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FEATURE

Strategic Planning Applied to Educational Facilities Design

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ABSTRACT — This article is comprised of three main parts. It begins with a comparison of the processes of strategic planning and the master planning of educational facilities, concluding that educational facilities master planning is in reality strategic planning applied in a very specific and practical way. Then, secondly, the processes and products of master planning and master plans are described and discussed. What a master plan is, and what it is not is followed by an outline of a typical institutional facilities master plan.

In the last part of the article is an example of the significance or importance of the master planning process; the relationship between educational philosophy, and educational facilities and buildings is examined. On-going reveals a number of ways in which institutional facilities may actually teach principles contrary to the principles espoused in the educational philosophy of that institution. The concept that facilities are in fact teachers, not simply tools in the hands of teachers, is in its infancy in educational literature; but the findings presented herein do support the notion that facilities do teach.

Introduction

The theme of the current issue of *InFo* is “strategic planning.” A variety of perspectives on, and applications of strategic planning in sundry fields comprise the substance of this issue. When strategic planning is applied in the development of the supporting physical infrastructure for educational programs terms such as “Master Planning,” and “Facilities Master Planning” are generally used to identify the process. In this article (a) we present a comparison of the subprocesses of strategic and master planning; (b) we develop a detailed description of the master planning product — i.e. a master plan; and (c) finally, to illustrate the importance of the master planning process, we report on recent research highlighting often unappreciated linkages between the planning of educational facilities and the educational philosophies of the planners.

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Master Planning Compared with Strategic Planning

The relationship between the subprocesses of master planning and those of strategic planning are summarized in the following table. The concepts of the educational facility master planning process are drawn largely from Basil Castaldi's classic: *Educational Facilities: Planning, Modernizing, and Management* (4th ed.) (1994), while those of the strategic planning process are based on the work of Philippine co-authors Effron and Santos, in their paperback, *Strategic Planning: Concepts Processes, Issues* (1999).

Educational Master Planning	Strategic Planning
Ⓒ begins with mission, vision, goals & objectives — and philosophy	Ⓒ begins with mission, vision, goals & objectives — “an ideological act.” These may be implied if not written.
Ⓒ data gathering/research phase — conducting surveys within the school	Ⓒ internal “scanning” — an assessment of the internal status of the organization
Ⓒ data gathering/research phase — conducting surveys within the community	Ⓒ internal “scanning” — getting a clear picture of the environment within which the organization functions
Ⓒ Analyzing data	Ⓒ SWOT analysis
Ⓒ Creating and evaluating alternative sites, designs, etc.	Ⓒ Lateral thinking — options generation
Ⓒ Selection of best option by Board or governing body	Ⓒ Decision making — Strategic choice
Ⓒ Purchasing land (or) constructing the building	Ⓒ Strategy implementation
Ⓒ Post-occupancy evaluation	Ⓒ Monitoring/Evaluation

Educational master planning is in reality strategic planning applied in an educational setting. The master planning of educational facilities, the master planning of educational institutions, the master planning of educational programs, for example, are *all* simply strategic planning principles at work in specific settings. Yet in one sense the concept of master planning is larger, is more than strategic planning — conveying in addition, the idea of an all-inclusive comprehensiveness within the specified area.

A Closer Look at Master Plans — the Product

What exactly is a master plan? What are its components, its content (subject matter), its characteristics? Answers to these questions are provided in this section. But before examining these, it would be well to consider what a master plan is not.

What a Master Plan Is Not

It is a common misconception, or error of master planning, that once the planning process has produced a product (a written document), and that document has been formally adopted as a master plan, that regardless of the quality characteristics of the process that has produced that master plan, the plan itself becomes a master. A master plan should not be a master. Rather, it should be master in the sense of being comprehensive, like an umbrella covering every aspect within its shadow. A master plan should not be utilized in a manner to tightly control or rigidly restrict future decisions, but rather to inform or guide them. When using a master plan as a guide for present decision making, the wise administrator sincerely seeks to understand the rationale upon which the plan was predicated, knowing that to simply set aside a carefully studied “recommendation” of a past planning committee is likely an action that would lead to later regrets. Alternatively, understanding the reasoning behind a particular action called for by the master plan might allow for an alternative course of action if circumstances had changed since the plan had been formulated. Institutions and other educational organizations of all types must remain the masters of their own master plans.

And secondly, a facility master plan is not simply a floor plan, or campus layout design, however professionally drawn such a plan may be. A master plan is much more than that, as the following three sections illustrate.

