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Effective School Research: Will It Play in the Country?

JOAN L. BUTTRAM[1] AND ROBERT V. CARLSON[2]

This article examines the potential application of the effective school research and model to rural school settings. Three strategies were used to orient rural educators to this body of research: (1) short-term awareness-raising sessions; (2) graduate level courses on the effective school research and model; and (3) actual conduct of the school assessment and improvement process in a rural school. The authors conclude that there is much relevance of effective schools research and practices to rural school settings but important adaptations must be considered to truly acquire the payoff desired.

Introduction

The Effective School research and model offers an appealing, common-sense approach to school improvement. Contrary to the results of the Equality of Educational Opportunity report [5], the effective school research asserts that schools can and do make a difference in the achievement of all children, regardless of socio-economic status (SES). This body of research continues by noting that in effective schools, or schools where all children achieve, seven school characteristics are generally found: 1. safe and orderly environment; 2. clear school mission; 3. instructional leadership of the principal; 4. high expectations for student achievement; 5. student opportunity to learn and time on task; 6. frequent monitoring of student progress; and 7. supportive home-school relations [6]. Although other researchers [1; 3; 7; 8; 11; 19] differ slightly in their listings of the effective school characteristics, there is fairly consistent agreement on the importance of the above factors.

In the past two years, there has been widespread debate and controversy over the validity and utility of this research [13; 17; 18]. These debates tend to focus on philosophical concerns (e.g., the importance of equity in defining school effectiveness, the primary emphasis on basic skills) as well as methodological concerns (e.g., the use of standardized achievement test data to identify effective schools, the preponderance of correlational and not causative studies [17; 18], the concentration of investigations in elementary and urban school settings [2; 4; 9; 10; 15; 16; 19]). This paper is intended to respond to one of the methodological criticisms, to examine the validity and utility of the effective school research and model in terms of the rural school setting. More specifically, this paper reports on the responses and reactions of rural educators to the possible application of this body of research to their own school environments and subsequent improvement efforts.

Methods, Techniques, and Data Sources

In order to examine the applicability of the effective school research to rural school settings, we first conducted a review of the literature. Our search followed two parallel avenues. First we carefully studied the research methodologies and procedures employed by others currently working in more urban school settings. Three main research groups were identified: the Connecticut State Department of Education, Bureau of School and Program Development; the Michigan State University Institute for Research on Teaching; and the New York City Board of Education. All three groups basically followed the same model in their school improvement efforts: 1. the development of school building awareness and commitment to participate in the school assessment and improvement process; 2. an initial assessment of the school in terms of student achievement and effective school characteristics; 3. the development of a needs assessment plan for school improvement; 4. the implementation of that plan; and 5. the reassessment of the school at a later point to determine if both sets of measures have improved (a decrease in SES-related achievement differences and an increase in characteristics associated with effective schools). All three groups focused on individual school buildings and relied on both student achievement test data and school personnel input via structure interviews and questionnaires to determine school status on the effective school characteristics.

Our second avenue of search involved collecting more discrete research articles, reports, and survey instruments. These materials generally addressed more specific issues concerning the effective school research model, especially related to the seven effective school characteristics. For example, the Shoemaker and Fraser article on effective principal practices [2] was included in the review. Overall, more than 100 articles were found and added to the literature collection. Because of the number, they could

[1]Manager of Assessment, Newark Board of Education, 2 Cedar Street, Newark, New Jersey 07102.

[2]Director of the Center for Evaluation and Policy Research, College of Education and Social Services, University of Vermont, Burlington, Vermont 05405.

not all be referenced here.

As might be expected, two sets of materials resulted from the above literature review. First, given the similarity of effort by all three research groups, the five steps listed above were adopted as the generic effective school research model for school improvement. Second, the individual articles, etc. were organized into a collection of readings and resource materials. Together, these two sets provided a knowledge base on the effective school research and model that could be shared with rural educators.

