

1. THE ENVIRONMENTAL QUALITY ASSESSMENT PROCESS

By the end of the second workshop involving the four teachers and the assistant principal, the group was ready to act. Discussing the problems with introducing yet another outside human service agency into the already tight open space layout consumed much of the group's discussion. The assistant principal declared, "I think its a priority that should be looked at, and one of the things this group can start thinking about for starting to plan for next year in September is 'can we use this space differently?'" She stated that this assessment process has given them impetus to question what they could do to improve their educational environment: "By doing this, we have been able to look at some stuff and say, hey, we have a bad thing, but how can we make it better? How can we use it more effectively?... and that's going to help us."

Participation in Environmental Design and Assessment

An issue that receives much attention in construction trade and school administrator professional journals is the lack of collaboration of school staff in the design of new school facilities (refer any issue of *American School and University*, *CEFPI Journal*, *School Business Affairs*, or *American School Board Journal*). Unfortunately, the infrequent collaboration which does take place rarely includes the public or the occupants for which the schools are intended to support. Several teachers in this study who were present when their schools were being planned experienced first hand the frustrations of non-involvement.

Present models of the educational facility design process were originally developed during the dramatic educational system reforms of the 1960s in which state involvement in school finance and governance expanded to include the planning of facilities. Many educators believe that state legislatures, regulatory agencies and product manufacturers have had more effect on school design and equipment than educators themselves.

Compounding this problem of a lack of design participation is that educators' lack an explicit understanding of how the physical setting affects their teaching and their students learning. Similar environmental concerns continue to surface in school after school. Teachers, in essence, learn on-the-job through trial and error. This is arguably due in part to a lack of in-service training of teachers on how to effectively utilize, maintain and manage classroom space to support their instructional efforts.

Several school teachers in this study indicated that they received one short in-service session with EAI on how to arrange their classrooms to accommodate a cooperative learning strategy. However, the prototypical plans they were given were apparently too generic for their particular circumstances. (The researcher was unable to obtain a copy of this prototypical plan, further evidence of the lack of value the plan had for teachers in this particular school).

Some educational researchers suggest that teachers have not been trained to look at the environment in non-traditional ways in order to organize space to maximize learning areas, relieve crowded conditions, and to visualize classroom space in new and creative ways. What the magnitude of this problem may be, or how to develop strategies for informing teachers in the use of instructional space is presently unknown.

Based on the findings of the previous section, it is clear that occupants of the school, i.e., the teachers, students, staff and administration, all have a role in maintaining and improving the environmental quality of the school. Facility management, traditionally custodial and maintenance services, can and do have a significant role in this process, but occupants have a responsibility as well.

One area where occupants can begin to increase their environmental competence is by participating in the assessment of their current facility and proactively addressing these concerns in concert with facility management.

What has been found in this study, through the work with one school in particular, Robert Coleman Elementary School #142, is that it is possible to proactively address and even solve some of these intractable problems that teachers have lived with for over thirty years in some existing urban schools.

Findings

This study indicates that an on-going assessment process in which occupants participate in the identification and prioritization of environmental quality concerns, issues and problems, can be helpful in continuously improving the physical conditions of learning and teaching.

Participants engaged in a process of environmental assessment are able to go beyond "wish lists" to the formulation of the most critical environmental concerns affecting not only their own situation, but the situation of students and teachers in the entire school.

The process is observed to facilitate not only environmental assessment, but environmental change and action on the part of participating schools. Small but significant environmental improvements have been made in several schools in the study.

The assessment process is observed to provide some psychological benefits to participants in that they have been able to express their environmental concerns in a systematic manner that they perceive as leading to the potential for change.

Participants experience increased environmental awareness and exhibit an increased environmental competence as a by product of the process.

Finally, the environmental assessment process offers an extension of the existing school improvement team skills into the domain of facility management.

These findings can best be illustrated through the case of Robert Coleman Elementary School.

The Case of Robert Coleman

While all five schools in this study were part of an assessment process aimed at improving environmental quality, Robert Coleman provides the closest example of an "on-going" process of improvement.

The process of assessment, initially focused on identifying problems and concerns, is now taking on a life of its own, with these concerns being proactively addressed, and solutions being proposed and implemented. Much of the success of this process of change is the result of dedicated educators willing to take risks with a fresh vision of what their school could be.

For Robert Coleman Elementary School, the process of identifying and prioritizing common environmental concerns has provided new opportunities for reconsidering aspects of their educational program. They realized that resolving their environmental concerns goes hand-in-hand with organizational change.

The following is an outline of the process they followed:

Robert W. Coleman Elementary School is in the process of implementing a vision of a community school that offers a one-stop shop interagency environment, one that reaches out to form partnerships with the community in order to more comprehensively serve the families within the community. The vision includes medical and dental care, religious services, family counseling, GED, and other programs. In essence, the school intends to become a complete community resource center. After some thought, the school made the decision to start with the development of a health services center within the school although a health service provider has not been identified as yet. The goal is to find a provider and to provide space within the school by the next school year.

It was within this context that the environmental quality assessment took place. Like the other four schools in the study, the views of students, teachers, staff, administration and parent volunteers were solicited with respect to environmental quality.

