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ABSTRACT

This report, written for the Ohio General Assembly's Legislative Committee on Education Oversight, outlines a model that depicts how quality education in seven Ohio school districts is maintained through a combination of available funds, community context, and schooling practices. Data were derived from Delphi-process surveys of a panel of professionals, discussion groups with consumers of education, interviews with district administrators, analysis of school district expenditures, and a literature review of research. Conclusions are that quality education happens more easily when the community supports the school; adequate funds are necessary to allow schooling practices to respond to the needs of different students (and this amount varies according to the district's community context); and schools choose to use both their available funds and community resources to implement the schooling practices that bring about quality education. Appendices contain a description of the research methodology, a list of consultants, a list of organizations nominating the Delphi participants, and interview questions. (Contains 87 references.) (LMI)

A MODEL OF QUALITY EDUCATION

LEGISLATIVE OFFICE OF EDUCATION OVERSIGHT
COLUMBUS, OHIO
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SUMMARY

A MODEL OF QUALITY EDUCATION

The Legislative Office of Education Oversight was asked to report to the Ohio General Assembly how much it costs to provide a quality education to public school students in the state. In order to address the cost of a quality education, LOEO had to define "quality" and identify what contributes to providing it in schools. LOEO planned to list the components of quality, isolate the cost of each component, and then sum the costs to provide an estimate. However, LOEO's findings regarding the factors that contribute to quality and the limitations of available financial data made this approach unworkable.

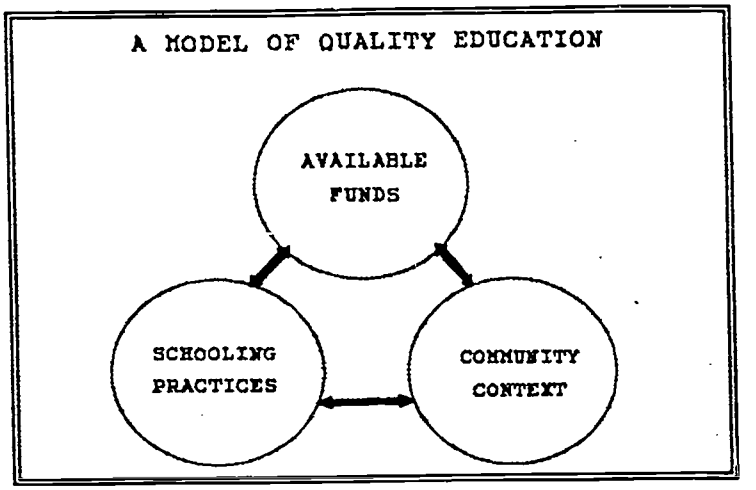
As a result, LOEO was unable to determine a cost figure for providing a quality education. Instead, LOEO created a model of how quality education is attained through a combination of available funds, community context, and schooling practices. LOEO identified districts that appear to be accomplishing quality education. LOEO reported their expenditures.

This is a report of LOEO to the Legislative Committee on Education Oversight. ***Conclusions and recommendations in this report are those of LOEO staff and do not necessarily reflect the views of the Committee or any of its members.***

A MODEL OF QUALITY EDUCATION

To develop a model of quality education, LOEO consolidated the ideas of professionals with an interest in education and "consumers" of education (including employers, students, recent graduates, parents, and individuals who did not complete high school) with current research literature; examined practices in seven school districts identified as providing quality education; and analyzed and compared the expenditures of the selected districts with those of districts in the rest of the state.

LOEO found that a quality education is the mutual interaction of three factors: the amount of funds available, how the funds are used to support particular schooling practices, and the context of the community surrounding the school. The following exhibit portrays LOEO's model as the mutual influences of these factors.



Because LOEO's model represents "quality" education, and not "minimum education," it includes many intangible factors. Describing such attributes as **caring** teachers, **involved** parents, and a **positive** school environment is unusual in a discussion of education spending, yet LOEO found that a report on quality education would be incomplete without doing so.

Available funds

Ohio school districts receive funds from state and federal governments and local taxes. A district's size, location, and wealth affect the amount received from the state. Numerous characteristics of a community determine how much it contributes to education funds. Theoretically and practically, there is some minimum amount of funds that must be available to a school district for it to have the opportunity to provide a quality education for all students. For any given district, this necessary funding level depends on its community context.

Five of the seven districts LOEO examined appear to be able to sustain quality at their current levels of funding. Of these five, the two lowest-spending districts had similar per-pupil expenditures. Both of these districts, which are suburban with fairly homogeneous student populations, many committed parents, and relatively high costs of living, spent between $4,500 and $4,600 per student in 1990-1991.

Community context

As LOEO analyzed ideas from all participants, the importance of community context--factors largely beyond the control of district personnel--became increasingly clear. How individual students learn, and how a school functions, are so intertwined

with the community that surrounds it, that much of what happens inside a school cannot be separated from what happens outside.

Characteristics of the surrounding community affect both the amount of available funds and the practices needed in the schools to create quality. Among these characteristics are the emphasis a community places on education, its financial resources, its degree of social and cultural diversity, and the income and education level of its adults. In addition, the readiness for school of a district's children, and the proximity of a college or university, affect schooling practices.

Schooling practices

Quality districts choose to use their available funds to support specific schooling practices. The practices are organized into six categories for discussion purposes: personnel, education environment, curriculum, instructional approaches, material and equipment, and policies.

Personnel. The most important characteristic of a school providing quality education is the staff, because it is their interactions with students that promote learning. Teachers in such a school are child-oriented, caring people, who know their subject matter and excite students about it.

Districts providing quality education use a variety of methods to ensure that the teachers they hire meet the needs of both the students and staff. Enough teachers are in school to ensure that they have time to meet each child's needs. Ongoing staff development allows teachers to develop their knowledge and skills. A high standard of performance is expected, and teachers are rewarded for meeting it.

Education environment. The physical conditions in schools "invite learning." Buildings are bright and clean. Students feel physically safe.

The social environment of the school promotes positive relationships among the people within the school and connections between the school and its surrounding homes and larger community.

Curriculum. The curriculum is related to the world beyond the school. It offers opportunities for every child to develop cognitively, artistically, physically, and linguistically, and it promotes higher-order thinking skills.

Instructional approaches. A school providing quality education recognizes that all children learn, but in different ways and at different rates. Students are active rather than passive. Teachers connect what the student currently knows with new material.

Materials and equipment. Materials and equipment support the curriculum and teachers' approaches to instruction. Computers are tools for all students and teachers; use of computers is integrated into daily classroom practice.

Policies. Throughout this report, it is noted that quality education can be attained when resources--time and money--are devoted to certain schooling practices. State and district policies often direct how educators use these resources.

District policies articulate what the schools should be accomplishing, and ensure that teachers are treated with respect and included in making decisions. District policies promote ongoing connections between the schools and the community.

State policies can contribute most to quality education when they create the enabling conditions for quality interactions in the schools. They need to do whatever is necessary to ensure that children's basic needs are met so they arrive at school ready to learn.

DISTRICT COMPARISONS

LOEO compared the available funds, community context, and schooling practices in seven selected districts. Funds available to these districts ranged from $3,100 to $8,100 per pupil in 1990-1991. The districts have several contextual factors in common: strong community desire for quality education, much parental interaction with schools, a university or college located in or very near the district, and moderate size. The differences and similarities among individual districts allowed them to be organized into three groups for discussion.

Group 1. Districts in this group are suburban with a relatively homogeneous student population. Per-pupil expenditures were between $4,500 and $5,200. Their practices closely resemble those described in the LOEO model.

Group 2. Districts in this group serve older suburbs, with diverse student populations. Per-pupil expenditures ranged from $6,300 to $8,100. This group's practices also closely resemble those in the model; they have lower student-teacher ratios than do the districts in Group 1.

Group 3. One district in Group 3 is rural and one is suburban. Each serves a relatively homogeneous student population, and many parents have jobs related to education or research. Per-pupil expenditures were $3,100 and $3,700. In both districts, most practices resembled the model, but educators explained how limited funds made them fall short, and limited their provision of quality education to only some students.

CONCLUSIONS AND POLICY IMPLICATIONS

LOEO concluded that a **quality education depends on the interaction of community context, available funds, and schooling practices.**

* **Quality education happens more easily when the community supports the school.**

  Policy implications. Individual communities or the state as a whole ensure that children's basic needs are met.

  State policymakers encourage collaboration across all sectors of society to provide broad support for quality education of all students. Colleges and universities are especially encouraged to participate in the ongoing improvement of schools.

* **To provide quality education, there must be enough funds to allow schooling practices to respond to the needs of different students. How much is enough varies with the community context of individual districts.**

  LOEO could not determine the exact amount necessary for each district given the financial data currently available. Furthermore, quality education includes intangible characteristics to which costs cannot be attached.

  Of the seven districts LOEO reviewed, only five appear to be able to sustain a quality education for most of their students. Of the five, the two lowest-spending districts had comparable per-pupil expenditures. Both of these districts--suburban, with fairly homogeneous student bodies, high levels of volunteer support, and relatively high costs of living--spent between $4,500 and $4,600 per student in 1990-1991.

Policy implications. Quality education is supported by a state funding mechanism that provides sufficient funding, equitably distributed, which takes into account the variations among districts.

* **Schools choose to use both their available funds and community resources to implement the schooling practices which bring about quality education.**

  Policy implications. Districts establish policies that promote a common mission, involve teachers in decision-making, encourage innovation, and foster collaboration among educators, parents, and other community members.

  State policymakers support quality schooling practices by funding staff development, technology purchases, and local innovations. Furthermore, they avoid policies that require educators to divert time and money away from quality practices.

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CHAPTER I
INTRODUCTION

The Legislative Office of Education Oversight (LOEO) serves as staff to the Legislative Committee on Education Oversight. Created by the Ohio General Assembly in 1989, the office studies education-related activities funded wholly or in part by the state of Ohio. LOEO was asked to report to the Ohio General Assembly how much it costs to provide a quality education to public elementary and secondary students in the state.

This is a report of LOEO to the Legislative Committee on Education Oversight. *Conclusions in this report are those of LOEO staff and do not necessarily reflect the views of the Committee or any of its members.*

OVERVIEW

In order to address the cost of a quality education, LOEO had to define "quality" and identify what contributes to providing it in schools. LOEO had planned to list the components of quality, use statewide data to isolate the cost of each component, and then sum the costs to provide an estimate. However, LOEO's findings regarding the factors that contribute to quality and the limitations of the statewide financial data made this approach unworkable.

