teacher Association. Two districts named the president of the Parent Teacher Association as the individual credited with assisting most in their respective districts in influencing public approval of new school building programs.

The county superintendent. Not a single district in the state credited the county superintendent as the individual assisting most in influencing public approval of building programs. Presumably a county superintendent, as a county official, exerts influence, but evidently it was not sufficient to be listed in any of the districts.

The secretary of the Chamber of Commerce. The secretary of the Chamber of Commerce was listed in the questionnaire as an individual who possibly would have influence in developing local school programs. In Arizona, it was evident from the returns of the questionnaire that his assis-

---

[35] Arizona Code Annotated, 1939, 54-416.

tance has been negligible. Not a district within the state named him as assisting most in influencing public approval of new school building programs.

Other individuals. Five districts named individuals other than those listed in the questionnaire. An analysis of those returns revealed the following practices:

In three cases it was noted that districts listed an individual board member other than the president as exerting the most influence in the community in developing school building programs. One district reported that eighty-five per cent of its students were Indians and that the chief of the tribal council assisted most in influencing public approval of new schools. Another district listed the mine operator as the most influential individual in the community as assisting most in building programs.

TABLE II

INDIVIDUALS CREDITED WITH ASSISTING MOST IN INFLUENCING PUBLIC OPINION FOR NEW SCHOOL BUILDINGS IN ARIZONA

No. Districts Reporting	Individual Credited With Assisting Most
40	School superintendent
17	President of school board
12	The principal
2	President of P. T. A.
0	County superintendent
0	Sec'y Chamber of Commerce
5	Other individuals
76	

III. ORGANIZATIONS EXERTING INFLUENCE

The board of education. The organization credited with exerting the most influence in developing school building programs in Arizona was the board of education. Fifty-six districts gave the board first place in their listings. Since a total of eighty districts responded to the question, this constituted seventy per-cent of the cases.

The Parent Teacher Association. Eighteen school districts within the state named the Parent Teacher Association

as the organization exerting the most influence in school building practices. This organization was second on the list and was far ahead of the third place rival..

The local teachers' association. Judging from the returns of the questionnaire, the local teachers' associations do not take an active part in school building programs. Only two respondents listed the local teachers' organization as exerting the most influence in their respective districts.

The Chamber of Commerce. In two instances it was observed that the Chamber of Commerce exerted the most influence in district school building programs.

Veterans' organizations. Veterans' organizations were not credited by any districts within the state as exerting the most influence in building programs.

Other organizations. Three respondents credited organizations other than those listed on the questionnaire as offering the most help in school building programs. These organizations were the Farm Bureau, Community Club, and The Tribal Council.

TABLE III

ORGANIZATIONS CREDITED WITH EXERTING THE MOST INFLUENCE IN DEVELOPING SCHOOL BUILDING PROGRAMS IN ARIZONA

No. Districts Reporting	Organization Credited as Most Influential
56	Board of Education
18	The P. T. A.
2	Local teachers' organization
2	The Chamber of Commerce
0	Veterans' organizations
3	Other organizations
80	

Summary. Three distinct trends may be noticed in the conclusion of this chapter. The methods used by boards of education in securing public approval of new building programs were reported with such frequency throughout the state that it is apparent that their occurrence is the current administrative practice in Arizona.

These practices are: First, personal contact with the voter in securing public approval of building programs. Second, the school superintendent was the individual assisting most in securing public opinion favorable to building

programs. And third, the board of education as an organization exerted the most influence in the community for new school buildings. All of these practices were found to be in accord with the practices commonly observed as acceptable by recognized schoolmen in the field.

CHAPTER III

TYPES OF BUILDING SURVEYS MADE TO ASCERTAIN THE NEED FOR AND THE SCOPE OF BUILDING PROGRAMS

I. THE INDIVIDUAL MAKING THE SURVEY

The school superintendent. Sixty-four school districts assigned this task to the superintendent. This practice constituted eighty-two per cent of the cases. That the superintendent received this assignment with such regularity within the state was indicative of the responsibility placed upon him by the school board. Preliminary surveys are of importance, and in Arizona it appeared that the boards of education recognized this and placed the responsibility of making such surveys in the hands of a trained man, namely, the superintendent of the district schools.

In the practice of assigning the superintendent the responsibility of being in charge of the development of a building survey the school districts of Arizona appeared to be in accord with the practices acceptable on a national scale. Whitehead[36] has published an organizational chart of school building survey techniques that has had wide distribution. In this chart the superintendent is the key executive in the

---

[36] Willis A. Whitehead, "School Building Survey Techniques," American School and University, Vol. 20, 1948-49, p. 105.

survey process.

Members of the school board. Individual members of the school board were assigned to make preliminary building surveys in seven school districts. This practice constituted eight per cent of the cases, and is not considered as significant on a state level. The districts in which this practice occurred were relatively small systems.

The county superintendent. One district in the state named the county superintendent as the individual making the preliminary surveys for building programs.

The State Department of Education. The personnel of the State Department of Education were not assigned to make any surveys for the district boards according to the returns of the questionnaire.

Other individuals. Five districts assigned individuals other than those listed in the questionnaire the task of making school building surveys. An examination of the returns revealed that four out of the five individuals assigned to make such surveys were principals. These were small districts where the principal of the school often acts in the dual capacity as principal and superintendent. One district reported that it employed outside experts to make its building surveys.

