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ABSTRACT

Curriculum change and the dynamics of this change were explored by means of a case study of secondary social studies, science, and vocational education curriculums in Gary, Indiana, between 1940 and 1970. The time period is characterized by both unprecedented effort to produce change and slow change in schools. Talcott Parson's hierarchy of levels; Charles Perrow's notion of goals, technology, and structure; and Kirst and Walker's assumption that curriculum decisionmaking was "political" were used to conceptualize and stabilize the data as curriculum development was traced through the time period. The study findings revealed that change occurred in small ways in individual classrooms -- by policy decision and by organizational "drift." Change and financial resources were found to be related. School system resources were used for "maintenance" of the system; few resources were left for innovation. The advent of federal funding (NDEA, Vocational Education Act of 1963) brought additional funds, which permitted the curriculum change that the Gary school system had failed to bring about with its own limited resources. An extensive bibliography is included. (Author)

FINAL REPORT

GRANT NO. OEG-5-72-003 (509)

WILLIAM LYNN MCKINNEY

THE UNIVERSITY OF CHICAGO
CHICAGO, ILLINOIS 60637

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MAY 14, 1973

U.S. DEPARTMENT OF HEALTH, EDUCATION, AND WELFARE
NATIONAL INSTITUTE OF EDUCATION
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I

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# THE GARY, INDIANA PUBLIC SCHOOL CURRICULUM, 1940-1970: A LOCAL HISTORY

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MAY 14, 1973

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U.S. DEPARTMENT OF
HEALTH, EDUCATION, AND WELFARE
NATIONAL INSTITUTE OF EDUCATION

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## ABSTRACT

Curriculum change and the dynamics of this change were explored by means of a case study of secondary social studies, science, and vocational education curricula in Gary, Indiana between 1940 and 1970. The time period is characterized by both unprecedented effort to produce change but slow change in schools. The study asked how this could be.

Talcott Parson's hierarchy of levels, Charles Perrow's notion of goals, technology, and structure, and Kirst and Walker's assumption that curriculum decision-making was "political" were used to conceptualize and stabilize the data as curriculum development was traced through the time period.

The findings of the study are that change occurred in small ways in individual classrooms, by policy decision, and by organizational "drift." Change and financial resources were found to be related. School system resources were used for "maintenance" of the system; few resources were left for innovation. The advent of federal funding (NDEA, Vocational Education Act of 1963) brought additional funds which permitted the curriculum change that the Gary school system could not bring about with its own limited resources.

# CHAPTER I

## INTRODUCTION

This study explores change and the dynamics of change in aspects of the curriculum of the Gary, Indiana public schools from 1940 to 1970. During these years unprecedented amounts of money, time, and energy were spent, both locally and nationally, on designing new goals for the schools and new curricula; yet, despite these efforts it seems that schools tended to respond to demands for change only slowly. Some of the most highly recommended innovations of these decades were only haltingly, if at all, operationalized in schools. This is the paradox that will be explored in this study: how can it be that so much effort had so little return?

Clearly the question is framed only loosely when put this way. Some of our findings from Gary can give it more meaning. It took, for example, thirty years for Gary to establish a technical-vocational school despite early acceptance of the idea in principle by the Board of School Trustees. There are, of course, explanations offered to account for this seeming failure of the schools to pick up the prescriptions that those who wished change have recommended. But there is no data

on the basis of which we might test these explanations or create further explanatory possibilities. It is the goal of this study both to begin the creation of such a data base by undertaking a longitudinal study of the changes in the curriculum of one school system and to speculate on what the data base might imply for educational policy-making.

Although schools as we know them have existed for over a century, there are many things we do not know about them. This is not to say that considerable attention has not been focused on schools, but our focus has tended to be on the links between schools and society and not on schools themselves. Yet, despite our inability to answer questions about schools, we continue to prescribe and to design innovations. The concern of education is properly on what should and must be. However, this preoccupation with what might be must not blind us to what is--how and why curricula do or do not change. Public education has withstood criticism and occasionally abuse in the century of its modern existence. Improvements and innovations in response to these criticisms are numerous. How schools withstand some pressures to change and how and why they change in response to others are questions for which we have no answers but for which answers must be sought.

Prescriptions for change must be responsive to certain realities. The curriculum is an institution that is developed within the institution of schools. It is more than a time-and-space bound list of courses and courses of study; it is a set

of forms, procedures, and means that represent what the schools know how to do. And, as with all such institutions, once established, the curriculum--with its canonical organization of English, math, and the like, its courses in state and national history, and its athletic programs--comes to be valued for its own sake.

Latin, once necessary for literacy, later the mark of an educated man, and now of little practical value to anyone is the case in point. Latin lost its place as a critical component of education in the late nineteenth century. But in 1960-61, as many schools were teaching Latin I as were teaching the first year of modern foreign languages.[1] An outside view of the school would find it difficult to account for the persistence of Latin, but it persisted. Why? How did Latin resist the assaults on it? And how did change take place around Latin within the school? In short, as society's ideas and values change, how are concomitant changes produced in the school curriculum?

There are, we believe, few answers to these questions readily available. Latin might be the extreme example, but to what extent do reformers of say reading or history face problems that are analogous to those of the reformers who wished to abandon Latin? Policy making depends on answers to these

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[1] Dianne B. Gertler and Linda A. Barker, Patterns of Course Offerings and Enrollments in Public Secondary Schools, 1970-1971, DHEW Publication # (OE) 73-11400, U.S. Government Printing Office, Washington, D.C., 1972.

questions. Numerous attempts are made each year to change curriculum by local, state, and national agencies. Yet the decisional process--deciding what changes should be attempted, where money and energy should be spent--is uninformed as to existing constraints within the institution of the curriculum. Money and energy are expended with no thought to predicting return because return cannot presently be predicted.

Curriculum policy making needs to be informed about resistance to change, entry points, the likelihood of successful change, and how long change takes. This kind of information can come from examination of and explanations about the internal dynamics of the school as an organization. This case study, then, explores curriculum change in an attempt to suggest how schools change and yet maintain themselves and, in so doing, to provide input into the process in which policy decisions about curriculum change are made.

## Literature and Lore on Curriculum Change

Despite our claim that there is a dearth of knowledge about curriculum change, there is a body of literature which claims to deal with this problem; before the argument and framework of the present study are fully explicated, we must examine this material. We will do this under the rubrics of adaptability, prescription, myth, and diffusion. Each will be discussed and criticized in turn.

Adaptability is defined as the ability of school systems to replace "old-fashioned" practices with new ones. In the adaptability studies, the initial hypothesis was that the higher the expenditure per pupil, the more innovative, i.e., adaptable, a school system would be.[1] This hypothesis was confirmed in a study that began with the questions, "How far does American education lag behind standards generally accepted as desirable?" and "How can we speed up adoption of innovations which are generally desirable in light of experimentation and research?"[2] The answer to the first question was roughly fifty years;[3] the answer to the second was, of course, to increase spending.

Concern for both adaptability and increased expenditure for schools characterize the majority of Paul Mort's numerous books. He and a colleague with whom he collaborated on several occasions, Francis G. Cornell, produced a Guide for Self-Appraisal of School Systems,[4] which was essentially a list of what the

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[1] Paul R. Mort and Francis G. Cornell, Adaptability of Public School Systems (New York: Teachers College, Columbia University Press, 1938), pp. 100-102.

[2] Paul R. Mort and Francis G. Cornell, American Schools in Transition (New York: Bureau of Publications, Teachers College, Columbia University, 1941), p. x.

[3] Ibid., pp. 405-406.

[4] Paul R. Mort and Francis G. Cornell, A Guide for Self-Appraisal of School Systems (New York: Bureau of Publications, Teachers College, Columbia University, 1937).

authors called adaptations. A score for each school using the Guide was computed on the basis of the presence or absence of each of the adaptations.[1]

Of the four rubrics summarizing our understanding of educational change, adaptability is of the least value to the present study. The two variables, adaptability and financial support levels have been shown to be related, but the nature of their relationship is not explained and may be spurious. The adaptability studies demonstrate correlation between school systems and the society that finances those systems rather than offer any insight into the process by which curriculum change is effected.

The second rubric is prescription. Curriculum as a field of study has treated the dynamics of curricular decision-making as a rational process in which curricular decisions are made after considering solutions based on competing ideas that originate within a range of what are called "influences."[2] These influences are categorized in a variety of ways. Ralph Tyler has suggested that the sources for educational objectives

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[1]Additional works indicating development of the adaptability notion include Public School Finance by Mort and Walter C. Reusser (New York: McGraw-Hill Book Company, Inc., 1941) and Principles of School Administration by Paul R. Mort (New York: McGraw-Hill Book Company, Inc., 1946).

[2]Michael W. Kirst and Decker F. Walker, "An Analysis of Curriculum Policy-Making," Review of Educational Research, Volume XXXXI, Number 5 (December, 1971), pp. 480-481.

were students, contemporary life, and subject matter specialists.[1] The objectives selected are then "screened" for consistency and feasibility by use of educational psychology and educational philosophy. Saylor and Alexander list twelve influences which they call "extra-legal,"[2] and include national curriculum projects, accreditation agencies, authors, publishers, and critics of education. Kirst and Walker have distinguished three levels of national and regional groups that influence curriculum: (1) those that establish minimum curriculum standards such as accrediting agencies and educational organizations; (2) alternative generators like textbook publishers, philanthropic foundations, and universities, and (3) groups demanding curriculum change such as the Council for Basic Education and the Chamber of Commerce.[3]

The concern of these prescriptive works is with identifying possible participants in the curriculum decision-making process, with designing new curricula, and with bringing about change by advocacy. The prescriptive works, however, do not attempt to deal with the reality of curriculum change; their focus is on what should and might be, not on what is. Instead

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[1] Ralph W. Tyler, Basic Principles of Curriculum and Instruction (Chicago: The University of Chicago Press, 1941).

