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OBSERVATIONS AND RECOMMENDATIONS
ON
THE LEXINGTON ELEMENTARY SCHOOLS

Summary of a Report

to

The Lexington School Committee

by

The Educational Program Study Committee

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OBSERVATIONS AND RECOMMENDATIONS: A SUMMARY

This committee has carried out its work during a turbulent time for education in Lexington: Parent concern over whether their children are receiving the basic education they should, teacher concern about the many demands placed on them and the absence of clearly defined educational policies, and the concern of many groups over threatened school closings have combined to create a widespread feeling of uncertainty. We have tried to carry out our mandate to provide a thorough background for the discussion of these issues and to recommend priorities and objectives which can guide the future development of elementary education in Lexington. We have not been able to delve into every aspect of primary education in our Town. We have done what a volunteer citizen committee with ten members can do with maximum effort in eleven months' time.¹

As a result of our work, we feel that elementary education in Lexington is generally in a good state of health. We have found exciting things happening in all our schools. We have been deeply impressed with the vitality of the elementary schools -- evident in the supportive, friendly relationships between students, teachers and principals, the variety of learning activities which absorb pupils and teachers in the classroom, the bright, colorful hallways and classrooms alive with creativity, and most importantly the dedication of a hardworking faculty. We know much which is very good is happening in the elementary schools and that parents, staff and students agree with this assessment.

But we did find some problems, which will require immediate attention if Lexington is to continue to provide education of high quality for its children. Most of the problems derive from a lack of clarity about priorities and basic purposes, and from a lack of coordination in carrying on the educational process. Of course, each group associated with the schools has developed its own set of concerns, because it sees only some of the problems and experiences them in its own way. As a committee, we do not claim to have seen everything. But, from listening to each of the groups and many of the individuals involved, we feel that there has naturally come together a course of action which can lead us all out of the turbulence we are in and into smoother air, where the pursuit of excellence in education will be once again feasible.

¹ The effort has included over 75 two-hour meetings of the committee and over 5,000 man-hours of work by the committee members.

I

SCOPE OF THE STUDY

I A. The Task

The Educational Program Study Committee (EPSC) was appointed by the Lexington School Committee in February 1975 and charged as follows:

The first charge to this committee will be to define the educational program now offered in the Lexington Public Schools, and to describe its strengths and weaknesses or problems. The committee shall define an educational program which best represents community priorities (at the elementary level first). This study will provide an opportunity for parents, teachers, and other representative citizens of the Town to express their concerns and add another dimension to the information being solicited by the (School) Committee before a decision is reached relative to the School Building Survey.

The committee was established by the School Committee during the first period of active debate of the Lexington School Facilities Study, a report prepared for the School Committee by the firm of Drummey-Rosane-Anderson, Architects. In the light of projected enrollment decreases, this report proposed a schedule of school closings and renovations under the architects' charge "to determine what degree of equality of educational opportunity was afforded each child as this may relate to existing physical plant" and "to make recommendations, where necessary, as to how this equality could be economically achieved." The debate brought strong reactions from parent groups in schools earmarked for closing, as well as questions about the accuracy of enrollment projections, about dislocations that would occur, about the amounts of money that would really be saved, and about the relationship or importance of facilities to education. As a result, the charge to the committee was accompanied by a list of eighteen specific questions about the meaning of "equality of educational opportunity", the influence of school size, atmosphere and neighborhood on education, and the impact of school closings.

I B. Organization

The committee met often through March, to sort out the issues to be addressed and prepare a preliminary report for the School Committee. That report was submitted early in April and concluded (i) that the questions raised about the meaning of "equality of opportunity", the relationship of facilities to education, and the impact of school closings on education were sufficiently serious that no decision should be made to close any schools for September 1975; (ii) that the task given to the committee was sufficiently substantial that another year's work would be required to complete an adequate study even of the elementary schools.

After the April report had been presented, work was begun on an intense study. The committee organized into four subgroups (with overlapping memberships), according to the interests and expertise of its members:

Surveys (questionnaires)
Interviews
Pupil Performance Data
Curricula

The activities of the subgroups were coordinated and reviewed by the main committee.

I C. Surveys

In May, a Staff/Student survey was conducted, to obtain views on a wide variety of matters bearing on education. It employed three questionnaires, distributed to:

- 450 teachers and administrators at all levels in the school system
- 1,800 students in grades 4, 5 and 6
- 1,290 students in grades 7-12 (600 high school, 690 junior high school).

The answers to multiple choice questions were tabulated on the high school computer before school ended. Over the summer, all of the 15,000 answers to open-ended questions were read and recorded, grouped and summarized by members of the committee. A fifty page summary of the results constitutes Appendix A of the committee's report.

A Citizen Survey was conducted, to obtain citizen views on educational priorities, on specific educational programs, and on the relative importance to education of facilities, neighborhood location, etc. Early in December, the citizen questionnaire went out to 9,300 households in Lexington. Slightly more than 2,000 responses were received, about 1,300 from parents of school-age children and about 700 from citizens without school-age children. The nineteen page summary of the results is Appendix B to the committee's report.

I D. Interviews

Individual interviews were conducted with the five elementary school principals who are the program managers for reading, language arts, mathematics, social studies, and science, as well as with Mr. Richard Barnes, Director of Information, Research and Federal Programs; Dr. Frank DiGiammarino, Coordinator for Planning and Curriculum; Dr. Rudolph Fobert, former Superintendent; Dr. Jack Monderer, Director of Pupil Personnel Services; and Dr. Constance Murray, former Coordinator of Special Programs.

Five two-person teams conducted a series of interviews with the principals, teachers, students and parents in every elementary school. They spent a full day in each school, interviewing the principal and six or more teachers. They also talked with students. They then spent an evening with each parent group. While obtaining answers to specific questions about educational programs, teams attempted to develop a "picture" of each school, which would encompass a feeling for (i) the atmosphere of the school and relationships between teachers, pupils, parents and principals, (ii) the special characteristics of the school's educational programs, and (iii) some of the strengths and weaknesses of the school.

I E. Pupil Performance Data

The subgroup on pupil performance data addressed three basic questions about pupil performance on tests of basic skills. These dealt with trends in performance, differences between schools, and a comparison of performance and potential. Three separate statistical analyses were carried out. The report of the subgroup is Appendix C of the committee's report.

I F. Curricula

This subgroup selected five curricula for study: language arts, mathematics, reading, science, and social studies. Discussions were held with the program managers and some of the specialists in these areas and with more than fifty classroom teachers. Guides, scope and sequence charts, teacher handbooks and sundry materials were reviewed. The goal was to assess the strengths and weaknesses of the curricula and their use. The results of the study constitute a major part of Chapter III of the report.

II

THE ELEMENTARY SCHOOLS -- PHILOSOPHY

Any discussion of current educational programs in our elementary schools must be preceded by some general description of what the Lexington Public Schools have been trying to achieve over the last several years and how they have been trying to achieve it. Rather than present a committee description which might be heavily colored by the committee's views of what needs to be changed, it might be more useful to begin with the following remarks, transcribed and edited from an interview in May 1975 with Dr. Rudolph Fobert, then Superintendent of the Lexington Public Schools.

The system aims at the optimum development of each child under the guidance of a competent, creative professional staff. No one person can conduct 11 elementary schools with 200+ classrooms and begin to meet this optimum. So you create as consistent a framework as possible which allows a creative staff to generate the diverse methods and programs they best teach with.

The dangers of such a system of course, are obvious; we make mistakes in diverse ways, and total loss of standardization can mean chaos. We limit mistakes by recruiting highly competent staff, by weeding them out if they don't work well in the system, and by providing stability in several ways system-wide. We provide road maps for specific curricular areas, such as science and math and reading. Teachers have specific directions, specified objectives to be reached and suggested activities they begin with. How they meet the objectives is up to them. The stability is in the structure, the freedom is in their choosing how to teach and in encouraging them to try their own ideas. So we have a variety of teaching formats, methods and approaches from teachers -- each finding whatever way best works for them and their classes. But always with the basic structure in mind.

Probably the most basic element of the Lexington Public Schools' philosophy is this diversity. Not everyone learns the same way, not every teacher teaches best using the same format. A vital aspect of the process is monitoring, which helps maintain stability and keeps an eye on the end results. Monitoring is done through reports to parents (what each child performs and how well), and through principals' continuing evaluation of teachers and the teaching curriculum. People can be creative if you give them responsibility for their actions and we have found it works well.