Prior to the third visit on October 25, 1995, information gathered from the previous visit was tallied and organized into a series of potential environmental quality issues to be discussed during the workshop. Workshop materials included a list of all issues, floor plans showing the location of issues throughout the building, and a presentation board containing photographs of problem areas. Also included were individual issue cards and a blank matrix worksheet for ranking issues by priority and the potential impact, if any, on educational outcomes. The workshop, with a working group of four teachers and the assistant principal, lasted a total of 90 minutes.

This first workshop proved to be just the beginning for the working group, who were interested in finding ways to address the concerns they had identified.



Discussing environmental concerns during one of the assessment workshops

A second workshop was conducted on December 13, 1995 with the same working group completing work begun in the first workshop. During this workshop, the group began to consider options for re-designing the layout of their open instructional areas on both the first and second floors of the school.

At this time, a teacher survey was administered to gather further information regarding teacher perceptions of environmental quality to see if what the working group was concluding was similar to the entire school staff.

The desire for further structural changes on both the first and second floor open instructional areas were a high priority environmental concern. Teachers in both instructional areas were open to any suggestions that might emerge from the working group.

Much of the re-planning of the open space was centered around a more efficient use of the abandoned library/media center area as well as provisions for larger instructional areas for the teachers who needed it most. The biggest puzzle for the group was the principal's vision of locating a new health suite on the second floor. Three separate options were drawn up and discussed informally among the group.

Many of the problems of the second floor open space instructional area were echoed on the first floor. The main focus of discussion centered around the location of the existing cubbies that divided up the open space in a formal way, preventing additional space needed for desired learning activity centers.

In some ways, the principal was way ahead of the working group. She had already contacted a group of volunteers to begin the process of not only reorganizing storage space, but also dismantling the unused media center as a first step in reorganizing the physical space in the school, with the intent of accommodating a health agency suite on the second floor. Once word about the principal's decisions were realized by the working group during the second workshop in December 1995, they analyzed the proposed configurations, identified the ramifications to their own reorganization decisions, and create options to accommodate all user needs.

The options were then formally presented to the principal and the School Improvement Team (SIT) committee, the ultimate decision makers.

On February 13, 1996, a final workshop, a planning and design workshop, was conducted with the School Improvement Team involved, in which design options for new open plan configurations generated during the researcher's absence, were discussed.



Debating environmental planning options at the School Improvement Team Meeting

Action is now being taken by Robert Coleman to identify and address many of these and other aspects of environmental quality in their school.³ As a result of the interviews and workshops between September 1995 and February 1996, discussions have begun between teachers, the SIT committee and the principal concerning ways to rethink the entire school facility to more closely fit the educational programs that currently exist, along with those school-community partnerships that will soon be sharing space with the school programs.

As a result of the workshop and discussions with the principal, several options were identified for the inclusion of a new health suite within the school. However, before these options could be developed, several wider implications of bringing in another outside agency into the already crowded school facility needed to be addressed.

At the February 13, 1996 SIT committee meeting, the decision to follow a modified and phased Option A was reached. Storage rooms were to be re-organized, the second floor open space instruction area was to be reconfigured without assignment of particular classes. The issue of whether the health suite would be located on the first or second floor, and other reassignments of classes to newly created instructional areas on the second floor would be tabled until the fourth option could be explored.

On Monday, February 19, 1996, the volunteer group from the Civic Works Project came into Robert Coleman to begin the ground work for implementing the new facility plans. Later in the month, another community volunteer group continued the process. Meanwhile, discussions regarding the rethinking of the educational program and its relationship to the physical structure on the first floor have continued.

The story of Robert Coleman continues and should ideally be an on-going, if not regularly reoccurring, process. With some hard work, the school will be settling into their newly organized space, September of 1996. But, the process does not necessarily have to end there. The educators at Robert Coleman have gained a new awareness of their environmental setting and a measure of competence in confronting problems they knew were there but did not have a way of comprehensively addressing.

Although this level of involvement was not seen as necessary in the other schools in the study, this particular case illustrates what is possible given a great enough desire for change. Many environmental concerns that schools confront can only be effectively addressed by educators themselves. In fact, all schools, through SIT committees, have the capacity to deal with environmental concerns.

The difference, illustrated by this project, is that comprehensively identifying the many environmental concerns *from the perspective of educational activities and goals*, is not a collective competence many schools possess. For instance, many educators grudgingly live with open plan instructional areas for years, conducting educational programs not necessarily suited for these arrangements. As several teachers remarked, "We make due with what we have."

This case study illustrates the potential value of institutionalizing an on-going process of environmental quality assessment that has implications for integrating facility management and educational decisions for the betterment of the educational process.

³ See Appendix B5 for a complete listing of the final issues arrived at by the environmental quality assessment working group

An on-going process of environmental quality assessment like the one followed in this study, has the potential for supplying the tools and implements necessary for educators to successfully resolve many such environmental concerns in as yet, unknown creative and innovative ways. In addition, the process can be helpful in continuously improving the physical conditions of learning and teaching.