[2] John G. Saylor and William M. Alexander, Curriculum Planning for Modern Schools (New York: Holt, Rinehart, and Winston, 1966), pp. 28-36.

[3] Kirst and Walker, pp. 488-498.

of examining the dynamics of change, they advocate one potential way of producing change, a way which may or may not ever have been successful.

The third rubric is myth. One identifiable theme here is the pervasive notion of local control of education. The local control theme goes like this: a school board, either elected or appointed, is legally entrusted with and responsible for establishing local educational policy; policies are made on the basis of local needs and desires in the light of perceived financial capabilities. There is a growing body of literature, however, which reveals some of the fallacy of the myth. As Campbell and Bunnell[1] show, although in the United States there is no "national curriculum," there is a general uniformity of curriculum among school systems across the country. In addition, within the separate states, school systems, by virtue of state statute, must include some subjects and topics in the curriculum while excluding others. But even if we accept at least partial validity of it, it does not offer us an explanation of how curriculum change occurs. It locates legal responsibility for education and suggests that local communities are properly where concern for the local school system resides. It does not specify either participants in curriculum decision-making or the dynamics of change, i.e., interaction among these participants.

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[1] See, for example, Roald F. Campbell and Robert A. Bunnell, Nationalizing Influences on Secondary Education (Chicago: Midwest Administration Center, The University of Chicago, 1963).

The fourth theme is diffusion. Impetus for the development of this theme came from the field of rural sociology where it has been found that there are identifiable stages in the diffusion of innovations, that local change agents could be identified, and that the likelihood of the acceptance of an innovation by an adopting unit is dependent upon the relationship of the local change agent to his peers.[1] Diffusion research has encompassed a variety of kinds of innovations; the focus has been (regardless of the innovation) on the spread of an innovation through a range of similar institutions, not on the adoption process within any one of those institutions. The elements of diffusion have been identified as (1) an innovation, and (2) its communication from one individual to another, (3) in a social system, (4) over time.[2] Of importance was the identification of the individuals receiving and sending communications about innovations. In the extrapolation of this tradition to education, most closely identified with Richard O. Carlson, superintendents of schools were identified as the communicators. Although school boards are legally responsible for local school policy, Carlson perceived that superintendents are responsible for the policy recommendations on which boards act. He found

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[1] Herbert F. Lionberger, Adoption of New Ideas and Practices (Ames, Iowa: The Iowa State University Press, 1960), p. 107.

[2] Everett M. Rogers, Diffusion of Innovations (New York: Free Press of Glencoe, 1962), p. 12.

that the more a superintendent was oriented toward school administration as a profession, the more innovative his school system was likely to be. The superintendent became, then, the key variable in studying the diffusion of innovations--the change agent. Additional works on educational change falling under the rubric of diffusion have tended to be compendia of studies focusing on the characteristics of the change agent and selected characteristics of his orientation.[1]

This study will argue that a much broader perspective than that of these kinds of studies is necessary to begin exploration of educational change, yet these studies are of significance. Communication, finance, prescriptions and myth are all important, but the processes by which the factors came together to produce change are more numerous and more complex than the studies suggest.

The present study differs from previous studies and thinking about educational change in two respects. First, it is a detailed examination of the dynamics of curricular change in a single school system over a thirty-year period. Previous

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[1] See, for example, Richard O. Carlson, Art Gallagher, Jr., Matthew B. Miles, Roland J. Pellegrin, Everett M. Rogers, Change Processes in the Public School (Eugene, Oregon: Center for the Advanced Study of Educational Administration, 1965), p. v; Matthew B. Miles, Innovation in Education (New York: Teachers College, Columbia University Press, 1964), p. 2; Richard O. Carlson, Adoption of Educational Innovations (Eugene, Oregon: The Center for the Advanced Study of Educational Administration, University of Oregon, 1965), p. 5; and Donald R. Ross, Administration for Adaptability (New York: Metropolitan School Study Council, 1958), pp. 1-2.

studies, because they were done innovation by innovation across a range of institutions lack a time perspective. As a result, they do not offer the richness of detail or the possibility of explanation of the dynamics of curricular change that this one offers. Second, this study goes beyond the question of innovation to explore how the Gary school system maintained itself. The focus of earlier studies was on innovations and selected, isolated variables; this study focuses on both change and stability in the curriculum in Gary within the local and national milieus. As such, a range of sources of demand for and resistance to curricular change can be accounted for. Organizational "drift" as well as planned change can thus be noted.

A case study, of course, is a view of but one of numerous possible cases. Generalizations necessarily should be based on more than one case. However, a case study can provide a rich array of data that can be viewed in light of existing generalizations and explanations, both supporting and correcting them, while offering the possibility of new explanations previously not seen because data was not examined longitudinally.

The Gary school system, its Board of School Trustees, its teachers and students, its mayors, and its civic, educational, and political organizations have all operated within the specific milieu of Gary. No other city, for example, had William A. Wirt as superintendent of schools for over three decades. The curricular change and the dynamics of the change in Gary can be seen in light of generalizations about change and resistance to

change, but they also reflect the milieu in which they occurred. As a result, questions asked about the curriculum of the Gary schools must be sensitive to both the local and the national scenes. How have national controversies and projects affected the schools of Gary? Have the reasons for national policy shifts and concomitant change in Gary been the same reasons? How has resistance to change effectively been exercised?

## The Framework of the Study

As suggested above, the problem to be explored in this study has its origin in a paradox: unprecedented amounts of time, energy, and money were spent on improving curricula during the years 1940 to 1970, but, despite these efforts, schools changed slowly. What does this mean on the national level?

The vast increase in expenditure for curricular improvement between 1940 and 1970 occurred within controversy and conflict. Inherent in the controversies were questions of national purpose and the nature of American democracy and society.

The first controversy in the period was the "Great Debate," a decade-long exchange of polemics matching the proponents of the life-adjustment movement against proponents of a more traditional, academic curriculum. The life-adjustment movement, an offshoot of progressive education started roughly in 1944. Life adjustment emphasis on guidance and the group over the individual seems to have struck a popular chord in American culture. According to Goldman, because "bigness" was

pervading all aspects of life (government, business, labor), individualism had become somewhat irrelevant for the American people.[1] Books such as John Keats' Schools Without Scholars[2] and Arthur Bestor's The Restoration of Learning,[3] however, argued that academic content was being seriously watered down in the public schools. The polemics were ideological in nature, each party to the controversy using arguments rooted in philosophical positions. Efforts were directed toward supplementing and strengthening the positions. As such, the observable effects in the schools were minimal as we shall see. The liturgies and slogans of the ideologues were about schools, but day-to-day schooling did not conform to the demands of the ideologies.

The second controversy of the period concerned the extent and nature of federal involvement in education. The numerous education bills passed by Congress were enacted only after considerable debate. Strict constitutional constructionists and those fearing national curricula were pitted against those who viewed the schools as a proper resource of government policy. A rapidly expanding industrial economy demanded better trained manpower, and the emergence of the Cold War seemed to

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[1]Eric F. Goldman, The Crucial Decade--and After: America, 1945-1960 (New York: Knopf, 1964), p. 264.

[2]John Keats, Schools Without Scholars (Boston: Houghton Mifflin Company, 1958).

[3]Arthur E. Bestor, The Restoration of Learning (New York: Knopf, 1955).

necessitate better educated people for national defense purposes. The involvement of the National Science Foundation and the enactment of the National Defense Education Act and the Elementary and Secondary Education Act were evidence of centralization of educational planning based on manpower and national defense needs. Additional influences, national in scope, included the National Merit Scholarship Program and the College Entrance Examination Board.[1]

An array of new curricula and curriculum projects appeared during the period studied. Because so much work was done and so much money was spent, a few general examples will have to serve to indicate the range and depth of efforts to improve curriculum.

The quality of education came under serious discussion both in terms of new emphases on subject matter and new methods in the classroom. Social studies curricula were broadened to include lessons and units on the United Nations, communism, and minority groups. The emphasis in the sciences turned to teaching students to think as scientists. The Physical Science Study Committee, the Biological Science Curriculum Study, and the School Mathematics Study Group began producing materials in the late 1950's and early 1960's; these materials stressed understanding of scientific inquiry rather than the mere learning of

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[1] Campbell and Bunnell, Nationalizing Influences on Secondary Education.

scientific facts.[1] The National Education Association started its Project on Instruction; the United States Office of Education launched Project English and Project Social Studies. Huge sums of money were spent. The National Science Foundation spent $159 million in 1960 on curriculum projects while the Fund for the Advancement of Education was spending an average of $10 million a year from 1956 to 1961.[2]

The problems of the schools themselves were quite different than this catalogue of debate and curriculum development would suggest. Cremin sees in the period ". . . the makings of the deepest educational crisis in the nation's history."[3] While the controversies were conducted above them, the schools had serious difficulties in simply finding housing for all their students. Few buildings had been erected during World War II; there were insufficient numbers of teachers; and the baby boom began to hit the schools as early as 1946.[4] Obviously, local jurisdictions gave buildings, teachers, and desks for all students top priority. Facilities and equipment are expensive; few resources were left for concern with curriculum.