Elementary schools are semi-autonomous. Each principal has his resources to arrange and re-arrange to best meet objectives -- which consist of general guidelines plus specific ones in some curricular areas. A principal knows he has 1 teacher for every 24 students, a specific amount of money per student, aides who provide 1 hour help per week for every three students, and a core of specialists. How he and his teachers choose to use these resources is largely left to them. We try to achieve consistency in a framework of common goals, based on spirit of creativity which generates motivation and considerable effort from the staff. The Superintendent can buy time but not motivation or endeavor -- so we need to create an atmosphere which promotes these.

Our 32 program areas are each defined by:

objectives aimed at
resources to be used
activities suggested
measurements (evaluation) to be applied.

Each principal is responsible for a specific learning area, system-wide in the elementary schools.

We are trying to move slowly toward program managers in each area, and have done this to a larger degree in math and reading

comprehension than elsewhere. We have made some progress in science and the social sciences. In the end, we should be able to provide more comprehensive education at no greater cost -- because of better planning. The Planned Program Budgeting Evaluation System (PPBES) reinforces this process.

The Continuing Curriculum Committees consist of faculty, all working voluntarily to continuously update and improve curriculum offerings. This grassroots responsibility is part of the basic philosophy of the system, and so far has generated an esprit de corps and considerable creative input. Summer workshops are the vital ingredient -- paid, intensive sessions where teachers can formulate and put into usable shape the materials and lessons generated in the classrooms. It has, for us, been a highly successful venture in many ways. Our curriculum has found its way around the world and requests were so many we finally had to subcontract publishers to do the printing for us and charge educators for the materials.

Our salary scale is not high, as you probably know. Nonetheless, we have for many years been able to hire very high quality faculty. One of the major attractions is the variety of professional activities they can take advantage of; the other is the promise of diversity and freedom in the classroom. Quite simply, we're investing in human energy, with high expectations, in a climate which fortunately has been one of good morale.

III

THE ELEMENTARY SCHOOLS -- PROGRAM

The first task associated with the committee's charge to "define the educational program now offered" and "to assess its strengths and weaknesses" was to describe present curricula as well as how they are developed, monitored and used.

III A. Five Town-Wide Frameworks

Of the thirty-two program areas identified with the school system, the committee decided to concentrate on Language Arts, Mathematics, Reading, Science and Social Studies, though opinions were also solicited, through surveys and interviews on Art, French, Human Growth and Development, Music, and Physical Education. For the five areas, the committee attempted to determine what the town-wide frameworks are (the road maps, as Dr. Fobert called them), how and to what extent they are used and what strengths and weaknesses may be in the curricula or their use.

III A. 1. Language Arts

The Language Arts Guide which was written in 1964 was an excellent piece of work. Teachers use it to some extent as a framework for what to teach, but it is outdated and no longer provides a town-wide framework. Current language arts teaching consists of innumerable approaches by teachers who have essentially compiled or created their own materials. Heroic efforts have gone into providing individualized instruction for varied student abilities -- "heroic" because teachers too often work without specified objectives, with minimal support systems, and an absence or unavailability of materials (which results in many teachers buying these with their own money). There is uncertain continuity across grade levels and no coordination across the system the committee could find. The absence of firm guidelines and adequate materials certainly affects teacher performance, but it also has contributed to staff creativity and has produced an amazing diversity of teacher-created materials, which need to be more widely shared in the system.

III A. 2. Mathematics

The Mathematics curriculum created eight to ten years ago provides more system continuity and sequential learning than any other program. Originally designed to introduce some of the concepts and the approach usually referred to as "the new math", it spells out specific objectives to be reached, specific skills and concepts to be learned, and specific suggestions to teachers about materials which may be used. It also provides tests and inventories which keep track of student progress. The program has been revised considerably in the past two years, to eliminate much of the terminology about sets and to put more emphasis on basic computation, problem solving skills and mastery. The revision is only partially completed and is being piloted at Bridge School and by twenty-five teachers in other schools. Numbers of teachers had already made many of the changes reflected in the revision. Reactions to the revised program are generally positive and if work on it can be completed, it probably will be widely used.

III A. 3. Reading

Step by step guidelines for "what" should be taught in reading, augmented by a scope and sequence chart, provide parameters for elementary teachers who make their own games, tapes, worksheets, tests and use commercial materials from more than twenty publishers to supplement the reading program. What this means is that each teacher essentially designs his/her own reading program. Though there is some continuity between grade levels in some buildings, there is minimum coordination across the system. Many teachers feel an integrated program is much better and teach what is in effect a combined reading and language arts course.

LIRSP (Lexington Individualized Reading Skills Program) stresses methods and materials for individual learning and provides a partial system-wide approach to reading. It specifies skills and concepts to be learned, the instructional sequence to be followed and provides for systematic evaluations of mastery. The curriculum requires large amounts of paperwork and considerable testing. Teachers hope these weaknesses will be ironed out during revision. The accountability LIRSP provides is useful and teachers generally approve of the concepts and sequential learning inherent in the program. Many feel an integrated LARS (language arts-reading skills) program would be much more effective than two separated curricula.

III A. 4. Science

The program focuses on teaching how to conduct scientific inquiry -- measuring, observing, recording, explaining, predicting. It uses a hands-on, manipulative approach. The Lexington elementary program does not provide a systematic approach, a means of evaluation or any degree of town-wide coordination, though each class is expected to complete three to five projects a year. General guidelines, topics to be covered and an extensive list of resources comprise the guide, but many teachers do not feel they have the time or the expertise to easily run projects. Science specialists provide exciting materials and help teachers plan and present topics. Because there are only two specialists for eleven schools, their time with teachers is very limited. Some schools are working to provide better continuity between grades and share in-school expertise they have, to strengthen what has been for the most part an uneven science program systemwide. In one school we found parent volunteers are used successfully throughout the year to supplement the science program.

III A. 5. Social Studies

The Social Studies program has a town-wide framework which is partially used K-6 by most teachers. There is minimal coordination between grades but some schools are working toward better continuity. Developed in 1961 and revised through 1971, the current program is concept-oriented, activity-centered and based on specific themes which focus on how man adapts to habitats, controls his environment, celebrates, frames governments, etc. Under each theme, three or four topic units are identified. A scope and sequence chart is used to some degree as a guide and supplemented with many resources. Staff are free to use any, all or none of these materials, but they are expected to cover 3-5 units each year.

III B. Curricula in the Classrooms

We began our review of five curricula by asking four questions: (i) What are the town-wide frameworks which have been developed in these areas? (ii) To what extent are they used in the schools? (iii) To what extent do they help or hinder teachers in accomplishing their

objectives? (iv) To what extent do they ensure a consistency of basic objectives or continuity from one grade level to the next?

This is what we found.

Weaknesses

The most obvious weaknesses in these curricula and programs are (i) lack of continuity between grade levels; (ii) lack of system-wide coordination grades K-6; (iii) lack, absence or unavailability of teaching materials. These are directly related to inconsistencies about

- core curriculum for each grade level
- definitive objectives for areas other than Math
- evaluation procedures and monitoring instruments
- integration of reading and language arts programs

and to

- limited specialist support in some areas
- not enough planning or sharing time for teachers within a school
- minimal system-wide sharing, planning, exchanging among staff
- inefficient information storage, cataloguing and retrieval systems
- lack of a central resource area where materials and support are readily available.

Strengths

It is important to note the strengths inherent in the system:

- teachers are allowed to utilize their own strengths, which ensures greater interest, application and excitement in the classroom
- teachers work hard to create materials and methods which individualize instruction for a wide variety of student abilities
- where teachers have found a way to share, students benefit from the cooperation, planning and variety of presentations
- some schools have bountiful resources and support systems which allow the teacher to focus his/her primary energies and resources on the students
- giving a teacher this kind of independence tends to attract individuals to the system who are competent and interested in professional growth; it also challenges principals to work with those who may require support adjusting to the system.

III C. Development and Monitoring of Curricula

The weaknesses which came to light prompted the committee to inquire into the support system which is supposed to make it possible for teachers to do their jobs effectively. It did not take long to understand where part of the problem lies, nor will it take long to describe it.

For more than a decade, the Lexington Public Schools have created a substantial part of the curricula for the system. Originally begun with federal and foundation funding which gave impetus to the effort and the opportunity to cooperate with university talent, the educational curricula found their way across the country and into many nations around the world. Development was intensive, comprehensive, and very well funded with sufficient amounts of time devoted to the creative process. Over the years, as funds have diminished and the impetus been diluted, the development process has changed to the point where it is now seriously questioned by the School Committee and some of the staff.

Theoretically, the schema outlined by Dr. Fobert in part II still stands. In looking at the reality, the committee reached several conclusions.