TABLE IV

INDIVIDUALS ASSIGNED TO MAKE PRELIMINARY SCHOOL BUILDING SURVEYS FOR BOARDS OF EDUCATION IN ARIZONA

No. Districts Reporting	Individuals Making Survey For the Board
64	School superintendent
7	A member of the school board
1	County superintendent
0	Personnel of State Department of Education
5	Other individuals
77	

II. PURPOSES OF BUILDING SURVEYS

An analysis of the returns of the questionnaire revealed a variety of purposes for making school building surveys in Arizona. The scatter of the number of cases in each category is indicative of the number of building problems facing boards of education and their applicability to a given district.

Population Increases. Apparently more surveys are made in Arizona to ascertain probable increases in population than for any other reason. Thirty-eight district boards reported that surveys were most often made for that purpose. This

practice constituted fifty-six per cent of the total reasons reported.

Cost of the building program. Out of a total of sixty-eight districts reporting, sixteen of them stated that surveys were most often conducted in their community to ascertain the cost of the building program. This reason ranked second in the state totals.

The potential tax support of the district. A desire to know the exact ability of the district in terms of tax resources was evident from the returns of the poll. Nine districts reported that surveys were made to ascertain the potential tax support of the district that could be converted into school building purposes.

The total assessed valuation of all taxable property[37] within the state as of June 30, 1951, was reported to be $756,219,540.05. Calculated on the basis of a four per cent limitation, this would allow a total of $30,248,781.60 in bonding capacity available to district boards for building purposes.

The location of sites. The location of the sites for school buildings was listed by four districts as the reason for making building surveys. This reason constituted almost

---

[37] "Twenty-First Biennial Report of State Superintendent of Public Instruction of Arizona," 1951-52.

six per cent of the total reasons listed.

Other reasons. One district added that it made preliminary surveys of a "comprehensive nature." It did not list the information expected to be obtained by a comprehensive survey.

TABLE V

REASONS LISTED FOR MAKING SCHOOL BUILDING SURVEYS IN ARIZONA

No. Districts Reporting	Reasons Listed for Making Survey
38	To ascertain the probable increase in population
16	To determine the cost of the building program
9	To determine the potential tax resources of the district
4	To ascertain the location of the best building sites
1	Other reasons
68	

Summary. In concluding this chapter two general administrative practices can be noticed. First, the superintendent was assigned by boards of education in Arizona to have charge of making preliminary building surveys. Second,

building surveys were most often made to ascertain the probable increase in population. The latter practice is common in states with migratory, or with rapid current growth in their population. The former practice is acceptable nationally as the normal procedure.

CHAPTER IV

THE EXTENT OF PROFESSIONAL SERVICES USED BY BOARDS OF EDUCATION IN DEVELOPING SCHOOL BUILDING PROGRAMS IN ARIZONA

1. ACCEPTANCE OF ADVICE

The questionnaire attempted to measure the extent of professional advice accepted by boards of education in developing school building programs in Arizona. The tabulations of the returns show the following practices.

The school superintendent. Sixty-three districts reported that the advice of the superintendent was most frequently accepted by boards of education in developing school building programs. The superintendent appeared to be the professionally trained man in the system advising the boards since seventy-five cases reported show him in first place. This number constituted eighty-four per cent of the districts answering the question. When these findings were compared with those made by Sorensen,[38] it was noted that since 1930, boards of education in Arizona increased the extent of professional advice sought in the development of building programs by four per cent.

---

[38] Glenn Sorenson, The City Superintendent and the Board of Education, (Unpublished Master's thesis, University of Arizona), 1930, pp, 47-48.

Boards of education in Arizona in their practice of accepting the advice of the superintendent in the development of a building program appeared to be in agreement with the boards of education on a nation-wide basis. The report made by the Commission on American School Buildings[39] states: "The board of education should look to the superintendent and his staff for recommendations in planning an educational program for the future."

Individual board members. Individual board members in three small districts of the state appeared to have had their advice most often accepted by the board in building matters. Statistically, this finding is not significant on a state level. On a local level, and in a professional sense, a problem may exist.

The influential citizen. Apparently boards were not inclined to accept the advice of the "influential citizen" of the district. Only two districts reported that in building programs an influential citizen's advice on school building problems was most often accepted.

The county superintendent. In one case the county superintendent was listed as having had his advice on school building matters most often accepted by the board.

---

39 "Report of American Association of School Administrators," Twenty-Seventh Yearbook, 1949, p. 21.

Other individuals. Six districts listed individuals other than those named in the questionnaire. These specific replies were checked. The individuals named were: Four were principals of rather small schools and in this capacity they were the administrators within the district. Two districts wrote in "the architect" as the individual whose advice the board most often accepted in developing building programs.

TABLE VI

THE EXTENT OF PROFESSIONAL ADVICE ACCEPTED BY BOARDS OF EDUCATION IN DEVELOPING SCHOOL BUILDING PROGRAMS IN ARIZONA

No. Districts Reporting	Individual Whose Advice Was Most Often Accepted
63	The school superintendent
3	A board member
2	An "influential" citizen
1	County superintendent
6	Other individuals
75	

II. RECOMMENDATIONS OF THE ARCHITECT

Recommendations considered. Recommendations made to the boards of education by architects are accepted after careful

consideration. The reports of eighty-four districts returning questionnaires included in this study were almost unanimous in stating that this practice prevailed. Only in one instance did a district report that it accepted the recommendation of the architect without question. And in only one district was it reported that after disregarding the architect's recommendation the board used its own ideas.

