

REVISITING OPEN SPACE SCHOOLS: A SYNTHESIS OF THREE DISCIPLINARY PERSPECTIVES



"In all our work it has been impossible to ignore the differences between what people said they were doing and what we saw them doing."
Maxine Wolfe, 1986

While the previous section emphasized the differences between these disciplines, this section will discuss similarities and linkages which exist between these disciplines. In addition, suggestions for the possibilities of an alignment of research agendas between the three disciplines. Although each discipline has differing epistemological positions and methodological approaches, the potentials of dovetailing research agendas in an effort to advance the state of knowledge about educational environments are great.

The goal of this chapter is to get at not only what is known about educational environments, but to gain an indication of how this research has impacted the operation of actual educational settings. To get lost in the research findings is to miss the point. One problem with all the research, in all three disciplines is the lack of discussion of actual impact upon the real conditions of schooling. Very little research has been conducted on the influence or efficacy of the research on changing organizational policy toward educational environments. In discussing changes in educational environment, Wolfe (1986) reflects on her experience with research in institutional settings: "We found that in most of these settings what occurred on a daily basis *did not reflect the goals that teachers, administrators or designers said they were trying to achieve*. People talked about the value of individualized programs yet taught group classes and measured progress using standardized tests. Though the fixed desks and seats had been replaced by movable furniture, in most rooms and schools no matter what the educational philosophy or the overall design of the space, the arrangements set at the beginning of the school year remained until the last day of classes, including the flexible walls. This was true despite the repeated declarations of staff that their spaces and rooms "weren't working" or that they wanted them to reflect changing programs. In all our work it has been impossible to ignore the differences between what people said they were doing and what we saw them doing" (Wolfe 1986, 1).

The experiences of Wolfe can be seen as a part of the uncertainty of the a real educational setting which is not always reflected in empirical research. Is environmental design research as a form of action research 'good enough' to influence change? Is empirical research in educational environments as conducted misplaced precision?, or is it more successfully a tool for identifying salient features of the environment for environmental designers? These are the types of questions which need to be addressed in an attempt to integrate the three disciplines.

As a way of studying the nature of interaction between the three disciplines, the open classroom/open education historical case study will be reviewed. By reviewing the case history of open education and open classrooms, many of these questions can be addressed.

4.1 OPEN CLASSROOM/OPEN EDUCATION

Of all the issues dealt with in the analysis, only the open education/ open classroom issue seemed to not only cross disciplines, but also find its way into all three sub-systems. Of all of the research issues identified, the traditional/open classroom issue appears to be a higher-leveled issue encompassing all other issues. In other words, traditional/open classrooms can be analyzed according to environment-behavior issues such as noise, density issues, teacher-child interactions, design issues and educational programs.

This section will look at the three disciplines from the perspective of what role they each played in the development of the open education/open classroom concept, and how an historical analysis can help provide some insights into how these three disciplines could be integrated into a multidisciplinary approach.

Even though the movement in open classroom/open education has long ended, and the conservative "back-to-basics" approach is now in vogue, there have been some calls for reconsidering the validity of the underlying goals which comprised the philosophy of open education (Rothenberg 1989). Many school buildings constructed according to the open schooling philosophy are nearing their 20th year of operation. Some schools have undoubtedly undergone alterations in layout, as well as renovations and additions. The variety of plans and programs can still be observed: many of these schools have reverted back to more traditional programs, others remain alternative, still others retain elements of both traditional and open. Although the movement is past, the issues are still being discussed and are relevant to researchers today.

A Brief History of Open Education/Open Classrooms

The origins of open education began in the mid-1960s with American educators' interest in the English "infant" (elementary) schools and their use of what they called "informal education" (Rothenberg 1989). Informal education, along with what was called the "integrated day," had evolved in England for some time and had its origins in the unique situation facing teachers in London during and after WWII. During the war, many children had been evacuated to the countryside to protect them from the bombing raids. Schooling continued with students of all ages living with their teachers. After the war, the London schools found themselves faced with children of different ages with different levels of academic achievement due to differences in educational opportunities during the war. The educators developed a organization of teaching to students of diverse achievement levels within one classroom. In addition, from experiences with teaching children during the war, teachers were convinced that education was strengthened when different aspects of the curriculum were integrated and related to ongoing daily activities. Information was integrated by relating it to different topics, rather than segmenting the topics into isolated time periods.