- *The authority of those responsible is not sufficient to see that the job gets done.*
- *Continuing Curriculum Committees (with (i) little or no support personnel, (ii) the entire faculty as members, (iii) principals who have full time responsibilities and function also as curriculum coordinators) do not work effectively*
- *Curriculum development must be treated as a high priority item if Lexington depends on it for primary programs. For the last several years it has not been given that status or the funding and attention which it warrants.*

The first two points are most obvious in the monitoring, or lack of monitoring system. There does not exist, as far as we could ascertain, any effective evaluation process. Curricula should be evaluated, revised, changed or discarded as they become outdated or ineffective. This has been done to some extent in some areas, i.e., math, and partially attempted in others, i.e., social studies. In still others it has not been done at all in any significant way, or if evaluation occurred, changes have not been implemented.

In short, there is no system structure functioning which insures development and implementation on a system-wide basis; what does happen can only be described as somewhat haphazard and does justice neither to teachers efforts or to some administrators' attempts to articulate a K-12 program for the Lexington Public Schools.

III D. Recommendations

It should now be apparent that several very important questions must be answered if the Lexington Public Schools are to continue to provide what has been high quality education:

- Is Lexington going to create its own curricula or select from those published commercially?
- If town-created curricula are to be used, can this be accomplished under the present arrangement - with principals serving as curriculum managers and coordinators, with continuing curriculum committees which function minimally, without sufficient money for materials, without summer workshops which are the heart of the process?
- Can teachers produce the superior level of education which Lexington desires when so much of their time is spent creating or locating materials and doing the endless amount of paperwork now required?
- Can a system continue to flourish without objectives and a coherent framework which sets standards, provides firm guidelines and specifies what must be done?¹

It appears that for want of central reinforcement the very strengths of the Lexington plan have become its weaknesses. We have gradually evolved a dichotomous situation. On the one hand, the concept of teachers being involved in creating what they teach is enormously exciting, and one which could occur only with highly qualified teachers in a very vital environment. On the other hand, we have placed the responsibility for coordinating curriculum into the hands of all-too-busy principals who often do not have expertise in that particular field and we have provided them with minimal or no support personnel. The concept of teacher involvement was based on sufficient time for developing and piloting programs in the classrooms and organizing them for implementation during summer workshops.

The past few years, workshops have been severally cut back even though several major areas obviously needed attention. The Language Arts program, for example, was based on the premise that it was a living instrument which would need regular updating. This has not happened and the program is now virtually ignored despite the inherent excellence of the original guide. A Reading Program was developed seemingly without regard for integration with a language arts curriculum, and without adequate provision for completion and implementation. Its use in some grades in some schools does not lead

¹ Specifying what is to be done is quite different from specifying how it is to be done. The latter would destroy much of what is valuable in the present program.

to continuity in goals or priorities. (All of the children are getting some of the skills, but only some of the children are getting all of the skills.) A creative Science Program is being used somewhat, but it depends heavily on the resources and guidance of two specialists divided among eleven schools.

If we are to maintain the good things in the Lexington elementary schools, and ensure even better education in the future, we should look hard for answers to the following more specific questions, and having found the answers, move quickly to implement decisions which will lessen the discontinuity, lack of coherence and confusion which now exists within the system.

Questions

- Do Principals, realistically, have the time and expertise to act as curriculum directors and/or coordinators?
- Should the language arts and reading programs be integrated into one program?
- Why is there such a lack of materials in some schools? Does the present policy to ensure equality by basing supplies on the number of pupils per school really lead to inequality of resources?
- How can we best provide support and resources for the classroom teacher so she/he can spend more time "teaching"?
- What framework would best enable teachers to share - ideas, planning, coordinating, resources?
- How essential is ongoing training for teachers in maintaining a high quality of education? (With less movement of faculty since the economy has tightened, and a high percentage of tenured teachers within the system, some ways must be found to ensure that we don't go stale.)

The committee is absolutely certain of one thing.

Decisions (and implementation) on these and more detailed questions will require highly competent leadership within the School Administration, with carefully delineated and specific authority to do what needs to be done.

The committee has also concluded that a move to a regimented system based solely on town-wide adoption of standard commercial curricula and materials is not the way to achieve better continuity and coordination in Lexington.

There is an appealing simplicity to the idea, but the committee feels strongly that such a move would have serious negative repercussions.¹ It well may be that careful planning will allow the integration of some such materials into Lexington's curricula. Certainly, more imaginative materials are available in some areas now than when our major curricular efforts began in the mid-sixties. And certainly we need a more clearly articulated curriculum, not just at the elementary level, but K-12 in basic areas. But no highly structured system, which dictated the materials that teachers must use, could hope to attain the quality of education which the committee understands the citizens of Lexington to want for their children.

Therefore, in speaking to the needs of curriculum within the Lexington Public Schools, the committee recommends that immediate system-wide steps be taken to

- develop and implement scope and sequence procedures for objectives in all basic skills and knowledge areas to produce continuity between grades and schools²
- provide a Curriculum Center which will provide direction for on-going development, catalogues and files of materials available for all teachers' use, an efficient, effective information delivery service for staff, a central location where all kinds of materials and equipment are located so teachers know where to go for resources or help and when they will be available.³
- provide curriculum coordinators in the schools (as well as in the Center)
- provide workshops of three kinds: (i) ones which directly address teacher needs in very practical ways,⁴ (ii) ones which involve parents with teachers in the development of some materials, (iii) ones which, in a down-to-earth way, keep teachers abreast of advances in understanding the learning process.

IV

THE ELEMENTARY SCHOOLS -- PROCESS

The third task associated with defining the elementary educational program and assessing its strengths and weaknesses is to review the

¹ Some of the reasons for this will be apparent, after the educational process has been discussed.

² This may apply to some concepts, as well as knowledge and skills.

³ The Wellesley Public Schools have an outstanding curriculum center, which might be studied as a possible model.

⁴ Teachers do not need workshops on philosophy. They need ideas and materials which they can take out of the workshops and put to use right away.

educational process, that is, to review the range of actions which occur in the attempt to achieve the educational objectives of the school system: how the schools are organized, what teaching methods are employed, what climates for learning individual schools provide, etc. (Part of this review is in the previous section which considers the development, monitoring and use of curricula, town-wide.) Here we will review the educational process -- its effects on curricular efforts and its relationship to other parts of the educational program.

IV A. The Eleven Elementary Schools

A profile was developed of each of the eleven elementary schools. What follows is a very brief almagamation and summary of these profiles, which constitute the (35 page) section IVA of the committee's report.

The eleven schools are similar in some important ways and yet, each is distinct, with its own special atmosphere, organization and teaching approaches.

Apt descriptions by students bring out the similarities clearly:

"It has nice teachers and I like the principal."

"I like the teachers here because they care about us and what we learn."

"You can crack up..."

"I like best the things we learn and do and the teachers we do it with and the way they teach."

Hard-working, caring staff and their comfortable relations with students are a vital ingredient. The eagerness and desire for learning on the part of students which came across on questionnaires and during interviews is impressive. Teachers are sharing, cooperating and "teaming" in every school, and "switching classes" or "re-grouping" is done to some extent in every school.

Specific things are common among schools of similar size -- in interpersonal relationships, in staff organization, and in dealing with problems. In the small schools the principal and staff organize themselves and meet together all-around-the-table. At larger schools, the organization is more hierarchical: the principal meets with team leaders or grade representatives who in turn meet with the rest of the team. This is efficient but can be impersonal. Problems appear in and between different groups: the difficulty of lunchroom management and playground supervision; little contact with other teachers in different grades and/or on different schedules; parents who do not know one another and do not feel the school reaches out to them despite persistent PTA and staff efforts over the years.

Parents at Bridge, Bowman and Estabrook feel they have meager information about plans and objectives for the year and the lack of parent unity is obvious. Parents at Bridge are especially concerned about younger children getting lost in the shuffle of a large school, and feel self-contained classrooms might be more appropriate for them - like those at Hastings or Harrington.

In some schools, self-contained classes at the upper levels have been instituted to better meet the need expressed by one student who represented many: "If a student's doing something and it's interesting and it's time for another subject, they should let him finish." More often the structure in grades 5 and 6 involves cooperative teaching with regrouping of students by subject areas.

Teaching approaches are varied in every school and few schools are stamped by one particular style. Even team-teaching which was once used to describe a single style appears to have many variations and several of these may be present in the same building.

