Methodologies used in studies dealing with curriculum in four big-city school systems (Washington, D.C., Columbus, Detroit, and Cincinnati) are compared. The Washington study receives the most attention. The comparison is somewhat hampered by lack of detail about what was done and the techniques and instruments used. All four studies imply that curriculum and the instructional process consist of many components other than course offerings, and all rely on descriptions of students, teachers, syllabi, prescribed curricula, and materials. Little was done to analyze the interactions and relationships among the various elements of the instructional system. Each study presumes that curricular changes, improvement, and upgrading can all be generated within the present system. None of the surveys recommended a radical reconstruction that would result in totally new programs, new support systems, or use of new personnel or material resources. Finally, although the studies suggested directions for change, they neglected the sequencing and timing of steps to implement these recommendations. A survey using a PERT approach is suggested to help overcome this latter limitation. (HW)
Studies of Big City School Systems: A Comparative Analysis of Methodologies -- Curriculum

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In a certain sense, the curriculum is at the heart of most surveys and studies of school systems. Whether we look at racial balance, financial support, classroom organization, administrative structure, personnel resources, or other aspects of the city system, we are or should be concerned with how these relate to more effective schooling. Of course, curriculum is defined in many ways -- or, at least some operating definition guides making decisions as to what kinds of data will be sought, how these data will be analyzed and interpreted, and how findings will be reported and recommendations stated.

In the Washington Study, the focus was on the total educational program -- the forms, structures, processes, resources, support systems and means of delivering educative experiences to the District of Columbia population. In the proposal which served as the basis for the contract, the Study Staff accepted "as the prime objective and, therefore, the focus of its efforts, the examination of the fundamental questions of what kind of education must be provided for the District's school population and what is required to provide this education." This statement represented an endorsement of one set forth by the D.C. School Administration.

This paper was presented at a symposium at the American Educational Research Association meeting in Los Angeles, 7 February 1969.
The single objective of this study is to develop an exemplary school system for the District of Columbia and a plan for moving from our present level to this desired level of educational service. By an exemplary school system we mean a school system which will meet the measure of our Nation's fundamental philosophy that all citizens have full and equal opportunities to develop their abilities, limited only by their natural endowments and their personal ambitions.

Thus, in proposing to undertake a comprehensive study of Washington's schools, we agreed that "all aspects of public education in the District -- pupil population, professional staff, instructional program, materials, organization, services, plant, resources, finances, community relationships, work with non-school agencies -- would be considered in relation to the quality of the educational program." To the extent that critical study of curriculum is at the heart of quality education, all of our efforts were curriculum-directed.

We were also sensitive to the impact of many factors other than subject offerings that affect what is learned and how. Washington is a de facto segregated school system (more than 90% of the students are black), the city has large areas of sub-standard housing, hard-core unemployment, an unusually high crime rate, and all the other pathologies of the ghetto, located side by side with affluent signs of federal activity in the nation's capital. Obviously, the curriculum, in the sense of learning opportunities, was not confined to the classroom nor could our study of the curriculum. One of the first steps the Study Steering Committee took was to identify the components of the system we thought must be studied, invite the specialists to head up some 33 "task forces" in these areas, and begin to plan.

For operational purposes, the task forces were divided into two groups -- one consisting of persons dealing with "The Schools, the Community and the People,"
and the other "Instructional Quality -- Teaching and Learning." The task forces
within each group, identified by short title, were as follows:

I. The Schools, the Community and the People

The District of Columbia -- Its Demographic and Communal
Characteristics
Community Attitudes and Perceptions
The Pupil Population
The Instructional Staff
Professional Staff and Central Office Organization
Continuing and Higher Education
School Plant and Facilities
School Finance
Adult and Community Education
School and Agency Relationships

II. Instructional Quality -- Teaching and Learning

Reading, Literature and Language Arts
Mathematics
Social Studies
Science Education
Art and Aesthetics
Health, Physical Education and Recreation
Vocational and Technical Education
Pupil Personnel and Welfare
Instructional Materials and Resources
Pupil Progress, Evaluation and Reporting
Organization for Instruction
Desegregation and Integration of Schools
Special Education and Related Services
Curriculum Development and Program Innovation
School Organization
Early Childhood Programs
Elementary Education