When the findings of this thesis are compared with the results of R. Izer Turner's[40] study of 1929, it was observed that boards of education in Arizona have very decidedly changed their policies regarding the recommendations of architects. The Turner study found that in 1929 boards of education in Arizona often proceeded with a building program without first having secured competent advice. Such is not the case in 1952.

---

[40] R. Izer Turner, American School Architect, (Unpublished Master's thesis, University of Arizona), 1929, p. 5.

TABLE VII

CONSIDERATION GRANTED ARCHITECT'S RECOMMENDATION BY BOARDS OF EDUCATION IN THE STATE OF ARIZONA

No. Districts Reporting	Action Taken On Recommendation Made by Architect
82	Accepted after careful consideration
1	Accepted without question
1	Discarded and the board's ideas used
0	Other actions reported
84	

III. CONSULTATIONS

The school superintendent. The school superintendent was the professionally trained man that the board most often consulted in routine building matters. Fifty-six districts reported that their boards most frequently consulted with the superintendent in routine matters regarding the building program. Out of a total of seventy-nine districts reporting, this practice constituted over seventy per cent of the cases.

The architect. The architect was the most often consulted person in fifteen districts of the state. This prac-

tice ranked second in the state.

The county superintendent. In three districts the county superintendent was the individual who was most frequently consulted by the board in routine building problems.

The contractor. Apparently the contractor was not considered as a source of information in routine building matters as the replies from seventy-nine school districts showed that only in three cases was he consulted by the board more often than any of the other professionally trained people.

Other persons. Two districts reported that they consulted other persons. They were written in "principal." Again it was noted that the district was a small unit and the principal was the administrator.

TABLE VIII

INDIVIDUALS MOST OFTEN CONSULTED BY BOARDS OF EDUCATION IN SOLVING ROUTINE BUILDING PROBLEMS

No. Districts Reporting	Individuals Most Often Consulted
56	The school superintendent
15	The architect
3	The contractor
3	The county superintendent
2	Other persons
79	

Summary. In summarizing the extent of professional services used by boards of education in developing school building programs, three practices were observed as occurring most frequently in the state. They are listed as follows: First, the advice of the school superintendent was found to be the most acceptable of all the individuals assisting boards engaged in building programs. Second, architects' plans were carefully studied by the school boards of the state.

And third, in routine building problems, the superintendent is the individual most often consulted by the boards. As previously discussed in the chapter, it was also evident that since earlier studies were made a marked increase has occurred in the extent of professional services now being employed.

CHAPTER V

CURRENT PRACTICES IN FINANCING NEW CONSTRUCTION

An attempt was made by use of the questionnaire to ascertain current practices in financing new construction in Arizona. A tabulation of the returns showed that eighty-four school districts made an attempt to reply to this part of the survey. The trends of the practices reported by the districts are as follows:

The sale of bonds. The sale of tax-supported school bonds appeared to be the prevailing current practice in financing new construction in Arizona. Sixty-two districts reported this method used exclusively. This constituted slightly under seventy-four per cent of the district replying to the question. This appeared to be in accord with the methods used on a national scale.

The ten cent levy for building purposes.[41] Ten districts reported this method utilized in their respective districts. However, on a state-wide basis, this method appeared inadequate for major building. Several districts advanced the comment "this should be increased to fifty cents."

---

[41] Arizona Code Annotated, 1939, 54-416.

Sale of bonds and ten cent levy combination. A combination of the sale of bonds and revenues derived from the ten cent levy was reported used as a method of financing new construction in five districts within the state.

Direct assistance from the Federal government. Four districts in the state reported that they had financed new construction by direct assistance from the Federal government. This method constituted almost five per cent of the cases calculated in the tabulation.

Other methods. Three administrators reported practices in their districts other than those listed on the questionnaire. These "write-in practices" were identified as "company gift," and "Public Law 815 is our only means." One district administrator did not make any specific identification.

TABLE IX

CURRENT PRACTICES IN FINANCING NEW CONSTRUCTION REPORTED BY SCHOOL DISTRICTS IN ARIZONA

No. Districts Reporting	Financial Practice Reported
62	Sale of bonds
10	A ten cent levy on property within the district
4	Direct assistance from the Federal government
5	A combination of the sale of bonds and revenues from a ten cent levy
3	Other practices
84	

Maturity date of bonds. An examination of the data collected from the returned questionnaire revealed that in sixty-three districts the bonds issued to obtain revenue for building purposes were to mature in from ten to twenty years from the date of issue. Ninety per cent of the districts reporting bonded indebtedness could be classified in this category.

Apparently some districts practice a short term method of financing. Seven districts reported that their bonds matured in less than ten years from date of issue. It was observed that seventy districts reported having bonded in-

debtedness created for building purposes.

The total bonded indebtedness of all school districts in Arizona as of June 30, 1951, was:

High School Districts	$ 9,628,300.00
Elementary Districts	16,874,700.00
TOTAL	$26,503,000.00

As of June 30, 1951, the total assessed valuation of all taxable property within the state was $756,219,540.05. Therefore, the bonded indebtedness for school building purposes of all the districts is three and five tenths (3½%) per cent of the total assessed valuation of the state.