Each school has its own distinct personality even though individual classrooms may differ considerably. The patterns of organization appear, interestingly enough, to be closely related to size. All schools have highly competent teachers no matter what the size or organizational structure. Hancock, Parker and Munroe have warm, friendly atmospheres and a very supportive group of parents who think these less tangible features compensate for limitations in facilities. One student said "It's small and doesn't have big problems like other schools."

Harrington and Hastings were built as sister schools and are in many ways similar. The atmosphere is calm and controlled, the teaching approach essentially conservative. Parents are pleased with the emphasis on the basics though some would like "more spark and enrichment." As one Hastings student summarized it, "It's not a new school, it's just old enough to be a 'steady' school."

Adams, Franklin and Fiske are medium-sized schools suffering from space problems. They are still overcrowded and coping with limited or out-dated facilities. Teachers (in many cases supported by parents who are very involved in all these schools) have developed exciting projects within different formats: Fiske with primarily self-contained classrooms, Franklin with its team approach and Adams in a style very close to the "open classroom" approach so strongly desired by numbers of parents at Fiske.

Estabrook, Bowman and Bridge are the newest and most spacious schools with an atmosphere characterized by the students as "open and free". Team or modified-team approaches are used by teachers

committed to the two-faculty-double-classroom structure where feasible, and find they "not only enjoy teaching this way but learn a lot" themselves. Students at the large schools criticized large-group encounters (like lunch) but found the schools "new, challenging and exciting." These larger schools have not yet found satisfactory ways of reaching parents effectively. This is one of their primary challenges. Each elementary school has special things which could enrich the system if they were shared or adopted by other schools in the system. We could not begin to explore all of them but the listing below is indicative of the kinds of processes, projects, channels of communication, etc. we feel are worth publicizing.

- Parents at one school received a Staff booklet with teacher biographies and experiences described. It provides a total profile of the school's staff which is enlightening and impressive.
- In-school Curriculum Coordinating Committees operate in some schools and provide much-needed communication.
- What appear to be endless teacher-developed materials exist in each school and should be shared.
- 5th and 6th grade camping trips are culminations of a year's study supported heartily by staff, parents and students.
- One principal sets time aside to meet with interested parents once a month; another meets them every two weeks.
- One principal writes personal commendations to students about individual projects, artwork, etc.
- At least one principal makes it a habit to greet children as they arrive at school.
- One teacher has developed what other teachers described as an "outstanding exciting" science course, for grades 5 and 6.
- One school has parents involved in teaching science throughout the year.

IV B. Autonomy and Diversity

The diversity of the schools, in age, size, environment and especially in teaching styles, is striking. The schools even vary in the diversity of educational options offered within them. Some schools are strictly team-teaching, others have all self-contained classrooms, still others have combinations of teams, open classrooms and/or cooperative teaching. The diversity of educational options, both within and between schools, is in part a result of the degree of autonomy which individual schools have. The committee has given

considerable thought to the advantages and disadvantages of a system which encourages independence and variability to the extent that our school system does.

Has the autonomy of the elementary schools been really important to the education of children in Lexington? The committee feels that in the past it has, for several reasons: (i) The autonomy of the schools has allowed the development of a teaching program which utilizes the particular strengths of each faculty. (ii) It has encouraged the principal and teachers to try to find better ways to do things on a continuing basis. (iii) It has attracted very capable people to teach in Lexington, those who desired growth professionally and knew that the environment here encouraged continuous development. (iv) It has allowed principals to develop healthy relationships in their schools and to match educational programs to parent preferences and neighborhood characteristics wherever feasible. (v) It has encouraged a sense of loyalty among the entire community of each school and enhanced esprit de corps.

These are valuable assets for any educational system, because they have direct positive effects on what happens to children in the classroom, the school, and on the playground. But, in the first part of the preceding section we pointed out the ways in which the schools have been left too much on their own in recent years. The schools have not received the support and materials they need. In particular the central development, articulation and monitoring of curricula, which is needed to help the classroom teacher and to ensure continuity in children's education, has been missing. As we move to correct this situation, the autonomy of the elementary schools and their principals will be reduced somewhat. Schools will be expected to follow town-wide curricula.¹ This does not mean, however, that the freedom of schools and teachers to choose their own methods and materials need be seriously interfered with. Indeed, it is important to ensure that this does not happen; otherwise, we will lose the several benefits which derive from a reasonable amount of autonomy.

The diversity of educational options which exist in Lexington is also important to the education of our children. Diversity within the schools is important because it increases the capacity of the schools to match individual students with teaching formats which best suit their needs. Obviously the range of options which one school can provide is limited. But the contact which the committee members have had with our school system and several others has led to the conclusion that the diversity which now exists in Lexington is unusual and quite valuable.

At present, we are not making full use of the diversity which exists between schools. Parental (and staff) choice of educational options for a particular child are constrained by the district in

¹ Of course, they will also be involved in developing them.

which the family resides. If, for example, the school in that district is entirely a team-teaching school while the parents feel that a self-contained classroom experience would be very important for the child's development, it is not easy to get the child reassigned. There is on the books in Lexington an "open enrollment" policy, but the truth is that it cannot be utilized except in highly unusual cases. A persuasive argument must be made both by teachers and parents, and even then administrative approval is difficult to obtain.

The committee feels that serious consideration should be given to adopting a limited open enrollment policy, which would allow parents to select the elementary school which a child will attend, if two conditions are met: (i) there is room in the desired school; (ii) the parents provide transportation for the child.

IV C. Ratings of Program Areas

The second task associated with the committee's charge to assess the strengths and weaknesses of the educational program is to see how program areas are rated by various groups. Are parents satisfied with the results? Are teachers satisfied with the results? What do students see as the strengths and weaknesses in their schools? Only the briefest description of the answers to these questions can be given here. For completeness, we will include junior high and high school ratings. For more complete descriptions, see section IVC and Appendices A and B of the committee's main report.

Elementary School Ratings

In general, parents and teachers give high marks to Art, Physical Education and Music, and they agree on the need to improve Composition, Handwriting, Math Computation and Reasoning, Counselling and Science. Except for Social Studies, where teachers were more negative, parents and teachers were within 5%-6% of one another in the degree to which each subject area "needs improvement". Teachers frequently leaned more toward "excellent" where parents chose "satisfactory".

A comparison was made of ratings given to program areas by the parent groups in individual schools. For the five curricular areas which the committee selected for study, the highest and lowest levels of parent satisfaction were as follows:

<u>Subject</u>	<u>High Parent Rating</u>	<u>Low Parent Rating</u>
Language Arts		
Composition	Hancock	Estabrook
Handwriting	Hancock	Franklin
Mathematics		
Computation	Hancock	Estabrook
Reasoning	Hancock	Adams, Bridge, Estabrook
Reading	Hancock	Franklin
Science	Hastings	Bowman
Social Studies	Munroe	Franklin

When asked in a multiple-choice question about the "best taught" subjects, the 4th, 5th and 6th graders across the system said Math. The 40% choosing Math was consistent for both large and small schools. 14% chose Reading, 13% Language Arts, 13% Social Studies, and 12% Science. In the open-ended questions, "Reading and Math" was generally considered to be the "most important thing to learn about" (averaging 31% and 34.5% respectively), and Math, followed by Art, was the most frequently mentioned subject in the responses to "What do you like best about your school?" Math, Music, French and Reading were also "liked least."

Junior High School Ratings

At the junior high schools, parents, students and teachers rated the following programs satisfactory/excellent by 60% or more: Art, Foreign Languages, Math Reasoning, Physical Education, Science and Social Studies.

They judged Math Computation, Research Skills, Sports and Reading satisfactory by 52-78%.

Responses were mixed on Composition, Handwriting, Counselling and Vocational Training and Special Needs, with satisfactory ratings as follows:

	<u>Parents</u>	<u>Teachers</u>	<u>Students</u>
Composition	46%	38%	69%
Handwriting	35%	21%	46%
Counselling	40%	75%	no data ¹
Special Needs	26%	77%	" "
Vocational Education	26%	28%	25%

(A high percentage of parents and teachers did not rate Special Needs or Vocational Education, but the majority who did felt they need improvement.)

The only programs more than 30% of the parents and teachers felt need improvement were Composition, Handwriting and Vocational Education. In addition, teachers feel improvement is needed in Human Growth and Development, and Reading. Students in one junior high school felt Music needs improvement, and parents felt that way about Counselling in one junior high school.

Senior High School Ratings

Parents, teachers and students rated the following very satisfactory (60-85%): Art, Foreign Languages, Math Reasoning, Music, Physical Education, Science and Social Studies. Math Computation was rated satisfactory.

They agreed that Composition needs improvement.

¹ No data was available on this due to a design error.

