
Functional School Buildings Don't Just Happen

By George P. Babcock

Part I

For many centuries the material aspects of education received little thought or attention. Education consisted of only two elements—learner and teacher. With such a view, the school building or classroom seemed incidental to the learning process. To the ancient Greeks, education was uncomplicated: The school was wherever the teacher and pupil happened to be. Since all schooling was private up to the age of sixteen, a parent simply selected a teacher and sent his sons to him. As a result, the school often consisted of just a teacher and a few students meeting on the steps of a temple or shrine.

That view of education remained alive for hundreds of years, and even today is not totally dead. President James Garfield stated that the best type of school was a log hut with a simple bench with a student on one end and Mark Hopkins on the other. However, with increasing population and an ever greater need for organized instruction, education buildings gradually began to emerge.

Through the eighteenth and most of the nineteenth centuries, American school buildings hardly

progressed beyond the old Greek idea that they were simply places where students and teachers came together. According to Knight, American schoolhouses were still in a sad state as late as 1844.

“The great majority of the schools” of New York State in 1844 were officially described as naked and deformed, in comfortless and dilapidated buildings, with “unhung doors, broken sashes, absent panes, stilted benches, yawning roofs and muddy, moldering floors.” . . . Only one-third of the schoolhouses were reported in good repair, another third “in only comfortable circumstances,” while more than 3,000 “were unfit for the reception of either man or beast.”

Even though the typical one-room schoolhouse of the colonial days was dreadful when compared

to the well-lighted, well-heated, well-ventilated schools of modern times, they did serve the needs of an immigrant, agrarian society. The fact that there were any schools at all indicates that there was an early recognition of the value of education.

Style, Not Suitability

Whenever architects were commissioned to design those schools, however, they were much more interested in the appearance and style of the building than they were in its suitability to house a particular educational program. As Castaldi expressed it:

During the latter part of the nineteenth century schools were designed as architectural works of art rather than educational facilities. Schoolhouses of that period were outsized buildings, characterized by unfunctional and undifferentiated space organization, and unfunctional and non-creative design. Many such schools are still in use with their large corridors, and imposing lobbies, stately columns, and useless parapets. Architectural emphasis was clearly on shape, form and style, not on the functional aspects of school plants.²

Obviously, the child's own scale was not taken into consideration, either practically or emotionally.

Castaldi reports that as early as 1880 Sullivan, an eminent American architect, had advocated the principle that “form follows function.”³ In spite of this positive development, it was well into the twentieth century before architects and educators began to cooperate

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in a noticeable way in school building planning.

Recent Trends

After World War II, a strong interest began to develop in having school buildings that were really designed for education. The functional schoolhouses appearing in the 1950s gradually matured and became more refined and sophisticated during the following years.⁴

Although the concept of educational specifications emerged in the 1920s, it was not until the 1960s that authors and researchers began to write in earnest about the great need for educational specifications. Many states now insist that school districts develop educational specifications that accurately describe for an architect what is required for a proposed educational facility to implement a specific educational program in the most efficient and effective way. In fact, many states are requiring that educational specifications be developed even for old buildings that need modernization.

While the Seventh-day Adventist Church, through its Department of Education, is not *requiring* educational specifications to be formulated for each new school building, it strongly recommends that they be developed. By providing additional technical information relating to space requirements, more leaders hope that better educational specifications may be developed for Seventh-day Adventist schools.

Developing Guidelines

In 1966 the General Conference Department of Education prepared two pamphlets—*Standards for Seventh-day Adventist Elementary Schools* and *Standards for Seventh-day Adventist Junior Academies*. Each of these publications contains about two pages of

information relative to the school plant; only a small portion of the material deals specifically with facilities requirements.

As the Seventh-day Adventist school system has grown, there have been an increasing number of requests for guidelines to assist local church school boards in planning and constructing new facilities. As a result, another document, *Learners Live Here: A Seventh-day Adventist School Planning Guide*, was published in 1977. This publication gives an introduction to and guidelines for educational plant planning. It has proved useful in assisting Adventist educational planners in developing educational specifications. Besides this, the booklet gives other helpful information, especially for the unique situations faced by the planners of Seventh-day Adventist schools.

More recently (in 1980) the Educational Facilities Planning Laboratory of Andrews University, under the direction of Dr. Edward Streeter, prepared a rather comprehensive document entitled *Guidelines for Developing Educational Specifications** for the construction of SDA schools, K-12. This volume is an exceedingly valuable tool for anyone planning new school buildings and/or remodeling old ones.