The rate of interest on outstanding bonds. The average rate of interest on outstanding school bonds was calculated from the data submitted and was 2.86 per cent. The sampling in the computation of this item was restricted to fifty school districts as the figures submitted by twenty districts were not of an exact nature and could not be accepted.

Two districts reported that they paid no interest on their outstanding bonds. One stated that "the mining company owns the property and purchases the bonds with no interest." The other district did not give the details of how it was able to avoid the interest rate. The only comment made was: "That is right. No interest."

In comparing the school districts in Arizona with the practices observed on a national basis, the following infor-

mation relative to interest rates was noted. Clark[42] reports that on a national scale, long term school bond interest rates rose from a low of 1.75 per cent in February, 1951, to 2.60 during the month of June, 1951. The latest figures quoted were for November, 1951, and at that date the current rates were 2.53. Short term school bond interest rates were currently quoted at 1.50. Clark[43] predicts that the rates for long term bonds may remain stable unless the government policy changes. Considering the fluctuations occurring from date of issue to the time of the quoted rates, it appeared that Arizona school districts are doing a good job of selling their paper at low interest rates.

---

[42] Harold F. Clark, "School Building Cost and Bond Prices," School Executive, Vol. 71, January, 1952, p. 25.

[43] Loc. cit.

TABLE X

INTEREST RATES ON BONDED INDEBTEDNESS PAID BY THE SCHOOL DISTRICTS OF ARIZONA

No. Districts Reporting	Rate of Interest Paid
4	.0600
1	.0500
3	.0400
1	.0375
1	.0350
9	.0300
8	.0275
8	.0250
6	.0225
3	.0200
2	.0175
1	.0150
1	.0125
2	.0000
50	

Summary. Briefly summarized the data discussed in this chapter conclude that the sale of tax supported bonds appeared to be the current practice in financing new school buildings in Arizona. It was also observed that most boards issued bonds maturing in from ten to twenty years. The total bonded indebtedness of all the districts in the state was $26,503,000.00 as of June 30, 1951. The mean rate of interest paid on this indebtedness was 2.86 per cent. As discussed in the content of the chapter, all of the above practices appeared to be in accord with those acceptable to recognized school administrators.

CHAPTER VI

THE MAGNITUDE OF THE BUILDING PROBLEM IN ARIZONA

I. BUILDINGS COMPLETED

Construction since 1946. An attempt was made to check on the progress made in solving the building problem. Data collected from the questionnaire revealed that since January 1, 1946, boards of education in Arizona had completed construction of one hundred sixty-two buildings. Some districts in Arizona have been able to meet the current building problems successfully in spite of the odds against them. These districts have completed extensive building expansion programs. An example of this type of expansion is noted in Tucson District No. 1.[44]

A study was made of the data submitted on the returned questionnaires in order to determine the use made of the buildings constructed since 1946. Administrators reported that ninety buildings were constructed for elementary school purposes exclusively. Eighteen buildings were constructed for high school instruction. It was also found that thirteen new gyms had been provided for in the building program completed since 1946. In six cases it was reported that

---

[44] Robert D. Morrow and Francis A. Vesey, "Look at Tucson's Schools," American School and University, Twenty-Third Annual Edition, Vol. 23, 1951-52, pp. 244-256.

buildings had been constructed that were classified as junior high school units.

TABLE XI

ARIZONA SCHOOL BUILDINGS COMPLETED SINCE JANUARY 1, 1946

No. Buildings Reported Completed	Classification as to Use
90	Elementary buildings
18	High school building
13	Gyms
6	Junior high school buildings
35	Miscellaneous buildings
162	

Miscellaneous buildings. The thirty-five miscellaneous buildings reported as having been completed since January 1, 1946 were classified according to their use. In the main they were temporary classrooms, cafeterias, teacherages, and shop units. A detail classification of this type of construction is given in Table XII on the following page.

TABLE XII

MISCELLANEOUS BUILDINGS COMPLETED SINCE JANUARY 1, 1946

No. Buildings Reported	Classification of Buildings
7	Temporary classroom units
5	Government barracks converted into classrooms
5	Cafeterias
4	Teacherages
3	Shop buildings
2	Multipurpose buildings
2	School bus garage
1	Temporary addition to high school building
1	Addition to cafeteria
1	Music building
1	Auditorium
1	Agricultural building
1	Storage building
1	Outside court
35	

II. BUILDINGS PLANNED

Buildings in the planning or construction stage. It was apparent by examination of the data collected that the completion of one hundred sixty-two buildings since 1946 had not solved the housing problem for the school districts in Arizona. From the tabulated results of the questionnaire it was evident that fifty-eight districts in the state currently had in the planning or construction stage a backlog of buildings needed. Data reported by the school administrators relative to the buildings being planned or under construction have been compiled and is exhibited in TABLE XIII which follows.

TABLE XIII

BUILDINGS CURRENTLY IN THE PLANNING OR CONSTRUCTION STAGE

No. Buildings	Type of Building
61	Elementary buildings
14	High school buildings
10	Gyms
8	Junior high school buildings
22	Miscellaneous buildings
115	

Miscellaneous buildings planned. To get a clear picture of the type of miscellaneous buildings being planned or under construction, a breakdown of the data was attempted. It was found that the districts intended to use these miscellaneous buildings for a variety of purposes, mainly as supporting structures for the larger units of the system. Table XIV which follows gives the breakdown in detail.