Parents and teachers (31-66%) felt that Handwriting, Human Growth and Development, Research Skills, Reading, Vocational Education and Counselling need improvement but students did not.

The programs which received mixed responses were:

	<u>Parents</u>	<u>Teachers</u>	<u>Students</u>
Reading			
Sat./Exc.	51%	39%	56%
Needs Imp.	40%	56%	22%
Special Needs			
Sat./Exc.	26%	61%	
Needs Imp.	24%	32%	

A few comparisons are worth noting:

- Parent ratings of the same subjects in the elementary and junior high levels are very consistent.
- Composition needs improvement at all levels.
- Parent satisfaction increases in Composition, French, Math, Music, Science and Social Studies from elementary to high school.
- Parent satisfaction declines in Handwriting, Reading, Counselling and Special Needs from elementary to high school.
- Teacher satisfaction with Composition, Reading (dramatically), Math, Handwriting, Research Skills and Counselling decrease notably from elementary to senior high school levels.

IV D. Standardized Testing as a Means of Assessment

Another means of assessing the strengths and weaknesses of elementary programs is to examine the results of the standardized tests which have been given regularly to Lexington students for many years. Has the average level of achievement (in basic skills) in Lexington been rising, falling, or holding steady over the last ten years? Are our children performing up to their intellectual potentials, as measured by IQ tests and test scores in basic skill areas? Are there significant IQ-corrected differences between the achievements of children in the various Lexington elementary schools?

The committee has attempted to answer these three questions.¹ All of the work has been carried out with due regard for the sensitivity of some of the information and the limitations of standardized testing.

¹ The detailed description of the committee's work on test scores is Appendix C of its report: Analysis of Pupil Performance Data.

The committee used town-wide average scores on the Iowa Test of Basic Skills to determine if the average achievement level has been rising, falling or holding steady over the last eight years in Lexington. Average scores for grades 3-8 were compared year by year and three conclusions reached: (i) there has been little change for grades 3 and 4, (ii) a slight downward trend in grades 5 and 6, and (iii) a pronounced tendency for scores in grades 7 and 8 to decline.

To determine whether children are performing up to their intellectual potentials, the committee compared achievement performances of 427 students who began 1st grade in 1967 and completed elementary education in the same school. The Myklebust formula¹ (a measurement based on IQ scores + chronological age + grade age) was used and the results compared with achievement age in Reading Comprehension, Spelling and Arithmetic. Particular attention was given to those students whose achievement age either exceeded or fell short of the expectancy age by more than half a year. Several conclusions were reached:

- *A substantial number of children are achieving at a high level in every grade and subject, and at every IQ level.*
- *A significant number of children are underachieving in every grade and subject and at every IQ level.*
- *The percentage of underachievers rises significantly from lower to higher grades.*
- *There is greater underachievement in those children with lower IQ's.*
- *A number of underachieving students with higher IQ's are not presently being identified in any systematic way within the school system.*

The committee feels these results are important because the two findings reinforce each other. The statistical significance of the results strongly suggest that, in spite of the unreliabilities of IQ and achievement testing, declining performance with increasing grade level is something we should be concerned about.

To determine if IQ-corrected differences in achievement exist, schools were grouped into three categories -- large (Bridge and Bowman), very small (Hancock and Munroe) and medium (the seven other schools), and the same 427 student sample was used. Eighteen analyses of covariance were performed. The conclusion reached was:

There is no significant difference between performance on standardized tests for students in large and medium schools.

¹ See Appendix for detailed analysis.

No differences appeared for very small schools either; however, because the sample for these schools was so small (19) and was biased by the fact that AP students from these schools were sent elsewhere, no definite conclusion could be drawn.

The Question of Testing

Recently the validity of testing, both IQ and achievement, has been questioned. For that reason a discussion pro and con is included in the committee's report. Having explored both aspects, and studied the testing schedule in our schools, the committee has reached the following conclusions:

- *As the educational system now functions, information on comparative student performance is needed. Despite obvious limitations, standardized achievement and ability tests will continue to be used. However, testing every year grades 3 through 8 seems excessive. The committee suggests that testing in every other grade (3-5-7) would be sufficient.*
- *Publicizing test results to allow citizenry to "keep a watchful eye" on the schools would not serve any useful purpose in Lexington now.*

The principal drawback to publishing results is the process set into motion by such publication: (i) it places pressure on teachers to coach students so they get higher marks on the tests (whose questions do not change from year to year); (ii) test results become a primary criterion in evaluating teacher performance (a situation which would strain anyone's integrity); (iii) the educational program tends to focus on very limited areas.

We should point out that there are alternatives to standardized testing which more and more educators have endorsed in recent years. The one which appears most useful to the committee is that which expresses educational achievement in terms of behavioral objectives and criterion-referenced evaluation. This is based on the belief that the purpose of education is not to determine who learns more and less of a given subject, but rather to see to it that "each student in a given class can be expected to master successfully the behavior specified in an objective." The foundation rests on the setting up of behavioral objectives which (i) help administrators insure that content and subject matter are adequately covered and there are minimal overlaps between courses; (ii) promote consistency and a thread of continuity through the years; (iii) help teachers determine the most significant aspect of the subject matter to be learned and to aid in establishing criteria for measuring achievement; (iv) help school committees by presenting members with a concrete representation of the educational program; (v) help parents understand what is expected of a child during the coming year.

IV E. Educational Process

In any social organization, relationships between the constituent groups in the organization play an important role in determining its success. One reason for this is rather simple: How people "feel" about others with whom they work or deal affects what they do and how well they do it. It is perhaps more important to note that the pattern of human relationships in an organization influences heavily the character of the organization and thus helps to shape or mold its individual members.

These observations have special significance for a school, since -- unlike most other organizations -- a school exists for the express purpose of playing a role in the development (i.e. the shaping) of most of its members.

IV E. 1. Staff Morale

We have found staff morale and relationships within most of the elementary schools is very good. (68% of staff believes morale in "their" school fosters the educational process).

Our observations in the schools reinforce teacher assessment; the very positive relationships contribute substantially to healthy learning climates inside most of the elementary schools.

There is however, a serious erosion of morale systemwide which stems from several sources:

- *Staff is seriously concerned about School Committee decisions and attitudes.¹ They feel their professional performance is under attack by the Committee and some parents.*
- *Parent expectations of what schools can do is unrealistic when teachers are inundated with paperwork, Ch.622, the exigencies of Chapter 766 and insistent demands for more and more from the town.*
- *An over-riding concern to save money without apparent concern for educational quality, the suspension of merit awards, what appear to be arbitrary cuts of specialists, summer workshops, etc., discourages staff deeply.*
- *The school closing issue effect on buildings which might be closed as well as those which will absorb students creates uneasiness across the system.*
- *The absence of clearly articulated educational priorities and objectives from the School Committee and administrators is sorely felt.*

¹ In the committee's staff survey, 59% of teachers said that School Committee/staff relationships hinder the educational process in their school. On an open-ended question asking them to describe weaknesses of the school system, 54% of teachers cited the School Committee. See Appendix A of the committee's report.

- The instability of the current transient period also contributes to low morale.

It seems important that something be done to improve School Committee/staff relations, and it appears to the committee that it is up to the School Committee and the new Superintendent to take the initiative. In fact, the committee recommends that two initiatives be taken. First, an attempt to clarify for the staff the basic directions in educational development which will be followed in the next few years. Second, the improvement of channels of communication between the staff and the School Committee. Serious consideration should be given to instituting some regular meetings between the staff of each school and (some) members of the School Committee, preferably meetings within the school which do not take place at the time of pending budget decisions.

IV E. 2. Students' Perceptions

There were several questions on the committee's elementary student summary which dealt with individual or group relationships and attitudes. The students (72% of them) felt that their parents were very interested in what happens in their school, and this was uniform over the schools. When asked whether school is fun, 39% said it was often fun. This percentage was higher (48%) for students in small schools.

The comments which students volunteered on open-ended questions show that they regard some aspects of human relations as an important part of school. In response to the question "What do you like best about your school?", the students mentioned a broad range of things: specific subjects, recess, the building, gym, special activities, etc. But, in spite of the open-ended nature of the questions, approximately 32% of the students mentioned some form of adult relations and about 11% mentioned relations with other students. When asked what they like least about their school, about 11% mentioned adults (teachers, aides, principals, etc.) while approximately 5% mentioned fellow students. When asked what they would change about their schools, about 15% mentioned adults while 4% mentioned peers.

These percentages varied considerably from school to school and there does seem to be a pattern which indicates clearly that, in the students' eyes, their relationships with adults and peers are more rewarding in Hancock, Munroe and Parker than in the other eight schools.

