Are you getting ready to build a new school or remodel or add to an existing facility? Before you do, you may want to consider the impact that major changes in how we think about and deliver public education in this country may have on your construction plans. Why? First, once a district has spent millions of dollars on facility construction or renovation, that structure will be a visible legacy of the district’s good—or not so good—planning for decades to come. If a district builds or remoldels a school in the wrong place, of the wrong size, or with the wrong types of spaces, the district and its community will have a steel-and-masonry reminder of that mistake for the next 50 years. Second, school construction dollars are hard to come by. If they are misspent, accumulating enough new capital to redo the job will be very difficult.

This article presents a dozen educational or education-related changes that can have a dramatic impact on where, how, when, and if you construct or remodel a school facility. If districts are aware of these changes and address each in the facility-planning process, the mistakes of the past—and possibly some new mistakes—may be avoided.

1. WHO WILL ATTEND THE SCHOOLS?
The biggest change in education in the foreseeable future is the move away from public schools with prescribed attendance areas. In one sense, facility planning for public schools has been relatively easy during the past 50 years. You projected the population of students who would attend each school based on the concept that a school had set boundaries, and students within those boundaries would attend that school. In a sense, public education has, for the most part, been the only game in town. It has had a relatively “captive audience” that has been expected to attend schools as defined by attendance lines.
That basic premise has changed dramatically in this era of educational reform. Unhappy with the productivity of public schools, parents and policy makers around the country have attempted to break what they perceive to be the monopoly that the public education system has enjoyed in the delivery of K–12 education in the United States. In several jurisdictions, this group has successfully pushed for voucher or tax credit mechanisms that allow parents to choose alternatives to their local public school.

At the same time, in response to criticisms of the lack of choice among public schools, the public school systems themselves have begun to move away from the concept of “if you live on this street, you go to this school.” Now districts are offering a variety of options to parents—everything from magnet schools to charter schools. Increasingly, school systems are embracing the concept that parents and their children should have some “say-so” about the school a child attends.

What major problem has this movement from prescribed attendance zones to various “choice” options in schooling created for facilities planning? Great uncertainty: uncertainty about how many students will actually show up at a particular school and uncertainty about what facilities the school needs—a magnet school for the arts and one with a technology focus may require quite different facilities.

The old rule of thumb of one size fits all is disappearing. As a result, the focus has shifted from developing a districtwide long-range facilities plan that provides equality of facilities to developing plans that meet the unique program needs of each school. A good facilities plan of the past provided all schools with relatively the same facilities—and fairness was judged this way. If School A had two gyms, then the plan needed to ensure that School B had two gyms. But today, the trend is away from “equality.” Instead, we are moving toward the idea that good facilities planning and implementation produce “equity,” not equality—with equity meaning that schools receive the facilities required to support their unique programs and help recruit and retain the program’s intended audience. Thus, no two schools may look alike. And, the old “cookie cutter” approach to facilities planning will not work.

2. WHERE WILL THE SCHOOLS BE LOCATED?
For many reasons, including student safety, the concept of the neighborhood school has returned. The premise of most of the past century that bigger is better is being increasingly dismissed by educators and policy makers. Instead of school consolidation, we will be faced in the coming years with school “deconsolidation.” Parents and communities will increasingly demand a school in their neighborhood, and that it serve just the neighborhood. Although this trend has been around awhile, particularly at the elementary level, in many places there is a major movement to downsize secondary schools and to relocate high schools into the neighborhood setting. The move to such neighborhood schools will require rethinking about where to buy sites for future schools, what size they will need to be, and how the site fits into the master plan or design of that particular neighborhood.

3. HOW LARGE WILL THE SCHOOLS BE?
A requisite companion to the return of schools to the neighborhood will be smaller schools. The educational literature is full of articles about the virtues of small schools. They are touted as the answer to improving everything from test scores to social behavior. States like Florida have already reacted to this literature by mandating much smaller maximum school sizes than is typical of today’s schools. It is not inconceivable that within the next 25 years the average-sized elementary schools will be in the 200-student range, middle schools will have no more than 400 to 500 students, and high schools will average 500 to 750 students. Combined with the concept that schools should be placed in neighborhoods, this move to smaller schools will require many more schools than would be necessary under the traditional “consolidation” approach. As a result, tremendous pressure will be placed on district facilities construction budgets.