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[1] Arno Bellack, "History of Curriculum Thought and Practice," Review of Educational Reserch, Volume XXXIX, 1961, p. 283.

[2] Matthew B. Miles, pp. 3-4.

[3] Lawrence F. Cremin, The Transformation of the School (New York: Knopf, 1961), p. 339.

[4] Ibid., p. 338.

While national controversies were waged about the quality of American education and while work was being done and money was being spent on national projects, the schools themselves were concerned with sheer numbers. Schools were engaged in the day-to-day business of providing an educational service to students. Preoccupied with their daily concerns, schools appear to have changed very slowly. In 1938 it was found that on the average, fifty years passed between the time an educational innovation was developed and the time it was universally adopted.[1] Many schools do not adopt new ideas and practices until years after they have become popular; many schools seem to make no changes; and not all schools ever adopt any single innovation.

Although continuous progress and non-graded elementary schools have been common terms for well over a decade, few schools pay more than lip service to them. School construction patterns have not changed markedly in decades. Although the bolted-down desks and seats have given way to more comfortable moveable furniture, individual classrooms with non-moveable walls are usually constructed to provide for approximately thirty students. Although the arrangement of the furniture is at the dictate of the teacher, usually desks and chairs are placed in lines facing the chalk board and possibly the teacher's desk. Although notions of individual differences and

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[1] Mort and Cornell, pp. 51-53.

different learning styles have become familiar terms, few schools actually provide for them. Learning and media centers have allegedly replaced libraries. Increasingly sophisticated audio-visual equipment has been designed and purchased by schools, but much of it rests unused on shelves and in corners. Textbooks still serve as the primary source of knowledge; the traditional classroom of one teacher and thirty students is still prevalent.[1]

There is some evidence now that the rate of adoption of some kinds of educational innovations is accelerating. For example, 20 per cent of all secondary schools were using Physical Science Study Group materials only four years after they were available. But not all schools adopted PSSC Physics, and few are still using it now. Yet the speed with which PSSC materials were diffused raises some interesting questions. Why were some innovations adopted more quickly than others? If the rate of adoption had increased in the late 1950's and early 1960's, what factors caused the increase? Did federal aid to education affect the process?

Although this is a local study spanning the years 1940 to 1970, Gary and its school system did not exist in isolation during these years. The focus of the study is on the dynamics

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[1] John I. Goodlad and M. F. Klein, Behind the Classroom Door (Worthington, Ohio: Jones Publishing Company, 1970), passim.

of change within one school system but the value of the study is in the extent to which the purely local and situational factors can be separated from the generic, the extent to which the dynamics of change in Gary can be viewed from a perspective which is not purely local. In order to locate and deal with the array of such generic forces for curriculum change in Gary, three conceptualizations were used. They were not used to structure explanations or conclusions but rather to guide the research; they will not be explicated as such in the succeeding chapters. Their usefulness and appropriateness will be dealt with in the concluding chapter.

Prescriptive work on curriculum development commonly conceives of the curriculum change process as rational--rational decisions are made from among competing ideas. This conception, however, is not rooted in reality. A more heuristically plausible conceptualization suggests that the process of curricular change is political; there is conflict among ideas and values with a legitimate authority deciding among the conflicting viewpoints.[1] This notion permits us to begin to question our traditional assumptions about who makes curriculum decisions and how they are made. So many individuals, groups, organizations, and agencies are potential participants that it appears overly simple to speak of "change agents."

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[1]Kirst and Walker, pp. 480-81.

In order to locate and deal with the array of participants, Talcott Parsons' hierarchy of three levels of functions applied to schooling was used in the study:[1] the institutional level which is that of the citizenry of the local community and represented by the Board of School Trustees, the managerial level which includes the superintendent and his administrative staff, and the technical level which is that of the teachers.[2] Positing these three levels serves to locate differing rights, responsibilities, and interests of both groups and individuals, and to permit examination of the relationships among them. Each of the three levels can be seen in terms of possible sources of facilitation of or resistance to curricular change. Each can be seen in terms of the formal or legal responsibility accorded it as well as the concerns and vested interests each may possess.

If the powers and duties of each group at the three levels are as they seem to be, the Board would be responsible for making curricular decisions, the administration would interpret the decisions to the teachers and then supervise and coordinate the efforts of the teachers as they operationalized them. It is obvious, however, that this tidy sketch is not a true picture of how a school system operates. The relationship among the levels is not simply "line" authority.[3] Yet

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[1] Talcott Parsons, Structure and Process in Modern Societies (New York: The Free Press, 1960), pp. 60-64.

[2] Ibid., pp. 60-64.

[3] Ibid., p. 65.

making the distinction among the levels would seem to be useful because it permits examination of some of the dynamics of the process of curricular change. The political nature of curricular decision-making and change may be seen by examining the nature of the relationships among the Board, the administration, and the faculty as curricular problems arose and were solved.

Charles Perrow characterizes organizations by goals, technology, and structure.[1] Each of his categories suggests sources of demand for or resistance to curricular change. The area of goals is significant because educational goals are broadly established by the society in which the school system exists and emerge from social values. The educational values of American society, then, can be seen as one source of demand for curricular change as societal values are translated into federal laws, [illegible] governing agencies, other educationally-concerned agencies such as the National Science Foundation, and regional accrediting agencies

Technology, when seen as the available means to reach educational goals, can be seen as a second area in which curricular change impetus or resistance can be found. Given a goal means may or may not be available. The third of Perrow's categories is structure--the way in which tasks and roles are embedded in institutional forms so that coordination and control

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[1]Charles Perrow, "A Framework for the Comparative Analysis of Organizations," American Sociological Review, Volume XXII, Number 2, April 1967, p. 195.

over the enterprise can be maintained. A structure is the result of the fusion of goals and technology. Once the goals are known and the available technology understood, a system of tasks and roles is necessary for the organization to begin moving toward achievement of the goals. Structure, like goals and technology, must be seen as an area in which either demand for or resistance to curricular change can arise. A structure, once it has been created, may take on properties that make change difficult. When changes threaten to alter the traditional roles of individuals within the structure, resistance may be mounted.

## Outline of the Study

The historical background of the Gary school system will be presented in Chapter II. Focus will be on the hiring of William A. Wirt, first superintendent in Gary, and on the school that Wirt created. Wirt served the Gary schools from their inception in 1906 until his death in 1938. The intervening thirty-two years witnessed the development of the Wirt or Gary Plan which was widely heralded and adopted through the 1920's. By the time of Wirt's death, however, few schools were using any aspect of the Wirt Plan, and those few were soon to give up all vestiges. The Plan became firmly entrenched in Gary, and the organizational rigidity it produced will help us understand aspects of later curricular change in the Gary schools. Chapter III traces broad organizational change in the Gary school system between 1940 and 1970 in order to establish an organizational context in which curriculum change occurred.

To have examined curricular change in all subject matters and all grade levels would have been far too ambitious for a single study. Limits have had to be placed. A very interesting study could have been done of the relationship between formal curriculum guides and documents and teacher practice in the classroom; reference to such relationships will be made only when appropriate and when evidence gathered prior to the present study is available. Although the aspect of the Wirt Plan called the unit form of organization will be referred to, curricular change in the elementary schools will not be discussed; the focus is entirely on the secondary schools. Examination of all the secondary subjects would have been still too ambitious; as a result, only selected portions of the secondary curriculum will be examined.

The 1945 racial strike in the Gary schools provides a local problem for the social studies curriculum; its development from 1943 to 1955 will be traced in Chapter IV. The spread of the new science curricula, PSSC, BSCS, and CHEM Study, provides the problem for Chapter V which covers the Gary secondary science curricula from 1956 to 1968. Because vocational education has been a perennial problem in Gary, and because Gary is a "steel town," the development of vocational education will be traced in Chapter VI; the time covered will span the study, 1940 to 1970.

The three subject matters examined were chosen for two reasons. First, in each of the three the initial impetus for

change came from within the school system yet no change occurred. Second, each attempted change could be examined from the time it first became an issue in the school system until it was either resolved or was no longer commanding any attention in Gary. No subject matter in the humanities or the arts was chosen because none was an issue in Gary. And, as Goodlad points out, the humanities and the arts did not receive the same kinds of attention given science and vocational education until the late 1960's.[1]

In each of the three subject matters chosen for this study, a problem situation arose; each situation contained curricular issues with which the Gary schools attempted to deal. The time periods selected for each chapter span the time between the rise of the problems and their resolutions, be it much, some, or no curricular change. Each chapter will be composed of three elements; the elements appear in different order in the three chapters because of the nature of the curricular problem under investigation. One element is concerned with the state of the subject matter as it existed in schools throughout the country. Both norms and ideals will be presented, and where appropriate, national discussion about proposed and actual legislation and movements affecting the subject matter. The second aspect of each of these three subject matter chapters is narration of

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[1] John I. Goodlad, The Changing School Curriculum, A Report from the Fund for the Advancement of Education, 1966.

curricular change that occurred in the Gary secondary schools in that subject matter. The third element is examination of the dynamics of the change process looking at both actors and their roles in the process and sources of demand for and resistance to curricular change as evidence in the change process. Attempt has been made in each chapter to highlight similarities and differences between national change and processes of change on one hand and change and change processes in Gary on the other.

Chapter VII will summarize the findings of the study, view them in the light of the original generalizations about the recent plethora of curricular change and then offer a way which permits understanding of the paradox that was our initial concern. In addition, the conceptualizations used to guide the study will be criticized in terms of their usefulness and appropriateness.

