DOCUMENT RESUME

ED 036 049 EF 001 793

AUTHOR GIBSON, CHARLES D.; EATOUGH, CLAIR L.
TITLE THE PORTABLE CLASSROOM IMPACT ON EDUCATIONAL PROGRAMS AND SCHOOL FACILITY FINANCING IN CALIFORNIA.
INSTITUTION CALIFORNIA STATE DEPT. OF EMPLOYMENT, SACRAMENTO.
PUB DATE 18 JAN 68
NOTE 7P.; A PRESENTATION MADE TO A SUB-COMMITTEE OF THE STATE ALLOCATION BOARD ON JAN. 18, 1968

EDRS PRICE EDRS PRICE MF-$0.25 HC-$0.45
DESCRIPTORS BUILDING DESIGN, *CLASSROOM RESEARCH, COST EFFECTIVENESS, *EDUCATIONAL FINANCE, *EDUCATIONAL POLICY, *EDUCATIONAL PROGRAMS, *MOBILE CLASSROOMS, PROGRAM EVALUATION, STATE SURVEYS

ABSTRACT

A DISCUSSION OF PORTABLE CLASSROOMS IN CALIFORNIA INCLUDES STATEMENTS ON THE EXTENT OF THEIR USE, THE REASONS FOR THEIR PURCHASE, PUBLIC ATTITUDES TOWARD THEM, SOME POSSIBLE LIMITATIONS, AND THE POLICY REGARDING THEIR USE. THE PAPER CONCLUDES THAT BEFORE POLICY IMPLEMENTATIONS ARE IMPOSED ON PORTABLE CLASSROOMS, A NEW SURVEY MUST BE UNDERTAKEN WHICH WOULD ASSESS THEIR BENEFITS IN TERMS OF EDUCATIONAL GOALS AND ESTABLISH THEIR TRUE AND TOTAL COSTS. (FPO)

THE PORTABLE CLASSROOM IMPACT ON EDUCATIONAL PROGRAMS AND SCHOOL FACILITY FINANCING IN CALIFORNIA

A presentation made to a sub-committee of the State Allocation Board on January 18, 1968

by

Charles D. Gibson, Chief
Clair L. Eatough, Architect

Bureau of School Planning
California State Department of Education

INTRODUCTION

The portable classroom building of today is much like "Topsy". "It just growed." With no legitimate educational forebearer in sight, its origins can be traced back to economic misjudgments, poor planning, and ignorance of the importance of school facilities to the success of educational programs. This produced "temporary" solutions to "emergency" school housing problems such as the use of war surplus buildings. For many years, large school districts — particularly large city districts — were the only users of portable classrooms. These districts designed and constructed their own one- and two-classroom models. Most were awkward and costly to move. After thirty-odd years, hundreds still stand on the exact spot on which they were built.

As suburbia began to blossom around large urban centers after World War II, scores of small rural school districts became large city districts on a population explosion basis. When enrollments outdistanced classroom facilities, few school officials stopped to evaluate possible new ways of running school programs, such as team teaching, staggered schedules, etc. Rather, they followed the established pattern of one teacher - one class - one classroom, with the result that the "portable" classroom became big business.

Segments of the building industry representing both well-established, responsible firms and speculative interests began flooding the state with salesmen. Portable classrooms became an over-the-counter commodity in a highly competitive and lush market. Established legal procedures for planning and providing school buildings were often ignored by both the seller and the buyer, including the specific requirements of Title 21 (Field Act). Competition based on price alone tended to hold down the quality level of portable classroom designs. Manufacturers of portable units were here today and gone tomorrow with all kinds of lease, lease-purchase, and outright purchase deals.

As competitive attrition set in, the list of manufacturers doing the major business in portable classrooms was reduced to a handful. A few designs, most of them similar in basic concept, became the "stock plans" of the portable classroom industry. Continued fierce competition has tended to prevent major design changes or improvement in these facilities.