In the Foreword to the final report, we condensed our methodology into a
short paragraph as follows:

The study was conducted by 33 task forces, each headed by a specialist...
Task force chairmen, aided by consultants and graduate students, visited
classes and schools; interviewed students, staffs, members of the community
and school and community leaders of many kinds; administered questionnaires and inventories to pupils and staff members; examined pertinent school records and other school data; analyzed existing instructional resources and materials as well as curriculum bulletins and guides; examined reports and records from other agencies and offices; and drew on appropriate data sources wherever they could be found. Since the District schools are surely among the most surveyed and "investigated" in the nation, earlier reports were studies as well -- from the report of the Advisory Committee on Education (1938) on down.

Several meetings of the task force chairman were devoted to discussions of how to proceed methodologically in the critical analysis of "what is, what ought to be, and how to get there." Each of the task force chairmen submitted a "proposal" which indicated how it proposed to undertake its part of the study, what kinds of data it would need, how these data were to be gathered. The Study had a resident staff in Washington of six research assistants whose prime responsibility was to gather data and make contacts for the task forces. Certain basic data were available from the D.C. Schools' Office of the Statistical Analyst and the Department of General Research, Budget and Legislation. However, other data were gathered directly by or for the task forces; these will be discussed in more detail later.

On the basis of the requests from the task forces in Group II (Instructional Quality -- Teaching and Learning), the Directors and Supervising Directors of all subject areas and special programs met with the Study Director to discuss the study and were asked to supply information and details concerning:

a. Curricula, including guides, bulletins, etc.
b. Differentiated programs for various track and ability groups.
c. Provisions for individualization and differentiation.
d. Instructional materials and resources.
e. Pupil population, teacher-pupil ratios of various grade levels.
f. Testing and assessment programs.
g. Teaching staff.
h. Other instructional resources.
i. Program planning operations.
j. Unusual programs.

Needless to say, this assignment was carried out quite differently by the subject matter and special program directors. Some used it for program self-assessment while others supplied the bare minimum of information.

In January 1967, all of the schools were closed an hour earlier than usual to facilitate administration of instruments to assess the attitudes and expectation, background and experiences of the District's professional staff. The 21-page questionnaire, prepared for the Study by Columbia's Bureau of Applied Social Research aimed at getting information in a variety of areas such as views on the tracking system, the educability of District children, factors impeding and facilitating teaching, sources of support for teaching, professional preparation. A total of 6225 teachers (98%) and 438 school officers (91%) completed the questionnaire. Twenty-five elementary schools (drawn from total 132), eleven junior high schools (drawn from total of 28), and all eleven senior high schools and one vocational school provided a sample for intensive analysis. Teacher responses were analyzed in terms of four variables -- race, track most students are in, licensing status and sex. Cross-tabulation were also made on some items. Then, using the individual school rather than the teacher as the unit of analysis since school contexts are known to exert strong influences on both students and teachers within them, rank order correlations were computed on some 63 variables.

Each of the task forces followed its own approach once this had been approved by the Study Steering Committee. For example, the group looking at the Elementary Education Program saw its responsibility as follows:

...to look at the program whole, watch for balance and continuity in the curriculum and how things fit together, study the in-between
times and the things that fall between people and subject areas, be concerned with classroom climate, the level of intellectual activity in classrooms, the amount of self-direction encouraged, the ways individuals are taught, the ways materials are used, the range of skills being worked on (social as well as intellectual), etc., etc.

The five professors and twenty-three students made the study the focus of a doctoral seminar. On the basis of visits to schools in Washington, one of the staff members prepared a paper addressed to the question of formulation of categories for observing and criticizing elementary school curricula. This and other papers were used by the group to develop a guide for observation and interview, to set up criteria for judging what they observed, and to prepare recommendations. After visiting classes selected on random basis, each of the doctoral students prepared a substantive report. These papers were the basis for the report submitted by the chairman of the task force.