Wilkinson wrote that one of the first Americans to recognize the need for educational facilities to relate to and support educational programs was Henry Barnard,⁵ an educator who served as Commissioner of Public Schools in Rhode Island. His contribution as a

*This document may be ordered from Central Departmental Services, General Conference of Seventh-day Adventists, 6840 Eastern Avenue NW, Washington, DC 20012. Price—\$16.50. Orders must be accompanied by payment or a conference purchase order.

designer of school buildings may well be his major legacy to American education.

Barnard was an associate of Horace Mann. McClintock wrote concerning Barnard,

He brought architecture and pedagogy into cooperation, and through this cooperation he determined the characteristic concerns to which designers of schools must still attend.⁶

Spiritual and Psychological Setting

McClintock further states that Barnard “took great care to explain the spiritual impact of the child’s physical surroundings.”⁷ Apparently Barnard was ahead of his day in understanding the importance of the psychological setting and the need to design a school building to house a particular educational program.

Unfortunately, even today, the need for cooperation between educators and architects often goes unacknowledged. Current literature reveals a wide diversity of practice in planning school buildings. Some would have the architect plan and design the school according to his own concept of what an educational institution should be like, while others insist upon a detailed set of educational specifications prepared jointly by the community and professional educators. In the latter case, the architect is charged with creatively translating the specifications into an architectural design.

The Council of Educational Facility Planners, International claimed that “the most important pre-design activity is the preparation of program requirements or educational specifications.”⁸ Since the experts seem to agree upon the importance of this pre-design activity, it is odd that such wide discrepancy would exist between theory

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Rae Holmes from Milton-Stateline School observed, "teach my children about the joys of writing."

To be good guides through the writing process, teachers need to understand both theoretically and experientially what it means to be a writer. They need to know the writing process in all its complexity. They can then encourage young writers, speaking from their theoretical knowledge of the writing process and their own experiences as writers. They can say to their students, "I know what you mean. On my last piece, I too . . ." When teachers model good writing, they show by their own example the importance that writing has for them both personally and professionally. They are an active part of the community of writers that they are establishing in the classroom. In short, they are teaching students to write because they are writers themselves.

The community of writers in the workshop crossed barriers of level and discipline. Elementary, secondary, and college teachers worked together; some were specialists in English, some were not. As they focused their attention on writing, any self-consciousness over these differences faded away. They began to see one another as writers and colleagues.

"I think one of the surprises of the workshop was," as Ann Jaramio from Laurelwood Adventist Academy put it, "how well we've been able to learn from each other." After all, teachers all deal with the same writing process and the same students—just at different times in their lives.

A writing workshop does not end when the participants pack up their pencils and go home. Its influence is only beginning. Bringing teachers in contact with current scholarship fosters a sense of pro-

fessionalism. Having teachers work as colleagues on common professional concerns develops a spirit of collaboration. The effect of this professionalism and collaboration will be seen in revitalized teaching and ultimately in improved student writing.

The participants in this workshop look forward to a spring postsession where they can discuss and evaluate their experiences during the school year. Their need for an audience for their own writing as well as a forum for their professional concerns continues. Exciting days lie ahead as scholarship and teaching practice blend in these teachers' lives. □

FOOTNOTES

¹ Janet Emig, "Writing as a Mode of Learning," *College Composition and Communication*, 28:2 (May, 1977), 122-28; Janet Emig, *The Composing Processes of Twelfth Graders*. NCTE Research Report No. 13 (Urbana, Ill.: National Council of Teachers of English, 1971).

² Donald M. Murray, *A Writer Teaches Writing: A Practical Method of Teaching Composition*. (Boston: Houghton Mifflin Company, 1968).

³ James Britton, et al. *The Development of Writing Abilities, 11-18*. Schools Council Research Series (London: Macmillan Education, 1975).

⁴ A special issue of the *Arizona English Bulletin* entitled *Writing Projects* (Vol. 22) describes several of these programs. It is available from the National Council of Teachers of English. Another program sponsored by the National Endowment for the Humanities and the University of Iowa is the Institute on Writing. In a five-year program, 42 colleges and universities, including Walla Walla College, developed comprehensive writing programs involving a freshman writing course, staff development, and writing across the curriculum. A report of this program entitled *Courses for Change in Writing: A Selection from the NEH/Iowa Institute*, edited by Carl H. Klaus and Nancy Jones has been published by Boynton/Cook.