During the 1960s in the U.S., challenges to traditional education forced a radical change in educational philosophy. Educational reform movements favored a teaching model adopted from the British informal education model. As a result, open education, and its complementary physical counterpart, the open classroom, were soon espoused (Barth, 1972; Kohl, 1969; Gross & Murphy, 1968). Open education, it was argued, provided more educational opportunities for children, provided freedom and autonomy for self-directed study, required less guidance by the teacher, and helped foster self-responsibility on the part of the student. In terms of architectural

interventions, the open space classroom was a milestone in the history of classroom design which had traditionally been popularly characterized by the 'egg-crate' plan. Architects initially sold school districts on open classrooms for cost benefits, only later realizing the more fundamental connections to open education. Once this connection was made, it became yet another selling point for the profession. It has been reported that as much as fifty percent of all schools built between 1967 and 1970 were open space design. By the mid-1970s, problems with open classroom schools began to spread to districts considering the idea. By the end of the 1970s, many school district building programs returned to more traditional building designs.

Some Reasons for the Failure of Open Education/Classrooms

The Definition of Open

The problem of what constituted open education and open classrooms became a stumbling block very early in the educational reform process for proponents, educational administrators, researchers and designers alike. No clear relationship has ever been presented between open education and the need for open classrooms. As far as some educators were concerned, open education could be accommodated in traditional classrooms, but this option was rarely explored. Once the open education philosophy took hold, so in turn did the construction of open classrooms. It could be argued that at times the reverse scenario occurred; open classrooms were constructed with the thought that open education would follow. This scenario constituted a naive environmental determinism: that the physical environment can determine behavior.

The ambiguity of openness was never resolved satisfactorily. For example, the definition of what was considered "open" varied from teacher to teacher. Some used open to refer to certain informal teaching techniques, while others described their classrooms as open when they individualized the way they taught certain subjects. Due to the increased demands and stresses of teaching in an open classroom setting, many teachers reverted back to their traditional programs while often still believing they were teaching open education simply because they were in an open classroom. In addition, educational program policy concerning openness varied in its effectiveness.

To complicate matters, the literal interpretation of the word "open" led architects to design buildings which had no walls between classrooms. The conceptual link of open classroom to open education could not be a clearer example of the organizational/physical dimension linkage emphasized by environmental design research. It could be argued that the open classroom design concept (of no walls between classrooms) became the most damaging factor to the open education movement. In many instances teachers using open classrooms continued to use traditional teaching methods unwilling to change their educational philosophy required by open education. As a result teachers were unable to adapt to the noise and distraction the open classroom setting allowed.

Finally, the research conducted on open classrooms has had numerous methodological problems. The most serious problem has been one of definition for the word "open" and the degree of "openness" (Marshall, 1981). With different definitions of openness it becomes difficult to reliably compare across studies and make clear conclusions about what affects are caused by what type of open classroom. Ross & Gump (1978) have offered a way of measuring designed and modified openness in elementary school buildings, but there is no evidence that this

system of measurement has been used by any researchers other than themselves. It is also interesting to note that this measure was developed a full ten years after the open school construction boom; too late to influence the research in any meaningful way.

Impact of Educational Policy

The impact of the educational policy of open education on classroom teaching methods employed by teachers is ambiguous. It appears that some teachers continued to use traditional teaching methods despite administrative policy to the contrary. Was it the case that some teachers may not have appreciated changing their teaching styles mid-way through their careers? Was it a matter of teachers not completely understanding the new open education philosophy? Or was it simply a lack of administrative leadership in effectively training teachers in this new method of teaching? These questions have only begun to be answered in the literature.

For example, some researchers (Good and Biddle, 1988) believe that educational reform often fell into the trap of creating open classrooms, developing learning centers and new individualized instructional materials at the expense of understanding how to mobilize students to use these materials as they planned. The aspects of group behavior in a new open classroom environment were ignored, as well as necessary monitoring of student progress in basic skills.

What may have been one of the most critical mistakes of school administrators in moving towards open education was the assumption that there was no need for organizational development, personnel changes or in-service training programs. Many times educational program changes were imposed by outsiders without community participation and support and often in these cases successful implementation of these programs were doomed from the beginning. Administrators did not always take into account the possibility of community group opposition. This was the case with two schools with low-income families who felt their children were not being taught the basic skills (Barth, 1972). In general, parents in urban communities more often supported "back-to-basics" reform rather than open education (Rothenberg, 1989).