As part of its study, the Task Force on Special Education, consisting of four faculty members and thirty graduate students, tested the entire second grade population in each of three schools for audio, visual, and other possible physical or mental handicaps. The findings concerning the individual pupils were shared with the schools in addition to providing data for the report.

In addition to considerable interviewing and observing, questionnaires were administered to persons in the following areas: (a) secondary school teachers of English, (b) language arts teachers in elementary schools, (c) science teachers at all levels, (d) mathematics teachers at all levels, (e) pupil personnel workers, (f) school nursing staff members, (g) special education teachers, (h) all teachers sponsoring extra-curricular activities, (i) foreign language teachers. These questionnaires were specially designed to get at the staff's perceptions of curriculum,
teaching strategies, available resources, and educational needs. In addition, a study of the in-service education program included questionnaires to staffs of sample schools. Large numbers of students completed questionnaires regarding their attitudes toward schools and education and extra-curricular activities. A special social studies questionnaire attempted to measure students’ inquiry and problem solving capabilities.

The Task Force on Adult and Continuing Education developed a detailed description of a theoretical model for a large city public school adult education that took into account the unique political and social characteristics of Washington. The staff eventually produced its report which consisted of the description of the model with a listing of desirable characteristics, the criteria by which each characteristic could be recognized and assessed, the data collected, the conclusions and recommendations.

A carefully stratified sample of four hundred persons were interviewed by Lou Harris Associates to assess views of the facilities, services, programs and educational practices as well as their opinions about the willingness and ability of school officials and personnel in the D.C. system to deliver good education. Group interviews, supplemented by questionnaires, involved junior and senior high school leaders and youth who were non-leaders and drop-outs. The latter were reached through youth workers in the community. The youth responded to questions on attitudes toward their own school, rating of teachers, attitudes toward transferring to other schools, recommended changes on program, placement in tracks, school administration, discipline, availability and sources of advice and counsel, availability of books and materials, extra-curricular activities, and Washington as a community in which to live.
In a sense, each of the more than three dozen task forces pursued its own inquiry. From time to time, task force chairmen would meet to discuss emerging findings and possible recommendations. The study proceeded on the basic assumption -- one which might be and probably should be questioned -- that the system contained within it the potential for generating change and improvement and that recommendations could be implemented within the institutional framework. The Washington Study has been criticized on this basis and a symposium could well be devoted to this aspect of large-city studies.

Each of the task force chairmen submitted a report to the Study Director. These reports were not intended to be incorporated into a final report in toto but rather serve as the basis for the preparation of the final report. This was an error for the task force reports varied considerably in length (from a dozen to almost three hundred pages), style, presentation of data, and nature and quality of recommendations. Only a few of them were prepared to stand on their own as documents which could be disseminated to the public. Because some of the task forces had subdivided, there were forty-four reports numbering thousands of pages.

It was at this point that the study design broke down. Although there was some discussion, analysis, and assistance from the Study Committee and from individual task force chairmen, the final report was prepared by the Study Director, practically on his own. He decided what should or should not be incorporated from the task force reports, wrote or rewrote sections, decided which recommendations should be included and, when he felt they were needed, generated his own recommendations. Because of time pressures, the material in the final report went in without further consultation or checking except for a few task force chairmen. The task
forces did not see the final report until it was published. The only positive thing one can say about this single-handed (and high-handed) procedure is that the 593-page report (Toward Creating a Model Urban School System: A Study of the Washington, D. C. Public Schools) was delivered to the Board of Education only ten days late. (In Washington, the report is known as The Passow Report; it should have been the Teachers, College, Columbia University Study Report.)

The point is that the curriculum design into which the data, conclusions, and recommendations were fitted was in the mind of the Study Director who, at least some of the critics have observed, did not clearly communicate his design. The section which deals with curriculum specifically, Chapter II titled, "The Instructional Program in the District Schools," is subdivided into fourteen sections and runs one hundred pages in length. Two other chapters deal with "Curriculum Development, Innovation and Planning" and "Instructional Materials and Resources. The material and recommendations might have been cast in a very different form had they been exposed for critical examination to the Study Committee or their reference groups.