⁵ Cleo Martin is director of the Rhetoric Program at the University of Iowa. For several years, she has directed the State of Iowa Writing Project, and now her participants are returning for a second and even a third session.

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and practice. Steeb indicated that the proper use of educational specifications would probably increase as the various states require by law and policy the use of such procedures.⁹ The use of educational specifications is increasing;

however, they are still not required by all states nor is the format or content of such specifications consistent among the states that do require them.

The Need for Educational Specifications in SDA Schools

The term *educational specifications* has been defined by a number of people and in varying ways. A general consensus suggests the following brief definition: Educational specifications itemize for an architect what is needed for a proposed educational facility to implement a particular educational program in the most efficient and effective way.

It should be noted first that educational specifications are not the same as master plans, which require a study of an entire school system with regard to facilities needed in the future, particularly until such a time that all land in the community is developed and there is no longer any significant growth anticipated in the school population.† A complete master plan provides a basis for developing educational specifications for each existing and proposed school in the community by describing the number of pupils to be housed and the philosophy and program of learning to be implemented. The master plan is not, however, a substitute for educational specifications.

Furthermore, educational specifications are not the same as building specifications. Building specifications are a technical supplement to and explanation of architectural drawings. Unfortunately, in many Seventh-day Adventist school and church building committees, the difference among these three different facets of the overall planning and

†Dr. Edward Streeter describes master plans in more detail elsewhere in this issue of the JOURNAL.

building program is frequently blurred.

Seek Input From Many Groups

Engelhardt points out that all interested parties should be given the opportunity to provide input in developing written educational specifications for a specific building project.¹⁰ The board of education must adopt the essential policies governing the educational program and provide the administration with accurate information regarding interest and aspirations for the educational system. The board also must give final approval to the educational specifications, as well as employ consultants (if needed) and an architect who will be charged with the responsibilities connected with designing and constructing the facility. Citizens groups can also help define community goals and aspirations and interpret the educational program to the public.

In terms of the Seventh-day Adventist school system, Engelhardt's idea needs to be altered slightly:

1. After studying the recommendations of the General Conference and union conference, the local conference board of education must adopt the essential policies governing the educational program. The church school board, in consultation with the conference superintendent and principal, should appoint the necessary communities to develop the educational specifications and other building plans.

2. The school administration—including the principal and local conference office of education—has the primary responsibility of defining the pupil population for the proposed school building and composing, editing, and printing the educational specifications after

the staff and other interested parties have finished their work. The conference superintendent and his or her administrative staff must provide leadership as well as make the various assignments, organize the various groups involved, assess progress, evaluate the completed document, and interpret the educational specifications to the local church school board, architect, and church community. The school principal should organize the teaching staff and students in developing descriptions of the various areas to be covered by the educational specifications and evaluate progress as well as double check which items should be included in the document.

Teachers' Contributions

3. Teachers, under the direction and leadership of school administrators, have the responsibility of describing the curricular and co-curricular activities, schedule of classes, number of spaces needed, and space characteristics, furniture, equipment, instructional aids, pupil groupings, and relationships to other spaces for each instructional and ancillary area of the new building.

4. Outside consultants (denominational educational leaders, college or university personnel experienced in school-plant planning, and independent professionals) can assist the local administration in defining the school population (particularly future enrollment) and counseling teachers regarding the educational program and space needs for various educational experiences. Equipment specialists can help determine equipment needs for the various areas of the building. The student body can provide valuable insight into the utility and comfort of various aspects of the building, as well as describing their

aspirations and desired program features.

5. Finally, an architect and his or her associate engineers can advise all participating groups about technical, aesthetic, and cost considerations after the program has been defined and decision-making regarding physical features and future expansion has begun.

The General Conference Department of Education went on record in 1977 in *Learners Live Here* stating that "No school facility should be remodeled or constructed without the careful development of a set of educational specifications."¹¹ However, the concept has not been adopted as a required policy as of 1984. Interestingly, in December, 1978, the North American Division conducted an extensive review of their *Education Code K-12*. At that time an expanded statement concerning the planning process and educational specifications for school plants was recommended to the Board of Education K-12.¹² Despite this apparent sign of progress, very few Adventist schools have yet developed full and complete educational specifications.

Little Impact Seen

An interview with the secretary of the General Conference Building Plans Committee revealed that, according to his knowledge, only one educational institution in North America—Andrews University Academy—has developed complete educational specifications upon which its blueprints were based. Needless to say, this school's building plans had no trouble receiving official approval. Apparently the forthright statement quoted above from *Learners Live Here* has had little impact at the grassroots level of academy and church school planning.