Research Examination Strategies

Three basic strategies were employed to study the applicability of this research to rural school settings in Vermont. Very briefly, awareness sessions (Strategy number 1) were held with rural school district personnel (mostly district superintendents and building principals, although some classroom teachers did attend). These sessions were conducted over approximately a one-year period and followed somewhat different formats and schedules. The first awareness session consisted of a week-long session that teams (consisting of superintendent, building principal, classroom teachers, and school board member) from five Vermont school districts attended. Three single-day sessions were held during the school year that were open to and widely attended by school districts across the state. Some isolated presentations to individual school districts who expressed interest were also made as part of their district in-service programs. The content of these sessions was drawn from the knowledge base described above and varied depending on the audience and the length of the presentation. However, all of the sessions focused on reviewing and critiquing the effective school research, especially in terms of the validity and relevance of the definition of an effective school and the characteristics associated with effective schools. Nationally-known researchers as well as university and state education representatives made presentations during these awareness sessions. Sufficient time was always scheduled during these sessions to interact and obtain feedback from rural educators concerning their response to the effective school research, especially in terms of its applicability and feasibility in their schools. State-wide sessions were co-sponsored and financed by the University of Vermont and the Vermont State Department of Education; individual district sessions were sponsored by the particular district.

The University of Vermont also sponsored a graduate-level education course through its off-campus continuing education program related to the effective school research (Strategy number 2). This course was divided into two parts which addressed the research literature concerning the effective school characteristics and the school assessment and improvement process (using the generic model described earlier). This course was offered in five rural school district sites and attracted a variety of school district personnel from all levels of responsibility. A course collection of readings and activities [21] was developed based on the literature review. Class sessions provided us with the opportunity to explore the appropriateness and validity of the effective school research to rural educators and the feasibility of conducting the school assessment and improvement in rural schools. Students enrolled in the class were required to form school assessment teams and pilot test on a limited basis the latter in their own schools. This exercise provided us with some very useful feedback and insight on the feasibility of the school assessment and improvement in rural settings.

As a final strategy, we attempted to actually conduct the school assessment and improvement process in a small rural elementary school in central Vermont. The school studied has a pupil enrollment for grades K-6 of 110 and a full-time staff of five (5) classroom teachers supported by part-time specialists in health, speech, special education and Title I. These students and staff are crowded into a small, wood-frame, two-story structure which barely meets State minimum space requirements of thirty (30) square feet per pupil. The attempt was patterned after the five-step generic model described earlier. Modifications were made to accommodate particular school concerns or restraints; these were carefully recorded to provide another source of feedback on the applicability of the effective school research to rural school settings at a later date.

Results

The results of all three examination strategies generally produced similar findings. In our interactions during awareness sessions (Strategy number 1), class meetings (Strategy number 2), and conducting the school assessment and improvement process (Strategy number 3), rural school district personnel reacted positively to the effective school research and model. In most cases, they found the research to be appropriate and consistent with educational "best practices." As in other more urban areas, part of the appeal of the research was its "common sense" approach to school improvement. As Ronald Edmonds [7] has repeatedly emphasized, "effective schools are today within the grasp of each and every educator." Given rural areas' limited access to new educational technology, school improvement efforts that rely on long-accepted and practical educational strategies are bound to be highly popular.

Although rural educators enthusiastically welcomed the spirit and promise of the effective school research, some specific concerns were raised. As with the other groups, these again seemed to focus on either philosophical or methodological concerns and generally paralleled those identified by their urban counterparts. However, when differences occurred, they resulted because of contextual differences between urban and rural schools that impacted on the conduct of the school assessment and improvement process.

It should be noted at this point that we did not systematically survey and record the reactions and concerns of rural educators to the effective school research.

Our findings are based instead on our own interactions with and observations of rural educators as they listened, questioned, and grappled with the effective school research. Our findings thus represent a collage of reactions. In the remainder of this paper, we have attempted to organize and present their reactions from either a philosophical or methodological point of concern.

Philosophical Concerns

Rural educators wrestled with the definition of an effective school throughout the school year. Their debate did not focus on the relevance of equity in determining the effectiveness of a school, but on the consideration of only reading and mathematics as the criterion measure. They argued that schools do more than teach basic skills (reading and mathematics), and those other instructional areas should be included in the criterion measure. One classroom teacher was finally able to focus this debate by noting that if schools were accountable for only one thing, it was basic skills instruction. And that one responsibility should be used in deciding whether a school was effective. That particular line of reasoning convinced many rural educators to accept the effective school criterion measure.