## CHAPTER II

## THE EARLY GARY SCHOOLS: CONCEPTION AND OPERATION

In discipline, in social life, and in the curriculum the Gary schools are doing everything possible, in cooperation with church and home, to use to the best educational purpose every resource of money, organization, and neighborhood influences.[1]

. . . the execution of the Gary plan is defective.[2]

The Gary scheme is not cheap in the sense that it offers more and costs less; it is only cheap in the sense that it offers much more and costs at most only a little more.[3]

Not even in those branches to which Gary has given impetus and development--the so-called special activities--has a high or even satisfactory standard (of achievement) been reached.[4]

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[1] John Dewey and Evelyn Dewey, Schools of Tomorrow (New York: E. P. Dutton and Company, 1915), p. 185.

[2] Abraham Flexner and Frank P. Bachman, The Gary Schools, A General Account (New York: General Education Board, 1918), p. 199.

[3] George D. Strayer and Frank P. Bachman, The Gary Public Schools, Organization and Administration (New York: General Education Board, 1915), p. 123.

[4] Flexner and Bachman, p. 202.

Economy entered into Wirt's philosophy not as an end but as a means to an end, the end being "a better world for the child" which has always been his creed as an educator.[1]

> . . . its adoption not only enabled administrators to economize and defend themselves against the charge of inefficiency, it enabled them to prove their administrative ability at the same time.[2]

These terse commends of praise and criticism of the Gary schools of the 1920's are representative of the larger works from which they were taken. Numerous groups and individuals examined and evaluated the early Gary school system; different perspectives and stances were selected by those who viewed the school system, and no matter what the focus of consideration--purpose, curriculum, organization, cost--there can be found both those who approved and those who disapproved. Questions about what the Gary school system was and how it worked can still be asked with profit. Was William A. Wirt an early twentieth century liberal reformer or one of the new "efficiency" administrators working from an industrial model? Did the Gary schools cost more or less than conventional schools? Were children in Gary better or worse educated than children elsewhere?

Our purpose here in pointing out these questions and controversies, is not to suggest that this study will attempt to

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[1]Roscoe Case, The Platoon School in America (Stanford, California: Stanford University Press, 1931), p. 7.

[2]Raymond Callahan, Education and the Cult of Efficiency (Chicago: The University of Chicago Press, 1962), p. 130.

settle them. We are not concerned here with reconciling the different perspectives which have and will continue to yield different views of the school system in Gary. Rather, we are invoking the claims, pro and con, to suggest that the early Gary schools were not conventional and that approaches taken toward them varied because of this lack of conventionality.

The school system in Gary was designed to be a serious alternative to the patterns of schooling which were dominant in the United States in 1910; it was a response to problems resulting from the urbanization of the early twentieth century. Some evidence suggests that the school was successful in responding to these problems; especially after 1940 however, there were pressures for the Gary school system to become like all other traditional systems. From 1906 to 1938 while William A. Wirt was superintendent of the Gary schools, these pressures were resisted. Wirt himself was impervious to them and so was the school system he controlled. But without Wirt as superintendent such pressures were not so easily resisted. Between 1940 and 1960 the distinctive features of the Wirt school began to disappear until finally they were all gone. By the 1960's the Gary school system was conventional. We must discuss the founding and development of the Gary school system from 1906 to 1940 in

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[1] Flexner and Bachman, p. 201.

order to understand both the criticisms of the school system dealt with in later chapters and the problems the schools faced as they became like other schools.

## The Founding of Gary and Its Schools

After much deliberation in the first years of the twentieth century, United States Steel chose a site on the southern shore of Lake Michigan about thirty miles from Chicago for the location of a new steel mill. By 1906 the sand dunes had been leveled, the swamps and marshes drained and filled in, streets had been laid out, sewers dug, and houses built, all by the Mill. The resulting city, named after the founder of USS, Judge Elbert Gary, claimed a population of 334 by the end of 1906.[1] The town grew quickly as workers for the mill moved in. By 1910 the population was 16,802, by 1920, 55,378, and by 1930, 100,426.

The first school, a one-room affair, built in 1906 by the Mill was soon inadequate; new buildings and more teachers were needed and, inevitably, a capable administrator was needed to run the schools. A "noted educator," William Albert Wirt, then superintendent of the Bluffton, Indiana, schools happened to visit Gary at this time. On the day of Wirt's visit, Tom Knotts, then president of the town board of Gary and later to be Gary's first mayor, was also out walking. The chance encounter

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[1] John Drury, Lake County, Indiana (Chicago: Inland Photo Company, 1956), p. 21.

of these two men proved to be of considerable importance for Gary and its school system.

> Tom Knotts met Wirt during a Sunday morning stroll among the sand hills where Broadway street was later built. Knotts discovered that the young man was a school teacher, and recalling his own experiences as a teacher, thought that he would find out what the stranger knew about education. "We had not talked long," said Knotts, "when I decided to quit and listen." Before they parted Wirt was asked if he would consider a proposition to head the new school system if at some time the offer was made to him. Within a few weeks the school board voted unanimously to employ Wirt as superintendent, beginning July 1, 1907, at a salary of $2,500 a year.[1]

## William Albert Wirt

> Personality peculiarities, including a tremendous inflexibility once a line of action had been decided upon, a difficulty in adjusting easily and gracefully to other members of the profession, an intense preoccupation with his own point of view, complete unconcern for other expressions of opinion and a certain heaviness in writing and oral expression retarded quick acceptance of even his good ideas. Once imbued with an idea, nothing could shake his complete faith or make him deviate in practice. This lack of social sensitivity brought him his greatest publicity and also clouded his real achievement. He took little interest in education organizations and had few close friends in professional circles. He was not a friendly or social person except in certain personal areas.[2]

William Albert Wirt was born January 21, 1874, on a farm near Markle, Indiana. He attended the Bluffton schools, was graduated from the Bluffton high school in 1892, and entered

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[1] Powell A. Moore, The Lake County, Calumet Region (No publisher or date given--may have been hand printed), p. 296.

[2] Obituary, Nation's Schools, XXI (May, 1938), 16-17.

De Pauw University in the fall of 1892 but twice interrupted progress toward his Bachelor of Philosophy degree and Phi Beta Kappa key to serve as superintendent of the Red Key, Indiana, schools. Receiving his Ph.B. in 1898 Wirt began work toward his Ph.D. at De Pauw while serving one year as a mathematics teacher in the Greencastle, Indiana, high school. Upon completing his graduate work he became superintendent of the Bluffton, Indiana schools, a position he held until moving to Gary in 1907.

Wirt's educational ideas developed while he was working in Bluffton where he created the first "platoon school" in the United States in 1900.[1] Not until Wirt reached Gary, however, did he have opportunity to translate his educational ideas into a total system of education.

> . . . While Gary would hardly have been selected deliberately as the fittest place for a considerable experiment in public education, nevertheless, from one point of view, perhaps no place could have been chosen where there were fewer obstacles and where conditions were more favorable to innovation.[2]

Because the town and the school system were new, there were no entrenched educational traditions to overcome. In addition, many of the new residents of Gary had no predisposed ideas of what education in America was like. In 1910, for example, 49 per cent of the 16,802 residents of Gary were foreign born.[3]

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[1] Case, p. 3.

[2] Flexner and Backman, p. 15.

[3] Ibid., p. 9.

Moreover, United States Steel was not interested in imposing any educational patterns on the rapidly growing school system.

> Its [Steel Corporation's] business relations have been limited to the sale by the Gary Land Company of the Jefferson School and sites for other schools; in matters of school policy, it has exercised no influence whatsoever. The school authorities thus enjoyed, and, in certain highly important respects, took advantage of, the opportunity to break away from established practices.[1]

In this open atmosphere, Wirt began to develop the kind of school system that he had only been able to begin in Bluffton.

## The Early Gary Schools--Goals, Technology, Structure

The school system in the early years of Gary was unconventional because Wirt's ideas were unconventional. He could easily have built a traditional school system in 1907; like many of his contemporaries, however, he did not feel that traditional school systems were adequately fulfilling the social needs of growing urban centers. Unlike many of his contemporaries, Wirt was able to put his ideas into practice, to translate his thoughts into a functioning school system that was different.

### Goals

Educational goals according to our conceptualization of the school arise from social values--values concerned with the purposes of schooling. In Gary, as we have suggested, William A. Wirt had opportunity to create a school that departed from tradition. He did not ignore traditional values and traditional

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[1] Ibid., p. 15.

goals--the ordinary subjects were included in the curriculum--however, he emphasized other values.

> First: All children should be busy all day long at work-study-and-play under right conditions. Second: Cities can finance an adequate work-study-and-play program for all children only when all the facilities of the entire community for the work-study-and-play of children are properly co-ordinated, with the school as the co-ordinating agent, so that all facilities supplement each other and the peak loads are avoided by keeping all facilities in use all of the time.[1]

Wirt's first goal was social; the school was to provide a variety of activities to keep children busily occupied all day long. Wirt's identification of this as his first goal for the schools was the result of his beliefs about life in the city as contrasted with life in the country. "The boys and girls out of the city streets are entirely different types from the boys and girls out of the old industrial home and small shop, or from the farm."[2] The difference resulted from the activities engaged in while children were not in school. Children from the farms, small shops, and industrial homes spent their "free" hours working with their families. Children from the city, on the other hand, were left to spend idle hours in the "streets and alleys, amusement halls, and gambling dens."[3] In the city,

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[1]William A. Wirt, letter dated August 15, 1915, quoted from Jack A. Jones, "William W. Wirt and the Work-Study-Play Schools," unpublished paper, Valparaiso University, January, 1968, p. 3.