In 1966 the General Conference

published a booklet entitled *Standards for Seventh-day Adventist Elementary Schools* which did carry the weight of official policy. It stated that "All plans for new construction of additions are to be submitted to the conference educational committee, the union conference building committee, and where necessary the General Conference Building Plans Committee for approval."¹³ Despite these clear guidelines, in many cases buildings have already been completed or are at least well underway before the plans actually reach the General Conference. Of course, any comment or suggestion the Building Plans Committee might wish to make is completely redundant once the concrete has hardened! Again, it appears that sufficient impact at the local level has not been achieved.

A further consideration is the fact that Seventh-day Adventist schools tend to be rather small. In 1982-1983, more than 74 percent of all Seventh-day Adventist schools in North America were one-, two-, or three-teacher schools. This smallness can offer many advantages. Loustaunau strongly asserted that small schools can have rich and adequate programs.¹⁴ Sher and Tompkins agreed, after survey and research, that the supposed economy and efficiency of large schools in comparison with small schools is a myth. They found that smaller schools could be much more flexible than larger schools.¹⁵ However, adequate and flexible programs are no accident and will not be achieved simply because the school is small. They result from careful planning.

Advantages of Smallness

Several educators today are strongly advising keeping schools

as small as possible, maintaining the absolute minimum size that the law will allow. The problems of schools, the difficulties of running them, and the troubles they get into with authorities seem to increase roughly with the square or perhaps the cube of the size of the student body. Four or five kids can go anywhere with an adult; a dozen offers some difficulty; three dozen are a big problem, and for 100 you need to get a permit from City Hall!

Leggett *et al* indicated that for small schools to gain optimum benefit, they must be planned just as carefully as large schools. These researchers maintained that small schools could and should be more flexible, but that in order to achieve these potential strengths, school boards must engage in careful planning.¹⁶ An additional strength is that in small schools the community (or local church constituency) can be involved fairly easily in a larger and more meaningful way. The North Central Association asserted that one of the best ways to involve the community was to involve them in planning an educational program that would be suited to local needs.¹⁷ The making of educational specifications is, perhaps, one of the very best means of planning an educational program while at the same time making the community aware of possible changes—as well as the necessity to plan for these changes in the design of the building.

Elements of Specifications

Streeter indicated in *THE JOURNAL OF ADVENTIST EDUCATION* that functional school buildings do not just happen; they must be planned.¹⁸ The SDA school system has in the past not *required* that educational specifications be prepared, but when the time comes

that such specifications are mandatory, this will constitute only the first step. A much larger step will be educating school planners to develop *meaningful* specifications. Streeter further suggested the following characteristics of educational specifications:

1. *A brief description of the various learning activities in which the goals or objectives are stated.* Attention should be given to trends that may be developing in particular subject or curriculum areas involving new or innovative ideas.

2. *A statement of the number, nature, and grouping of individuals involved in the various learning activities.* Particular activities requiring specific spaces and facilities should be identified. Consideration should be given to immediate as well as long-range needs relative to enrollment projections.

3. *A listing of space requirements.* These should be expressed in terms of square feet needed for each area. No attempt should be made to describe detailed dimensions or specific building materials. Desired storage needs, work spaces, or teaching requirements should be identified.

4. *A diagram or illustration of the desired space relationships.* This should be summarized in a matrix or bubble-type diagram and should include a relationship between the facility and the site, as well as the interrelationship of the various instructional and non-instructional activities to one another.

5. *A listing of the major items of equipment or furniture or any special environmental needs.* Particular care should be exercised regarding recommendations that are based on considerations of safety, comfort, economy, and flexibility and that may help promote staff efficiency.¹⁹

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In their publications, many state departments of education have indicated that educators must alert the community to the vital need of planning for flexibility in their schools by the use of educational specifications.

Literature on this topic forcefully emphasizes the need for all schools to be carefully planned and designed to meet present needs as well as future requirements. Most states indicate that the best way to achieve such goals is through the medium of educational specifications. Indeed, one could logically conclude that since all schools should be carefully planned, SDA schools—with their unique role and purpose—should be painstakingly developed in the most professional manner possible. Perhaps the main ingredient in this planning process is development of educational specifications. □

(To be concluded.)