THE EXTENSIVE USE OF PORTABLES

A research study by Stanford University, published in 1960, revealed that 19% of the total classrooms in Los Angeles are of the portable type; in San Diego - 18%; in Sacramento - 13.4%; and in San Francisco - 13.7%. The average percent of use in districts with over 10,000 average daily attendance was 16.8%,and throughout California portables comprise more than 10% of all classroom housing. These figures were confirmed in 1962 by a Federal survey which also disclosed that California schools were using more than three times as many portable classrooms as any other state percentagewise. Texas was second with approximately 3% of its classrooms of the portable type. This is significant because it dramatically revealed that California has invested heavily in a type of classroom unit that in concept is generally admitted to be substandard. These surveys are now out-of-date. Since 1960 we have seen an increased use of the portable because of new State and Federal educational programs. For example, in 1965 the Congress of the United States passed the Elementary Secondary Education Act as part of the Great Society's Program initiated by President Johnson. Stipulated in the rules and regulations of this largest Federal Aid to Education effort was a rule limiting the expenditure of E.S.E.A. funds for permanent construction. Thus, hundreds of portable classrooms were purchased or leased to meet the requirements of this program. Other programs which contributed to the unprecedented demand for portables were the Economic Opportunity Act which provides improved educational opportunity for the culturally deprived child. Operation Head Start is only one example. Again school districts met the demand for educational space to house developing programs through relocatable facilities. Senate Bill 28 was passed in the summer of 1966 by the California State Legislature. It provides $34 million dollars to reduce class size and $1 million dollars for school housing to improve the lot of the migratory child. The $1 million dollars were specifically allocated for the purchase of relocatable classrooms.

In addition to the units acquired specifically for State and Federal programs, many districts during this time experienced unusual difficulty in passing bond issues and, therefore, leased quantities of portable classrooms. Statistics are not presently available but it is a certainty that many districts have more than doubled their number of portable classroom units since 1960.

WHY DISTRICTS BUY PORTABLES

Portable classrooms are generally purchased for the following reasons:

1. Shifting enrollments — a mobile population
2. Time factor — a district needs immediate housing
3. Economy — it is believed that portables are cheap.

Each of these reasons needs examination before it can be accepted as valid.

Shifting Enrollments — The use of portable classrooms is justified in those situations where the student enrollment is not stable. It is true that a mobile population may validate the use of mobile facilities, but it is equally true that a stable community deserves the advantages of custom designed permanent facilities. It is extremely unlikely that any major California school district has a student population shift during the life-span of a portable that would justify the use of these units as a substitute for permanent facilities to the extent of say 10% of the total number of classrooms. Evidence suggests that most portable classrooms are never moved at all.

Time Factor — A portable or relocatable building does provide a rapid solution to classroom construction. A building can be ordered and delivered to the site within a few weeks. All too frequently, however, they are needed in a hurry only because of poor district planning.

Economy — The fundamental reason for purchasing or leasing portable school facilities is the belief that portables are a cheap solution when the district is in a financial squeeze. The State of California, as one major purchaser of portables, can give evidence as to whether or not this is true. The Office of Local Assistance, under the Department of General Services, has actual cost figures for portable classrooms purchased by districts under the State-aid program and portable units purchased by the State under Senate Bill 28 - Migrant Housing. It is the understanding of the Department of Education that the initial cost of these portable classrooms is very close to the maximum cost allowances for permanent classrooms under the State-aid program. One must add to the purchase price the higher maintenance costs of portables and higher overhead and operating costs. Most portable classrooms sell for about $13,000, plus or minus, for a limited facility of about 960 square feet. The average cost of moving this so-called portable classroom exceeds $2,000 per move. Acknowledgment must also be made of the fact that these units are of temporary quality and thus, one can assume that their useable life-span is no more than half that of a typical custom designed permanent facility. Available evidence suggests that portables are actually more expensive classrooms to own and operate than the permanent type facility.