In retrospect, the basic design and data collection processes seem sound but several second thoughts come to mind:

1. Although originally conceived as a cooperative study involving self-study by District groups, this aspect was never really carried out. Joint college-district committees might have enhanced the potential for later implementation. Since recommendations were made for District consideration and implementation, better understanding of the harsh realities from which they emerged and how they might be translated into program might have resulted from cooperative ventures.
2. Continuous, ongoing analysis and discussion of impressions throughout the study could have resulted in better hammering out of critical issues. A study of a large city system by a university group might be used as a seminar in which substantive papers are brought for discussion and refinement so that the bases for a final report emerge.

3. A school survey should obviously contribute to upgrading the school but it should also contribute to the instructional program of the university. Students might have been used far more effectively, learning experiences developed more fully with the study providing both theoretical as well as practical insights. The value to students as well as faculty members of a study are large, especially if there is continuous probing and challenging so that conclusions and recommendations are soundly based on something more than conjecture and generalization.

4. Recommendations need to be examined, placed in some context, criticized, and generally subject to thorough analysis so that they represent something more than one person's best guess. Working papers, carefully prepared and studied, could yield a more cohesive, substantive and meaningful report.

Columbus-Detroit-Cincinnati Studies

The bulk of this paper deals with the Washington Study because the methodology is known to the writer. Since most studies spend altogether too little time detailing the methodology and strategies employed, they can only be inferred from the final report. Since these inferences are based on little information, they can be completely erroneous. One knows that certain techniques and procedures were used
but has no information about how they were used -- i.e., the methods by which data were analyzed and fed into the process for generating recommendations. For example, interviews are conducted but there is seldom any indication as to the interview schedules or how the responses were interpreted for a meaningful input.

The Columbus Study team gathered its information from many sources including 1052 household interviews, analysis of achievement of data supplied by the school system, questionnaires completed by 11,000 youngsters and 3,700 teachers, interviews with 200 teachers, and conferences attended by 3,700 people. Individuals and groups met with the Study Commission on campus as well as around the city. More than 400 letters were received. School board members, central office administrators, principals, counselors, and other ancillary staff were interviewed. Community agency leaders were contacted. Major employers in metropolitan Columbus supplied information at their practices and needs. Some dropouts were interviewed. Thus, questionnaires, interviews, and conferences represented the major gathering approaches.

The Columbus Study came at curriculum and instruction through examining the concepts of equality of educational opportunity and compensatory education. Equality of educational opportunity is defined by the team as a condition "when each child of school age has the same access as any other child to the educative resources of the state essential to his needs." The team was concerned with scholastic achievement -- and examined the results of standardized achievement tests -- but pointed out that "schools can provide a setting for the inculcation of self-esteem, self-confidence, personal accomplishment, achieving command over
over one's surroundings, appreciation of other human beings, valuing form of human expression, and a respect for the larger world and how each individual fits into it. Racial balance, a balanced mix of representatives of the black and white communities was perceived as a necessary, though not sufficient condition to insure good quality education. Clearly, the team was concerned not with some proportion of whites to blacks but rather with the conditions for learning and the substance of what is learned in a racially imbalanced school.

The data confirmed that racial imbalance did exist in the Columbus School System and the recommendations urged that steps be taken to achieve integrated education for all pupils. However, the recommendations propose new construction, additions for existing facilities, and intensified efforts to secure open housing agreements. In addition, the report recommends managed school desegregation through agreements with suburban districts and state action to support such arrangements. Until racial balance is improved, the team proposed that compensatory education programs be continued and extended while vigorously pushing ahead toward "equal educational opportunity through integration." As regular programs are strengthened, compensatory programs are to be phased out.

Columbus has designated its schools on a scale with those designated "Priority I" eligible for the greatest concentration of compensatory programs and services. There are five levels of priority and a final "Non-Priority" designation. Student achievement -- and indirectly the curriculum which presumably contributes to this achievement -- were assessed through standardized test data analysis. The results are reported and analyzed grade by grade, comparing the five levels of priority and non-priority schools' achievement.