As a further attempt to isolate the cost of these components, LOEO identified districts that appeared to be accomplishing our definition of quality education, anticipating that district and school expenditure data would make determining a cost estimate possible. LOEO found that districts seldom collect information other than that required by the state. As a result, LOEO was unable to estimate a cost for providing a quality education to all Ohio students. However, we did identify districts that appear to be accomplishing a quality education and report their expenditures.

LOEO used the information that was available to create a model of quality education. This study presents a model of how quality education is attained through a combination of available funds, community context, and schooling practices.

Scope and methods

To develop a model of quality education, LOEO:

1. solicited the opinions of professionals with an interest in education using a Delphi process--a series of surveys designed to develop consensus;

2. obtained the views of five types of education "consumers"--students, recent graduates, parents, employers, and individuals who did not complete high school--during ten discussion sessions held throughout the state;

3. confirmed findings from Delphi panel and discussion group participants about quality education with the relevant research literature;

4. examined supportive practices by interviewing educators in seven school districts identified as providing quality education (Appendix A describes the selection process); and

5. examined the expenditures of the selected districts.

This study describes how particular districts maintain a quality education for their students. LOEO did not examine what is necessary to change a school into one of quality.

Limitations. The available statewide financial data on school expenditures did not allow LOEO to isolate the cost of individual components in the definition of a quality education. Furthermore, neither statewide data nor the data available from selected school districts allowed us to determine how much districts spend to support the particular schooling practices associated with attaining quality. As a result, LOEO was limited to discussing the overall per-pupil expenditures of selected districts identified as providing our definition of a quality education. Additional detail on LOEO's methods is included in Appendix A.

DEVELOPING A MODEL OF QUALITY EDUCATION

LOEO used the Delphi process, discussion groups, research literature, and interviews with educators in selected districts to identify practices which contribute to a quality education. By considering a combination of these common practices, the funds available to the selected districts, and their surrounding community contexts, LOEO developed a model for the provision of a quality education.

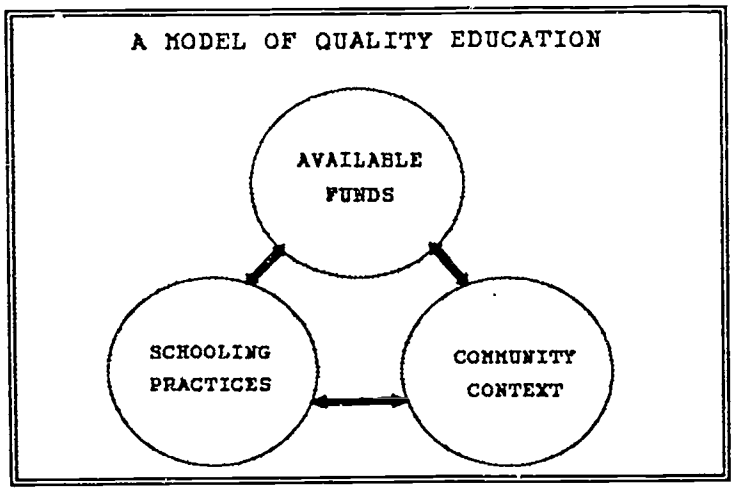
Section 3301.07(D) of the Ohio Revised Code directs the State Board of Education to "Formulate and prescribe minimum standards to be applied to all elementary and secondary schools in this state for the purpose of requiring a general education of high quality." LOEO's model of a quality education goes beyond the "general education of high quality" that is outlined in Ohio's Minimum Standards for Elementary and Secondary Schools.

As participants in this study described quality education, they included such attributes as the development of higher-order thinking skills, the integration of the curriculum across subject matter areas, opportunities for artistic expression, and the social and ethical development of students. Outcomes of such practices are not currently assessed with Ohio's proficiency or norm-referenced achievement tests. For these reasons, LOEO did not use test scores to define quality.

Available funds, practices, and context

LOEO found that a quality education is the result of the interaction of three factors: the amount of funds available, how the funds are used to support particular schooling practices, and the context surrounding the school. Exhibit 1 portrays LOEO's model as the mutual influences of these factors.

EXHIBIT 1



The term "available funds" refers to all sources of money provided to the district, including federal and state appropriations, local tax dollars, grants from public and private agencies, and donations from parent-teacher organizations or local businesses. A district's per-pupil expenditure is derived by dividing its total expenditures by its total number of students.

LOEO refers to "schooling practices" as those decisions, actions, and day-to-day activities affecting learning over which educators exercise control. LOEO labeled "community context" those external factors affecting learning in the school over which educators have little, if any, influence.

As the rest of this report describes in detail, it is the mutual interaction of these three factors that effects a quality education. The cost of quality depends upon the context surrounding the school and the educators' response to that context by using practices that provide all children opportunities to excel. For some contexts, the attainment of quality in the schools is more costly than in others.

Intangible aspects of quality

Once a description of education moves beyond "minimum" and toward "quality," it must include a number of intangible factors. **Caring** teachers, **involved** parents, and a positive school environment are examples of intangible characteristics that are parts of a quality education. Describing such intangibles is unusual in a discussion of education spending, yet it would be incomplete to talk about a quality education without them. Specifying what these intangibles cost is impossible.

Although no amount of funds can guarantee that the intangible aspects of quality will appear in a school, financial resources help create and sustain the conditions which foster these characteristics. For example, enthusiastic teachers might receive the same salaries as complacent ones, but many of the conditions that create and sustain enthusiasm cost money--providing time for conferring with colleagues, paying expenses to professional meetings, and purchasing supplies and equipment necessary to create a successful lesson. Occasionally, individual teachers or particular schools may be successful with few resources, but these exceptions are difficult to sustain.

REPORT ORGANIZATION

The next chapter describes LOEO's model of a quality education in terms of the interaction of community context, common practices, and available funds. Chapter III describes how three different groups of schools respond to their different contexts and different amounts of available funds. LOEO's conclusions about the necessary elements of a quality education are summarized in Chapter IV.

Appendix A provides further detail on LOEO's methods, including the selection of school districts. Appendix B contrasts LOEO's approach with those used in other school finance studies. Appendix C acknowledges consultants who contributed to this study. Appendix D is a list of professional organizations which nominated members for the Delphi process. The questions asked of administrators in selected school districts are included in Appendix E. A bibliography of LOEO's sources is in Appendix F.

CHAPTER II
LOEO'S MODEL OF A QUALITY EDUCATION

LOEO's model of a quality education is the sum of the ideas of Delphi panel and discussion group participants, confirmed by the relevant research literature, and reflected in practices common across quality districts. As LOEO staff talked with educators in the selected districts, it became increasingly clear that their schooling practices are influenced by available funds and community context.

AVAILABLE FUNDS

Sources

Ohio's school districts receive funds from the state and federal governments, as well as their local communities. On a statewide average basis, the state and school districts combined provide 95 percent of schools' funds. In fiscal year 1992, the state and school districts each provided about half of the 95 percent. The balance was provided by the federal government, which supports specific programs, particularly for children of poverty.

The General Revenue and Lottery Profits funds are the two principal sources of state support for schools. In fiscal year 1993, they provided $3.6 billion and $650 million, respectively. Basic Aid payments account for nearly 47 percent of the Department of Education's General Fund appropriations, and over 85 percent of its Lottery Profits appropriations. The balance of state support is for such categorical programs as special education, pupil transportation, vocational education, property tax rollbacks, and disadvantaged pupil impact aid.

Ohio recognizes that there are additional educational costs associated with relatively high rates of poverty. School districts with poverty rates of at least five percent receive special state support through the Disadvantaged Pupil Program Fund and the Disadvantaged Pupil Impact Aid appropriation items. Districts with poverty rates of 20 percent or higher would receive nearly $1,300 per impoverished pupil from these two line items in fiscal year 1993. The total fiscal year 1993 appropriation for these two items is more than $270 million.

The cost of living varies among Ohio counties as much as 36 percent. Services that cost 80 cents in one district cost $1.00 in another, and $1.08 in a third. Although a

cost-of-living factor is included in computations for state aide, the increase is limited by statute to 7.5 percent.

School districts generate funds locally through assessments against real property (land and buildings) and tangible personal property (businesses' equipment, furniture, machines, and inventory). About 13 percent of all school districts also receive revenue from local income taxes.

Funding levels

Theoretically and practically, there is some minimum amount of funds that must be available to a school district for it to have the opportunity to provide a quality education. For a given district, this necessary funding level depends on its community context.

It would probably be most expensive to provide a quality education in a very small (or very large) district with a very diverse student body, with a high poverty rate, in an area with a high cost of living. Per-pupil spending in very small districts can be steep because their fixed costs are spread across a few students. Some districts are so large that they are very difficult to manage efficiently.

A quality education should cost the least in a district that has a homogeneous student body that is neither too small nor too large, with little poverty, in an area with a low cost of living.

As described in the next chapter, five of the seven districts LOEO examined appear able to sustain quality at their current levels of funding. Of these five, the two lowest-spending districts had very similar per-pupil expenditures. Both of these districts--suburban, with fairly homogeneous student populations, many committed parents, and relatively high costs of living--spent between $4,500 and $4,600 per student in 1990-1991. Depending on their context, other districts may need to spend more or less than this to achieve quality.

COMMUNITY CONTEXT

As LOEO analyzed responses from the Delphi process and comments from discussion groups, reviewed pertinent education literature, and examined quality districts to discover common practices, the importance of context--the factors largely beyond the control of the district personnel--became increasingly clear. How individual students learn and how a school functions are so intertwined with the community that surrounds it, that much of what happens inside a school cannot be separated from what happens outside.

In all districts, contextual factors affect the amount of available funds, as well as choices about how those funds are used. Because the makeup of the community affects a school's policies and practices, it greatly affects the cost of providing quality education. For some of the contextual factors identified by participants as affecting schooling practices, see Exhibit 2.

EXHIBIT 2

COMMUNITY CONTEXT

EXAMPLES OF EXTERNAL FACTORS WHICH INFLUENCE SCHOOL PRACTICES

- Emphasis community places on education
- Family income
- Financial resources of community
- Cost of living
- Degree of social and cultural diversity
- Education level of parents
- Geographic setting--rural, urban, or suburban
- Number of students in district and schools
- Physical and emotional needs of students

The following sections describe community characteristics which affect what happens inside a school. These characteristics include demographic factors such as property value and district size and location; children's readiness to learn, including their physical and emotional needs; and the nature of the community itself, including its stability, support for schools, role of parents, poverty level, cultural diversity, and proximity to a college or university.

Demographics

Property value and tax effort

Because much of the local contribution to school funds is based primarily on property taxes, the factors of property value and tax effort affect a district's available funds. The value and kinds of property determine the base from which taxes are determined. Therefore, the amount of commercial property with a high dollar value, the number and worth of residences, and the number of agricultural acres all contribute to how much money is available for schools to spend.