[2]William A. Wirt, The Great Lockout in America's Citizenship Plants (Gary, Indiana:Emerson Sch. Prt. Shop,1937), p. 14.

[3]Ibid., p. 10.

> industries, the modern home, and the church place upon the school the entire burden of making the child intelligent, reliable, industrious, and strong physically. Formerly, the child came to school from the small shops and the industrial life of the home industrious, reliable, healthy, and well-informed concerning the established industrial, business, and social life.[1]

Wirt claimed to have only two educational goals. He was concerned with the traditional aims of schooling too, but he believed that these traditional goals could not be sought until the social aim of the school was realized. Until the pernicious influences of the city were minimized, children could not be expected to learn.

> The following are four fundamental requirements for success in life: good health, intelligence, reliability, and industry. What does the life of the street and the alley contribute to the health of children, to their intelligence, to their reliability, and to their industry? Without these four fundamental attributes of good character, the boy cannot be worth much to himself or to society.[2]

"The fact is that without health, intelligence, reliability, and industry, the school cannot teach reading, writing, and arithmetic successfully."[3]

Wirt's emphasis on keeping children occupied rather than on more specific educational aims resulted from his beliefs about the nature of man.

> Many teachers talk of educating children by "drawing them out," that is, by a sort of pumping process. They cannot understand that natural children are at all times overflowing like artesian wells and do not need pumping. On the contrary, they are in dire need of outlet and

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[1] Ibid., p. 21. [2] Ibid., p. 13. [3] Ibid., p. 13.

> direction. The type of school which represses self-activity certainly cannot be depended upon for development of character and citizenship, and for the complete education of the child.[1]

While Wirt's first educational goal was social--keeping children happy and busy--his second goal concerned financing the school. It can hardly be called educational in the conventional sense; it is concerned much more with administration and financing and, as such, contributes nothing new to our discussion of goals.

Technology and Structure

Educational technology is conventionally considered to comprise methods and materials--the means for achieving established educational goals. To employ the technology, tasks and roles are embedded in a structure. Because of his beliefs about the nature of children, Wirt was concerned with both the kinds of experiences the school would offer and the way in which they would be structured. Instead of focusing on teacher training and textbook selection, Wirt attempted to make the Gary schools places where children were permitted rather than forced to learn.

> Pedogagy has long tried to educate children by the intensified use of the few short hours in study schools, by highly developed teaching methods and devices, and by a correlation of subject matter in a curriculum of subjects to meet the needs of children. It is now generally recognized that the proper development of the child in the modern city is more of a social problem than it is a psychological or pedagogical problem. Psychology and pedagogy cannot do much for children as long as they are

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[1] Ibid., p. 16.

left to the crowded unsanitary tenements for their home life, and to the gangs of the streets and alleys for their activities.

The teacher who has a social service viewpoint in regard to his work no longer depends on pedagogic nostrums and devices for the development of the souls of his charges. Rather he now attempts to give nature a chance to work the marvelous changes that come irresistibly and naturally in the growing child under fit living conditions.[1]

Wirt did become specific when discussing the kinds of activities that should take place in class, however. "Children are not educated by strapping them in straight-jackets to fixed school seats, where they sit for five hours a day and day after day, apparently studying out of books and listening to teachers talk."[2]

Instead,

Somehow, some way--we must get the children to want right now the things the school has to teach, if the school is to secure the necessary application and concentration on the part of the child to do its tasks successfully. We do not wish to make the school work easy, to sugar coat distasteful work with sentimental play, but we do wish to stimulate the child's will power.[3]

Every child must do the work of educating himself. No parent or teacher can do this work for him. No child can live permanently in any spiritual home that he has not created for himself. The great problem of parents and educators is to surround the child with an environment wherein he will be stimulated to put forth the required effort to do the necessary real, hard work involved in educating himself. No such environment can be adequate unless it creates a real, immediate need for the doing of the work required by automatically bringing real, immediate disappointments for the non-performance of the work, or real joy in its accomplishment.[4]

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[1] Ibid., pp. 28-29.

[2] Ibid., p. 15.

[3] Ibid., p. 18.

[4] Ibid., p. 19.

Three technological features characterized Wirt's plan for a school system in which his goals would be met and where teachers would not have to rely on "pedagogic nostrums and devices": (a) the platoon plan, (b) the lengthened school day and year, and (c) the unit form of organization.[1]

There were four basic kinds of instruction to be offered in the Gary schools: (a) academic which included reading, spelling, grammar, writing, arithmetic, geography, and history; (b) special work which included drawing, science, cooking, and manual training; (c) auditorium which provided for singing, records, movies, and drama; and (d) physical education and play.[2] In order to provide all of these experiences and still keep school construction costs within reason, Wirt devised the platoon plan. Each school would have academic classrooms for only half of the students in the school. While one-half of the student body was using these academic classrooms the other half would be using the shops, gymnasium, auditorium and laboratories. Students, then, were "platooned." Halfway through each day the two platoons would switch places. The money saved by building only half of the usual number of classrooms was used to construct the extended, and occasionally elaborate, "special" facilities as shown in

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[1]Frank Seymour Albright, "A Critical Study of the Organization of Eight Thirteen-Grade Schools in Gary, Indiana" (Unpublished Ph.D. dissertation, The University of Chicago, 1956), p. 2.

[2]Strayer and Bachman, p. 10.

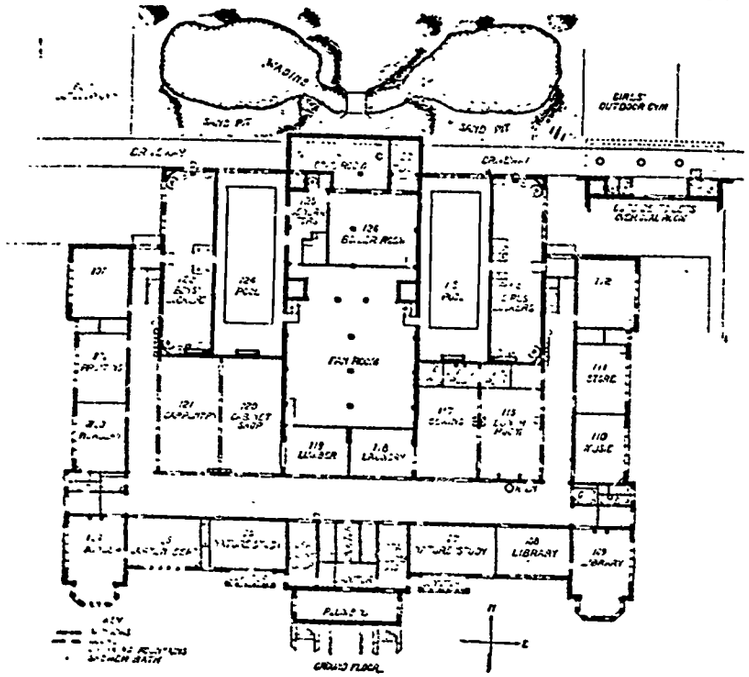
Figures 1 and 2. Because there were so few classrooms, all rooms of the school were in constant use. This constant usage both justified the expenditure for their construction and permitted the school to provide a broader program than was found in conventional schools.

In each of the four curricular areas, students were to be physically engaged in life-like activities. In auditorium, for example, large groups of children, maybe as many as two hundred at once and often of different grades, listened to outside speakers or fellow students give speeches and demonstrations, prepared or watched dramatic presentations, and observed a wide variety of music activities and other audio-visual presentations. Science classes not only worked from books but also maintained a garden and a zoo. Students in shop classes built and repaired the school and its furnishings. Cooking classes planned, prepared, and sold hot lunches on a self-supporting basis. And students in the print shop printed school forms and announcements and, in 1937, even Wirt's book.

## The Great Lockout in America's Citizenship Plants

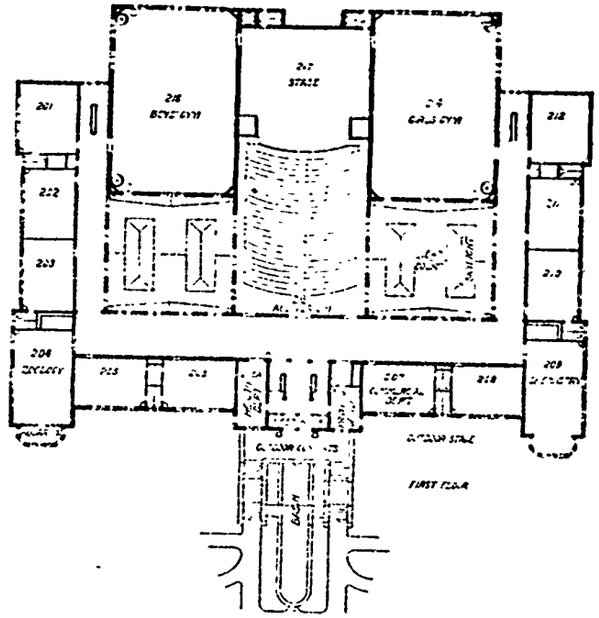
Some of Wirt's ideas were not particularly unusual. There were other schools that provided shops, swimming pools, and auditoriums. What was unusual in his plan was that these special activities were added to the regular school program instead of being squeezed into it. He lengthened the school day and year to keep children busily and constructively engaged for

Fig. 1.--Floor Plan, Froebel School.