Impact of Educational Research

The research literature, although inconclusive about the relative merits of open education, seems to have been, in part, instrumental in downfall of the political undoing of the movement. The disadvantages of open education/classroom quickly leveled against proponents, suggested that students waste time moving from activity to activity, less time is focused on educational tasks, students are distracted by other activities going on around them, and teachers experienced increased levels of noise which decreased their effectiveness. Another disadvantage was the mixed result of academic achievement comparisons between traditional and open classroom settings.

It is generally believed that the research literature which reported the failure of open classrooms to measurably increase achievement scores compared to traditional was a strong contributing factor in the demise of open education (Raywid, 1981). Many non-achievement outcomes such as cooperative behavior among peers, independence in work habits, attitudes and creativity were clearly achieved within the confounds of the open classroom (Giaconia & Hedges 1982), but failed to persuade the public at large to retain open education and classrooms.

4.2 THE ROLES OF THE THREE DISCIPLINES IN OPEN EDUCATION/OPEN CLASSROOMS

In exploring the roles each discipline played in the development of the open classroom/ open education movement, there is a clear pattern which emerges. The move toward open education was first initiated by educators who took the lead from English informal education. Environmental designers following the assumptions of the educators provided a physical setting (open classroom) which was presumed to match the objectives of open education. Finally, environmental psychology and educational psychology followed up with empirical research of the open classroom setting. The open classroom essentially became a working research laboratory. Many of the assumptions of open education were not challenged by researchers other than the comparison studies between traditional and open classrooms.

The movement towards open education was a political decision made by the educational community based on changes in the educational philosophy of the period. The move toward constructing open classrooms on a large scale began before any substantial research had been completed to support the open education and open classroom hypotheses. Once the research began to indicate some differences (mainly inconclusive evidence in both directions), the life of open education was already waning. Whether or not the research had much effect on the short life of open education, it is unclear, since as stated above, research findings were used by proponents and opponents alike. What does seem to be clear, however, is that direct conflicts between educators, parents and the general public over the viability and efficacy of open education were the main contributors in determining the final outcome of the movement (as Gold & Miles, 1981 illustrate). Could research have played a more prominent role in the process had it been utilized candidly in the process of developing the concepts of open education? Could findings from preliminary projects have helped clarify what an open classroom should look like? The idealistic answer to both these questions is yes.

4.3 THE CASE OF THE LINCOLN ACRES SCHOOL

Gold and Miles (1981), in a book called *Whose School is it Anyway?: Parent-Teacher Conflict over an Innovative School* discuss the problems connected with creating a new school from the ground up from an ethnographic perspective. Although this more sociological view has not been covered within this publication, there seem to be many lessons and implications that could be drawn from this case study to further the cause of synthesizing research agendas of the three disciplines.

Lincoln Acres was one of six sites in what Gold and Miles called their "Social Architecture" study. The story is told of the planning, construction and occupancy of a new open-space elementary school, and the conflict that existed between the community and the school in that process. The early planning and vision that emerged, the formulation of the faculty, and the intensive "final planning" that took place during the months before the school was to open are described. A description of the gradual development of conflict between the school and its surrounding community during the school's opening, and the subsequent reorganization of the school in response to the conflict between educators and parents during the first and second years of the school opening is presented (Gold & Miles, 1981; 11).

Over the course of the school's initial year, the school changed from a 'quasi-collegial organization' (child centered individualized instruction) to a 'legal-rational bureaucracy' (modified back-to-basics program of study). Basic changes in organizational structure were a result of redefinitions of educational philosophy offered by the school which were for the most part a result of the conflict between school educators and the community (Gold & Miles, 1981; 345). Organizational change was the result of educators' inability to maintain positive relations with the community. Gold and Miles conclude by introducing several required factors which would have assisted educators, in guiding organizational change in a more positive manner: rates of change, levels of organizational rigidity, the exercise of power, leadership, and organizational fragility.

There are many illustrations of instances where community group action has limited and framed personal and organizational dimension issues. In fact, it could be argued that a whole body of knowledge about school environments covered under the rubric of "sociology of education" have been missing from the discussion thus far. One blaring observation of this case study is the almost complete lack of reference to the physical environment of the school itself. This observation lends further support to the argument that separate fields of research consistently limit their coverage of other aspects of the total educational environment. Nevertheless, the inclusion of a discussion of social issues will begin to reveal that certain issues within the three disciplines may be more critical and relevant for research than others.

4.4 CONCLUSIONS

The case history of open education, and the open classroom, brings to light several issues which can help refine the multidimensional model of the educational environment, as well as provide a framework which begins to suggest a conceptual synthesis of the three disciplines of educational psychology, environmental psychology and environmental design research.