WHY THE LAYMAN IS MISINFORMED

Since 1960, which is the period of development for the trailer-type portable, a large number of manufacturers have entered the field. Today, perhaps half a dozen companies dominate the market and for these companies the portable classroom has become very big business. They have broadened their operations and means of production to meet the demands for educational space generated by Federal and State funds. This in turn has increased their sales staff. Salesmen periodically contact every school superintendent, business manager, and trustee who could be a potential customer. The portable classroom has become a vendor's display at every administrators' convention. Colorful and abundant sales literature proclaimed that these units are "reasonably priced", "flexible", "built to permanent standards", "suitable for modern education", etc. Sales practices are highly competitive and sometimes ignore both desirable and legally required procedures. This continuous and heavy promotion is effective because few counteracting voices are heard and because the average taxpayer sincerely believes that the portable classroom represents economy.

THE PORTABLE CLASSROOM LIMITS EDUCATIONAL METHODOLOGY

The traditional classroom no longer represents a valid space for modern education. Today and tomorrow the new schools being planned and put in operation are basically large loft space shells in which the interiors can be readily modified to accommodate varied teaching-learning activities. The portable classroom, however, retains the space geometry of yesterday's self-contained classroom and is restricting education to the techniques of yesterday.

The Educational Facilities Laboratories, Inc. (sponsored by the Ford Foundation), in a report titled Relocatable School Facilities, published in 1964, says it another way:

"At the most primitive levels of planning, the school is simply a shelter; a shed or large box to protect the student, his books, his papers, and his teacher from rain, snow, and the glare of the sun. Simple arithmetic would have it that the bigger the enrollment, the more boxes we need.

Obviously school planning as a process has advanced beyond the simple arithmetic means to an end.

Following more advanced concepts of planning, today's school is a complex of spaces and facilities of varied sizes. . . . Space for the student to work by himself. Space to meet with a teacher and/or small group in a seminar. Space to receive instruction in a larger group. Space to meet in large assemblies. Space for the principal, the counsellor, the nurse. . . . the cafeteria, the gymnasium, the heating plant.

While the classroom is still the most recognizable unit of school space, it is clearer today than ever before that the isolated classroom, a 30' x 30' cell for 30 students and one teacher, is not sufficient for the total education of the students who occupy it. Planning for an effective interrelationship of spaces and equipment has superseded older concepts of joining a series of cells by a corridor and calling it a school.

By the very nature of the structure. . . . the relocatable facility. . . . is usually an isolated classroom unit, physically separated from the main school plant to which it has been assigned. This isolation from the mainstream of a school's functional plan — the limited access to the educational experiences designed into a well-planned school complex — is undoubtedly the major educational disadvantage of relocatable facilities now in use. And thus we may slip back to the cliche of a school being a series of isolated cells, this time not even joined by a corridor."

BUREAU POLICY REGARDING PORTABLES

Specifically the Bureau of School Planning, State Department of Education, does not support the use of portable classrooms as a substitute for custom designed facilities except in those instances where a district can submit clear evidence that they represent a logical answer to the district's housing problem. This policy is based upon the following facts:

1. Portable classrooms are not suitable for instructional programs which require large free-flowing spaces equivalent to several traditional classrooms. No portable manufacturer is presently marketing units which provide the type of space geometry and environmental controls recommended by the Bureau of School Planning. (This statement is made with the knowledge that manufacturers can make extensive modifications to the trailer-type component to comply with a client's specifications.)

2. A school plant is much more than classrooms. Manufactured units are not suitable for toilets, multi-purpose or gymnasium spaces, music rooms, science, arts and crafts, shop facilities, libraries and cafeterias, and large group instructional spaces. Efforts by school districts to adapt portable space to these functions have had questionable results.

3. Portable classrooms fragment the organization of existing schools. It is usually impossible to locate portable facilities on the site in relationship to parking and bus loading, to library facilities, and to other major elements of the campus. Invariably, they are placed as an afterthought at the periphery of the campus and create a scattered building organization of the Master Plan.