Components of a Master Plan

It is risky, perhaps foolhardy, to attempt to list in one place all components required for a master plan, because all master plans are not equivalent, and logically

the components must vary depending upon the specific situation. Herein are presented typical components for a Facilities Master Plan for an educational institution. It is not the purpose of this article to present a comprehensive checklist for all possible applications, but rather a useful beginning point. Common sense and careful study of a particular situation are needed to edit this list to suit any particular need.

Statement of mission & philosophy. The statements of mission and philosophy of the institution are essential to guide the development of the master plan itself.

Description of the desired educational program. This should not be a fully developed curriculum framework, but more general, including

- the vertical dimension — the range of grades/levels envisioned
- the horizontal dimension — the range of courses or degrees planned in various fields.

Special concerns. For example, in a Seventh-day Adventist institution, consideration should be given to special SDA concerns which emerge from their unique educational philosophy, such as

- spiritual life on campus
- social and cultural activities
- student work programs
- service commitments
- research opportunities/undertakings.

Enrollment projections. Enrollment projections should be made based on observable trends, both in total and by department, level, etc.

Space allocations on the campus. The plan must show locations of both present and future facilities and provide a development sequence. It needs to consider the flow of both pedestrian and vehicular traffic and the interrelation of the two types. The development sequence will detail how services needed at present are to be accommodated in present buildings, and how this arrangement will evolve as new facilities (and possibly additional services) are added.

Building plans. General building plans should be developed sufficiently to define the campus personae or “face” — detailing desired architectural features that will unify the campus. Detailed architectural plans may come later as plans are finalized for each individual building.

Landscaping plans. The aesthetics of the campus must be detailed, including sidewalks, stairways, and desired features such as fountains, monuments, trellises, gathering places.

Faculty/staff (personnel) development plan. It is possible to prepare elaborate plans, to erect marvelous institutions, but unless there are personnel to support the educational vision, it will be meaningless. Faculty and staff development includes both the recruitment/selection and in-service training processes. The staffing plan should in reality inform the building master plan.

Financial/resource plan. Any master plan without a supporting plan for resources will most likely remain only a dream, a disappointment.

Content (Subject Matter) of a Master Plan

Although the preceding listing of components is certainly suggestive of what a master plan should include, it is also useful to look at a master plan from the perspective of subject matter. In his discussion of a comprehensive educational facility survey, Castaldi (1994, pp. 71 - 74) has identified four specialized areas which comprise such a survey. Each of these areas suggests a content area of a comprehensive educational facility master plan.

- a community and pupil population survey
- a financial survey
- an educational program survey
- a school building survey.

An identification of the subject matter not usually included in a Facilities Master Plan for an Educational Institution should provide a useful perspective. For example, other areas requiring consideration in an institutional (not merely facilities) master plan would include the following. [Note that these are listed here as master plans in their own right. Although they are similar to items previously listed as components of an educational facilities master plan, the difference lies in the degree of treatment. In the facilities master plan, only sufficient detail is provided in each to inform facility design and evolution, whereas greater detail would be required in the comprehensive institutional master plan.]

- a curricular master plan
- a personnel master plan
- a spiritual master plan.

Characteristics of a Master Plan

An educational facilities master plan may be characterized as follows:

1. Comprehensive in relation to the present and future institutional facilities needs of the particular institution.
2. Based upon a philosophy or set of beliefs, goals, objectives.

3. Projects a long-range vision — five years, ten years, 25 years, and longer!
4. Flexible — provides for contingencies, both foreseeable and unforeseeable.
 “To accommodate today's educational programs, administrators must create flexible, contemporary space to meet changing needs. . . . Unfortunately . . . much piecemeal expansion of existing buildings has occurred over the years” (Beaudin & Sells, 1998).
5. Ensures that present efforts/construction will support (not prevent or complicate) future development.
6. Action plans broken down into bite sized pieces — but ensuring that the result is coherent at each and any stage of implementation.
7. Dynamic (living) — updated regularly — not projecting too much detail too far into the future, but becoming more clearly focused as each anticipated future event comes nearer.

Castaldi(1994) indicated that a master plan which has not been updated within the last two years is *obsolete*.

The state of West Virginia requires all its counties to develop a 10-year Comprehensive Educational Facilities Plan (CEFP), update it *annually*, and rewrite every 10th year (Clutter, & Elswick, 1999).