FOOTNOTES

¹ Edgar W. Knight, *Education in the United States* (Boston: Ginn and Company, 1941), pp. 416, 417.

² Basil Castaldi, *Creative Planning of Educational Facilities* (Boston: Allyn and Bacon, 1969), p. 11.

³ _____, *Educational Facilities Planning, Remodeling, and Management* (Boston: Allyn and Bacon, 1977).

⁴ *Ibid.*

⁵ Raymond K. Wilkinson, "A Model for the Development of Educational Specifications for Small Schools," Ed.D. dissertation, Andrews University, Berrien Springs, Mich., 1978.

⁶ Jean and Robert McClintock, eds., *Henry Barnard's School Architecture*, Classics in Education, No. 42 (New York: Columbia Teachers College Press, 1970), p. 6.

⁷ *Ibid.*

⁸ Council of Educational Facility Planners, International, *Guide for Planning Educational Facilities* (Columbus, Ohio: Council of Educational Facility Planners, 1976), p. D-6.

⁹ Ralph V. Steeb, "Educational Specifications: First Phase in Facility Planning," *Man/Society/Technology*, 36 (November, 1976), pp. 40-41.

¹⁰ Nicklaus Engelhardt, *Complete Guide for Planning New Schools* (New York: Parker Publishing Co., 1970).

¹¹ General Conference of Seventh-day Adventists, *Learners Live Here* (Washington, D.C.: General Conference of Seventh-day Adventists, Department of Education, 1977), p. 11.

¹² _____, *North American Division Education Code, K-12*.

¹³ _____, *Standards for Seventh-day Adventist Elementary Schools*, p. 3.

¹⁴ Martha Loustaunau, *Small Rural Schools CAN Have Adequate Curriculums* (Austin, Texas: National Education Laboratory Publishers, Inc., ERIC Document Reproduction Service, ED 100559, 1975).

¹⁵ Jonathan P. Sher and Rachel B. Thompkins, *Economy, Efficiency and Equality: The Myths of Rural School and District Consolidation* (Washington, D.C.: The National Institute of Education, 1976).

¹⁶ Stanton Leggett, C. William Brubaker, Aaron Cohodes, and Arthur S. Shapiro, *Planning Flexible Learning Places* (New York: McGraw-Hill Book Company, 1977).

¹⁷ North Central Association, *The Small School—How It Can be Improved*, Working Paper for Small School Conference, March, 1974 (Cedar Falls, Iowa: University of Northern Iowa, 1974).

¹⁸ Edward A. Streeter, "Developing Educational Specifications," *The Journal of Adventist Education*, 39:4 (April-May, 1977), pp. 16-18, 25.

¹⁹ *Ibid.*, p. 17.

Master Planning

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leges begin developing any master plans at all. Even then, most master plans that were developed were really academic master plans rather than overall master plans. In general, few schools attempted to plan their resources and finances beyond the current year. However, the recession of 1982-1983 helped to alter this myopic view. Economic strictures brought most construction to a halt. For the first time, many colleges and universities were forced, because of their financial condition, to take a hard look at planning and resources available to them.

Design Considerations

In planning the campus design, the following questions should be answered:

1. Will the campus be an educational community where students and faculty live in close proximity, or will they commute?
2. Will the campus have a rural setting or become urban in appearance?
3. Will the campus be planned for pedestrians or vehicular traffic?
4. Will the campus be dominated by massive, monumental

buildings or residential-type structures?

5. Will the campus have a natural setting with minimum landscaping, or will there be expansive lawns with extensive parklike landscaping?

6. How can the campus achieve a harmonious integration of buildings and spaces that creates a distinctive educational environment?

7. Will the campus be constructed of materials that present a unifying design?

8. Will the campus provide interesting views from various locations on campus?

9. Will the campus provide a means for a dynamic spiritual/social relationship between faculty, students, and visitors?

10. Will the campus present a "statement" to the general public that this is a Seventh-day Adventist school of learning?

Although basically the responsibility of the architect, the architectural style for the campus must be selected in consultation with the planning committee. It should be in keeping with the location, culture, and type of educational program. The style should present to the general public, as well as the students, faculty, and administration, a statement of mission and the philosophy of belief of the educational venture.

Space Relationships

The relationship between the various buildings on campus is, to a large extent, determined by the educational program and convenience to be afforded to students and faculty. Frequently used facilities should be located in close proximity to aid operational efficiency. The library and the student center, the latter of which usually includes the cafeteria, are focal points and should be centrally located. Academic buildings