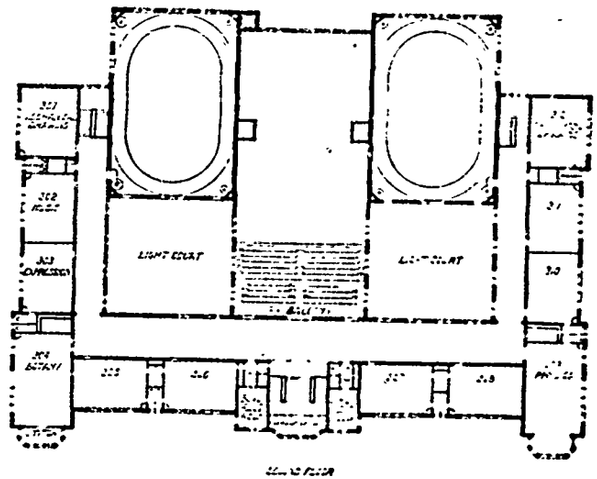


A. GROUND-FLOOR PLAN, FROEBEL SCHOOL.



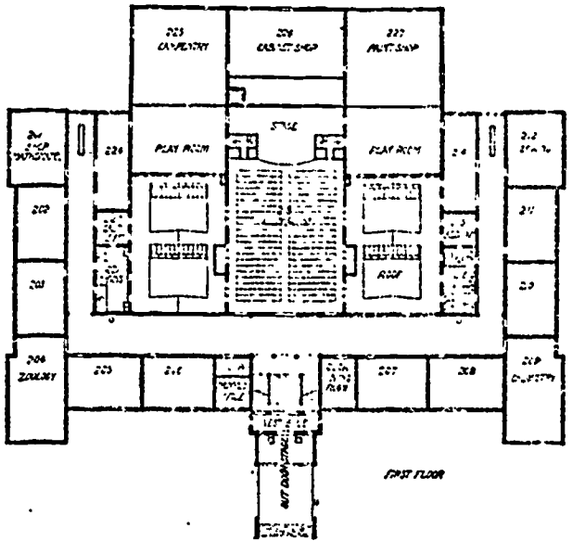


A. FIRST-FLOOR PLAN, FROEBEL SCHOOL.

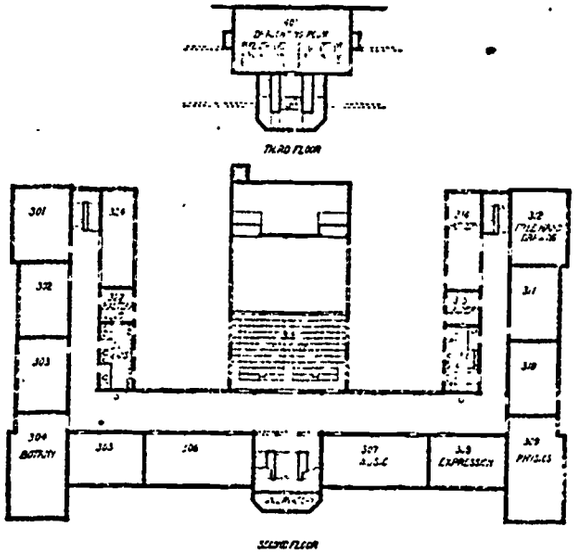


B. SECOND-FLOOR PLAN, FROEBEL SCHOOL.

Fig. 2.--Floor Plan, Emerson School.




*A*. FIRST-FLOOR PLAN, EMERSON SCHOOL.




*B*. SECOND-FLOOR PLAN, EMERSON SCHOOL

as long as possible. In this way the social purpose of the school, to keep children occupied under "right conditions," was met. The lengthened day, of course, was the only way to provide the variety of educational experiences Wirt prescribed to each student on a daily basis. From the earliest days of the Gary schools until 1941 the school day was eight hours in length, from 8:15 to 4:15 with one hour for lunch. During this time Gary had one of the longest school days in the country, and at times, the longest. The school year, until the 1940's when it was shortened to thirty-eight weeks, was forty weeks long. In addition, until the depression years of the early 1930's the schools were open on a voluntary basis from nine o'clock until five o'clock on Saturdays, and there was a ten-week summer program.

Wirt did not argue that it was cheaper to operate the schools longer days and years. What he could, and did, do was argue that the Gary schools were operated less expensively on an hours-the-schools-were-in-use basis. He was proud of the extended services offered the community at such an expenditure. All rooms of the school were in continuous use during the day, and many of them were in use during the evenings. Wirt went so far as to compare this efficiency with that of industry, when he wrote, "Certainly there is nothing new in the idea that all departments of the school should be in continuous use all the time. What manufacturer operates only one department of his plant at a time?"[1]

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[1] Wirt, p. 33.

The third feature of Wirt's schools, the unit form of organization, describes the composition of the student body of any school. All students from kindergarten through twelfth grade living in a geographic area attended the same school. Each unit school was to be a community center for schooling as well as other activities much in the manner of rural schools. A sense of community identity was to grow around the school.

The unit form of organization aided the fulfillment of the social purpose of the school because it dictated that the school, like the world around it, was composed of a variety of individuals of differing ages and interests. The idea of school-community relations became one of seeing the school as a community itself. "Young children are placed with older children, as observers or helpers, on the theory that the situation thus created duplicates actual life conditions where children learn from observing or helping their parents or older persons."[1]

> . . . High school pupils often take charge, usually under the direction of a teacher, of elementary school and even of high school classes, and both high school and upper grade pupils assist in the routine work of keeping records, handling supplies, placing work on the blackboard, correcting papers, coaching individuals or small groups of children.[2]

The results of this mixing of ages in class had its benefits.

> Among the compensating gains . . . are the democratic spirit developed between elementary and high school pupils, familiarity of elementary pupils with

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[1] Strayer and Bachman, pp. 54-55.

[2] Ibid., p. 54.

> high school opportunities, and the knowledge which high school teachers acquire regarding elementary pupils, their methods of work, and their achievements.[1]

Also, the unit plan removed the artificial "breaks" found in the traditional school. Wirt argued that the Gary schools had greater holding power because the completion of sixth or eighth grade did not signify a "graduation." There was continuity in the Gary schools, not a series of "completions" any one of which might serve as a stopping point for students dropping out.

The financial ends of Superintendent Wirt were served by the unit plan of organization. The construction of the extended facilities such as shops, laboratories, and swimming pools was justifiable only when it could be shown that these facilities were used to their maximum capacity. In order to so use them a large number of students was needed in each school. Large extended schools built to serve just high school students would have served the same purpose, but students would have had to travel farther to school, and the other benefits of the unit organization such as social purpose and continuity would have been lost.

To achieve the goals he had identified, Wirt had created his own form of schooling. Neither traditional educational goals nor traditional notions of teaching concerned Wirt. Instead, he had devoted his attention toward providing an atmosphere in which learning could take place.

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[1]Flexner and Bachman, p. 61.

The structure--tasks and roles--of the Gary school system was conventional. Wirt, as we have said, served as superintendent from 1906 to 1938. Although the administrative hierarchy changed over these years, both in form and in personnel, he usually had one assistant superintendent as well as central office supervisors for some of the subject matter areas. In 1926, for example, there were supervisors for English, social science, mathematics, kindergarten and primary, physical education, boys' industrial work, girls' industrial work, extension work, auditorium, and music.[1] However, this array of supervisors was not the rule during the years of Wirt's superintendency; customarily there were supervisors only for the special subjects; academic subjects had department heads who, in addition to supervising, taught one course less than regular teachers. There was a principal in each school; larger schools had assistant principals. Teachers in the Gary schools were supposedly hired because of their subject matter expertise. With the exception of academic teachers in grades one through three, all teachers taught only in the subject matter areas in which they had been trained. All teaching after the third grade was completely departmentalized so students changed teachers each hour. Primary students had different classrooms and teachers only for non-academic subjects.

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[1] Work-Study-Play-Schools, Indiana, Circular of Information to Applicants for Teaching Positions, Board of Education, Gary, Indiana, 1926-1927, p. 12.

The school system in Gary, then, was different from conventional schools. During the last thirty-one years of his life, Wirt devoted his energies to his plan for schooling. Where traditional schools provided academic classrooms for all students and few additional activities, the Gary schools offered a variety of activities and then demanded that students engage in them by providing only half of the classrooms customarily seen necessary. While children elsewhere attended several different schools during their educational careers, children in Gary attended only one. Children attending traditional schools spent five hours a day with one teacher; students in Gary spent their seven-hour days with several teachers. When most schools closed and locked their doors and gates, schools in Gary opened theirs for the pleasure and benefit of the entire community, in the evening, on weekends, and during the summers.

However, our description of the school system to this point has not suggested how well the system worked. As the quotations with which this chapter began suggest, observers did note deficiencies. But, as Wirt's obituary suggests, he was not convinced by criticisms of his school system.

There are two indications that Wirt had no intention of making changes. Despite the fact that the Wirt Plan was no longer used by any other schools in the country at the time, Wirt declared in 1937 that the objectives of the Gary schools had not

changed at all in the preceding thirty years.[1] The policy for school construction had not changed either. Six of the eight unit schools were built between 1909 and 1922; the other two, Edison and Wirt, were completed in 1937 and 1939 respectively. That these latter two schools were built along the same lines as the earlier ones certainly testifies that Wirt had no intention of altering the basic plan of schooling.

The schools of Gary in 1938 must have appeared anachronistic to many observers. During the first two decades of their existence they were frequently visited and copied. By 1915 the Board of School Trustees had set aside four weeks each year during which visitors would be permitted to observe the schools; teachers were finding it difficult to teach because of the constant stream of people previous to this ruling.[2] By 1938, however, no one was coming to visit the Gary schools. Outside Gary there were almost no schools employing any portions of the Wirt system. Wirt had not only built but also maintained a system of schooling that departed from convention.