Tax effort is the rate at which voters in a district have decided to tax property owners. It is expressed in terms of effective mills, or the dollars a school district receives per $1,000 of property value in the district. Tax effort is often perceived as a barometer of a community's commitment to education, in spite of what portion of individual family budgets taxes might consume.

If the property value in a district is very high, an average tax effort produces local funds well above the state average. One large commercial complex in a district can greatly affect the amount of taxes collected. For example, in one district LOEO visited, the tax effort is 31 effective mills, only one mill higher than the 30.2 mill average for all districts in the state. Yet even at this rate, the average property value per pupil of more than $100,000 yielded $3,600 per pupil in local revenue, 170 percent of the state average.

When property values are low, an average tax effort will result in low local funding for schools. Furthermore, a below average tax effort results in even less revenue. In another district we visited, the average property value per pupil of $45,000, multiplied by about 22 effective mills, resulted in a local revenue per pupil of a little over $1,000, less than 50 percent of the state average.

District size and location

Where a district is located, the nature of nearby districts, and the physical size and population density of a district all affect spending. Costs of living are affected by location in the state, as well as proximity of large urban centers. Districts that must compete with nearby extremely wealthy districts for teachers pay high salaries. The number of students in a district also affects costs. Small districts incur some of the same fixed costs as larger districts--for example, the superintendent's salary.

Readiness for School

Physical and emotional needs

The number of children in the community who are not healthy and well-fed affects both schooling practices and spending. Hungry and unhealthy children concentrate on meeting their immediate physical needs rather than learning academic skills. When parents are unable to meet the physical needs of their children, and the remainder of the community does not meet them, schools or individual teachers must do so in order to be effective academically.

Districts serving large numbers of children who arrive at school hungry must divert resources from academics to meet these needs. When money is spent to support lunch and breakfast programs, it is no longer available for computers or textbooks. When staff development or planning time is used to organize a food drive, it cannot be used to introduce new teaching practices. When teachers expend time and energy finding coats or shoes for their students, they have less to use on creating effective teaching strategies.

In spite of the best efforts of school personnel, if large numbers of students have unmet physical needs, even the most effective teaching approaches are wasted. A child with a toothache will find it hard to concentrate on math, no matter how well the concepts are presented. A child who needs glasses and has no way to get them will find reading impossible, regardless of how it is taught.

Just as a child who has pressing physical needs finds concentrating on school work difficult, a child whose emotional needs are unmet will be unable to attend to academic tasks. When a population of students includes large numbers of such children, a school must either increase staff, such as counselors, to meet these needs, or divert resources from academics to do so.

Early childhood experience

From the day of their birth, all children have been constantly learning. By the time they get to school, they have learned a language. They have learned how they fit into their families and neighborhoods, and how the adults around them typically relate to each other and the larger world. They have absorbed many of their families' values and self-images about their places in the world and expectations for their futures.

If the children's early learning closely resembles educators' expectations for school readiness, fewer resources are needed to provide these children a quality education.

A wide variation in experiences children bring to a classroom makes finding appropriate teaching strategies a challenge. A teacher might address the needs of a kindergarten child who has trouble remembering his address, sitting next to one who uses a computer to write stories. A classroom in which many children distrust adults, or speak differently from the teacher, or have never seen a book, presents different challenges. Meeting such challenges takes time from teachers, and often requires extensive staff development and small class size. All of these activities affect spending.

The Community

Stability

How frequently families move into and out of a school district determines the stability of a community. A stable community has social connections among the people in it. Parents know each other, and may know school personnel outside of school. These connections contribute to ease of relationships among students, parents, and teachers.

Teachers in a less stable community must spend more time forming relationships with parents and teachers. Schools may need special programs for students transferring from districts that did not meet their needs.

Support for schools

Support of community members eases implementation of quality practices. When the community as a whole sends a clear message to the students that their education is important and they are expected to work hard at it, it is easier for schools to succeed.[1] If the community is flexible, it will support the schools' efforts to address ever-changing problems.

The number of parents and other community members who desire quality education strongly enough to contribute time, effort, or materials affects the resources of the school. When parents volunteer, they often perform tasks that a district would otherwise pay to accomplish, or leave undone. Equipment or supplies donated by community businesses, for example, might not be otherwise available.

Parents

Day-to-day parental support of education at home reinforces the lessons taught in school, as well as communicates the value parents have for education.

The education and school experiences of parents in a community affect expectations of schooling--both how a school is expected to perform, and how students expect to use their education upon completion of high school. When expectations of parents and students correspond to those of the school, educators spend little time convincing students or parents to value schooling, and little time must be spent in staff development learning to understand the perspective of the community.

Researchers note that the strong emotional bond between parent and young child allows the parent to help the child develop--socially, emotionally, psychologically, linguistically, morally, and intellectually. For the child to continue developing once he or she enters school, this emotional bond must extend to include the teacher. If the attitudes, values, and behaviors mesh with those of the school, all goes well. "A bond develops between the child and the teacher, who can now join in supporting the overall development of the child."[2]

If a child's attitudes, values, and behavior are at odds with the school, and a child's parents feel alienated or intimidated by the school environment and expectations, teachers and parents will be unable to mutually support the child's learning.

Children who find the norms for speaking and interacting different at school than at home have difficulty being a part of the conversations and social relations established by the adults in the school. As a consequence, children may choose not to speak at all[3] or to reject the values of the schools.[4] Unless staff development prepares a teacher for this, he may then conclude that the children are not capable of learning or do not value learning. Without substantial changes on the part of the teacher, the result can be lowered expectations by the teacher and decreased performance by the students.

Poverty

None of the preceding contextual issues are limited to communities defined by a particular socio-economic status. However, poverty can affect each issue. The number

of families in any district who live in poverty can be indicative of how many students are likely to come to school with their physical and emotional needs unmet and with early childhood experiences that create mistrust of schools. Urban families of poverty may be particularly mobile, which reduces a community's stability.

Diversity

One of the aspects of context which influences both cost and practices is diversity. In this report LOEO considers the issue of diversity in two ways.

Diversity among individual students. This refers to differences in the ways students approach a learning task, in their level of interest and motivation for a particular subject area or lesson topic, in their past performance, and in their abilities to do various cognitive, artistic, physical, and linguistic tasks.

This diversity is inherent in all schools, among any group of children. Quality schools recognize and respond to these differences in children by varying the curriculum and instructional approaches to meet the needs of different students.

Diversity within the community. This refers to differences in the social, economic, cultural, and language backgrounds of the families who send children to the school. Some schools serve children from relatively homogeneous communities; as a result, they share the same conventions and expectations about the way people should think, learn, behave, and interact with each other.

Other communities have families from dissimilar backgrounds, and consequently those assumptions differ, as do their values, beliefs, and expectations about the future.

Quality schools serving children from diverse backgrounds recognize and respond to these differences with varying curricular and instructional approaches. Given that providing a quality education requires educators to respond to the needs of all students, the more diverse the students, the more varied the responses must be. Both human and financial resources are needed to develop these variations.

Availability of university or college

The existence of a college or university in a community affects practices in several ways. When college or university staff are parents of children in the district, they have high expectations for the schools, and contribute to the creation of quality. Colleges and universities serve as resources to inform both the community and school personnel of recent education thinking. University personnel can be recruited to assist with staff

development. Districts which lack the proximity of a university must use time and financial resources to obtain these benefits.

SCHOOLING PRACTICES

This section describes schooling practices identified by Delphi and discussion group participants, confirmed by education research literature, and exemplified by the districts LOEO examined. The quality practices are organized into six categories for discussion purposes: personnel, education environment, curriculum, instructional approaches, materials and equipment, and policies.

Districts choose to spend their available resources to support these practices and all practices work together to produce a quality education. Exhibit 3 summarizes these quality practices.

Personnel

The most important characteristic of a quality education is the staff. A quality education depends upon how adults interact with children in schools. A quality staff ensures that these interactions are positive and promote learning.

Administrators

The administrators in a quality school are leaders, rather than rule enforcers. They create the conditions for teachers and support staff to respond flexibly and creatively to the many needs of different children. They are described as people who listen well. They serve as the vital communication link among parents, teachers, and other educators.

Quality schools have enough administrators that no important work is left undone. With sufficient staff, all work is completed by someone who has training and experience appropriate to the task.

Teachers

Contributors to LOEO's study believe child-oriented, caring teachers are the foundation of a quality school. Excellent teachers are described as those who know their subject matter deeply and bring it to life for students. They make connections between what they teach and their students' lives. Because they get to know their students well, such teachers are able to personalize lessons and thereby engage each student in learning. They not only respect students, they have high expectations for them.

EXHIBIT 3

SUMMARY OF QUALITY SCHOOLING PRACTICES

In response to their community context, quality schools use their available funds to:

* hire the right people, especially well-prepared teachers who care about students;
* employ enough people, both teachers and support staff, to attend to each student's needs, allow teachers time during their working day to prepare classroom activities, confer with other teachers and experts in their fields, and review their own practices;
* invest in ongoing staff development;
* create an environment of respect and expectations for excellence from all students and staff;
* actively develop their connections to the community, including parents, businesses, and colleges or universities;
* focus on developing students' ability to solve problems, reason, communicate, and work cooperatively with others;
* relate classwork to life outside of school;
* offer a wide variety of curricular and extracurricular activities to respond to differing student needs, talents, and interests;
* acknowledge and respect different cultural backgrounds;
* personalize instruction in response to student differences;
* provide information to protect student health and well-being; encourage discussion of complex and controversial topics;
* develop active, hands-on, collaborative, and interdisciplinary teaching methods to engage and challenge all students;
* provide students with multiple ways of demonstrating what they have learned, beyond tests;
* equip students and teachers with the reading materials, supplies, and equipment necessary to support a demanding curriculum; and
* establish policies that promote a common mission, involve teachers in decision-making, encourage innovation, and foster collaboration among educators, parents, and other community members.

Quality teachers have formal training in both student development and their subject areas. They have the necessary background to teach all students--students with diverse learning styles, as well as students from cultures different from their own. They know how to teach critical thinking and problem-solving. Perhaps, most important, quality teachers have an attitude about students that says, "I will not give up on you."[5]

The salaries of such teachers are not necessarily different from those of less effective teachers. Given that teacher salaries make up the largest share of any district's budget, the time and money spent on selecting teachers may be one of the most important investments a district can make. Quality districts use a variety of methods to ensure that the teachers they hire meet the needs of both students and other staff in the school.

Selecting teachers. Administrators from districts LOEO examined routinely visit college and university campuses to recruit the best students as teacher candidates. At least one district advertises in national education publications when it has an opening.