TABLE XIV

MISCELLANEOUS BUILDINGS PLANNED OR UNDER CONSTRUCTION

No. Reported	Type of Building
4	Temporary additions to present buildings
4	Cafeterias
3	Office or administration
2	Multipurpose buildings
2	School bus garages
2	Shop buildings
2	Teacherages
1	Vocational agriculture
1	Auditorium
1	Storage building
22	

III. FEDERAL ASSISTANCE

Federal government loans for advance planning. It appeared from the data reported that many boards of education in Arizona did not make application to the Federal government for advance planning loans. A total of fifty-eight respondents reported that they declined to file application for such assistance. However, twenty administrators reported that their districts had filed applications for Federal planning loans. Out of a total of seventy-eight districts replying to this question, those making application to the Federal government for such loans were just under twenty-six per cent.

IV. CURRENT OBSTACLES

The bottleneck in Arizona. The school administrators were asked to give their opinions as to what they considered the most apparent obstacle or "bottleneck" in developing school building programs in Arizona. Seventy-two administrators replied to the question. This constituted seventy-seven per cent of the administrators assisting in the survey. Due to the high subjectivity of the nature of the replies, only general conclusions could be formulated.

The frequency of comment relative to the encroachment of the Federal government on the total tax potentiality of the people was noticeable.

It was also noted that many administrators thought

that a revision of the state code which limits a levy to ten cents on the hundred dollar valuation for building purposes would alleviate the problem in many districts. Other administrators commented on the absence of a state equalization program for building purposes. Others listed the fluctuations and the inflation in the cost of building material. Twenty-five random samples of the comment received on this question are quoted verbatim as follows:

> Money, money, money. If we could get the hand of the Federal government out of our pockets, we wouldn't have much of a problem.
>
> Lack of funds. Lack of a state architect.
>
> The lack of say a 50¢ levy that would allow average additions without a bond issue election.
>
> Some school districts have a large assessed valuation and others are poor.
>
> Inability of heavily populated but low assessed districts to finance a building program without Federal aid.
>
> Too little per capita tax wealth per school child. Too much variation of tax wealth per pupil among districts. Equalization fund needed.
>
> The burden of high taxes of all kinds (not only property tax) seems to be the greatest obstacle in this district.
>
> School board members and some other patrons who are afraid to increase taxes.
>
> In our own area the water code just caused us to lose an election for eight more class rooms.
>
> Objections of large property owners whose children have left the community.
>
> State laws requiring local districts to provide all the cost of constructing new schools.
>
> Finance-fluctuating-population. People are usually

reasonable if school officials are. Our district has never lost a bond election.

The general tax situation which places the major responsibility for financing construction on the property owner.

Taxitis.

In light of heavy taxes in all phases of government, to convince taxpayers of new buildings needed.

High cost of material and labor.

All construction has to be made from money derived from property tax alone. This is not a fair base.

Lack of per capita wealth.

In our area it appears to be the smaller taxpayers who present most obstacles.

The patrons.

Sudden population increases and impact created by defense industries. (It takes time to develop and execute a sensible and desirable building program.)

The school boards do not realize the need for buildings, nor do they know how good school buildings should be constructed.

Lack of school survey by authoritative personnel, or staff of experts.

In our district, low valuation.

Tax Research.

A further analysis of the comments made by the seventy-two administrators who returned questionnaires revealed that the volume of this comment was from one word, namely, "taxitis," to over a page in length. All comment reflected current problems in each administrator's district.

Twenty-one administrators did not submit opinions as to what constituted the most apparent problem or "bottle-

neck" in the building program.

Twenty-seven districts within the state reported that they did not complete any construction from January 1, 1946, to the date of returning the questionnaire. And thirty-five districts stated that they did not have buildings planned or under construction at the present time.

The magnitude and the complexity of the building problem facing the school boards in Arizona apparently increases monthly. Clark[45] in his release on School Building Costs and Bond Prices as of January, 1952, states:

> Shortages in copper, nickel, and aluminum are even worse and will continue. If prices rise and Federal deficits continue, it will add to the monetary supply and greatly increase inflationary pressure.

Summary. The important facts noticed in the development of this chapter may be concluded as follows: First, the large volume of construction completed by the school boards in Arizona since 1946 to the present date. Secondly, the large backlog of construction planned for the future and in the actual contracting stage. And a variety of miscellaneous structures built to accomodate the needs of a modern school system.

The trend of boards of education in accepting Federal assistance in the form of planning loans was significant. The obstacles or apparent "bottlenecks" as evidenced by

---

[45] Harold F. Clark, "School Building Cost and Bond Prices," School Executive, Vol. 71, January, 1952, p. 25.

the comment of seventy-two administrators and the courage that these school men of the state have in facing these problems are all significant and encouraging. As one superintendent stated, "we just keep plugging," seemed to be typical of the attitude found and to be the current administrative practice observed throughout the study of the building problem.

CHAPTER VII

SUMMARY OF THE CURRENT ADMINISTRATIVE PRACTICES IN THE DEVELOPMENT OF SCHOOL BUILDING PROGRAMS IN ARIZONA

I. THE MAJOR CURRENT PRACTICES

It was observed when compiling and analyzing the data received from ninety-three school districts of the state that certain practices occurred with such frequency and regularity that trends were established. The enumeration and analysis of these trends in administrative practices in school building programs was in part the intent of the survey.

The school superintendent. The influence of the school superintendent in securing public approval of new building programs was evident. In forty districts of the state he was listed as the individual assisting most in securing public approval.