IV E. 3. Committee Observations

The pattern observed in student responses was repeated in the reports of the committee's interviewing teams: With a few exceptions, relationships between teachers, principals and parents in our elementary schools are in good health and the atmospheres of the schools are alive and exciting; yet, there are three schools in which the atmospheres and relationships have a warmth and vitality which simply places them on another level. These schools are Hancock, Munroe and Parker. The intimacy, involvements, cooperation, mutual

support and unity in these schools are remarkable. Two questions about this phenomenon have been important for the committee's work.

What is it about (most of) Lexington's elementary schools that promotes good human relationships, and what are the special circumstances at three of the schools which place the quality of the relationships on another level?

Should the generally high quality of human relationships in our schools be viewed as one of the strengths of the Town's educational program?

Out of the many factors which influence patterns of human interaction in important ways, four seem to the committee to be important for Lexington schools in general: quality and dedication of teaching staff,¹ size,² location, principal. Two physical characteristics of the three schools which have been identified are the things which distinguish them from the other eight schools. The committee is convinced that it is these things which further enhance human relationships in them. Each has a small student population (under 275) and is a neighborhood school. (This is to a certain extent corroborated by the committee's assessment that the quality of human relationships at Adams is not too far behind those at Hancock, Munroe and Parker.³) School size will be discussed further in the next section. Here, it will suffice to say that a student population of, say, 250 or less makes for a school its members can "know", that is, a school in which almost everyone knows almost everyone. This is reinforced by the neighborhood quality of a school, which also contributes to a sense of belonging and increased parental involvement of a constructive nature.

But, does all this affect the quality of education? The committee's work discovered no significant difference between schools in terms of student performance on tests of basic skills. For reasons explained in section IIC4, the analysis was inconclusive as far as small schools are concerned. But, even if it had been, our answer to the lead question of this paragraph, could not stop there. For, what is education? A better way to put the education question is: For which parts of it are schools responsible, in whole or in part? Instruction in basic knowledge and skills, surely. What else? On the committee's citizen questionnaire, parents of elementary school children rated in importance seven aspects of education.⁴ Two of the seven were, "human relationships" and "building confidence". Each of these was rated important or very important by at least 84% of parents (92% of those who rated the items.) It is evident that parents expect the schools to contribute to the education of their

¹ As has been pointed out, these are heavily influenced by the organizational plan, which allows the schools to be semi-autonomous.

² By the standards of many school systems, the present student population of Lexington elementary schools are not large.

³ Adams draws from two districts but definitely has the spirit of a neighborhood school. Its student population is larger (343).

⁴ All seven had been identified by teachers as important.

children in ways which go beyond instruction in basic skills and knowledge, and, therefore, that the quality of the human relationships in a school is an important criterion by which the strengths and weaknesses of the educational program must be judged.

The committee concludes that the quality of the human relationships in the elementary schools in general, and at three schools in particular, is one of the strengths of the educational program in Lexington.

IV F. Physical Facilities and School Size

We come now to a discussion of physical characteristics of schools and their effects on education. Does the size of a school affect the type of quality of education a student receives? How important are various physical facilities in providing education of high quality? With such questions in mind, the committee has sought the views of many people on facilities and size and has made some investigations of its own. The discussion begins with a summary of the data and opinions from several sources then extracts a few key things from the tangle of inputs and presents the conclusions which the committee has reached.

IV F. 1. Summary of Attitudes

Teachers and administrators were asked the same questions on physical facilities and school size.¹ The topic was approached more indirectly with the elementary school students, but many spoke directly about the facilities at their school. Citizens were asked in the Citizens Survey to place facilities, equipment, and materials in a list of priorities.²

School Size and Age

Administrators and teachers felt the optimum size for an elementary school to be between 200 and 500 with a slight preference for the 200-350 size. Teachers in the smaller schools voted heavily for the smaller sizes (69%). Only 15% of the staff felt size made no difference.

On open-ended questions, 12% stated the small school is a definite strength in its promotion of (1) close association among children, teachers and parents, (2) pride in the school, (3) neighborhood spirit and (4) personal warmth and a friendly atmosphere.

¹ From the school-wide survey of 450 teachers and administrators, the following groups were formed and examined:

- 116 elementary teachers; 21 from large schools, 65 from medium size (350-500), 16 from small (200-350), and 14 from very small schools
- 110 junior high teachers (Their opinions on optimal elementary school size are noted in this section.)
- 30 administrators; 12 elementary, 4 junior high, 5 senior high, 5 with grades 7-12 responsibility, and 4 with grades K-12 responsibility. 51% were in schools over 500, 38% in schools 350-500, 11% in schools 200-350, and 3% in schools of less than 200. See Appendix A.

² See Appendix B for the complete summary of citizen responses.

Elementary students (62%) felt school size mattered little or not at all; 34% said it mattered some or a lot. However, many students were uncertain whether they were in a large or small school and except for Munroe and Hancock students, preferences stated were for new, large schools:

"I am happy at this old small school, but I would like to go to a new big school."

"I like a medium sized school like Bowman."

"I don't care about large, small, old, new. It's what you learn in them and if you are happy in school."

It's small so you get to know your teachers well and you are not just numbers on a file like in a big school."

Students (50%) felt the age of a school matters little or not at all and 46% said it matters a lot or some. School age was more important to students in the large, newer schools:

"I would like to go to a big, new school but with the same kids."

"It's new, challenging and pretty exciting."

Physical Facilities, Equipment and Materials

Most citizens (50%) thought diverse school facilities and size did not matter; 34% preferred diversity while only 8% preferred equality in facilities and size.

Superior facilities, equipment and materials were placed last when citizens listed their seven educational priorities, yet 69% thought them important or very important.

Elementary teachers and administrators felt that physical facilities do affect the educational process, particularly those teachers in the newest schools (71%). Only 13% of staff felt facilities had little effect. Most teachers felt that renovations would allow greater program variety and that those renovations suggested in the 1974 Ad Hoc Survey would best serve the educational program.

	<u>Elem. Teachers</u>	<u>All Teachers</u>	<u>Admin.</u>
Renovating as specified by parents & teachers in Ad Hoc Survey	42%	37%	37%
Following School Facilities Study	17%	16%	29%
Closing older schools when students can readily fit in another	15%	17%	

	<u>Elem.</u> <u>Teachers</u>	<u>All</u> <u>Teachers</u>	<u>Admin.</u>
Renovating older schools	21%	17%	
Keeping schools as they are	5%	6%	

Staff felt overall that newer schools provide more educational advantages (82%) than older schools provide (61%). (20% of teachers in large schools did not judge "older school" advantages.) Staff rated classroom space excellent or satisfactory in general, but 64% of small school teachers felt it needs improvement. Teachers and administrators and students agreed that auxiliary space needs improvement, particularly libraries, tutoring space, gyms and auditoria in small and medium sized schools. Poor gyms and playgrounds showed up in student responses from Hancock, Adams, and Parker as things they would like to change.¹ At Fiske, Franklin and Munroe students appreciate their good playgrounds while parents and students at Bowman emphasized the need for a better playground. Students at Hastings, Fiske, Estabrook, Bridge and Bowman listed the library as one of the things they like best about their school.

Students generally were very definite about other areas they felt needed improvement; clean bathrooms with doors for privacy, less noisy lunchrooms (especially at larger schools), clean, colorful walls and rooms. Teachers mentioned dreary corridors and lack of electrical outlets and sinks in classrooms.

In the last 20 years, educational programs have assumed a variety of frameworks and emphases; classrooms have changed to scenes of active participation from straight rows of children dependent primarily on pencil and paper. This has resulted in an "acoustical overload" in some of the older schools and certain limitations; i.e. a poor library hinders the educational program where independent research is important.

As one teacher said:

"Mechanical and physical facilities ease the process somewhat: space and flexibility allow for more diverse programs and teaching formats."

Another teacher put it all into perspective:

"Leadership is most important; it can make a success of an old school, or a disaster of a new one."

¹ Since the surveys, the gym situation at Hancock has improved significantly.

IV F. 2. Conclusions about Facilities

There is considerable diversity in the physical facilities of the eleven elementary schools. This is hardly surprising, since Hancock opened in 1891, four schools opened in the period 1904-1931, four in the period 1949-1961 and two in 1966-67. What the committee did find surprising is that, even during the period of expanding enrollments, so little seems to have been done in the way of renovations in the pre-World War II schools. As a result, when asked in conjunction with the recent School Facilities Study what their physical needs were, staff in the older schools developed rather extensive lists: gyms, auditoria and auxiliary space of various sorts were lacking in some of the older schools; libraries and rest-rooms were in need of expansion or improvement. The committee's inquiries into these matters, many of which are reflected in the summary of the previous section, revealed three interesting patterns.