These districts investigate each candidate thoroughly. For example, one principal contacts the administrative staff and teachers in schools where a candidate has taught previously, and telephones parents of the candidate's former students. Another superintendent described a rigorous hiring and staff development process for substitute teachers, and then explained that his district offers contracts only to those teachers who have been successful as substitutes.

Pre-employment interviews are detailed and use research-based techniques to evaluate applicants. One superintendent shared three pages of questions that probe attitudes, commitment to children, ideas about specific teaching methods, and subject-specific skills and knowledge.

As personnel officers and principals consider applicants for positions in quality districts, they carefully match the needs of both the students and the other teachers. Teachers with whom the applicant will work contribute to the hiring decision, especially at the elementary level. Teachers may be asked to spend some of their planning time or be offered supplemental pay to participate in the hiring process. In districts where this is not possible, teachers often spend uncompensated time on weekends, in the summer, or after school to contribute to the interview process.

Those responsible for hiring quality staff are not only careful in developing criteria for whom they will hire, they are committed to using that criteria. For example, superintendents in two districts told LOEO that they are committed strongly enough to refuse to hire a mediocre candidate, even if he happens to be politically connected.

The community context of these districts, combined with a reputation of quality and practices that support professional attitudes about teaching, make these desirable places to teach. There is no dearth of applicants--one district had nearly 4,000 applicants for 43 positions. High rates of teacher retention, combined with the relatively small

number of total positions, limits the number of positions these districts must fill in any one year. The probability of finding a few excellent teachers is great when the applicant pool is large.

Enough teachers. By spending the money to provide enough teachers, quality schools ensure that teachers have the time to attend to each child's needs. Delphi participants and other contributors suggest that elementary classrooms have no more than 20 students per teacher; in secondary schools, class size should not exceed 25.

Class size is dependent on several variables--among them are pupil-teacher ratios, scheduling of classes and activities, and the number of classes and special programs which have one teacher for a very few students. Among districts LOEO examined, the ideal average class size was attained by those with low overall pupil-teacher ratios. Realizing the increased importance of small class size in the primary grades, at least one district with high overall pupil-teacher ratios organized its schools to create small primary classes. In order to do this, it was necessary to form larger classes for older elementary and secondary students.

Quality districts spend money on tutors and mentors for small group learning and one-on-one assistance. Specialists in music, art, physical education, library science, and foreign languages are part of the elementary as well as secondary school staff; special education teachers are part of all school staffs.

Educators point to the issue of time as essential to the delivery of quality. "Lack of time" is the most frequent reason teachers give for not using instructional approaches which promote thoughtfulness in students.[6] Teachers need time to develop trusting relationships with students, to talk with parents, to problem solve with one another, to reflect on what they are doing and consider new approaches, and to learn and practice new skills.[7]

A QUALITY SCHOOL HAS TIME. . . .

. . . for teachers to confer with one another to solve problems they face in helping children learn;

. . . for teachers to prepare lessons that respond to the particular needs of different children;

. . . for teachers to talk to parents about the children and their learning;

. . . for teachers to review what they are doing and learn new approaches;

. . . for students to investigate ideas, topics, and skills that personally excite them; and

. . . for teachers to participate in decisions which affect student learning.

Staff development. Participants noted that in quality districts, teachers' professionalism is reinforced by ongoing opportunities to develop their knowledge and skills both inside and outside the school. Teachers use the opportunities to question how they might improve their practices.

One principal stated, "My policy is that if a teacher just asks [to attend a development activity] she can go. It is my job to figure out how to make it happen; I find the money and the substitute."

In order to radically shift the way they think about and practice teaching, teachers need further education themselves. Effective staff development has replaced the single inservice meeting with ongoing sessions. Once a new skill is learned during training sessions, there is no guarantee it will be applied in a classroom setting unless teachers also receive coaching. Researchers estimate it takes up to 20 coaching sessions[8] to ensure that a recently introduced skill becomes a part of the teacher's daily repertoire in the classroom. Quality schools establish a supportive but challenging environment and the time for teachers to interact and coach each other on these new skills.

Several districts LOEO interviewed pay for at least part, if not all, of tuition for college courses and continuing education units. One district provides advanced college courses for teachers by arranging for university personnel to teach these courses in the district's buildings. The value these districts place upon advanced education is reflected in the relatively high concentration of teachers with masters' degrees.

Performance and compensation. Teachers in quality schools are respected and their opinions are valued. They are expected to use their expertise in making decisions in school. Teachers are involved in curriculum decisions, and they have flexibility and autonomy in their daily classroom decisions. Opportunities for team teaching, preparation time, and release time for ongoing development contribute to the atmosphere of professionalism. Teachers can focus on teaching, because the districts have sufficient support staff to complete paperwork and other administrative or clerical tasks.

Study participants noted that teachers in quality schools take pride in their work. A high standard of performance is expected and clearly articulated. Teacher evaluations are used as a base for improvement, as well as a criterion for continued employment. Teachers who do not meet the high standards are coached, encouraged to set goals, and participate in further training. If improvement is not effected, employment is terminated. One superintendent said, "We take evaluation seriously. We are not afraid to remove the dead weight, regardless of tenure, and we have the legal bills to prove it."

Principals told LOEO that they maintain frequent contact with their teachers, and evaluations are based on multiple observations. For example, one elementary principal told us he spends time observing every classroom at least once a week. In one district, teachers routinely discuss their own performances with administrators in light of their personal and district goals.

Participants stated that in quality schools, adequate compensation helps to retain good teachers. There are opportunities for advancement--such as becoming a team leader or mentor--without necessarily leaving the classroom. Quality schools publicly recognize their teachers' commitment and performance. For example, one elementary

school principal buys a book for each of her teachers each year; the same principal makes sure each teacher is provided with business cards. Two principals explained that their presentation of awards and gifts to teachers occurs in the classroom, in front of students.

One participant summarized the necessary attributes of teachers as follows:

> To provide a quality education we need teachers who are strongly committed to their work, well compensated, and supported professionally. Teaching is an exhausting activity. Teachers must be compensated at a level that allows them to commit all of their energies to their students. . . . Teachers must be well trained, anxious to keep on learning, and supported in their attempts to bring the newest understandings of effective learning to their work.

Support staff

Adequate numbers of effective support staff allow teachers and administrators to focus upon their own responsibilities. Guidance counselors, school nurses, and social workers help students meet nonacademic needs outside the classroom. Clerical staff relieve teachers of many recordkeeping duties, and facilitate contact between teachers and other members of the community. This enables teachers to concentrate on teaching.

Education Environment

The environment of the school is one of the obvious, yet in some ways intangible, characteristics of quality. The physical environment is readily perceived. Those who describe a quality school talk of surroundings that are bright, clean, cheerful, and comfortable. Most of all, the physical conditions "invite learning."

Classrooms are large enough for the number of students, and well equipped for the activities that take place there. Chairs, on which the students spend most of their day, are comfortable. As one consultant for this study noted, "People, both children and adults, are more productive in surroundings that are clean and attractive than in ones that are dirty and ugly."

Another participant wrote:

> Good facilities . . . say to the student 'you are important enough, and this work is important enough for proper and good surroundings.'

In a building where quality education is provided, students feel physically safe, not threatened by physical harm from other students, outsiders, or unsafe conditions of the building itself.

Connections

One way to describe the less tangible social environment of a quality school is to talk about its connections--connections among the people within the school and connections between the school and its surrounding homes and larger community.

A QUALITY SCHOOL HAS CONNECTIONS

. . . to the surrounding community;

. . . to a university where teachers learn about new ideas;

. . . to life outside of school so students can see what the community expects them to learn and what opportunities await them;

. . . to parents who have input into how the school is run and who help their students learn; and

. . . to all the different cultures of the students in the school.

Connections to the community. A quality school is not separate from its community. Districts LOEO examined, invited community members to volunteer in the schools as guest speakers, library aides, tutors, student mentors, and to help with early identification of children with special needs. Students contribute work to the community--several districts require a substantial contribution of community service for graduation.

These districts involve parents and other community members extensively in school planning. One district recently involved 200 community members in developing its strategic plan; in another, a community council jointly plans activities with schools.

District buildings are used for everything from community action programs to recreation. As an example, one district uses one floor of a former high school building as a senior center, another floor for preschool and latchkey programs, a third floor for district administration offices, and the ground floor for community recreation activities. In a second district, recreation activities are offered on school property, by city recreation personnel. The school district and community parks and recreation department share a swimming pool.

These districts invest in administrative and teacher time to pursue ongoing and interactive business partnerships. As a result, community business people contribute more than money and advice. For example, in one district, the local machinists' union shared computer-assisted-design equipment and software with the high school--the school provided space in its building, and some of the computer hardware. The union members contributed sophisticated computer programs and instruction and training for students.

Districts LOEO examined actively pursue connections with higher education personnel, beyond using them for staff development activities. Such connections range from theater and arts programs for district students, to assistance for high school

students with college financial aid forms. One district hosts at least 100 university students as tutors each year. Ongoing relationships between districts and colleges facilitate opportunities for high school students to take college courses as part of their school day.

Connections to parents. Teachers and administrators in quality schools learn to understand and respect the family cultures of their students, no matter how diverse. Rather than expect children to disregard everything they have learned at home upon entering the school, quality schools acknowledge the strengths brought by children to the learning situation in school. They build upon these strengths and add to them rather than reject them as inappropriate to school.

In addition, quality schools reach out to parents of all cultures to make them feel welcome in the school. They build on parent strengths and use parent talents as valuable resources in the school. When necessary, they help parents acquire the skills needed to assist their children with schooling tasks. In addition, the administrators and teachers review which of their practices serve as barriers to parental involvement, and work to change these practices.[9]

Building upon the background of students from diverse cultures means more work for teachers and administrators. It is easier to teach when the culture of the teacher matches the culture of a homogeneous group of students. To respond to diverse cultures and diverse needs, quality schools need to have versatile, highly knowledgeable teachers who are willing to develop multiple ways of teaching, multiple courses, and multiple after-school activities.

In the districts LOEO reviewed, parents know their opinions are valued. One district always includes parents in curriculum development and long-term planning. These districts make it as easy as possible for parents to attend meetings. When so many parents came to a high school open house that its parking lot overflowed, the district provided shuttles from the parking lot of a different school.

Connections inside the school. A distinguishing characteristic of quality schools is their positive relationships among adults and students.[10]

In districts LOEO reviewed, time is allotted for teachers to communicate with and help each other and students. The daily schedule encourages teamwork among teachers. The school is organized into smaller units, such as teams or houses, so teachers and students can get to know each other. These units are not "tracks." Students with varying abilities are assigned to each team.