The poll also showed that the school superintendent was the individual who made the preliminary building surveys for the district. Not only did he make the preliminary surveys, but it was noted, by an analysis of the data, that the superintendent's advice to the board in both the development of the program and in routine building problems was more often accepted than the advice of any other

individual.

It is concluded that in the scope of his influence with the public, his responsibility in making the preliminary surveys, and by the number of times his advice was sought and accepted by the board of education, that the school superintendent is the key figure in developing school building programs in Arizona.

Population increases. Another major trend observed in analyzing the data collected on building programs in Arizona was that preliminary building surveys are most often made in order to ascertain the probable increase in the population of a district. This purpose within itself is indicative that the state is currently faced with the problem of population increases. Almost fifty-nine per cent of all the districts assisting in the survey were more concerned with the factor of population increases than any other factor entering a building program survey.

Recommendations of the architect. It was very decidedly a practice of the boards of education in Arizona to carefully consider the recommendations made to them by architects. This practice was the most prevalent and occurred more frequently in the state than any of the other practices revealed by the poll.

Ninety-seven per cent of all the districts replying to the question stated that they approved the recommendation

of an architect after careful consideration. And only one district reported that after having discarded the recommendation of an architect, the board substituted its own ideas.

Buildings planned. The magnitude of the housing problem facing the school districts in Arizona was evident by the volume of building now planned or in the actual construction stage. In spite of governmental allocation of critical material, inflationary building cost, and other "bottlenecks," boards of education and their administrators are not napping. Fifty-eight districts reported buildings in the planning stage or under construction. The practice of boards in Arizona during these critical times appeared to be, as one administrator commented, "we just keep plugging." Thirty-five districts have no buildings in the planning stage.

Buildings completed. An examination of the data returned by the questionnaire revealed that since January, 1946, a huge volume of school building within the state had actually been completed. Classified as to use these buildings were: Ninety elementary buildings, eighteen high school structures, thirteen gyms, six junior high school units, and thirty-five miscellaneous other structures.

Current practices in financing. It was observed that major construction of school buildings in Arizona was fi-

nanced by the sale of district tax supported bonds. Sixty-two administrators reported their building revenues largely derived by this means. In this connection it was also observed that these bonds usually matured in from ten to twenty years and the average rate of interest charged was 2.86 per cent.

It was adduced from the comment made by the administrators and from the practices reported that revenues derived from the ten cent levy for school building purposes now authorized by law were not sufficient to provide adequate housing funds for the district schools.

Personal contact with the voter. Personal contact with the voter appeared to be a current administrative practice in twenty-four districts attempting to secure public approval for their building programs. This trend was not as decided as in some of the practices investigated in other fields. For example, the press was listed by thirteen districts, and mass meetings with the voter was also listed by thirteen districts as methods most often used in their respective districts to secure public approval for new buildings.

II. MINOR PRACTICES OBSERVED

It was observed that in certain phases of the development of a building program practices were reported occurring less frequently in the state, and have been classified as of minor importance. However, their occurrence may not

be as significant in a statistical sense as it is in an educational or professional sense. For this reason these practices are enumerated and discussed as follows:

Federal aid. Twenty school districts reported that they had filed application with the Federal government for advance planning loans. This practice constituted almost twenty-six per cent of the districts reporting building programs.

It was also observed that four districts reported that they received their building funds largely as direct assistance from the Federal government. This was slightly under five per cent of the districts that conducted building programs.

From the comment made by the administrators relating to the "bottlenecks" in building programs in Arizona it was ascertained that in ten cases the administrators themselves indirectly advanced the need for more Federal aid in solving the building problem.

Miscellaneous types of buildings. It was noted from the returns that school districts in Arizona had completed since January 1, 1946, thirty-five structures that were not classified as major classroom units. This type of construction is thought of as adding support to the physical convenience and instructional use of the entire school plant. An analysis of this type of building showed them to be used

largely as temporary additions to major buildings; converted government barracks, used as cafeterias and teacherages.

It was also observed that boards of education currently had planned, or had under construction twenty-two buildings of the same general type. Apparently the need for supporting buildings increases with the growth of the school system.

Rate of interest paid on school bonds. The rate of interest paid on school bonds by the districts in Arizona was tabulated and analyzed. The average rate of interest paid by fifty districts used in sampling was 2.86 per cent. It was noted that ten districts reported that they currently paid more than three (3%) per cent on such indebtedness. Although this practice is not significant on a state level, much lower rates can possibly be obtained.[46]

Board members. It is a nationally accepted theory among schoolmen that boards of education should restrict their actions to policy making and delegate the executive functions to the school superintendent. However, it was noted that in seven cases in the state, board members assigned to an individual member the executive function of making the preliminary building survey.

It was also observed that in three cases, districts reported that their boards most often accepted the advice

of an individual board member in developing building programs.

The board was credited as the organization which exerted the most influence in developing school building programs in the state. The Parent Teacher Association ranked second in the state in assisting in building programs.

The president of the board was the individual credited by seventeen districts as assisting most in influencing public approval for new construction. In the over-all picture of the state he was far behind the superintendent in the amount of influence wielded.