At every grade, as could have been predicted, the Priority I and II schools serving
more disadvantaged (i.e., black and poor children) were far below grade level while the non-priority school average scores were above expectation.

The team also administered an 84-item School Morale Inventory which provided sub-scores concerning morale as affected by the school plant, instruction and instructional materials; administration, regulations and staff; community support of and parental involvement in schools; relationships with other pupils; teacher-student relationships; and general feelings about attending schools. Again, school morale and climate can be viewed as curriculum components affecting what is learned and how, particularly in the affective domain. In general, the data supported the observers' impressions that morale is high in the non-priority schools and low in the priority ones. The relationships between these data and the achievement data are fairly high. Although self-esteem, self-confidence and similar affective development were not assessed, it is possible to speculate on the total school environmental impact. Integrated education is obviously more than desegregated schools; racial balance is only a move in the direction of creating conditions for improved learning and teaching.

The Columbus team pointed out that it really did not appraise curriculum in a detailed way because it was not possible to learn what actually takes place in classrooms on a day-to-day basis. However, the interviews with teachers, students, parents, administrators as well as the questionnaire responses from students, teachers, employers revealed classroom problems and the general impact of environment (school and community) on learning. The Commission suggested that "studies of the appropriateness of purposes, the attainability of goals, the effectiveness of courses, methods, organizational procedures and evaluative approaches should be initiated soon." Because they found persistent questioning
about the quality of return on the educational investment, they recommended the establishment of an Office of Evaluation and Research which would continually assess educational programs and processes. Rigorous examination is the only way, the Commission argues, for a school system to insist that its program be improved and that flexibility, innovativeness, and creativity can be encouraged. Such continuous assessment can also broaden the decision-making base.

The Detroit High School Study opens with a section on curriculum which reviews some of the past controversy about philosophy and goals. Conant's twenty-one recommendations for the comprehensive high school are listed, followed by a commentary relating each of these to Detroit's secondary schools. The superintendent's statement of objectives are set forth as the educational philosophy of the Detroit school system and presumably data were collected to ascertain how these goals were being reached. The lines of administrative organization, the work of the Office for the Improvement of Instruction and the Curriculum Council are examined for their contributions.

An Organizational Climate Description Questionnaire was administered to professional staff members to determine the general climate in each high school. The curriculum committee also attempted to ascertain the manner in which students viewed their experiences in the school by an assessment of the nature of student alienation. The principal instrument employed was a Dean's scale for measuring alienation. Race, sex, socioeconomic status, grade level and grade point averages were compared in terms of feelings of alienation manifest in the student body. The degree of alienation is significantly related to the degree of student success as measured by scholastic achievement (i.e., grade point averages). What accounts for this alienation is suggested as the focus of another study.
The concept of alienation relates to the degree of powerlessness, normlessness, and social isolation experienced by the respondents. In a segregated society, black students experience a much higher degree of these conditions than did white students.

The Commission examined the organizational structure and the manner in which selection of basic curriculum materials is done. There are thirteen organizational plans in existence in Detroit. The Commission decided that the three year (7-8-9) junior high school was superior since "a more appropriate curriculum could be offered for seventh and eight graders in a junior high school than would be true in an elementary school under the 8-4 plan." The data on which this conclusion was based seems to have been conversations with staff members and study of other reports on organization. The textbooks were examined for balanced treatment of all groups and found wanting. Not all teachers engaged in enrichment of basic materials for various courses. A readability study done of the basic textbooks indicated that there was a gross discrepancy found between the findings of the committee's analysis and reading levels suggested by the publishers. Attention was given to other instructional tools and the possibilities of using para-professionals and other aides as instructional resource personnel.