First, the intensity with which the need for these facilities is felt has varied, depending on the time at which the questions were asked and the context in which they were placed. When information was solicited for the Facilities Study, improvement of education was assuredly understood to be the basis for response, but the context was more or less "what would you like to have if you could have it". When the threat of school closings was in the air (and the committee's staff survey was taken) deficiencies in facilities in older schools were being weighed against the educational merits of the schools, and although teachers still felt facilities to be important, a "we'll make do" attitude had set in. By the time of the committee's in-school interviews last fall, fewer teachers cited physical facilities as weaknesses of their schools and many of those who did focused on items such as inadequate library space or poor acoustics in classrooms, which were more clearly of direct relevance to education than some which had been mentioned earlier. Furthermore, major facility concerns were almost as prevalent at newer schools as at older ones.

The second interesting pattern is that, even after an allowance is made for defensive responses in schools which might be closed, it appears that teachers in the newer schools attach more importance to facilities (and equipment) than do teachers in the older schools. This is a common pattern with people, one which the committee members decided was best described by Helen Grush's grandmother, who used to say, "One want supplied makes room for another."

The third pattern is especially interesting to the committee, because it is quite similar to teacher response to the lack of basic teaching materials which was discussed in section IIIB. The staff of each school has been very creative at adapting to what is available and, in many cases, turning apparent defects into assets. At Fiske School, part of the science program takes place in a corridor lobby. At Hancock, the principal and a few volunteers cleared the top floor over the summer and thus made it function as a gym. At Adams, it is amazing what has been done with closets and in place of closets. All across the system, rooms and corridors are used in

imaginative ways. The committee has been impressed at what people who are dedicated to teaching can do and at what they can do without.

And yet, there do remain some problems with physical facilities which will need attention. The committee has not made a systematic study of facilities. It has noted that there are a number of physical problems which are detrimental to the educational process and small enough to be attended to without great cost, e.g., the acoustic problems in the old wing at Franklin. Where small quantitative space needs are involved, e.g., library space, declining enrollments should help. Surely, a modest plan of renovation over several years could complete the correction of these things. The committee would like to point out that, based upon its interviews in the schools, it appears that development of such a "modest" plan will require going back to the schools (or the Ad Hoc reports prepared at the schools) to identify needs which fall into the "small but serious" category.¹

What about more large-scale differences in facilities? From the point of view of education, is it important to try to iron out such differences, i.e., to "equalize" facilities in the schools?²

The committee's major conclusion about physical facilities is the following. The two major responsibilities of the schools are (i) to instruct students in the knowledge, skills and concepts basic to functioning as an adult in the society, (ii) to provide an environment and an educational process which promote good human relationships and enhance the development of such attributes as self-confidence, empathy, etc.³ Proper facilities are necessary for carrying out both of these responsibilities. The committee's work indicates clearly that, in the context of Lexington today, facilities should not be a primary educational issue because: (i) the (newer) schools with the most adequate facilities are no more effective at teaching "basics" than other schools (section IVD); (ii) the best educational environments and relationships are at the three schools with facilities which are deemed least adequate (section IVE).

IV F. 3. Equipment and Materials

The committee found the lack of materials, supplies and small equipment in some schools rather appalling for a town that prides itself on the quality of its school system. Teachers without maps or globes, without up-to-date textbooks, with duplication processes that produce virtually unreadable copies of worksheets they depend on -- these are things which almost have to be seen to be believed. The committee has made no study as to why these situations exist. But some schools have bountiful materials and supplies

¹ There is a strong feeling in the schools that their inputs were not properly taken into account in the School Facilities Study.

² This was the rationale behind the School Facilities Study.

³ More will be said about these two responsibilities in the next chapter.

while others have to skimp on things that are vital to the educational process. Part of the explanation may lie in the policy of allocating resources for materials and supplies on a dollars-per-student basis, which gives smaller schools much less flexibility than larger ones. Part may be due to past principals, who were less assertive. In any event, the committee feels strongly that this situation should be remedied as soon as possible.

IV F. 4. Conclusions about School Size^{1,2}

Two of the committee's conclusions about the effects of school size on education have been presented in sections IVD and IVE:

-There is no significant difference between the performance on achievement tests of students in large (500-700) and medium sized (300-500) schools.

-Human relationships are significantly better in small schools (under 250) than in large or medium sized schools.

Three comments must be made here. First, the committee's analysis also showed no significant difference in performance for students in small schools versus those in medium and large ones; however, the sample size for small schools and the bias created by AP students being absent from the sample for these schools did not allow firm conclusions to be drawn. Second, the study leading to the first conclusion was based on data from the period 1968-73. At present, no Lexington elementary school has as many as 500 students. Bridge and Bowman now have 455 and 481 pupils respectively, whereas they were over 500 during 1968-73 (Bowman had 700 pupils at one stage.) Third, the student populations in our schools have been changing. Most, but not all, are going down. This is one of several reasons that the demarcation numbers 250, 300, 500, must be interpreted flexibly.

What does school size affect? It seems convenient to organize the rest of the discussion around the advantages and disadvantages of smallness of school population.

Advantages of Smallness

School size affects the pattern of human relationships in the school.³ When the student population is under 250 or so, the principal knows almost all children by name, the children can know most teachers, not just those who teach them, most of the teachers know most of the students, and parents who are at all active in the

¹ The term "school size" is being used here as shorthand for "the size of the student population in the school." Of course, the size of the physical plant usually is correlated with this, but the number of students is the principal thing being discussed here.

² As this report was being written, the committee became aware of a 1973 study of the 200,000 pupil school system of Montgomery County, Maryland, which reached educational conclusions very similar to those we are about to describe. As of this writing, the committee has not seen the report, but has the abstract located by a computer search of the literature on school size.

³ This includes relationships with the parent group.

in our Town. We do feel there is trouble just ahead unless we take time to reflect on what we have been expecting of our schools, how we may have to modify those expectations, and how the schools may need to modify their conceptions of what they can realistically accomplish. The current Lexington Public Schools' statement of goals contains a sentence which describes what the schools are trying to do at present:

"To provide a curriculum based on explicit instruction in subject areas, learning skills, and the skills of communication, as well as implicit instruction in social relations, behavior, mental and physical health and citizenship."

The sentence makes clear something most of us are aware of, namely that the schools now have two purposes, explicit instruction in knowledge and skills and "implicit instruction" in human development (behavior, relations, emotional development, and a few values). The second purpose needs to be examined in the light of what the committee learned during the past year. What should parents reasonably expect schools to do with "implicit instruction" in these areas? What can (or should) schools attempt to do with them?

Two general answers resulted from our study: Parents expect too much of schools and teachers in the area of human behavior and development, and schools should be more realistic about what they can do. A reordering of priorities for school staff and the system is clearly indicated in the data gathered. We should expect that school atmospheres as well as the way schools are organized and subjects are taught will reinforce certain human qualities, attitudes and behavior. But we need to move farther away from the idea that teachers "instruct" children in such matters and closer to the idea that this part of a child's development is primarily the responsibility of parents.

From the evidence the committee has gathered, the schools are doing a very creditable job now. If we can (i) agree on the (ideas behind) these statements of purpose, (ii) set priorities, (iii) clearly define specific educational objectives and (iv) give teachers what they need in order to work toward those objectives, education in Lexington may avoid an extreme swing of the pendulum (which could be very damaging) and draw nearer the basic goals:

- provide instruction for each child in the knowledge, skills and concepts basic to functioning as an adult in the society;
- provide an environment and an educational process which promote good human relationships and enhance the development of qualities which are important for mental and physical wellbeing.

V B. Priorities

Teachers, citizens and students in Lexington agree that the first purpose listed above is the primary one. They also agree that

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the single most important ingredient schools must have to carry out their responsibilities and begin to meet that objective is high quality teachers.

In the Citizen Survey 2,000 citizens rated educational priorities. The seven items they were asked to rate in importance were based on the choices 450 teachers had listed as the three most important goals for our schools. Citizen and teacher ratings are given in Table VII on page 106 of the committee's report.

Three substantial differences between the two lists should be noted. First, facilities, equipment and materials are more important to teachers than to citizens in general. Second, teachers rate basic skills sixth, and citizens rate them second. Third, citizens rate varied programs and diverse teaching styles sixth, while teachers give it third place. Committee interviews in schools indicated that one reason "sound basis in basic skills" is sixth in the teachers ordering is that many teachers took this goal as a given and chose items they felt might be overlooked. But there was no doubt that teachers and citizens agree on what the primary purpose of the school is. The different ratings given facilities, equipment and materials may be due in part to the fact that citizens tend to take these as given.