4. Most portable classrooms rely upon a unit ventilator to provide air distribution and control classroom air temperature. Such units do not normally meet established comfort criteria because the location of air supply and return is often in the same unit preventing proper air distribution patterns. These units are often undersized, noisy, and present maintenance problems.

5. In California, few portable classrooms are engineered for a specific climatic location. This would require that the building shell be analyzed to prevent heat loss or gain and that the heating and cooling plant be engineered for a particular temperature range. Manufacturers have attempted to market the same classroom with the same structural engineering in various regions in California, from desert to mountain areas (heavy snow loads). Fortunately, the State laws under Title 21 prevent this and require that structural adequacy be proven for each submittal.

6. Most portable manufacturers sell a classroom as an empty shell, and require the district to purchase such items as cabinet work, carpets, and specialized equipment as extras. Portable classrooms frequently do not have sinks or lavatories necessary for the elementary school programs. The equipment provided is not scaled to the student with lavatories and counter tops at the correct height, and there is seldom adequate storage for equipment.

7. Portables are often placed on a site without provision for utilities, such as gas, water, sewage, and storm drainage. The inclusion of utilities would tend to make the portable classroom a permanent space and raise the cost level proportionate to permanent facilities. When the school connects the portable classroom to the campus with sidewalks or covered walkways, develops hardtop areas for play, and maintains landscaped areas, the portable classroom becomes a permanent classroom with compromises in space, flexibility, and environmental controls.

8. Portable classrooms have not found general acceptance by the lay public because they are recognized as sterile, monotonous, and unattractive buildings. There is no recognition of the elements which produce a good architectural solution. The materials used are generally industrial materials and the result is often inappropriate to the climate, the region, the community, or the other buildings on the site.

9. Decisions concerning the type and quality-level of buildings to house educational programs also should include serious consideration of the fact that school officials have few chances, if any, to correct housing mistakes. The structure of school financing does not permit the luxury of second guessing. Once capital outlay funds or funds from operating budgets are spent for educational facilities, the school district is committed to use them for long periods of time whether or not they meet the on-going and often changing needs of the educational programs they continue to serve. Not only is the kind of space provided important, but also the quality of other building elements such as the lighting system, the heating-ventilating or air-conditioning systems, the provisions for the control of unwanted sound and the projection of wanted sound.

A survey of California school buildings demolished after many years of use because of their structural inadequacy to meet engineering requirements to resist lateral forces generated by earthquakes revealed that some ninety-five percent of the buildings still contained the lighting-heating-ventilating and sound conditioning equipment installed when the buildings were constructed. Some had served as schools for communities for over fifty years. Other elements such as furniture, floors, thresholds, chalkboards, etc., also were the original units.

Decision makers determining the type and quality-level of housing for current and future educational programs have grave responsibilities not only to the pressures of the moment, but also to the welfare of future generations of programs and people which and who must adapt themselves to the limitations or freedoms presented by the housing choices made.

10. In light of the above stated facts and analysis, portable classrooms of today cannot be rated as a sound educational investment.

CONCLUSION

The concern of the State for administering and controlling the leasing and purchasing of portable classrooms must include concern for the impact such portables have on education. If we are to impose regulations and procedures, we must first determine the extent that portable classrooms are jeopardizing such desirable goals as schools which have quality design, possess maximum educational utility, and represent true dollar value. Evidence must be gathered on these issues. The Department of Education is prepared to make an up-to-date survey on the number of portables put in use in California schools since 1960.

We can also obtain documentation of the varied experiences from districts which utilize portable classrooms. Reports on the true and total cost of the portable, including overhead, operating costs and moving costs, can be supplied by the Office of Local Assistance. Also, such groups and organizations as the California Taxpayers Association, Parent Teachers Association, American Institute of Architects, California Engineers Association, general contractors and labor unions should be invited to voice their opinions.

If evidence demonstrates that the use of portable facilities are retarding educational progress and creating fiscal difficulties for districts which have been encouraged to invest heavily in these units, then their use should be discouraged.