## The End of an Era

William A. Wirt died on March 11, 1938. The school system was immediately faced with the problem of either finding

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[1] Jones, p. 31.

[2] William Paxton Burris, The Public School System of Gary (Indiana, Washington, D.C.: U.S. Government Printing Office, 1914), p. 7.

an heir who would continue his practices or of beginning to change the system. A clear decision was not made; and, perhaps to avoid an immediate decision, a major survey of the schools was requested by the Board and contracted to the School of Education of Purdue University. Charles D. Lutz, long a supporter of Wirt and principal of Horace Mann School since 1924, was hired as the new superintendent. Lutz's efforts to perpetuate the Wirt system will be discussed in later chapters.

The Purdue Survey, severely critical of the Gary school system, was released in final form in 1942. Although it was widely felt in Gary that the survey staff did not understand the Gary system and was needlessly trying to make it like other school systems, the Purdue Report had been requested by the Board of School Trustees and was a document with which the schools would have to deal.[1]

The criticisms of the Gary school system found in the Purdue Report serve both to illustrate the kinds of pressures on the system to become like other systems and to indicate the problems facing the system in 1940. Under Wirt's superintendency the system had become rigid; in order to retain the essential features of his system but still correct the excesses and deficiencies, the Board would have had to expand Wirt's ideas and then rearticulate the system. On the other hand, a conscious decision

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[1]Interviews with school personnel and Gary residents.

to abandon the Wirt Plan would result in the transformation of Gary to a conventional school system.

Whatever the decision to be made, the system had to deal with the Purdue Report criticisms, the first clear statement after Wirt's death of recommendations for making the Gary schools conventional.

The Purdue Report recommendations are found under twenty-eight different headings. Many of them are of no interest to use here.[1] Others are of considerable interest. They serve both to show the pressures on the system to conform and to illustrate how the Gary school system in operation differed from the school as conceived. Four topics about which recommendations were made are of interest: personnel policies, buildings and grounds, the kindergarten and primary grades, and the high school.

Wirt's plan for the schools required that all rooms in every school be fully used at all times. In order to do this and at the same time incorporate Wirt's school-community notions, students of widely different ages were scheduled into the same classes. Table 1 provided an example for a shop class. The theory behind this scheduling policy was a social one; people of different ages and abilities work together in the world, therefore, they should in school too. Several problems resulted from this arrangement.

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[1] Such topics included a policy for publicity releases, keeping better records of meetings of the Board, using agendas at Board meetings, and improving the accounting procedures of the school.

TABLE 1*

DISTRIBUTION OF STUDENTS BY GRADE LEVELS AND PERIODS OF THE DAY FOR ONE SHOP TEACHER IN TOLLESTON SCHOOL

| Grade Level | Periods | | | | | | | | Total by Grades |
|---|---|---|---|---|---|---|---|---|---|
| | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | |
| 6A | | | | | 5 | | | | 5 |
| 7B | | | | | 10 | | | | 10 |
| 7A | | 11 | | | | | | | 11 |
| 8B | | | | | | 9 | | | 9 |
| 9B | 2 | 1 | | | 3 | 2 | 3 | 1 | 12 |
| 9A | 2 | 1 | 1 | | | 1 | 3 | 4 | 12 |
| 10B | 11 | 2 | 11 | | 3 | 3 | 9 | 14 | 53 |
| 10A | | 3 | 3 | | 2 | | | 2 | 10 |
| 11B | 9 | 5 | 7 | | | 1 | 1 | 7 | 30 |
| 11A | 1 | 6 | 3 | | 2 | 2 | 5 | 1 | 20 |
| 12B | 4 | 3 | 2 | | 4 | 5 | 7 | 3 | 28 |
| 12A | | 1 | 1 | | 1 | 1 | 1 | 1 | 6 |
| Total | 29 | 33 | 26 | | 30 | 24 | 29 | 33 | 206 |

*Final Report, Purdue Survey Committee for the Gary Board of Education, Lafayette, Indiana, 194(2), p. 283.

Administratively, the scheduling of students was difficult; accordingly, students were often registered for programs that were quite unbalanced. For example, students occasionally would take three hours of physical education and two of shop; this left only two hours for academic work.

Although special classes were more likely than academic classes to have students of different ages in them, it happened in all classes often enough to cause student difficulties. The practical effect was often that younger students were either used as "errand boys" or were simply forced to sit and watch.

The one-room school house effect caused instructional problems for teachers. There is no evidence to suggest that Gary teachers were prepared to teach such widely varying groups of students.

Instruction in Gary, as later chapters will suggest, had never been unusual in any respect. There were two contributing factors. First, preparation for teaching in Gary was offered by the school system itself. It is not at all clear what this preparation consisted of, but at least in Gary it was felt to be unique.

> It must be explained that the Gary schools had never evaluated college training as highly as they did "experience in Gary." Teachers were not urged to complete degree work or seek further degrees. The "unique" system was held to be one's best training ground. Often teachers did take college courses in their field, many had such credits, but no importance was placed on degrees as such.[1]

Until 1946 the Gary school system had had no workshops for teachers before school opened each fall; nor were there in-service training programs.

> Gary teachers vary greatly in the amount of professional training brought to the day's work. They also vary greatly in the recency of professional study. We failed to find a School Board policy in actual operation that guaranteed, to children and tax-payers, school teachers who were in a realistic fashion keeping fresh and alert.[2]

It is not clear, then, with the lack of concern for college preparation, how Gary teachers learned to teach. There are

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[1]Flora A. Philley, Teacher, Help Yourself, a brief history of the Gary Teachers Union, Local #4, 1948, p. 29.

[2]Final Report, Purdue University Survey Committee for the Gary Board of Education, Lafayette, Indiana, 194(2), p. 31.

suggestions that the quality of teaching was measured more in terms of devotion to the system than in assessed training or competence. The 1942 Purdue Report had several other comments about teacher preparation.

> We recommend that the Board view the matter of giving fresh and added training to its elementary school teachers, as one of its major tasks and one of its major opportunities. This will involve giving up, or at least very much reducing in potency, a bit of administrative and supervisory practice which has been dinned into our ears on many occasions. "Gary teachers do not need training from the outside. We see to it that they become loyal to the Gary system and that is the best (and only) we know." We feel that the disadvantages of inbreeding of ideas as well as with personnel has been overdone and is a disadvantage to you.[1]

The unwritten practices of the personnel policy were also attacked by the Survey. Both stem from the notion of loyalty to the Gary system. First, Gary residents, graduates, and relatives of those already in the system were given preference for jobs.[2] Obviously such individuals had knowledge of and were assumed loyal to the system prior to their being hired. Second, once teachers entered the system, they did not move to other districts. Exact figures are not available, but the Purdue Survey commented that in 1940 seventy per cent of the teachers were at or near the maximum on the salary schedule.[3] This, of course, was a problem over which the system had no control; it could not simply dismiss teachers because they had been there for many years.

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[1] Ibid., p. 42. [2] Ibid., p. 11. [3] Ibid., p. 132.

Supervision of these loyal teachers was entirely in the hands of department heads and supervisors. Not even principals were responsible for curriculum or instruction; they served only as business managers of each school. The 1918 survey of the Gary school system commented,

> In the main, therefore, the teaching is of ordinary type, ineffectually controlled. There is nothing in the Gary Plan that requires this; there is no reason why a school of the Gary type should not be well organized, well administered, and well supervised. Indeed, as we have already urged, the enrichment of school life inevitably results in complications which give added importance to good organization, good administration, and good supervision.[1]

The Purdue Report attributed a lack of general curriculum improvement to the lack of adequate supervision.

> Attempts to review the curriculum as a whole and to make robust attempts to improve and modify it have been absent for many years. This static condition has had its adequate causes. Rather than review the causes for the general static conditions found, the Board could better turn its attention to suggestions calculated to relieve the school of more than a slight trace of a chronic case of the doldrums in matters of curriculum administration.[2]

In short, because of the personnel policies, the Gary schools had become isolated from the rest of the educational world.

> It is our opinion that over the years the Gary personnel has become unduly inbred; its educational ideas have become too uniform and too soft through lack of challenge, even competition from outside sources. Gary could profit by more exchange of trade in educational ideas and practices which spring from these ideas.[3]

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[1] Flexner and Bachman, p. 87.

[2] Purdue Survey, p. 46.

[3] Ibid., p. 41.

The second policy which served to dictate the kind of education offered from 1906 to 1938 and with which the system later had to deal was the building construction policy. There were academic classrooms available for only half the students. Without extensive remodeling of the special rooms and change in the overall educational offering, the school system after 1938 had to confront a problem of overcrowding. In 1947, for example, all of the schools were overcrowded with the exception of Emerson and Wirt.[1] Roosevelt, the all-black unit school, had 33 per cent more students than it was designed for. The Purdue Survey noted this overcrowding and went on to discuss a policy for new construction. The Report did not directly recommend that the Wirt Plan of construction be discontinued but strongly suggested it. "It has never paid Gary (in our estimation) to keep forcing a school program to a building for the sake of proving that the original basic plan was forever right."[2]

> We recommend that before any other buildings of any size are planned the board take due consideration of the very creditable advances of school house architecture that have somewhat paralleled the changes in automobiles since Ford first went into production. Instead of repeating the past or even a new edition of it (from a most creditable sense of loyalty, no doubt), we recommend that the next buildings be planned with tradition

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[1]The Anselm Forum, Press Reaction to Gary's School Troubles Over Integration, unpublished collection of articles, pictures, and textual materials, p. 13.