The other philosophical concerns revolved around the appropriateness and generalizability of the instruments used to assess the status of the school on the seven effective school characteristics. These instruments were developed by the Connecticut State Department of Education [6] but had not been validated in rural school districts. Rural educators enrolled in the graduate level course (Strategy number 2) as well as school district staff involved in the school assessment and improvement project in their school (Strategy number 3) reviewed both instruments (interview and questionnaire) and noted several weaknesses in the operational definitions of two of the seven effective school characteristics. These were eventually corrected as described below.

In the Connecticut State Department of Education [6] interview instrument, specific items are provided to assess the status of the school on each of the seven effective school characteristics. For the "safe and orderly environment," more weighting is given to the physical safety, security, and disciplinary climate of the school building than to the general condition of the physical plant and up-keep of the building. No attention is given to the issue of sufficient space in which to operate the school instructional programs. In rural schools, there are very few security concerns; "safe and orderly environment" issues tend to revolve around building maintenance and adequate instructional space. In order to correct this imbalance from the rural school perspective, an additional item was added to determine if insufficient space was hampering the instructional programs of the school.

The assessment of the "instructional leadership role of the principal" characteristic also had to be closely scrutinized. In many of the smaller rural elementary schools, it is not uncommon for a classroom teacher to be appointed "head teacher" or "teaching principal." In those schools, the more traditional responsibilities and functions of the building principal will usually be shared by the "head teacher" and the district superintendent. In assessing the instructional leadership of the rural school, the functions of the principal have to be separated from the individual. More simply, the instructional leadership functions are still accepted as critical to the effectiveness of the school; however they may be fulfilled by many individuals (i.e., head teacher, superintendent, other classroom teachers). In assessing this characteristic, some modifications were made in the wording of the items to account for the fulfillment of these functions by others besides the non-existent full-time building principal.

An additional area requiring further exploration is the role of community in defining the mission of the school and in providing a perspective on the school's overall effectiveness. Much of the effective schools literature does not place high stress on home-school relations. It seems in rural settings the school often becomes a major outlet for community identification and whose support (economic and moral) is critical for ensuring effective performance.

The assessment of equity in students' achievement as part of the definition of an effective school is both a philosophical and methodological issue. The problem of how to best identify low SES students is explored later in this paper. The philosophical question at this junction is the relevance of this issue at the building level where a large percentage of families are at or below poverty level standards. It may not only be a question of inter-group variances but also a question of the overall achievement of all children and what standard should be applied. For example, most schools set the 30th percentile as a minimum standard for mastery and it is not uncommon to find 60% or more of all students scoring below this standard. It seems this issue requires a broader base of comparison and there is a need to look at inter-school differences in a large geographical area which is made up of comparable characteristics and family background. This line of thinking re-opens the debate around equal opportunity and educational financial support. The discrepancy of per pupil support varies greatly from district to district in states like Vermont and the solution to these disparate support levels continues to be illusive. Clearly more research and debate is needed to put the equity issue in perspective and to make it relevant to rural areas experiencing marginal financial support or below poverty conditions.

Methodological Concerns

Methodological concerns identified by rural educators echoed their more urban counterparts – "Does it work at the high school?", "Does it work anywhere but in the big city schools?". But rural educators, as they learned more about the research and the model, also raised some specific questions about actually conducting the school assessment and improvement process in their own schools.

Resource Questions. Their first set of methodological

questions centered on finding the resources to actually conduct a school assessment and improvement project. In the urban schools, these projects have typically been conducted by one of three groups: 1. district research personnel, as in New York City; 2. nearby university faculty, as in Michigan; or 3. state department of education staff, as in Connecticut. In rural areas, central office staff rarely exceed a superintendent and business manager; none in Vermont have identified any staff positions with full-time research and evaluation responsibilities. University and state level departments of education may sometimes be available; however, access—time and travel—may pose insurmountable problems. In Vermont, the University of Vermont was able to offer such assistance on a cost-recovery basis to assist school districts; however it should be noted that probably more than five separate projects in a given year would severely tax available university resources.