Relationships among students and teachers are described by one participant:

> 'We have a sense of family here.' In seven years, I have never visited a school--judged as outstanding by those inside it and outside it--that did not cite this as its most valued quality. In schools considered to be outstanding, community leaders, parents, administrators, faculty, and students (including students on the fringe) describe the place as family.

The more diverse a district, the more effort is needed to attain this sense of family.

Quality districts ensure that personnel work together, instead of as adversaries. Principals in these districts frequently describe themselves as facilitators or leaders, rather than as managers or bosses, and they expect staff to contribute to decision-making. District administrators take the time and make the effort to work with teachers' unions to resolve issues before they become problems. One district spends time on a monthly basis negotiating whatever conflicts arise. In this district, when one current contract ends, terms for the subsequent contract have already been determined through these monthly negotiations.

In quality schools, an atmosphere of mutual respect and personal regard creates an environment conducive to intellectual thought, creativity, hard work, and risk-taking.[11] Students need interactions to develop their thinking and literacy skills. Quality schools allow students to connect with each other to learn, to talk through ideas, to mutually solve problems, and to read and write to each other. Researchers confirm that cooperative and collaborative learning activities promote positive relationships among students. In turn, the positive relationships promote more and deeper learning. They also encourage the development of ethical and responsive human beings.[12]

The focus on the social and ethical development of students is fostered by the example of teachers. In the words of one educator, a quality teacher:

> . . . models not only admirable patterns of intellectual activity but also desirable ways of interacting with people. Such teachers treat students with respect and consideration and encourage them to treat each other in a similar fashion. [13]

Within an atmosphere of respect and trust, students can feel emotionally safe, a basic precondition for learning. As imagined by one discussion group member who had not completed high school, teachers in a quality school would, at the very least, "greet students with a polite 'Hello'."

Discipline. Discipline is used in a quality school to help all students acquire an education. One student's lack of self-discipline is not allowed to interfere with the learning and well-being of others.

Schools help students meet expectations by providing written rights and responsibilities. Consequences of disruptive behavior are clearly stated. Discipline policies are firm, fair, and consistent. Punishment and reward are appropriate to a situation, and not based on staff's personal feelings about a particular student.

Many districts LOEO visited have intervention programs to help students learn self-discipline, as well as deal with the problems that may have contributed to disruptive behavior. For example, ongoing support groups for students with drug or alcohol abuse, behavior, or family problems help the student and help prevent the need for disciplinary action.

Curriculum

Quality schools expect all children to develop cognitively, artistically, physically, and linguistically. As a result, their curriculum offers opportunities for every child to develop these capacities and to excel in one or more.

Participants described that in a school providing quality education, the curriculum is related to the world beyond the school. With frequent ties to the surrounding community, students can see how their studies in school relate to opportunities that await them. Preparation for a job or higher education coincides with preparation for adult independence. Students learn to function in a democratic society. They also begin the task of lifelong learning.

As one survey respondent noted:

> The curriculum directs instruction. It should be challenging and reflect the needs and interests of the children, the cultural diversity of the children and community, and incorporate the latest in technology and research on how children learn.

A quality curriculum is described as one that promotes higher-order thinking skills, focusing on helping students to reason, solve problems, synthesize ideas and information, and recognize a thoughtful argument from a poor one.[14] Reading, writing, and arithmetic skills are not isolated activities.

These skills, and working cooperatively with others, are learned as part of in-depth examinations of the principles of science, mathematics, computer literacy, and foreign languages. A student learns how to find and present information. An appreciation for human accomplishment and cultural diversity evolves from studies of history, literature, art, and music. Information to protect students' health and well-being is honestly presented, in a direct, unbiased way.

Another characteristic of quality schools is the role of the arts in the curriculum. Since instruction in the arts is seen as central to the education of students, financial

resources are used to provide opportunities for artistic expression. Educators recognize that when students put on a play, perform a concert, or paint a mural, they synthesize and apply the cognitive skills taught in other classes. Just as importantly, they feel the intrinsic satisfaction of engagement, learn that craftsmanship counts, and put their personal signature on the work. They also develop the social skills to work collaboratively.[15]

In a school providing quality education, students participate in a variety of extracurricular activities. Sports programs are accessible to all students who have an interest, not only those who are skilled athletes. Drama, music, and social activities teach students to work with one another. Social interaction during the day is encouraged; there may be time set aside specifically for it. After-school activities create an atmosphere of working together and foster positive relationships among students and teachers. These relationships enhance classroom learning.

Instructional Approaches

A school providing quality education recognizes that all children learn, but in different ways and at different rates. People in districts LOEO examined not only say, "All children can learn," they believe it, and act on it. Instructional approaches reflect the respect teachers have for individual children, and respond to the needs of these children. They do not use as an excuse that some children in their district have "limited ability" and lower their expectations for these children.

Quality schools encourage and support innovation by classroom teachers and promote in-depth learning. Students are active rather than passive; instructional techniques vary across learners and lessons; and children discover, discuss, and present knowledge rather than repeating isolated facts given them by their teachers or the textbooks.[16] The emphasis is seldom on rote learning, but on thinking and solving complex problems. Hands-on learning uses manipulatives in a wide variety of areas, particularly math and science, to help students learn concepts.

To promote student understanding, teachers connect what the student currently knows with what is being taught. This connection becomes possible when teachers have specific information about their students' likes, dislikes, strengths, and weaknesses. When students and teachers are strangers, this connection is missing, and learning opportunities are lost.[17]

Frequent group-learning opportunities include discussion of complex and controversial subjects. Field trips into and outside of the community are used to relate subject matter to the larger world. Interdisciplinary approaches ensure that ideas from once-discretely-taught subjects relate to each other.

Participants noted that in a school providing quality education, evaluation of students is not limited to testing. Students demonstrate their accomplishments in a variety of ways. One contributor to our study described useful student evaluation as:

> . . . evaluation that considers a broad range of learning, allows for diverse ways of demonstrating learning, provides students, parents, and educators with the information they need to teach, counsel, and look to the future.

Materials and Equipment

Materials and equipment support the varied curriculum and teachers' multiple approaches to instruction. A school providing quality education has many current books and reading materials. Textbooks are up-to-date. Libraries offer a variety of classical and contemporary material, in addition to reference books.

Basic supplies, such as paper, are kept in stock so that teachers and students use them as needed. The wide range of equipment and materials needed to stimulate hands-on learning is available to all teachers. Science laboratories have enough equipment and supplies for students to work in pairs; no student must merely watch an experiment, rather than perform it.

Quality schools use computers as tools for all students and teachers, just as they are tools for the world of work outside school. Quality schools invest the time and money to ensure that teachers and students know how to use them. Computer labs develop specific computer-related skills. Use of computers is integrated into daily classroom practice.

Long-term planning allows quality schools to keep pace with technological advances. One district started to incorporate computers as learning tools more than ten years ago. It developed a long-range plan for their acquisition, and has increased the numbers and quality of machines each year, using local grant money. In this district, classroom use of technology mirrors that in the business or science world--the course descriptions of 11 of its high school's 21 math courses state that the use of a calculator is required at all times and computer applications will be emphasized.

Policies

As noted throughout this report, quality education can be attained when resources--time and money--are devoted to certain schooling practices. State and district policies often direct how educators spend these resources.

District policies

At the district level, quality practices are guided by a mission statement which clearly articulates what the schools should be accomplishing and serves to mobilize staff to work together. Administrators and teachers cooperate to maximize their talents and resources, rather than diminishing them by frequent disagreement.

The school board supports quality practices by working with educators and community members to help create the common mission. School board members encourage administrators and teachers to be creative in solving the problems that arise in accomplishing the mission. The board, however, does not "micro-manage" by dictating what solution must be used.[18]

District policies ensure that teachers are paid as professionals, establish teacher participation in all important decisions, expect teachers to be flexible and creative in their personalizing of instruction for individual students, and invest in ongoing staff development.

High expectations for teachers are coupled with evaluations that are taken seriously. Student and parent participants in LOEO's discussion groups suggested that they have input into teacher evaluations. Such input would focus on how well the teacher helped students learn.

Discipline policies are fair and consistent and focus on helping students acquire the personal skills to succeed in school and other social situations.

Finally, district policies recognize that the school is an integral part of the community and cannot succeed without community support. Policies promote ongoing connections between the schools and the community.

State policies

Policy researchers describe how state policies can contribute to the development of good schools. Since policymakers cannot mandate the most important aspect of good schooling--the quality of the interactions between teachers and students--they are most effective when they create the enabling conditions for quality interactions.[19]

Delphi and discussion group participants identified a number of these enabling conditions. First, the state needs to do whatever is necessary to ensure that children's basic needs are met so they arrive at school ready to learn, both initially in kindergarten and daily thereafter.

Next, the study participants stated that schools need sufficient funding, equitably distributed, to support quality teaching and equitable opportunities for learning. Equitable state funding can support quality in districts whose local context provides limited money for education. A parent commented that her property-poor district needs more money, adding "we shouldn't have to sell Popsicles for school supplies."

In addition, state funding can promote specific practices that contribute to quality, including staff development, technology purchases, and educators' pursuit of innovative solutions to particular problems in their districts.

In some cases, participants told LOEO that state policies can impede the achievement of a quality education, especially if they direct educators' time and money away from quality practices. Examples of such policies cited by participants were excessive reporting requirements (most recently, the Education Management Information System) and state-mandated testing.

Most individuals agree on the need to know how well students and schools are doing, but do not want evaluation to be limited to testing. For assessments to be useful, they must focus on important educational tasks, provide meaningful information on what students do and do not know, and be understandable to parents. As one employer stated, "We need a means of evaluating our schools . . . [but] all we have are tests, and test scores don't do it." Performance tasks and portfolios were suggested as ways evaluation could focus on the broader outcomes expected of students.

Additionally, state policies can encourage collaboration across all sectors--government, business and social agencies, and institutions--to provide broad support for educating all children.

In sum, districts respond to their surrounding community context by using their available resources to support particular quality practices. This chapter has described how the context, funds, and practices combine to provide a quality education.

CHAPTER III
DISTRICT COMPARISONS

The districts that LOEO reviewed exemplify the practices of quality education described in the previous chapter to varying degrees. Each district's practices reflect both the funding and context aspects of LOEO's model. LOEO did not try to locate all of Ohio's quality schools and districts, only a sample of them. There are undoubtedly many more quality schools and districts in Ohio than the ones LOEO reviewed.

In selecting districts that seemed to be providing a quality education, LOEO attempted to obtain a sample that would be representative of Ohio's different types of districts. LOEO could find no urban districts that seemed to parallel our model for quality, but several urban schools were recommended for LOEO's consideration. Unfortunately, LOEO could not review individual schools. Sampling had to be done at the district level because expenditures are accounted for by district, not by school.