III. THE NEED FOR FURTHER RESEARCH

The need for further investigation in the administrative practices in developing school building programs in Arizona is evident. The magnitude of the problem, the tremendous capital outlay involved, the instability and current fluctuations in cost of material and labor, and the probable increases in population, coupled with migratory problems, lack of adequate funds, and the encroachment of the Federal government on the tax potentialities of the income of the state are but a few of the reasons why further and continuous research is needed. On a national scale, McGrath, in his report to Congress and the President said of the schoolroom shortage, "the situation is rapidly approaching

a major national catastrophe."[47]

School building programs constitute a "big business" in Arizona. And as in industry this demands research. Administrative practices can be analyzed for effectiveness, enumerated as to efficiency, evaluated as to economy, and reorganized and improved only by further research.

---

[47] Earl J. McGrath, "Annual Report to Congress and the President," Associated Press Release, The Arizona Daily Star, March 23, 1952.

BIBLIOGRAPHY

Arizona Code, Annotated, 1939, 54-416

Bliss, Sidney M., "Publicity and School Building Programs," American School Board Journal, Vol. 118, January, 1949.

Briscoe, William S., "Cooperative Planning," American School and University, Vol. 20, 1948-49.

Burke, Arvid J., Financing Public Schools in the United States. New York: Harper and Brothers, 1951. 584 pp.

Clark, Harold F., "School Plant Cost and Bond Prices," School Executive, Vol. 69, August, 1951.

_____, "School Plant Cost and Bond Prices," School Executive, Vol. 70, March, 1951.

_____, "School Plant Cost and Bond Prices," School Executive, Vol. 71, January, 1952.

Cocking, Walter D., and Robert L. Hopper, "America's Outstanding School Buildings," American School and University, Vol. 22, 1950-51.

Dixon, Ralph Bruce, "An Administrative Handbook for School Board Members and Administrators of Arizona High Schools," Unpublished Master's thesis, University of Arizona, 1946. 104 pp.

Edens, Thomas L. Jr., "Architectural Standards for Contemporary School Buildings for the State of Arizona," Unpublished Master's thesis, University of Arizona, 1941, 114 pp.

Hedlund, Paul A., "Support for a School Building Program," Nation's Schools, Vol. 44, December, 1949.

Hewes, Harry, "Federal Assistance in School Planning," School Executive, Vol. 69, August, 1950.

Marshall, John, "Community Participation in School Planning," School Executive, Vol. 67, December, 1947.

McGrath, Earl J., "Annual Report to the Congress and the President," Associated Press Release, The Tucson Daily Star, March 23, 1952.

Morrow, Robert D., and Francis A. Vesey, "Look at Tucson's Schools," American School and University, Twenty-Third Annual Edition, Vol. 23, 1951-52.

"Report of American Association of School Administrators on American School Buildings," Twenty-Seventh Yearbook, 1949.

"Report of American Association of School Administrators," Thirtieth Yearbook, 1952.

"Report of National Education Association," Research Bulletin, Vol. 24-26, 1946-48.

"Report of School Plant Trends in Financing the School Plant," American School and University," Vol. 21, 1949-50.

"Report of State Superintendent of Public Instruction of Arizona," Twenty-First Biennial Report, 1951-52.

Sorensen, Glenn, "The City Superintendent and the Board of Education," Unpublished Master's thesis, University of Arizona, 1930. 53 pp.

Turner, R. Izer, "American School Architect," Unpublished Master's thesis, University of Arizona, 1929. 39 pp.

Turner, Wendell P., "A Proposed School Building Code for the State of Arizona," Unpublished Master's thesis, University of Arizona, 1939, 97 pp.

Wilson, Donald R., "A Survey of Classroom Lighting in the Safford, Arizona, Public Schools," Unpublished Master's thesis, University of Arizona, 1948, 88 pp.

Whitehead, Willis A., "School Building Survey Techniques," American School and University, Vol.-20, 1948-49.

_____, "Educational Service in Planning," Educational Research Bulletin, 25-26, Ohio State University, October, 1947.

APPENDIX

A copy of the questionnaire and the accompanying letter mailed to one hundred forty-six school administrators in Arizona in order to collect data for the development of this survey is included as a part of the appendix of the thesis. The number of acceptable replies used in the tabulation of the data of the survey is listed on the questionnaire form opposite each item.

Copy of letter mailed to administrators.

1103 East Adams Street
Tucson, Arizona
February 21, 1952

_____

_____

Dear Superintendent_____:

I am collecting data for the development of a Master's thesis on administrative practices in school building programs in Arizona. I realize the value of your time. However, I would deeply appreciate your checking the enclosed questionnaire which will take only a short time and your returning the same to me.

A copy of the abstract of this thesis will be mailed to all school administrators who indicate a desire to have a copy of the results of the survey. An addressed and stamped envelope is enclosed herewith for your convenience in returning the data.

Kindly accept my personal appreciation and thanks for this valuable assistance.

Sincerely yours,

/s/ R. P. Kiser
Student

/s/ R. A. Crowell
Thesis Director

Copy of Questionnaire Used.

Instructions. This questionnaire is designed to collect data on administrative practices in developing school building programs in Arizona. Kindly check the practice current in_____district No._____

- -

Part I. SECURING PUBLIC APPROVAL

1. In securing public approval for new buildings in this district appeal is most often made by use of: (check one)

 0 the radio.
13 the press.
 8 printed material circulated as handbills.
24 personal contact with the voter.
13 mass meetings with the voters.
 6 other methods, specify.