Ability grouping through "tracking" is given considerable attention. This examination is done through detailing the criteria for placing pupils in high and low tracks and an analysis of Cooperative English Test results by track in each of the high schools. These data are then supplemented by the testimony of a consultant as to the harmful effects of tracking. The Commission noted that several of the study teams indicated considerable concern about grouping and only that "a thorough analysis of the effects of grouping in Detroit schools seems in order."
The section on "the current status of the high school curriculum" suggests that the curriculum has been defined in terms of the subjects required of students in grades ten through twelve. The Data Processing Department provided a complete listing of course selection by students at each of the high schools. Course offerings are discussed by subjects to indicate what is available and what curriculum developments seem to be taking place. Student enrolment in particular courses are computed as a percentage of total enrolment in each school. Content in courses is reviewed rather cursorily.

The charge of the Commission was to determine the validity of the allegation that equality of educational opportunities in Detroit's high schools varied from one school to another. On the basis of analysis of availability of courses (no attempt was made to examine substance within such courses) and of achievement as measured by standardized tests, the Commission concluded that the quality of education in Detroit high schools is "not only differentially apportioned, but the learning outcomes of schools in the central districts of the city are materially inferior to those on the periphery."

A chapter is devoted to "the manner in which institutional arrangements for the education of young people at the high school level materially affect the lives of these young people." Attendance figures analyzed but the Commission found it difficult to do more than speculate as to what accounts for these patterns: to what extent is poor attendance a reflection of difficulties of living in impoverished areas and to what extent is it a reflection of irrelevant and unchallenging curricula? The issue of space and overcrowding as affected by building utilization, length of day, tardiness and study hall programs are discussed. Classroom management, student
control and discipline -- the problems which resulted in formation of the Commission in the first place -- are examined through policy statements and found to be "both punitive and in need of revision." Evaluation and student grades are studied through policies and an analysis of failure patterns in the high schools -- by subject and by school. The percent failed ranged from 3.4% in Music to 30.6% in Safety Education with most subject areas at about 10%. (Incidentally, the percent failed in Counseling was given at 16.6%). The dropout problem is analyzed in terms of the patterns of school survival. Eight of the twenty-two schools had survival rates under 50% between tenth and twelfth grades. Student honors and merit scholarships, Advanced Placement Program participation, and college attendance and survival rates, participation in extra-curricular activities are discussed in terms of basic data.

From the data analysis which the Commission felt carefully detailed curriculum deficits and differential learning outcomes, ninety-six recommendations are made. Nine of these deal with "The Urban Environment." Thirty-seven deal with the rationale for the high school curriculum -- consideration of an appropriate philosophy for education, criteria of excellence, procedural issues related to education of a high quality, the instructional staff, organizational climates, the question of teacher attitudes such as alienation, the organization structure of the school, textbook adoptions, instructional media, the role and function of the counselor in the school situation, ability grouping at the high school level, computer scheduling of classes as well as standardized testing program in the schools. A third section deals with "The High School Curriculum" and presents materials in terms of required and elective courses. Thirty recommendations are made which range from suggestions that the English teachers have no more than 100
students and that remedial reading instruction should be provided in a reading clinic in each of the nine regions, to urging students to take a greater number of science courses. Finally "The High School Program" is discussed in terms of outcomes which are evident in the student body as a result of participation in programs. Attention is given to the pattern of attendance of the students, the nature of the educational settings in which they must learn, the length of the school day, problems related to tardiness, the nature of the study hall program, the pattern of student control and discipline, evaluation and student grading procedures, the incidence of failure in the student body, the dropout rate of students, the nature of honors, scholarships, and merit awards, the Advanced Placement Program, the holding power of the schools in terms of the numbers who graduate, the number of students who seek admission to college, the post-high school plans for employment and the survival rate of the students in colleges as well as the extra-curricular programs. The cost estimates of sixteen major recommendations are provided in the report.

The Detroit study was conducted by a 26 member city-wide commission composed of representative citizens, appointed by the Board of Education and charged with the responsibility of making a thorough investigation and evaluation of the status and needs of the senior high schools. Twenty-one study groups were appointed to examine more intimately each individual high school and subsequently the chairman of each high school study committee was added to the city-wide commission. The Detroit study is essentially a citizen study with a relatively small professional staff. Most of the data were "available data" which were synthesized and interpreted by school on a city-wide basis.
The Cincinatti Study involved some 100 investigators under twelve task force chairmen, each of whom was responsible for a major area of the survey. The task forces gathered data in a variety of ways including observations of operations in the school system based on visits to classrooms and offices; examination of courses of study, official reports and research monographs; interviews with teachers, administrators and other school personnel. A survey of a random sample of 1000 heads of households was conducted and a study of job satisfaction involved over 500 teachers.