Of the seven districts LOEO examined, six are suburban, and one is rural. For 1990-1991, average annual personal income in the six suburban districts ranged from $36,000 to more than $71,000--compared to a statewide average of less than $30,000. Average personal income for the rural district was $25,000. Per-pupil real property valuation for the six suburban districts ranged from $72,000 to $105,000, and the valuation for the rural district was $45,000. The statewide average per-pupil valuation for real property is $67,000.

Rates of poverty among the selected districts vary. For four of the six suburban districts, the percentage of their students receiving Aid to Dependent Children (ADC) was less than 1.5 percent. The ADC rates of the other two suburban districts were eight and 10 percent, and the rate of the rural district was five percent.

Per-pupil spending patterns of the seven districts were mixed, ranging from $3,100 to $8,100 in 1990-1991. The rural district ($3,100) and one suburban district ($3,700) spent less per pupil than the statewide average of $4,400. Two suburban districts ($4,500 and $4,600) spent close to the statewide average. The three remaining suburban districts spent from $5,200 to $8,100 per pupil--substantially more than the statewide average.

The districts LOEO examined have several contextual traits in common.

* Parents and other community members want the schools to provide a quality education, and in some cases have moved into a district because of the schools.

* Parents interact with the schools. In all the quality districts, parents volunteered many hours in the schools. (One of the districts in our sample reported more than 50,000 volunteer hours last year, to meet the needs of about 4,000 students.)

* At least one university or college is located within or very near the community. This physical proximity allows university staff and students to spend time in the district schools. It is convenient for district teachers to use the resources of the college to add to their teaching skills.

* The districts are neither extremely large nor extremely small. None has more than two high schools. The total number of students in the district ranged from 2,200 to 9,900.

The discussion that follows organizes the seven districts LOEO examined into three groups, each of which has roughly similar contexts, available funds, and practices. As the community context of each district in a group varied, so did the focus of its schooling practices. Nevertheless, **within each group** the districts' community contexts, schooling practices, and amounts of available funds were more alike than different.

The following description compares the schooling practices of these districts with those in LOEO's model, and describes their community contexts and available funds.

GROUP 1

Community context. The three districts in Group 1 are suburban. Rapid growth in these districts has created need for new schools. Each district in this group has built a new high school recently.

Cultural diversity among students in these districts is limited. Most children are similar to each other, most come to school healthy and ready to learn, and few come from families of poverty. Parents have high levels of education, and as one superintendent described, they make their living using skills they acquired through education.

District personnel told LOEO that parents have more than high hopes for schools; they turn their expectations and demands into participation. The nature of donated services and goods reflects the nature of the community's employment. For example, parents arrange for the donation of computers and instruction in their use.

Available funds. Spending of districts in Group 1 is in the middle of spending of districts we examined, but near or above the average spending statewide. Per-pupil expenditures for 1990-1991 were between $4,500 and $5,200.

Schooling practices. Most practices in the first group of districts closely resemble those described in the LOEO model. Because their students come from similar

backgrounds, these districts use their financial resources to respond to the differences in student ability, interest, motivation, and past achievement. A wide variety of courses, programs, and after-school activities are available. Although opportunities for advanced courses are offered to gifted and talented students, all students are encouraged to do challenging academic and creative work.

The ratios of students to regular classroom teachers in these districts range from 19:1 to 20:1. The mean for the state is 19.6 to 1. The term "regular classroom teachers" does not include teachers of art, music, physical education, vocational education, or special education.

Organizing teachers' time to allow them to confer with each other and parents and engage in staff development is a challenge, but not an insurmountable one. Principals often expressed the wish that their teachers had more time to prepare lessons and confer with others.

Districts in this group have integrated technology into their day-to-day teaching strategies. As noted, business and parental involvement often contribute to a school's ability to use technology. Donations of computer hardware and software help ensure that computer use starts in kindergarten and continues as students progress. Satellite connections with schools in other states and foreign countries allow access to diverse activities, and allow students to share their own projects with a wide audience.

GROUP 2

Community context. Both districts in the second group serve long-established suburbs which bridge an adjacent city and newer suburbs. There is little opportunity for growth in population, industry, or tax base.

Students in these districts come from a wide range of backgrounds. Their families have dissimilar financial situations. The districts have both a large number of wealthy families and a relatively large number of families receiving ADC. Children's preschool experiences vary widely. A kindergarten class may contain a child who knows only a few words of English, several Head Start graduates, some children who have spent every day at home with a parent, and a few children who have attended programs for academic enrichment or early computer literacy.

The strong desire of families in these districts for a quality education translates into financial support for the schools. As a result, the districts are able to meet the different needs of the students. Contributions from the community are more than financial. For example, in one district a black educators' group provides theater and art experiences in African-American tradition for both students and community members.

These districts serve the most ethnically and racially diverse students. About half the students are nonwhite, and at least 20 different languages are spoken in their homes.

Available funds. Districts in the second group spend the most of those LOEO examined, well above the average spending statewide. Their per-pupil expenditures for 1990-1991 ranged from $6,300 to $8,100.

Schooling practices. Most practices in the second group also resemble those described in the LOEO model. With their financial and community resources, these districts provide a variety of programs. For example, one district offers special classes to improve skills of students transferring into the district, English-as-a-Second-Language classes, and elementary schools that focus on individually guided instruction. It also includes many high school advanced placement courses, as well as additional enriched high school work in math and science. Its high school English courses include, among their wide range, two offerings of African-American literature, and a course on literature of the Holocaust.

Sufficient funds allow low student-teacher ratios, ranging from 14:1 to 18:1. The large number of teachers allows well-coordinated preparation and staff development time. One high school has an entire day per month devoted to planning and staff development. During this day, there are no students in the buildings, and the teachers can concentrate on decision-making, evaluation, and learning new skills.

To provide role models and meet the needs of large numbers of minority students, Group 2 districts actively recruit minority teachers.

Use of computers in these districts is widespread. In both the elementary schools and high school of one district, calculators are assigned to each student.

GROUP 3

Community Context. One district in Group 3 is rural and one is suburban. Most property is residential or agricultural; industrial property contributes little to the tax base.

Children in these districts come from relatively homogeneous backgrounds. There are few differences in race, ethnicity, and cultural assumptions about language, behavior, and norms for interacting. Many of the parents have jobs related to education or research. In one district, the largest employer is a college; the second largest is the school district itself.

Parents are eager to participate in their children's education, and often accomplish what district personnel do elsewhere. For example, in these districts parents have volunteered to paint bathrooms or take charge of classrooms so that teachers can attend staff development activities.

Available funds. Districts in Group 3 spend the least of those districts we examined; spending ranged from $3,100 to $3,700 per pupil in 1990-1991. (The average per-pupil expenditure for the state was $4,400.)

Schooling practices. Each district in Group 3 emphasizes different practices in the LOEO model. Overall, their practices approach those in the model, yet educators in both districts explained that limited funding makes them fall short. District administrators told LOEO that they provide quality education to some of their students, but limited funds preclude providing it to all.

One district has exemplary programs for its gifted and talented students and a strong commitment to staff development. However, the physical facilities are in such poor condition that the high school roof is unsafe, and the electrical wiring is so inadequate that plugging in computers causes the lights to go out.

The second district has the highest teacher-pupil ratio, and as a result, the largest average class size, of any we examined. Few other staff are available to support the work of teachers or deal with students' nonacademic needs. There are no school nurses, no elementary school counselors, and only one teacher aide for the whole district. Staff development opportunities are very limited.

Lack of teacher time for planning limits how often teachers can formally contribute to the district decision-making process. District administrators are knowledgeable about how quality education happens. Because of their commitments to creating excellence, they listen to teachers and principals as they make decisions. Nevertheless, management in these districts appears to be more "top-down" than that of others LOEO examined.

In both districts, individual principals told LOEO that they include their teachers in school-level decisions, but this did not happen in all schools. Innovation and commitment to adjusting teaching strategies also happen in individual schools, rather than as a product of district policy. Principals and personnel at the district level stated that they know which innovations and changes would work best in their districts, but the funds to support them are not available.

Personnel of these districts are aware of their shortcomings. Principals and superintendents stated that teachers in the districts frequently had given so much of their personal time and income in the past, it was unlikely that they could avoid "burnout" in the future. District personnel also realize that voters are reluctant to increase their financial support, in part because the district is perceived as able to provide quality education with its current financial resources.

District personnel expressed doubt that they could sustain the current level of quality with the current levels of expenditure. They felt that with a combination of increased funding and their staff's dedication, the needs of all students would be met.

To summarize, schooling practices in Group 1 districts closely resemble those described in the LOEO model. Most students are similar to each other, most come to school healthy and ready to learn, and few come from families of poverty. These districts spend between 4,500 and $5,200 per pupil.

Most practices in Group 2 districts closely resemble those described in the model. A very diverse community population creates students with wide ranges of family backgrounds. Large numbers of students coming from families receiving Aid to Dependent Children are taught next to children from very wealthy families. These districts spend between $6,300 and $8,100 per pupil.

The practices of the third group approach those described in the model, yet educators in these districts explained that limited funding makes them fall short. Most children in these districts are similar to each other, most come to school healthy and ready to learn, and few come from families of poverty. District administrators report that limited funds preclude providing a quality education to all students. These districts spend between $3,100 and $3,700.

CHAPTER IV
CONCLUSIONS AND POLICY IMPLICATIONS

After examining districts where quality education occurs, analyzing the contributions of Delphi and discussion group participants, and considering the writings of education researchers, LOEO concluded that **a quality education depends on the interaction of community context, available funds, and schooling practices.**

* **Quality education happens more easily when the community supports the school.**

  When the community surrounding the school desires and supports education, parents and others expect quality and help provide it. Parents ensure their children take education seriously and businesses actively participate in education. Children's basic physical and emotional needs are met so they come to school ready to learn.

  Policy implications. Individual communities or the state as a whole ensure that children's basic needs are met.

  State policymakers encourage collaboration across all sectors of society to provide broad support for quality education of all students. Colleges and universities are especially encouraged to participate in the ongoing improvement of schools.

* **There must be enough funds to allow schooling practices to respond to the needs of different students. How much is enough varies with the community context of individual districts.**

  Enough money allows districts to hire enough teachers and support staff. Having enough teachers and other staff allows teachers the time to adjust their approaches so that each child has an opportunity to excel.

  LOEO could not determine the exact amount necessary for each district given the financial data currently available. Furthermore, quality education includes intangible characteristics to which costs cannot be attached.