What a Facilities Master Plan Does

What is the resultant benefit to an organization or an institution which has developed a quality master plan? Would the effort expended be worthwhile? The answer to the latter question would definitely be “yes”, for to operate without a comprehensive master plan or to develop or change facilities without a facilities master plan would be akin to traveling without a map. Edward Streeter, recently retired from Andrews University in Michigan, declares: “A well-formulated master plan . . . provides a dependable blueprint for the future.”

Other things which master plans accomplish include

1. Specifies overall campus/building design — including land use, reserved sites for future construction, traffic circulation patterns, aesthetic and functional dimensions.
2. Serves as a monitoring device for the Board and Administration in their day to day decisions — such as admission policies.

3. May serve as a symbol to the constituency and community — focusing a shared vision of the future.

“A well-formulated master plan . . . provides a dependable blueprint for the future.”
Edward A. Streeeter [Michigan]

Master Planning Applied

One of the greatest challenges facing educational facility planners is to create buildings and institutions that accurately represent the educational philosophy of the institution. Speaking in the context of teacher performance in the classroom, Sergiovanni (1976) differentiated between what he called “espoused behaviour” and “practised behaviour” (or “espoused platforms” and “practised platforms”). He spoke of “disequilibration” when there was a recognized incongruence or mismatch between the desired and the observed behaviours or platforms.

Educational philosophy is what we say we believe, and facility design and maintenance is just one of the ways in which institutions demonstrate or put into actions what they really do believe. It is the thesis of this writer that in far too many instances the realities of school buildings and campuses are in disequilibration with the verbalized philosophies of their institutional administration and leadership.

Facilities Can Teach

Educational facilities, classrooms in particular, can enhance (or inhibit) the teaching-learning process. Well-documented in the literature is the “relationship between learning and the design of instructional spaces within schools” (Castaldi, 1994, p. 17). Indeed, the idea that facilities could be tools in the hands of teachers was the concept that spawned the entire school building revolution of the 20th century. In the latter decades of the 20th century, much research has been conducted which supports the notion that better educational facilities produce better educational results, all other things being equal.

But there is a newer concept that is only in its infancy in the literature, and that is the idea that facilities *do* teach, with or without a teacher present. Facilities are not only teaching tools in the hands of teachers, but they themselves *are* teachers — facilities *do* teach .

Facilities Do Teach

With or without a human teacher present, school buildings and campuses do teach. As already stated, in the educational literature, this concept is still in its infancy. The earliest reference to this idea appears to have come from Ellen White in her work, *Testimonies for the Church*, Volume Six, largely written from Australia in the 1890's and published posthumously in 1948. Mrs. White made the following insightful comment:

In the erection of school buildings, in their furnishing, and in every feature of their management the strictest economy must be practiced. . . . In every feature they [buildings, furnishings, and management] are to *teach* [italics mine] correct lessons of simplicity, usefulness, thrift, and economy. (1948b p. 208)

Strangely, the intervening hundred years seem to have entirely ignored the idea. It wasn't until 1987 or 1988 that the idea reappeared in the work of Taylor, Aldrich, and Vlastos:

Two of us (Taylor and Vlastos) are convinced that school environments have a largely untapped potential as active contributors to the learning process. . . . A number of learning opportunities can be woven into the structure of a school so that the built environment becomes an active, three-dimensional textbook or teaching tool, rather than a passive space housing a disarray of "things."

. . . . *The architectural environment, as a work of art in and of itself, can affect behavior.* It can stimulate or subdue, aid creativity or slow mental perception, cause fear or joy. In fact, it can affect a whole range of psychological phenomena.

The most recent contribution to this theme comes in a book, published just this year. In their monograph, *Educating by Design*, authors Strange and Banning illustrated how facilities do teach by subtle things such as the placement of certain student service facilities, or the ambiguity of directional signage which may make newcomers or other users feel unimportant or unwelcome (2001, pp. 9 - 32).

Recent Research Results

On-going research reveals many linkages — ways in which facility design and maintenance *do teach*. During April and May of 2001, questionnaires were circulated among 175 Seventh-day Adventist (SDA) educational administrators throughout the North American Division (of SDA). The 88 respondents included on their returned questionnaires a number of ideas in response to an open ended question designed for that purpose. In addition, students in the course, "Master

Planning of Educational Facilities” conducted in Bangkok, Thailand during June, 2001, were invited to contribute their ideas to the emerging list.