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4. HOW MANY STUDENTS WILL A CLASS HAVE?
The current interest in reducing class size will remain high for the foreseeable future. Research, such as that of the STAR project in Tennessee, will continue to reduce teacher-student ratios. For example, South Carolina’s state funding mechanism has recently been changed to provide for a teacher-student ratio of 1:18 for Grades 1–3. And there is a strong push to reduce this ratio further. This trend is typical of what is happening across the nation, with some states, such as California, mandating immediate and comprehensive across-the-board reductions in class size.

We may see the national average teacher-student ratio approach 1:12 within a decade, at least in the elementary grades. This reduction in class size will not only require more teachers but will decrease the student capacity of buildings. As a result, schools that now have sufficient space to house their student populations may soon find themselves with too few classrooms, even if the number of students they serve remains unchanged. Long-range facilities plans will need to address the growing overcrowding that will occur at existing schools as teacher-student ratios continue to decline.
5. WHAT ROLE WILL TECHNOLOGY PLAY?

Every indication is that technology will dominate instructional delivery. Because schools will be smaller, there will need to be economies of delivery wherever possible. One way that will occur is through distance education. Students wanting relatively low-incidence courses will be able to take them through combinations of television-based delivery, use of the Internet, and CDs and DVDs.

And because of the expense of operating smaller schools, districts will look to control expenditures through reduction of personnel costs. One way to reduce those costs is to deliver programs via computers and software instead of people. For example, one scenario of the future pictures school organizations embracing more of a doctor’s office model. Instead of four teachers and a couple of assistants delivering instruction to 100 fourth-grade students, the future school may have one teacher for fourth grade—master teacher if you will—who oversees learning for that grade. He or she will work with a team of four or five technicians, educational and technical, who deliver much of the instruction as prescribed by that master teacher. The treatment might be face-to-face interaction between the student and technician, or it might be a technician assisting the student with a software program specifically designed to overcome that child’s educational deficiency.

In effect, the master teacher in this scenario is like a doctor, diagnosing and determining treatment but assigning all but the most complex educational intervention procedures to others to accomplish. If such a model does occur, the concept of a school building will need to undergo substantial rethinking. As with a doctor’s office, a variety of spaces will be needed for different functions to accommodate everything from one-on-one interactions to large-group exercises.

6. WHAT ROLE WILL SCHOOL FACILITIES PLAY WITHIN THEIR COMMUNITIES?

Because schools will be in neighborhoods, and because those paying for schools will often have no children in school themselves, schools will become more and more full-service agencies for their respective communities. To encourage retirees to pay taxes to keep schools operating, districts will make schools available for their use. Schools of tomorrow will be open from dawn to dusk, probably 240 days each year and on weekends. Computer labs will serve students during the day and adults who want to work on their taxes at night. School health rooms will bandage children’s bumps and bruises, while offering adults flu shots, prenatal exams, and dental checkups. Cafeterias will feed students breakfast and lunch, and the elderly their supper. The media center will provide a neighborhood gathering place for browsing the Internet, reading the newspaper, or checking out a book on CD. Basically, schools will need to be designed for all ages—from birth to death.

7. WHAT SPACES WILL SCHOOLS OF THE FUTURE INCLUDE?

As measured by narrowly defined indicators of academic success (basically test scores), the current emphasis on school accountability may have a larger impact long term on school facilities than we yet realize. As schools have become increasingly focused on producing good scores on standardized achievement tests, the curriculum of those schools has subtly been changing. More and more schools are requiring students with academic difficulty to take specific additional courses in the problem areas. For example, a student may be told to take a second course in math instead of taking art as an elective, to better ensure that the student scores well on upcoming state or national tests. Students who are already doing well in math or science are being encouraged to take additional courses in those subjects instead of nonacademic electives.

Schools hope that the added academic rigor will open more college doors for students—and maybe raise the standardized test score average for the school at the same time. As schools increasingly focus on the traditional “academic” subjects, the demand for music and art courses, vocational courses, and even physical education courses continues to drop. It is not impossible to picture at least some schools in the future being very basic, that is, composed primarily of standard academic classrooms with few spaces for “nonessential” subjects. Those who are planning facilities for the future should be aware that what has been considered a “given” in what a school building contains is changing. As a result, careful attention must be directed to determining the programs—and in what numbers—school curricula will actually include.

8. HOW WILL STUDENTS BE GROUPED IN THE SCHOOL BUILDING?

Students and teachers will be organized differently in the future. Traditionally, students have been placed in a classroom as much to create a balance of class size for teachers as anything else. But increasingly, students are being placed in classrooms based on learning and teaching styles.