Teacher response to diverse programs and teaching styles reflects the fact that it has been the conscious aim of the system for many years "to individualize instruction to best meet the needs of each child". Parent response presumably indicates some concern that we may have lost sight of what the instruction is for, be it individualized or not. But the differences need not be competitive if the schools and community can agree about where we are going and how we plan to get there.

Similarities must be mentioned also, Citizens rated every priority identified by teachers as being important, but some things were rated more important than others: quality teaching staff and sound basis in basic skills are very important, while physical facilities are only "important". The consistent pattern of citizen responses denotes very clearly what priorities should guide our future educational program: high quality teachers should stress basic skills and provide excellent career or college preparation first, then perform competently in the other areas.

V C. The School Closings Issue

Proposals to close some of the eleven Lexington elementary schools have been stimulated by three concerns. The first concern is financial -- the desire to run the school system as economically as possible and, more specifically, to reduce administrative and plant maintenance costs. The second is the desire to provide more and better physical facilities for students (and teachers) who are now in the older schools. The third is the desire to equalize the physical facilities in the (remaining) schools and thus provide

"equality of educational opportunity" for Lexington's students. The immediate motivation for an increased concern with these things has been the fact that enrollments have been declining, so that we may not need all of the physical space or all of the staff we now have.

The committee has consistently borne in mind that these are difficult financial times for all of us and, therefore, that any recommendations made must be financially realistic. As a result of its work, the committee reached two general conclusions about costs: (i) we must get our educational priorities straight before general financial considerations can be reviewed in proper perspective and before we can see what to do in the face of declining enrollments; (ii) there does not seem to be an abnormally high level of concern among the citizenry about school costs.¹

The committee looked hard at the question of the importance of physical facilities to education and presented major conclusions in section IVF: *there is no evidence that the quality of student education would be improved by closing one of the older schools and transferring its pupils to one of the newer schools. On the contrary we have found just the opposite; because the older schools are also the smaller neighborhood schools, the students would lose something which is educationally important. This is not to say that students in older schools are oblivious to physical facilities or the need of paint or repair; students at Adams, Hancock, Munroe and Parker, the four oldest schools mentioned facilities significantly more often as things "liked least" about their school than did students in the other seven schools.*² Nor is it to say that teachers in older schools do not see the need for physical modifications and repairs. But these are of very small significance educationally.

*This last point should be underscored, not by reviewing the advantages found in the older, smaller schools, but by citing the most dramatic case of older facilities versus quality of education. By almost every measure of educational effectiveness the committee reviewed, the Hancock School, opened in 1891, is the outstanding elementary school in Lexington.*³ *We are convinced that the circumstances which combine to make it so could not be reproduced (and have not been) in any facility which was significantly larger or located out of the neighborhood from which its children are drawn. The deliberate closing of such a school would be an act of educational folly. In educational terms, Hancock is the last school which should be closed.*

The committee has not investigated why maintenance and small-scale renovations have been neglected at the older schools for some time, but someone should. It appears that we have been operating

¹ See Appendix B.

² Gyms and bathrooms were their main concerns. See Appendix A.

³ See Appendix A.

for years with an unstated policy that more is better (bigger, brighter and shinier facilities). The threat of school closings has made many people - teachers, parents, students - reconsider what is important in education. We strongly recommend that the policy of neglect should be seriously re-examined in light of our findings on the educational effectiveness of large versus small schools.

To provide "equality of opportunity", the most important steps to be taken in the schools are:

- to establish specific educational objectives in major curricular areas, maintain classroom teachers of equally high quality in all the schools, provide them with the materials they need to do their jobs well and see to it that they do them;
- to provide in each school the best human environment possible.

"Equality of educational opportunity" does not mean homogeneity of physical facilities, organization or teaching formats.

The only aspect of physical facilities we have found which does bear on equality of educational opportunity, to a certain extent, is school size. The committee recommends that every reasonable effort be made to keep elementary school sizes small in Lexington. Given the present facilities, this means two things: (i) that every effort be made to keep the existing small schools open; (ii) if enrollments drop significantly in larger schools, ways should be explored to utilize parts of their physical plants for other purposes.¹

V D. Recommendations - Program and Process

The committee throughout this report has discussed the two purposes of the Lexington schools as well as system strengths and weaknesses in educational program and process, and has made specific recommendations in each area. These are summarized below.

The autonomy and diversity of our elementary schools is one of the uniquely valuable characteristics of our school system. Its preservation should be given high priority. The basic organizational scheme of the Lexington system started in the sixties, to allow school and teacher autonomy but provide town-wide frameworks, is fundamentally sound. It does encourage teacher creativity; it does allow for greater diversity in teaching styles to better meet the needs of each child; it has helped attract high quality teachers to Lexington. But it does have some problems which need attention. Educational programs need greater coordination between grades and across the system; educational objectives in each program area need to be clearly defined; teacher resources need to be more readily available. These ends can better be accomplished by:

¹ Administration offices might be one possibility.

- Creating full-time curriculum coordinators in several major areas. Having principals act as program directors is not realistic. Curriculum coordinators should develop town-wide frameworks more fully, oversee the preparation of materials for the classroom teachers, create better channels for exchanging ideas and materials among teachers, work with teachers in the implementation of new programs and continuously evaluate educational programs. Coordinators should ideally be master teachers with extensive knowledge and experience in their subject areas. They should work closely with principals and teachers and be accountable to a central office administrator.
- Establishing a Curriculum Resource Center to provide the kind of learning resources and support which would enable the classroom teacher to spend more time with children.
- Deciding if Lexington is to continue developing curriculum to any great extent. If so, sufficient funding, more teacher-released time, summer workshops and program implementation should be amply provided. If not, then a decision should be made which clarifies what new directions will be taken.
- Using the "mastery learning" approach in program areas where a large component of what is to be learned consists of skills. Mastery learning provides greater continuity in a student's education and is in keeping with current citizen priorities. It can provide clearer communication with parents and greater teacher accountability in the system. Since the approach would be used only in town-wide frameworks, ample room is left for individualized learning and individual teaching styles.
- Appointing an assistant superintendent with responsibility to
 - (i) keep in close contact with elementary staff and act as a liaison between the eleven schools and the central office;
 - (ii) be responsible for curriculum coordination and implementation;
 - (iii) ensure a sharing of resources, ideas and planning at all elementary levels;
 - (iv) work to improve staff, parent, administrative and School Committee communications;
 - (v) ensure research and development to provide continuing staff growth in educational process and practice;

- (vi) *be responsible for stimulating in-service teacher training programs;*
- (vii) *ensure continuity between the 6th and 7th levels where interface is sorely needed.*
- *Implementing a systematic procedure to ensure greater accountability for students, teachers and administrators. The present arrangement is uneven and insufficient.*
- *Reviewing the whole question of specialists:*
 - *Is it more educationally sound to lower pupil-teacher ratios and provide training for classroom teachers so they can better handle challenges within the classroom?*
 - *Or should we assume teachers' responsibilities will be limited and continue to rely heavily on specialists to supplement many areas of learning and to deal with behavioral aspects?*
- *Using resources and talents within town more extensively. Sporadic and duplicating efforts have been made to do this. Lexington is a town uncommonly rich in human resources, which still remain largely untapped by the schools. One staff member should explore, coordinate, and make full use of this enrichment by channeling these resources into areas where teachers and students can enjoy them fully.*

We are convinced that necessary changes can be made under strong, creative leadership by shifting resources and redirecting efforts. Resources need not be new or additional for the most part. The school budget need not increase substantially over the next few years, except to keep up with inflationary pressures. There is little sign that the citizenry is clamoring for reduction of the school budget or that they are eager to pay more for their schools.¹ They feel about the "right amount" is now being spent.

- *The Superintendent should make a concerted effort to reduce personnel in areas where it can be done without increasing class size or decreasing services which directly aid the classroom teacher.*
- *For the next few years, where staff reductions do occur because of declining enrollments, resources should be channeled directly into curriculum coordination and implementation and the articulation of a K-12 master educational plan.*

And, finally, Lexington citizens, educators and students have endorsed above all else the utmost importance of hiring top quality staff. False economizing by employing lowest salary applicants to teach Lexington children will only insure long range educational deficits. As one youngster in elementary school said, "I mean, if you don't have good teachers, what's the good of going to school?"

¹ See Appendix B.