  Of the seven districts LOEO reviewed, only five appear to be able to sustain a quality education for most of their students. Of the five, the two lowest-spending districts had comparable per-pupil expenditures. Both of these districts--suburban, with fairly homogeneous student bodies, high levels of volunteer support, and relatively high costs of living--spent between $4,500 and $4,600 per student in 1990-1991. Depending on their

community contexts, other districts may need to spend more or less than this to achieve quality.

Policy implications. Quality education is supported by a state funding mechanism that provides sufficient funding, equitably distributed, which takes into account the variations among districts.

* **Schools choose to use both their available funds and community resources to implement the schooling practices which bring about quality education.**

  These quality practices include employing the best teachers and supporting their ongoing professional development as well as providing the materials and equipment to accomplish a demanding curriculum for all students.

  The more widely students differ from one another, the more widely the teaching approaches must vary. The more widely the members of the community differ, the more important it is that all are welcomed by the school, and in turn, support the school. Such districts actively recruit parental and community participation at all levels--from classroom assistance to strategic decision making.

  Policy implications. Districts establish policies that promote a common mission, involve teachers in decision-making, encourage innovation, and foster collaboration among educators, parents, and other community members.

  State policymakers support quality schooling practices by funding staff development, technology purchases, and local innovations. Furthermore, they avoid policies that require educators to divert time and money away from quality practices.

To summarize, a certain amount of money is necessary for schools to provide a quality education, yet dollars alone do not guarantee quality. The dollars must be used to support particular schooling practices that respond to the varying needs of students.

ENDNOTES

1. Brown, 1991, pp. 37, 45.
2. Comer, 1988.
3. Dumont, 1985; Phillips, 1985.
4. Fordham & Ogbu, 1986.
5. Willis, 1992a.
6. Brown, 1991, p. 235.
7. Brown, 1991; Joyce & Showers, 1982; Joyce & Showers, 1980; Noddings, 1988.
8. Joyce, Murphy, C., Showers, Murphy, J., 1989.
9. Comer, 1988; Levin, 1991.
10. Brown, 1991; Fox, 1992; Goodlad, 1984; McLaughlin & Talbert, 1990; Sizer, 1989.
11. Brown, 1991.
12. Brown, 1991; Graves, 1983; Kohn, 1991; Noddings, 1988; Sizer, 1989; Slavin, 1991; Smith, 1990.
13. Noddings, 1988.
14. Willis, 1992b.
15. Goodlad, 1992; Willis, 1992a.
16. Brown, 1991; Haberman, 1991; McLaughlin, 1987; Sizer, 1989.
17. Brown, 1991; McLaughlin & Talbert, 1990; Sizer, 1989.
18. Brown, 1992.
19. Darling-Hammond, 1988; Elmore, 1983; Elmore, 1987; McLaughlin, 1987; Shulman, 1983; Soltis, 1988.

APPENDICES

APPENDIX A

LOEO METHODOLOGY

LOEO used five strategies to develop its model of quality education:

1. A Delphi panel was organized to elicit a consensus from diverse professionals with an interest in education. A consultant from Ohio State University helped design and analyze the surveys.

2. Discussion groups were conducted in different regions of the state among students, recent graduates, parents, employers, and individuals who did not complete high school.

3. Information gathered from steps one and two was confirmed by reviewing research literature, and ideas common across all three were used to formulate a list of the components of a quality education.

4. LOEO staff interviewed administrators in districts identified as providing quality education to determine what practices they have in common, and to discover how these practices support the definition of quality provided by the Delphi panel, discussion groups, and research literature.

5. LOEO staff analyzed and compared the expenditures of the selected districts with those of districts in the rest of the state.

Delphi process

The Delphi process is designed to develop consensus across respondents; it involved a succession of three mail surveys. The surveys were piloted and revised prior to each mailing.

The first survey had one question, "What do you believe is needed to provide a quality education?" Responses were used to generate a list of items identified as necessary for a quality education.

On the second survey, participants were asked to respond to the initial list and identify which items might produce costs. They rated each item on a scale of 1 to 10, with 10 being the highest in terms of importance to providing quality education.

The third survey included a revised version of the original list of quality components. Each participant received fifteen stickers to vote for the items they believed to be most important to providing a quality education. The votes for each item were tabulated, and items were arranged in descending order by numbers of votes.

To develop the Delphi panel, LOEO selected 30 professional organizations with an interest in education. All but two are based in Ohio. Each organization was asked to nominate two participants who could represent the views of their organization. Twenty-nine nominees agreed to participate, representing variations in location, gender, race, and organizational affiliation. Appendix D lists the professional organizations.

Few of the nominating organizations suggested teachers for the Delphi panel. LOEO staff determined more teacher input would be helpful and randomly selected principals in seven Ohio school districts from whom to request teacher nominations. One principal had a strong interest in the LOEO study, and nominated himself instead of a teacher. Thus, five teachers and one principal were added to the panel, creating a total of 35 participants.

Discussion groups

LOEO conducted ten discussion groups with "consumers" of education--two groups each of parents, employers, high school students, recent high school graduates, and individuals who did not complete high school. An average of eight individuals participated in each session.

Discussion groups were held in five regions of the state and participants were recruited from urban, suburban, rural, and central city areas. LOEO contracted the services of six trained facilitators from the five regions of the state to assist with conducting the discussion groups. An LOEO member co-facilitated each session. In addition, another LOEO staff member took notes as ideas were listed, defined, clarified, and consolidated through the discussion process.

During the two-hour discussion sessions, participants' ideas about quality education were recorded and clarified on poster board for all to see. During a subsequent voting process, participants individually marked their priority items.

The components of a quality education deemed necessary by the discussion group participants were categorized and rated according to their frequency, and then combined with those of the Delphi panel.

Names of potential discussion-group participants were obtained from schools, universities, General Education Development (GED) programs, and area Chambers of Commerce. A $25 incentive fee was provided for those groups deemed hard-to-recruit.

Names of area facilitators were provided by the Ohio Commission on Dispute Resolution and Conflict Management (OCDRCM). To ensure consistent data collection, a standard script was used and all facilitators were trained.

Examining the literature

Throughout the course of the study, LOEO staff reviewed the research literature in education, looking specifically for work related to characteristics of high performing schools. The writings of researchers and practitioners were used to confirm the attributes of quality identified by the Delphi panel and discussion groups. The authors are listed in Appendix F.

Examining quality districts

LOEO interviewed administrators in districts identified as providing quality education. The purpose for the interviews was to determine what practices districts providing quality education have in common which support the components of quality developed by the Delphi panel, discussion groups, and research literature.

The following steps were used to identify the school districts:

1. LOEO requested Delphi participants to list Ohio districts or schools they believe currently provide quality education as defined by their list of quality components. There was considerable overlap among nominees.

2. LOEO narrowed the list by eliminating those districts whose performance on the statewide proficiency tests made them eligible for intervention by the Ohio Department of Education.

3. Districts were selected for further analysis if one or more of its schools had received national recognition, such as being named a Blue Ribbon School by the U.S. Department of Education. Most of the components of quality education as defined by LOEO were very similar to the criteria used to identify Blue Ribbon schools.

4. LOEO staff visited six of the selected districts and telephoned the seventh to interview school building principals, as well as the districts' superintendents, treasurers, and personnel directors. Questions concerning practices of administrators and teachers at individual schools, as well as district policies supporting those practices, were posed. A list of the interview questions is in Appendix E.

LOEO staff attempted to select districts representing a range of community characteristics including: type of district (rural, city, suburban); average income; property value; minority population; and percentage of families who are recipients of Aid to Dependent Children (ADC).

Finally although private and parochial schools were recommended by Delphi panel members, LOEO restricted its investigations to public school districts.

Examining spending

LOEO used financial information for the 1990-1991 school year to analyze the expenditures of school districts. The treasurer of each district submits an end-of-year financial statement (form AUD/ODE 4502) to the auditor of state and the Ohio Department of Education (ODE). This is the only statewide comprehensive financial accounting of all school districts' revenues and expenditures.

With these data, LOEO attempted to isolate spending on individual components listed in the definition of quality education and to isolate spending on particular schooling practices associated with attaining quality. For example, we tried to answer such questions as "How much does a district or school spend on staff development?"

LOEO discovered three problems with the financial data which made these detailed questions impossible to answer.

First, the financial data are collected in very broad categories which mask the expenditures for particular components and practices. For example, expenditures for hiring classroom aides are combined with expenditures for staff development into a category labeled "Improvement of Instruction Services." As a result, there is no way to determine how much a school district spends solely on staff development.

Second, the data are only available for the district as a whole; there are no breakdowns for individual school buildings.

Third, districts account for their expenditures differently on the auditing form. For example, a one-day staff development session for math teachers might be included in the "Improvement of Instruction Services" category by one district. Another district might include this expenditure in the "School Administration" category because the session was initiated by a school principal.

In sum, the auditor's report fulfills the purposes for which it was created--accounting for broad categories of revenues and expenditures. However, the broad categories used, and the lack of consistency among school districts in completing the form, limited the usefulness of the data for this study.

Partial solution to the data problems

LOEO used two strategies to attempt to improve the quality of the financial data available to us.

1. LOEO visited six school districts and telephoned another to discuss the financial data they collect for their own purposes. We hoped the districts would have breakdowns for individual schools that focused on quality components or practices. Unfortunately, school districts collect information

primarily to fulfill state requirements and use the same broad categories as ODE and the auditor of state.

2. LOEO identified twelve of the broad categories on the auditor's form within which district expenditures supporting quality practices were likely to be included. We compared the expenditures in these broad categories for the seven selected districts with those for the state as a whole. We found no differences between the selected districts and the rest of the districts in the state. However, we cannot determine whether in reality there are no differences, or that real differences exist but are not apparent, because of the way the data are organized on the auditor's form.

As a result of these problems with the available financial data, LOEO was limited to discussing the overall per-pupil expenditures of selected districts identified as providing our definition of a quality education.

Data from the Education Management Information System (EMIS) were not available in time for this study. In the future, the EMIS will provide more detailed information about spending for specific programs at both the district and building levels. It is unlikely, however, that EMIS data will ever fully answer the question, "How much does a quality education cost?"

As noted in this report, a quality education is the result of the combination of available funds and how the funds are used to support particular schooling practices in response to the context surrounding the schools. In addition, the attributes of quality include intangible characteristics to which dollars are difficult to attach. Finally, money alone does not create quality, so no financial accounting system will ever fully answer this question.

APPENDIX B
CONSIDERATION OF OTHER APPROACHES

In designing this study, LOEO considered the approaches used by a number of other states and researchers to determine the costs of educating students. These approaches fall roughly into three categories:

1. Resource cost models--identify resources needed (e.g., so many teachers, so many books), attach costs to each resource, and sum the costs.