In order to explore other options, university faculty trained school district personnel to conduct assessments in their own or nearby schools (as part of Strategy number 2). These personnel conducted interviews, distributed questionnaires, collected student achievement data, and analyzed all three data sets. This option, pilot-tested in either their own school or in another building on a very limited basis, generally proved unacceptable. School personnel reported that they felt uneasy in collecting information from their peers, especially in their own school or district, but also somewhat in other district schools as well. They did not feel adequately trained in interviewing skills and/or data collection and analysis techniques. The latter obviously could be corrected with addtional training and practice. Release time for classroom teachers to collect and analyze school assessment data was also problematic. Perhaps the most cogent comment concerned the uneasiness of school personnel in collecting these data, especially in face-to-face interviews. At the end of the pilot test they strongly recommended that the assessment process to be conducted by personnel external to the school district in order to ensure the validity and confidentiality of the data.

Resources are also necessary in order to develop a school improvement plan based on the school assessment and to follow through with its implementation. In the case studies of the urban school districts we reviewed, these were done by individual school buildings, with outside building help often from the central office.

Most of the schools we have worked with in Vermont have not yet reached this point, yet several points seem clear from the awareness sessions (Strategy number 1) and course discussions (Strategy number 2). Because of their relative isolation and size, rural educators have fairly limited resources on which to draw. If they identify a particular weak spot, they may not be able to adequately respond because of time and staff limitations. For example, in one school the four elementary teachers identified the lack of a uniform, sequential curricula in reading and mathematics as one of their most pressing problems. The probability of those four teachers undertaking the development of such a curricula in a reasonable amount of time seemed impossible. Since there were four other elementary schools in the district with the same problem, they were able to band together to address this problem, but still work independently to resolve other issues. Provision for non-district resources and inter-school networking is thus a must in rural schools involved in the school assessment and improvement process.

School Assessment and Improvement Model Questions. A second set of questions was raised on the validity of the model for the school assessment and improvement process. As we indicated above, the model will most likely require some modification to allow individual school buildings to band together to carry out parts of their school improvement plan. We also discussed that the awareness stage of the model required much more time to complete in rural schools that previously reported for urban schools. In the urban school settings, this has generally involved separate meetings first with the district administration and then with the building principal, followed by an awareness presentation to the entire school faculty. A follow-up session is sometimes held with the school faculty to answer teacher questions. Once these awareness sessions reach the faculty level, little time elapses between the presentation and the decision by the school on whether to continue.

In our work in Vermont, we found schools required more time before deciding whether to continue. In those schools that have elected to move onto the next stage and have faculty eager, committed, and informed, the awareness period has involved many more meetings or presentations over several months. Some of our colleagues may joke that this may be another instance of the stereotyped Vermonter reaction to "flatlander" innovations; however we prefer to believe that it represents a true difference between urban and rural schools. Because of the small size of the rural school faculty, all will have an important role to play. There is simply insufficient numbers of teachers assigned to a single school to follow the urban school strategy of forming a school improvement committee to spearhead the school's effort. In order to win over the entire rural school faculty, more time is required.

Achievement - SES Analysis Questions. A final set of questions arose as we began to pilot test the school assessment and improvement process in one of Vermont's more rural schools. As discussed earlier, student achievement data are analyzed to determine if significant SES differences exist in each grade. In rural schools, some of the traditional SES indicators are not reliable because of the overall reduced income levels. For example, the recommended Connecticut State Department of Education SES criteria (free or reduced lunch eligibility) results in 95% of one Vermont school classified as low SES, including a share of the teaching staff's children. Rural schools must therefore find another more suitable SES indicator. Teacher ratings of SES were tried in our pilot-testing school; unfortunately these proved unreliable. In two more recent studies conducted in Vermont, mother's education level combined with child's eligibility for compensatory education seemed to provide a more reliable

basis for identifying SES groupings.

In addition to the problem of finding an appropriate and reliable SES indicator, analyses of student achievement data by grade by SES group in rural schools often result in very small SES cell sizes (i.e., low versus middle and upper SES). For example, if there are only twenty students per grade, such analyses will likely result in SES group cell sizes smaller than ten. Such small numbers hardly provide much confidence in the findings. One possible solution to this second problem may be to examine achievement data (combined reading and mathematics scores) for individual grade or cohort groups longitudinally to determine if consistent patterns of bias exist. Also, since in many rural school areas the overall percentage of low SES attending the school is so high, analyzing the test on other factors may be more informing. Thus far schools have requested comparisons of French surname, preschool experience, early admission, and handedness. There may also be some merit in tracking reading groups over time and determining the long-range impact and the degree of discrepancy in performance between groups.