2. The individual commonly credited with assisting most in influencing public approval for new buildings in this district is: (check one)

40 the school superintendent.
12 the principal.
17 the president of the school board.
 2 the president of the P.T.A.
 0 the secretary of the chamber of commerce.
 0 the county superintendent.
 5 others, specify.

3. The organization credited with exerting the most influence in developing school building programs in this school community is: (check one)

 2 the local teachers' association.
56 the board of education.
18 the P.T.A.
 0 veterans' organizations.
 2 the chamber of commerce.
 3 other organizations, specify.

PART II. TYPES OF SURVEYS MADE.

1. In this district preliminary building surveys are usually made by the: (check one)

64 school superintendent.
1 county superintendent.
0 State Department of Education.
7 members of the school board.
5 others, specify.

2. In this district surveys are most often made to ascertain: (check one)

38 the probable increase in population.
16 the cost of the building program.
9 the potential tax support of the district.
4 the location of the best sites.
1 others, specify.

PART III. THE EXTENT OF PROFESSIONAL SERVICES USED.

1. In developing building programs in this district the board most often accepts the advice of: (check one)

63 the school superintendent.
3 an individual board member.
2 an influential citizen of the district.
1 the county superintendent.
6 others, specify.

2. Recommendations made to the board by the architect are most generally: (check one)

1 accepted without question
82 accepted after careful consideration
1 discarded and the board's ideas used.
0 others, specify.

3. In routine building matters the board most often consults: (check one)

56 the school superintendent.
3 the contractor
15 the architect
3 the county superintendent.
2 others, specify.

PART IV. CURRENT PRACTICES IN FINANCING NEW CONSTRUCTION

1. In this district new buildings are largely financed by: (check one)

62 the sale of bonds.
10 the annual ten cent levy in the school budget for building purposes.
4 direct assistance from the Federal government.
5 a combination of the sale of bonds and revenue derived from the annual levy in the school budget for building purposes.
3 other methods, specify.

2. If financed by the sale of bonds, the maturity date of these bonds is generally: (check one)

7 less than ten years.
63 from ten to twenty years.
0 over twenty years.

3. The interest rate of school building bonds sold in this district is commonly_____per cent.

4. As of June 30, 1951, the bonded indebtedness for school building purposes in this district was:

For high school buildings $_____
For elementary buildings $_____
For other types of school buildings $_____

5. The annual ten cent levy for school building purposes in the current school budget in this district amounts to:

For high school buildings $_____
For elementary buildings $_____

PART V. GENERAL INFORMATION.

1. Since January 1, 1946, this district has completed the construction of the following number of units:

90 elementary buildings.
18 high school units
6 junior high school buildings.
13 gyms.
35 others, specify.

2. At the present time this district contemplates or has in the planning or construction stage, the following units:

61 elementary buildings.
14 high school units.
8 junior high school units.
10 gyms.
22 other units, specify.

3. In developing building programs this district:

58 has not made application to the Federal government for advance planning loans
20 has made application to the Federal government for the services of advance planning loans.

4. The current active enrollment of this district is:

97,200 elementary students
7,661 junior high school students.
26,893 high school students.

5. As a school administrator would you care to give your opinion as to what you consider the most apparent obstacle or bottleneck in developing school building programs in Arizona? (Write comment below)

_____

_____

_____

_____

_____

6. When this study is completed do you wish a copy of the abstract mailed to you? 68 yes 12 no

_____
Signature of person making this report

School Districts Contributing Data

Ninety-three school districts with an active enrollment of over one hundred pupils returned questionnaires that were used as a source of data in the development of this thesis. The school districts returning questionnaires were:

Ajo
Amphitheater
Arlington
Bagdad
Balsz
Benson
Bisbee
Bowie
Buckeye
Buckeye Union
Camp Verde
Casa Grande
Casa Grande Union
Chandler
Chino Valley
Clifton
Coolidge
Cottonwood
Creighton
Douglas
Duncan
Duncan Union
Eagar
Eloy
Flagstaff
Fredonia
Gadsden
Gila Bend
Globe
Hayden
Holbrook
Isaac
Kenilworth
Kingman
Kyrene
Liberty
Lichfield
Littleton
Madison
Mammoth
Maricopa
Mesa
Miami Area
Mohawk Valley
Morenci
Nogales
Northern Yuma County Union High School
Osborn
Palo Verde
Patagonia
Patagonia Union
Payson
Pendergast
Peoria
Phoenix Union High School System
Phoenix
Picacho
Prescott
Puerco
Queen Creek
Riverside
Roosevelt
Rural
Safford
Santa Cruz Valley Union
Scottsdale
Seligman
Short Creek
Snowflake
Snowflake Union
Solomonville
Somerton
Stanfield
St. David
St. Johns
Sunnyside
Superior
Tempe
Tempe Union

Tombstone
Tolleson
Tucson
Washington
Wellton
Wickenburg
Willcox Union
Willcox
Wilson
Window Rock Consolidated
Winkelman
Winslow
Yuma Union
Yuma

Seventeen school districts having active enrollments of less than one hundred students also returned questionnaires. As this study was intended to survey school districts having active enrollments of more than one hundred pupils, the reports from these districts were not used in the tabulations of the data for this thesis. Districts in this classification were:

Bonita
Calabasas
Elfrida
Franklin
Ft. Thomas Union
Grand Canyon
Pioneer
Laveen
Mayer
Oracle
Pomerence
Ray
San Simon
Tanque Verde
Theba
Vail
Williams