The reports from task force chairmen were submitted to the director and each of the reports was revised one or more times before delivery to the Policy and Steering Committee. Each report was then reworked by the Policy Committee and administrative staff. The report is in two volumes: Volume I includes a summary and major recommendations; Volume II contains supplementary papers with more elaborate and supportive data. The nine supplementary papers indicate the major areas studied: Education and Race, Elementary Education, Secondary Education, Vocational Education, Student Personnel Services, Staff Personnel Services, School Plant and School Community Relations. The bulk of the first volume is organized around three topics: the instructional program, the organization of the school system, and the financing of the program. The report points out:

While each of these major topics is important in itself, the relationships among the topics are even more important. Educational finance and the organization of schools are important only to the degree to which they affect instruction. The manner in which an educational system is organized affects the efficiency with which resources can be utilized. Feedback from the results of the instructional process should be utilized in making institutional, organizational and financial decisions.
The Cincinnati school district may therefore be viewed as a total system; in which, its various aspects should be closely inter-related. Instruction is the central purpose of the system; if the system is seen as consisting of instructional, organizational and financial sub-systems, the latter two are subordinate to the former.

Instruction was described through examination of "the nature of the curricular, personnel, and material inputs into the instructional sub-system."

The various programs -- pre-school, elementary, and secondary school -- are described in terms of enrolments, standardized achievement data, personnel, etc. Seven common problems which seem to cut across all or most of the subject fields are identified and discussed. These deal with problems of segregated tracking, lack of leadership at the building level, absence of clearly defined objectives which could direct educational planning, the "tracking system" as a whole, the tight schedule under which teachers operate, the need to build greater flexibility into the existing school program, and communication barriers among teachers and between teachers and the central staff.

Concluding Remarks

Comparing methodologies of dealing with curriculum in these four studies is somewhat hampered by lack of detail about what was done and the need to infer what techniques and instruments were used. All four studies imply that curriculum and instructional process consist of many components other than course offerings alone. All rely on description of students, teachers, syllabi, prescribed curricula, and materials. Some attempts were made to assess the affective and attitudinal responses of persons in the system. However, little is done to analyze the interactions and the relationships among the various elements of the instructional system. Achievement, as measured by standardized tests is "good" or "bad"; implications
are drawn as to the causes for this performance. A more comprehensive and complex computer-based design which handled interactive relationships might provide a sounder basis for recommendations. On the other hand, the intuitive expertise of a survey staff may be sufficiently adequate for the purposes intended. Nevertheless, survey staffs are asked to analyze a total system and make recommendations for reconstituting it so that present or new objectives will be more adequately attained. Some model or framework should guide the methodologies employed and this model should be fairly explicit.

Each of the studies clearly presumes that curriculum changes, improvement and upgrading can all be generated from within the present system. None of the surveys recommended a radical reconstruction that would result in totally new programs, support systems, use of personnel or material resources. Coleman has argued that only a drastically different environment -- "whether it be provided through other children, through tutorial programs, through artificial environments by computer consoles or by other means" -- will bring about the needed changes. Different programs are proposed by the four studies but all seem to begin with the assumption that the basis for regeneration exists within the system if properly initiated and guided.

Finally, the recommendations tend not to be programmatic in their presentation i.e., the directions are indicated by the detailed programming and costs are left for the stage. A survey using a PERT approach might help overcome the limitations of a set of recommendations which suggest direction for change but neglect the sequencing and timing of steps which would implement these recommendations.
References


Luvern L. Cunningham et al. Report to the Columbus Board of Education. Columbus: The Advisory Commission on Problems Facing the Columbus Public Schools, 1968.