Summary

This article provides an overview of how one rural state, Vermont, and respective educational partners (e.g., local school teachers, administrators, school board members and higher education faculty members) reviewed the effective school research, various models for school improvement, alternative data collection instruments, and procedures for analyzing student test data. It is our judgment that the overall process of school improvement can be enhanced and better focused by the procedures and relevant concepts outlined in this article. It is clear, however, that important conceptual adaptations are necessary in order to gain the desired effects. Areas such as space, instructional leadership, and school-community relations come quickly to mind. With appropriate modifications and the involvement of a cross-section of interested local groups including teachers, administrators, board members, and parents, it is possible for rural schools to progress through the school assessment and improvement process.

It is our judgment that the present state of knowledge about school improvement has relevance for a rural context and can provide a powerful tool for local school personnel to examine their practices and to make sensible improvements. We have been impressed by how the effective school research has provided a needed focus for releasing the professional commitment and talent that is very evident in rural settings.

References

1. Austin, G. *Process evaluation: A comprehensive study of outliers.* Baltimore, MD: State Department of Education, 1978.

2. Brookover, W.B. *Effective secondary schools.* Philadelphia: Research for Better Schools, 1981.

3. Brookover, W.B., & Lezotte, L. *Changes in school characteristics coincident with changes in student achievement.* East Lansing: The Institute for Research on Teaching, Michigan State University, 1979.

4. Center for Early Adolescence. *Successful schools for young adolescents: A summary.* Carrboro, NC: University of North Carolina at Chapel Hill, 1982.

5. Coleman, J.S., Campbell, E.Q., Hobson, C.J., McPartland, J., Mood, A.M., Weinfeld, F.D., & York, R.L. *Equality of educational opportunity.* Washington, DC: U.S. Government Printing Office, 1966.

6. Connecticut State Department of Education. *The Connecticut school effectiveness project development and assessment.* Hartford: State Department of Education, 1981.

7. Edmonds, R.R. Some schools work and more can. *Social Policy,* 1979, 28-32.

8. Edmonds, R.R., & Frederiksen, J. *Search for effective schools: The identification and analysis of city schools that are instructionally effective for our poor children.* Cambridge: Center for Urban Studies, Harvard University, 1978.

9. Firestone, W., & Herriott, R. *Effective schools: Do elementary prescriptions fit secondary schools.* Philadelphia: Research for Better Schools, 1982.

10. Hamilton, S. *The social side of schooling.* Washington, D.C.: Teaching and Instruction, National Institute of Education, 1982.

11. Hersh, R.H. *What makes some schools and teachers more effective?* Unpublished manuscript, 1982.

12. The Journalism Research Fellows Report. *What makes an effective school?* Washington, DC: George Washington University, 1980.

13. Leithwood, K.A., & Montgomery, D.J. The role of the elementary school principal in program improvement. *Review of Educational Research,* 1982, *52,* 309-339.

14. Miles, M.B., Farrar, E., & Neufeld, B. *Review of effective schools programs: The extent of adoption of effective school programs.* Cambridge, MA: The Huron Institute, 1983.

15. Neufeld, B., Farrar, E.,& Miles, M.B. *A review of effective schools research: The message of secondary schools.* Cambridge, MA: The Huron Institute, 1983.

16. *New York Times.* Four city high schools to adopt program to motivate students. January 9, 1983.

17. Purkey, S.C., & Smith, M.S. Effective schools: A review. *The Elementary School Journal,* 1983, *83 (4),* 427-452.

18. Ralph, J.H., & Fennesey, J. Science or reform: Some questions about the effective schools model. *Phi Delta Kappan,* June 1983, 689-694.

19. Rutter, M., Maughan, B., Mortimore, P., Outston, J., with Smith, A. *Fifteen thousand hours: secondary*

schools and their effects on children. Cambridge, MA: Harvard University Press, 1979.

20. Shoemaker, M., & Fraser, H.W. What principals can do: Some implications from studies of effective schooling. *Phi Delta Kappan,* November 1981, 178-182.

21. University of Vermont. *School improvement: Theory and practice.* Burlington, VT: University of Vermont, 1983.