2. Regression models--identify inputs and predict or explain outcomes from them. For example, so much money produces so much achievement.

3. Expenditure models--analyze differences in spending across districts and infer a standard for what spending should be.

The general problem with each of these approaches for the LOEO study is that none of them addresses the issue of quality, especially in light of the definition provided by Ohio participants in this study. As noted in the text of this report, we found that a quality education was produced with the combination of the financial resources available to the district and what the district did with those resources.

Districts used the resources, for example, to find and support talented teachers, to promote caring relationships among adults and students, and to connect the work of the school with the community. None of the models we considered incorporated the notion of how the money was used to promote specific practices.

There were also particular limitations to each of these models for the LOEO study:

Resource cost model. The resource cost model was used in Virginia and Illinois to describe the cost of either a minimum or an adequate education.[1] The model assumes one can describe exactly the resources a school needs and can attach a cost to these resources.

As noted, quality schooling is not based solely on the number of resources. What promotes quality is not only the number but the type of resources one acquires, as well as what one does with them. For example, quality schools not only have more teachers, they also have committed, talented, and caring teachers. They not only have money for staff development, but recognize that teachers need time during the day to confer with one another to support their ongoing professional growth. As a result, this time is built into the daily schedule.

A further problem with the resource cost model is that the "cost" is often defined as the statewide average of the expenditures. For example, the cost of adding a new teacher is determined by using the statewide average of teacher salaries.

Once again, this process does not help determine the cost of quality education. Districts told us over and over that quality education comes from quality teachers. What makes a quality teacher is a blend of such intangibles as caring, enthusiasm, and creativity as well as the willingness to reflect on one's work, to risk trying something new, and to work cooperatively with others. It is difficult, it not impossible, to associate a cost with intangible characteristics. In a resource cost model, a mediocre teacher may cost the same, more, or less than an excellent one.

In summary, the resource cost model is essentially an accounting system. Quality cannot be defined solely by an accounting system.

Regression model. The regression model assumes that one can predict or explain an outcome from an input or a set of inputs. It assumes a one-way relationship between clearly defined input and outcome variables. A common use of this model is to link school spending with test scores. Using the regression model presented several problems for the LOEO study.

First, the definition of quality incorporates many more outcomes than are measured on tests currently available in Ohio. For example, quality schools promote higher-order thinking skills in their students, they integrate the curriculum across disciplines, they provide opportunities for artistic expression, and they promote the social and ethical development of students. Such outcomes are not captured on either the proficiency or norm-referenced tests currently used in Ohio.

Secondly, the regression model assumes that inputs can be isolated and clearly defined. As noted, the inputs into quality schools (e.g., talented teachers, particular schooling practices, a community which values education) are numerous, nebulous, complex, and mutually interacting. The outcomes are similarly complex and affect the inputs. For example, a good predictor of future achievement is past achievement; thus achievement can be considered both an input and an outcome variable. In short, the regression model assumes a simplistic conception of schooling based on absolutes. This conception is contradicted by the characteristics of the quality schools studied by LOEO.

Expenditure model. The expenditure model was used in South Carolina and another study in Texas[2] to determine a base student cost from which to determine state funding of education. The spending among different districts was compared to infer a standard of what spending should be. In South Carolina there was no attention to the issue of quality. Average expenditures were assumed to constitute a "reasonable" standard of what things should cost.

One difficulty with the expenditure model is that it does not consider that what a district spends on an item is limited by what it has to spend. For example, staff development was consistently presented as under-funded by the districts LOEO studied. Although they devote resources to it, these resources were inadequate in comparison to what district personnel felt was needed. An expenditure model does not account for unmet needs when considering what something costs.

In Texas, a subset of schools was identified as quality based solely on the scores of their seventh graders on TEAMS tests (criterion-referenced tests of minimum competency in reading, writing, and mathematics). The expenditures of these schools were studied to predict a per-pupil cost for quality schools across Texas.

A shortcoming of this approach is its reliance on test scores as the definition of quality. As noted earlier, test scores do not adequately capture all that quality schools are accomplishing. In addition, the Texas approach assumed that more resources alone will bring about quality. LOEO's study concludes that quality is the result of the combination of the amount and type of resources available, how they are used in the schools, and the external context surrounding the school. This community context affects both the resources necessary and the schooling practices used.

To summarize, the different models considered by LOEO were determined to have one or more of the following shortcomings in the determination of the cost of a quality education:

- they did not address the issue of quality; or, if they did,
- they used test scores alone to define quality outcomes; or
- they looked solely at the amount of resources to determine how to produce quality.

Instead, LOEO's study concludes that tests alone do not define what quality is, and the amount of resources alone does not produce it.

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1. Joint Legislative Audit and Review Commission, 1986; Joint Legislative Audit and Review Commission, 1988; Task Force on School Finance, 1992; Texas Education Agency, 1988.

2. Augenblick, Van de Water & Associates, 1991; Texas Education Agency, 1986.

APPENDIX C
CONSULTANTS

LOEO contacted several specialists when deciding on methodologies for various stages of the project.

1. Chris Carlson, Executive Director of the Ohio Commission on Dispute Resolution and Conflict Management (OCDRCM), helped LOEO locate and contract with regional discussion group facilitators. In addition, OCDRCM trained LOEO staff and regional discussion group facilitators in the discussion group techniques specific to this study.

2. Dr. Gary Henry, Director of the Center for Urban Policy Research at Georgia State University, discussed statistical methods used in other studies, and possible applications to LOEO's study of quality education.

3. Barry Mastrine, president of the Davon Group, a division of a central Ohio public relations firm, also helped LOEO to review discussion group techniques and determine which methods would best meet our needs.

4. Dr. Paul M. Nutt, from Ohio State University's College of Business, reviewed techniques for gathering information from groups with LOEO staff, and helped determine which approaches would best serve our needs. In addition, Dr. Nutt helped LOEO staff design questionnaires for the Delphi panel, and analyze data resulting from those questionnaires.

5. Dr. Larry Picus, Assistant Professor and Senior Research Fellow at the Center for Research in Education Finance at the University of Southern California, was contracted by LOEO to help review cost formulas, and examine possible methodologies for attaching costs to practices in Ohio school districts.

APPENDIX D

LIST OF ORGANIZATIONS NOMINATING DELPHI PARTICIPANTS

Academic Affairs Division of National Association of State Universities and Land Grant Colleges

Association of Independent Colleges and Universities of Ohio

Buckeye Association of School Administrators

Catholic Conference of Ohio

Coalition for School Funding Reform

Columbus Urban League

Council for Exceptional Children

Education Commission of the States

Home Education League of Parents

Junior Achievement of Central Ohio, Inc.

National Conference of State Legislatures

Ohio Association for Supervision and Curriculum

Ohio Association of Two Year Colleges

Ohio Association of Elementary School Administrators

Ohio Association of Student Councils

Ohio Association of Secondary School Administrators

Ohio Association of Independent Schools

Ohio Business Roundtable

Ohio Chamber of Commerce

Ohio Chamber of Commerce

Ohio Commission on Spanish Speaking Affairs

Ohio Congress of Parents and Teachers, Inc.

Ohio Department of Education

Ohio Education Association

Ohio Federation of Teachers

Ohio Head Start Association, Inc.

Ohio Public Expenditures Council

Ohio Student Association

Rural and Appalachian Coalition

State Board of Education

APPENDIX E

LEGISLATIVE OFFICE OF EDUCATION OVERSIGHT

Vern Riffe Center • 77 S. High St., Concourse • Columbus, OH 43266

Tel. (614) 752-9686

INTERVIEW QUESTIONS FOR SELECTED DISTRICTS

*When answering these questions, please refer to the LOEO list of criteria for quality education.**

1. What does this school do to ensure the quality of teachers hired? Quality of other personnel?

2. What is done to maintain teacher quality?

3. What are your school's ratios of various employees to students (teachers, administrators, etc.)?

4. What policies or practices ensure professional treatment of teachers and a positive, comfortable atmosphere for all employees?

5. Please describe your curriculum; how is it related to life outside of school?

6. How are higher order thinking skills, including problem solving, emphasized as part of the curriculum?

7. What special programs or special opportunities are there for gifted or talented students?

8. What specific instructional approaches or activities enhance education at your school?

9. What extra-curricular activities are available to all students?

* This list is summarized in Exhibit 3

10. What on-going interactions take place between the school and the community?

11. What specific links are there between your school and the community to help children and families?

12. How does this school meet the needs of students who are not ready to learn (in terms of social and behavioral development, in addition to basic physical needs)?

13. How would you characterize the school atmosphere? What helps to maintain this atmosphere?

14. Please describe the discipline policy, and its effectiveness.

15. Please describe the reading material available to students.

16. What supplies and materials, besides books, are available to support the curriculum?

17. What policies affect this school's ability to provide quality education? Statewide? Districtwide?

18. If you had more money, how would you spend it? If you had less?

APPENDIX F

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COMMITTEE COMMENTS

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Columbus, OH 43266-0604
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Jan Michael Long
State Senator
17th Distict

December 28, 1992

Paul Marshall, Director
Legislative Office of
Education Oversight
Vern Riffe Center
77 So. High Street
Concourse
Columbus, OH 43266

Dear Paul:

Please find attached my comments relative to the staff report on quality education. I would appreciate the comments attached as an addendum to the final published report.

Very truly yours,

JAN MICHAEL LONG
State Senator
17th District

JML/pl

Enclosure

National Conference of State
Legislators Standing Committees:
Education Committee
Energy Committee—Alternate
Boards:
Physical Fitness and Sports
Advisory Board
Children's Trust Fund Board

Committees:
Finance
Judiciary
Agriculture
Education, Retirement and Aging
(Ranking Minority Member)
Legislative Ethics Committee
Commission on Education
Improvement

COMMENTS BY

JAN MICHAEL LONG, STATE SENATOR

17TH DISTRICT OF OHIO

ON THE REPORT ON QUALITY EDUCATION

Staff is to be commended for preparing a report of this nature, given some of the time constraints and staff constraints involved. However, it is this Legislator's opinion that this document should be an on-going, evolving report, wherein future General Assemblies may examine the elements of a quality education. Exhaustive efforts should be employed over a continuing period of time to identify and provide a cost analysis of those tangible items that compose a quality education. While it is acknowledged that there are many intangible variables that provide the basis for a quality education, it is still incumbent upon the Legislature to assure that adequate funds are provided to insure a quality education composed of the tangible features. Therefore, I would respectfully request that in the on-going staff investigation, that we focus on those tangible qualities, whether they consist of infrastructure, curricula, or staff development, or otherwise and further develop various cost models for several different demographic regions of the state. If this can be accomplished, then such should provide a road map for us for future state and local funding efforts.

JML/pl