In the future, students will be assigned to a classroom with a particular design because that design best supports how those students learn. Schools designed in this way may have very different classrooms down the same hallway. Some will promote tactile learning, whereas others will engage the student through the visual environment. The “one size fits all” classroom model will disappear.
9. WHAT WILL SCHOOLS LOOK LIKE PHYSICALLY?

In general, schools will become less institutional in operation and appearance. In an attempt to assure parents and the community that public schools are healthy, safe, and desirable places to be, educators will try to make schools feel increasingly like “home.” Using warm colors, casual furniture, residential-style lighting, and so forth, classrooms will take on the appearance of the family den. Students will work in small groups for the most part, instead of being lectured to and seated in rows. Teachers will be facilitators of learning as opposed to the dispensers of all knowledge. They will move about the classroom helping students define their individual work plans, assisting them in finding electronic sites to gain needed information, and generally guiding learning instead of controlling it. As a result, classrooms will not only be more pleasant, they will need to be relatively large to accommodate a variety of learning centers and continuous movement of students and teacher into and out of groups.

10. HOW LONG WILL STUDENTS BE IN SCHOOL?

“School time” will continue to expand. In an attempt to meet the demands that policy makers and society in general place on education, the school day will be lengthened and the school year will approach 240 days. And, as noted earlier, when the buildings are not used for traditional school functions, they will be serving the greater community—often in the evenings and on weekends. School structures will need to be durable. Good building support components, such as heating, ventilating, and air conditioning systems, will need to be in place. In general, because of increased use, school buildings will need to be of higher-quality construction.

11. WHAT WILL BE THE INSTRUCTIONAL MATERIALS OF SCHOOLS?

Paper as we know it will disappear from schools. Students will not carry texts or notebooks with paper and pencil to class. Much of the reference material in schools, including journals and magazines, will no longer be found in paper form. Instead, those traditional paper products will either be on CDs and DVDs or accessed at remote sites via the Internet. As a result, we will need to reconsider such things as shelving for classrooms, the amount of electrical service, the number of Internet connections, and the size and design of such spaces as the school library.

12. WHAT GRADES WILL BE HOUSED TOGETHER?

Schools of the future will be designed to accommodate emerging research about when and where students learn best. That will take several forms. For example, substantial research indicates that the more transitions or school changes a student must make, the more learning is affected negatively. To offset this, some school districts are looking at reducing these changes by implementing different grade configurations. The old K–8 configuration is staging a comeback. And some districts are seriously considering a return to a K–12 configuration with all grades under one roof. The reconsideration of K–12 schools is part of the neighborhood school concept—students can attend the same school near their home from kindergarten through high school.

Based on other emerging research, some school systems are moving in the opposite direction. Although K–5 or K–6 has been the standard elementary pattern for years, more and more school systems are splitting this pattern to create a primary school and an intermediate school. The idea is that the entire faculty of a primary school is prepared in and focused on educational techniques supportive of early childhood education. In any event, traditional grade groupings will very likely be reconsidered in many places, requiring substantial reconfiguration of the size, shape, and location of school buildings.

WHAT DOES ALL THIS MEAN WHEN DEVELOPING A FACILITIES PLAN FOR A SCHOOL DISTRICT?

In this time of significant change and uncertainty, what can a district do to better ensure that its long-range facilities plan will include buildings that effectively house both programs and students? Although there are no magic answers, a district may want to at least consider the following suggestions:

- Review the district’s current facility plans against each of the 12 trends presented herein. Are the trends occurring, or likely to occur, in the district? What adjustments must be made in the facility plans to accommodate the trends that will affect schooling in the future?
- Incorporate flexibility as a basic design component in planning for new schools and remodeling existing ones. And ensure that flexibility addresses both the building in general and the individual classroom. One of the basic questions to ask is, do plans allow the alteration of the size and number of instructional spaces, as needed?
- Involve stakeholders not only in planning for new schools but also in using those schools. The more direct benefits the community sees in a school, the more that community is willing to pay for it. Is the school designed for community access? Do parking, security, furniture, storage, and so forth accommodate adult use of spaces?
- Build schools of quality, but with the idea that they may be needed for only 25 years instead of 50. And in the design stage, plan for the possibility that a school of today may be a community recreational center or retirement complex of tomorrow.
- Constantly scan your environment to identify educational and societal trends that will affect school use and design.

This article has identified 12 trends of today, but there is nothing to preclude 12 more emerging tomorrow. The more you know about the future, the less surprised you will be.

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