Content analysis and synthesis of the results have produced the following list of ten linkages, presented from an SDA/Christian philosophical perspective. By design and delimitation, the research to date has focused on examples of linkages between facility design and Christian principles; and yet, as Carney & Strange (2001) have ably demonstrated, similar linkages do exist between facility design and those other philosophical principles that we hold in common with all education in general. In the following list, occasional comments by Ellen White have been added where they appear to harmonize with or support the identified concept. No attempt has been made at the prioritization of the several items.

1. Locating the school in a natural setting among the trees or near the sea, a lake, a waterfall, reinforces our belief in the Creator-God.
2. If the school buildings are built in a way that blends with nature, appearing to “belong in their setting,” it engenders the desire to order our lives in harmony with God’s purposes for us.
3. School facilities that are built economically (not to be confused with “cheaply,”) and designed to conserve energy teach the principles of stewardship — accountability in the management of the capital resources utilized and responsibility to care for and conserve God’s creation.

Ellen White commented:

Those in positions of trust are in all things to act as faithful stewards. . . . There must be care to prevent all needless outlay. In erecting buildings and providing facilities for the work, we should be careful not to make our preparation so elaborate as to consume money unnecessarily; for this means in every case inability to provide for the extension of the work in other fields, especially in foreign lands. (White, 1948a, p. 215)

4. A prominently located church or house of worship on the campus teaches that we really do give God first place in our programming, in our thinking and doing.
5. The accessibility of secluded wooded areas and/or the construction of a campus prayer garden demonstrate that we value time spent in communion with God.

6. A framed portrait of Jesus Christ strategically located in the classrooms or elsewhere on campus can remind that God is always watching, and that He should come first in our lives.
7. Creative and aesthetically pleasing works of art on the campus or in the school buildings teach that God is creative, a lover of the beautiful — directly fostering creativity and a love of the beautiful in the students.
8. Adequate and well-organized storage areas model the philosophical principle that God is a God of order.
9. The construction/usage of gymnasias to the exclusion of manual labor or other exercise in the fresh air, will teach that outdoor exercise and manual labor are unimportant. There are also significant implications for the profitable use of leisure time.
10. Well-maintained and properly-cleaned service areas (such as cafeterias and comfort rooms which serve basic bodily needs) reinforce our teaching of the Biblical principle that “our bodies are the temple of God.”

Several comments from Ellen White lend their support:

The kitchen and all other parts of the (college buildings) should be kept sweet and clean. (White, 1954, pp. 88, 89)

The necessity for much better facilities in the bathrooms (has been deeply impressed upon my mind). . . . A small, crowded bathroom leaves on the mind an impression of cheapness and commonness, and this should not be. (White, 1899, p. 15)

Note that in the context of this statement, the bathroom was actually a room for bathing, not a rest room or comfort room. However, the principle would still apply to the latter.

In the study of hygiene . . . show the necessity of perfect cleanliness both in personal habits and in all one's surroundings. . . . Teach the pupils that a healthful sleeping room, a thoroughly clean kitchen, and a tastefully arranged, wholesomely supplied table will go farther toward securing the happiness of the family and the regard of every sensible visitor than any amount of expensive furnishing in the drawing room. (White, 1954, p. 90)

Implications

Our educational facilities, both buildings and campuses, are a visible expression of our educational philosophy — not the “espoused” philosophy, but

the “practised” philosophy. We must seriously ask the question, “Do our educational facilities reveal an inconsistency?” Sergiovanni (1976) predicted that where a difference between “espoused” and “practised” platforms occurred, “disequilibration” would follow and efforts would be made to harmonize the two — most likely by moving toward the “espoused” platform. It is our belief that that is precisely what is needed in designing and maintaining the educational facilities of the future.

We need to move toward designing facilities which teach, reinforce, and complement what our “espoused” philosophy indicates that we really desire or intend to teach. And even the manner in which we operate our existing facilities must be considered a teacher — a teacher whose performance must be monitored continuously.

This article is only a beginning. More research needs to be done in this area. We need to identify and document other linkages which may exist, and to further evaluate the educational significance of these linkages. This is an urgent matter, because until this territory is well researched and clearly understood, we may well continue to make problems for ourselves by designing facilities that teach what we actually oppose — what we do not believe or desire to teach.

Master planning (strategic planning in an educational setting) teaches us that we cannot be too careful in considering the educational impact of the facilities which we create to teach our children, our students. Kindly note that we did not say “*in which to teach our children, our students*” — because, *facilities do teach!*

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