Internal factors, as well as external factors to the educational environment contributed to debate on educational philosophy during the sixties reform movement. The resulting open classroom/alternatives schools, a first in the history of education in the U.S., raised many fundamental questions of educational philosophy previously not open for public discourse: for the first time, the public had a voice in how they were to be educated. Community participation was a very real factor in the success or failure of open education (Barth 1972, Gold & Miles 1981). In fact, parental involvement in school activities became a central feature of the "new" educational philosophy.

The problems in dealing with the political groups within and outside of the open education movement were not taken into account either from the side of school administrators, or on the side of researchers in any of the three fields. The relationships between administrators and teachers, and parents and teachers were not researched as part of the larger theoretical framework of open education, even though participation was one of the originally espoused principles of open education. Research focused, in the case of the psychologists, on the children and possibly the relationship between the teacher and the students, but only from the viewpoint of the individual, not the group. In reality, educational policy impacted groups as well as individual behavior.

Several issues have been cross-linked from the perspective of the multidimensional model of educational environments: lessons of open education, and questions concerning educational policy. Each issue will be discussed in turn, followed by an exploration of directions for future research.

The Experience of Open Education

Open education was first and foremost an educational philosophy developed out of social unrest of the sixties. How the philosophy of open education was implemented was not the same from city to city, school district to school district, or even classroom to classroom. This diversity of definitions establishing what constituted open education and open classroom was never clearly addressed. Researchers and designers accepted almost without question the assumptions of this new philosophy. Researchers and designers will need to become much more explicit about their values and hidden agendas during the present and future reform movements, and take a closer look at how their work fits into the ever transforming forms of the educational system.

Educational Policy

From the perspective of the open education/classroom case study, the strength of the linkage between educational policy and teacher curriculum has not been clearly explored. How much control does administration have, or expect to have, on teacher instruction methods? How can school administrators both encourage diversity in teaching methods, and at the same time provide the most congruent physical environment for learning? It has been demonstrated by many researchers that teachers do not have the training to manipulate the physical classroom setting to support their own teaching styles and methods. In what ways can educational policy contribute to the education of teachers to the possibilities of using the physical environment to support their teaching efforts? Many problems of classroom management can be attributed to weak, or unclear educational policies concerning both teaching methods and use of the classroom setting.

Directions for Future Research

Several areas of research have been identified for future work, and can be approached from any of the three disciplines.

1. *Research on the impacts of differing levels of quality of instruction on usage of instructional space is needed.* Previous research on the impacts of open or conventional classroom space on student achievement scores has left out the mediating variable of teacher effectiveness. A measure of the quality of instruction might be one way of getting a more accurate reading of the influences of space on achievement. Other measures, such as how the teacher actually goes about using classroom space during instruction, and comparing use across classroom settings, might begin to develop a more comprehensive approach to the study of classroom settings in use.

2. *Continue research on the role that groups play in influencing organizational policy and the effects of this action on the educational setting.* Issues of organizational development might be addressed to understand how changes in organizational structure could influence design and use of instructional space.

3. *Create a more sophisticated outcome topology of degrees of classroom openness with respect to instructional methods.* Which methods work best in which degrees of openness? Openness can be defined as a continuum ranging from highly open education to highly closed (traditional) education; and thus can be defined on a continuum of open to traditional physical classroom settings. All dimensions of openness need to be clearly defined.

4. *Continued research needs to take into consideration the combined social and physical environmental dimensions on the student's performance.* Research on student achievement will always be a central feature of the evaluative processes of the educational environment, however, the student may perform better in some social environments than others. What these optimal environments might be should be researched. In the meantime, student behavior and academic performance should be evaluated within the context of the larger social group characteristics. As one teacher stated, "the teaching profession is now 85% social work." Research should address this reality.

5. *The role of the physical environment in supporting philosophically diverse educational programs is unclear and should be investigated.* Programs which could be investigated range from various alternative and magnet schools (e.g., creative arts, language immersion, Montessori, Urban Waldorf), to special school programs (e.g., at-risk students, emotionally disturbed, over-age middle school students, bilingual-bicultural education, programs for academically talented). In what ways do these different programs require similar or different physical surroundings, and how can the physical environment best support the program in question?

The brief list developed above attempts to identify areas of research which could be a common concern of all three disciplines (educational psychology, environmental psychology, and environmental design research). Hopefully, some of these areas of research will be of interest to administrators and citizens outside of the research community, resulting in effective social change.

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