[2]Purdue, p. 33.

> respectfully laid aside and that a hard-headed analysis of the job that the school is to perform be given first call.[1]

The Survey's criticisms of teaching in the kindergarten and primary grades were, however, a direct assault on fundamental aspects of the Wirt Plan. Justification for the criticisms, however, was offered.

> An alarming amount of retardation in these grades was a bald fact. We recommend to you a single class per teacher organization in contrast to the elaborate platoon system. Modifications of the teacher-per-class essence of organization were suggested and will of course take place.[2]

No remodeling of facilities was suggested, however; it was felt by the Survey staff that this change could be made within the schools as they were.

Recommendations for the Gary high schools were primarily about curriculum and instruction. Curriculum uniformity among the eight schools was criticized.[3] Centralization of planning had been the rule under Wirt; the Purdue staff recommended that curricular planning become the responsibility of each school. In this way different kinds of student bodies would have experiences which would be appropriate for them.

The static curriculum that we have already commented on was criticized. It was urged that curriculum committees composed of school personnel be formed to begin updating subject matter offerings. Required courses were to be examined as to

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[1] Ibid., pp. 33-34. [2] Ibid., p. 40. [3] Ibid., p. 46.

their necessity; new courses in several subject matter areas were to be added; and, some of the high schools were to be established as specialized subject matter schools. A liberal transfer policy was to be designed.[1]

Criticisms of instruction in the classrooms revolved around the static, uninspiring nature of classroom atmosphere. "The concern for subject matter exhibited in a great many Gary classrooms results in much work being done which is lacking in vital meaning to pupils."[2] As in too many schools an academic classroom is still regarded in Gary as a recitation room requiring little else but neat rows of seats and a teacher's desk in the center of the stage."[3]

## The Problem Facing the System

The Purdue Survey, in making its numerous recommendations, had posed two challenges to the Gary school system. First, the system was urged to accept the Purdue recommendations; however, as the Report noted, many of the recommendations were not based on an existing reality in the educational world. Few school systems existed that did not deserve these same criticisms. Gary, then, was challenged to become a model system. Second, this change to become a model system was to take place despite the limiting factors imposed by the previous thirty years of the school system's existence. Although the Report did not

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[1] Ibid., p. 46. [2] Ibid., p. 49. [3] Ibid., p. 49.

directly demand that such fundamental features of the Gary system as the unit form of organization, the platoon plan, and the extended school day and year be immediately abandoned, it did criticize them.

However, these assaults on the Gary Plan did not produce any immediate changes in the system. Over the thirty years of the system's existence, ways of operating had become institutionalized. The system had gone for so long without any change that problems which existed in 1938 had been accepted as part of the institution too. While several of the Purdue Report recommendations could be easily put into effect, any fundamental change was dependent on factors not as easily changed such as the unit school buildings and the teaching staff.

William A. Wirt, superintendent of the Gary schools from 1906 until 1938, had built a school system that was, at the time of his death, responsive only to him. For many years the Gary Board of School Trustees had abdicated its function of policy-making to Wirt.[1] The Board was convinced that Wirt had built the best system possible and therefore would not interfere with his decisions. Faith and loyalty to Wirt came also from school personnel. The Purdue staff commented that,

> We found in many of your "key" people clear evidence of (1) undue and uncritical faith in a "superintendent"; (2) unwarranted praise for the actual condition of school affairs; (3) practically no genuine

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[1] Ibid., p. 5.

> search for better ways of doing things; and (4) a bona fide surety that impersonal investigation was really "attack" and "assault."[1]

When the Purdue survey team began its work in 1940, Frank B. Knight, survey director, wrote that he ". . . knew nothing of the almost unique trust Mr. Average Citizen had in the schools and the equally priceless asset of loyalty in the hearts of many students and alumni."[2]

This faith in Wirt and his school system held by the Board, students, teachers, and residents of Gary caused the Survey to state, "Even a few years after he had been taken from you, he was still the livest [sic] person in the system. To him, the eyes, mind, and personal loyalty were still attached--and in many ways, quite properly so."[3] As a result of this devotion, "It is noteworthy . . . that by and large, the dominating influences seem to be far more concerned with preserving the status quo than with improving it."[4]

The Purdue Report attempted to undermine this loyalty.

> In the olden days Gary was engrossed in an important exposition and demonstration of an educational organization of great vitality and worth, i.e., the Gary "System." This demonstration has had its effect upon the nation's schools and formed the basis for Gary's fame. We feel that <u>at the time</u> great emphasis upon the particular type of organization was wisely stressed, that careful protection of Gary teachers from other ideas even to the point of discouraging serious study elsewhere was proper--we are sure it was effective.

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[1] <u>Ibid</u>., p. 15.

[2] <u>Ibid</u>., p. 2.

[3] <u>Ibid</u>., p. 12

[4] <u>Ibid</u>., p. 19.

> It is only in your fancy, however, that the educational world is watching Gary now. Perhaps it would be wise to settle down and be just yourselves--just a good school system serving its own community as best it may. In time another great educational leader may live and work in Gary and again it may become your duty to "show the world," but that time is now now--as we see it.
>
> Putting the matter bluntly, now is the time for Gary to forget that it was once often visited by others and to begin visiting around a little itself. The justification for inbreeding and isolation no longer exists.[1]

Essentially the message of the Purdue Report was this: the Gary school system was once a model system which was quite different from traditional systems. In 1940, however, the system was to turn its back on its own tradition and history and to become a model conventional school. For a system that had never before been without William A. Wirt, the challenge presented numerous problems, some of which we have sketched. Complicated and difficult changes were necessary; not only was the system to become conventional, but it was to become a model conventional system. Between 1940 and 1970 change did occur, both in curriculum and in the over-all form of the system. Chapter III will discuss organizational change between 1940 and 1970. Chapters IV, V, and VI will trace the history of curriculum in social studies, science, and vocational education respectively, and Chapter VII will then summarize how and why curriculum did and did not change in Gary.

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[1] Ibid., p.

## CHAPTER III

## THIRTY YEARS OF CONCERN: CONSTRUCTION AND CURRICULUM

Between 1940 and 1970 the Gary school system faced many problems, some of which involved curriculum in specific subject matters; these will be discussed in Chapters IV, V, and VI. Other problems arose from the organization of the school system. The organizational structure of the school system changed over time; some organizational changes were made in order to produce curriculum change. This chapter will focus briefly on criticisms of the organization of the system, the ways in which problems were perceived, proposed solutions to these problems, and the process of change as action was undertaken. This focus will serve both to outline the organizational context in which curriculum change occurred and to suggest that organizational changes as such did not promote curriculum change; planned change could not occur if new resources were needed to produce the change, but change could occur if the necessary resources were available from outside the system without any concomitant planning. Our concern here is with broad changes in the organizational structure of the school system, changes in the location

of the responsibility for curriculum change, and changes in the primary concern of the school system over time.

Chapter II discussed William A. Wirt's ideas about schooling, the Gary school system as operationalized under Wirt, and the criticisms by the Purdue Survey of 1942. From 1906 to 1938, under the superintendency of Wirt, the Gary school system was notable because of its lack of organizational change. Wirt changed neither his general ideas about, his conception of, nor his plan for schooling as operationalized in the school system. Each school had a principal; larger schools had assistant principals. Department heads who taught nearly a full load of courses were responsible for curriculum and instruction in their respective subject matters at all grade levels. Standing between the separate schools and Wirt were two assistant superintendents, one for business affairs and one for instruction. As suggested in Chapter II, the school system was tightly controlled by Wirt. Although responsibility for curriculum was nominally that of the department heads, the supervisors for the special subjects, and the assistant superintendent for instruction, Wirt actually kept responsibility for himself.

The Purdue Survey criticized Wirt's administrative arrangements because they provided neither for change nor for teacher improvement. Neither department heads nor assistant superintendents had time to supervise teachers and to work to keep the curriculum fresh and current. When Wirt died, the school system was faced with the choice of either perpetuating

the Wirt system or becoming conventional. By appointing Charles Lutz to succeed Wirt, the Board chose to continue the Wirt plan.

Decentralization and Buildings, 1942-1955

Charles Lutz had been employed by the Gary schools since 1924, first as a classroom teacher, later as a principal. His perpetuation of the Wirt plan was inevitable because of his years of working closely with Wirt. In the thirteen years Lutz served as superintendent, he was only sporadically concerned either with change or with curriculum. He was forced, as a result of a rapidly growing number of students, to be primarily concerned with buildings. In the absence of direct concern for curriculum or the form of schooling in Gary, the few planned changes during these years did not occur; by virtue of "drift," however, other changes did occur.

As a response to two criticisms of the Purdue Survey--lack of mechanism for change and curriculum uniformity among schools, Charles Lutz decentralized responsibility for curriculum. The principal of each school assumed this responsibility. During the Wirt years the principals were only business managers; curriculum was the concern of department heads and supervisors. Suddenly, in 1942, with no special preparation, principals were to assume responsibility for curriculum. The practical effect of this decentralization was minimal; as our discussion of the 1942 and 1955 school surveys will shortly show, curriculum in 1955 was much the same as it was in 1942. It appears that the principals did nothing about curriculum.

Yet despite the relocation of responsibility for curriculum, there were three attempts to consider curricular issues on a city-wide basis during Lutz's tenure. One of these three attempts concerned social studies and will be discussed fully in Chapter IV. The other two are of interest to us here. The first, changing the first six grades to two non-graded "cycles," did not become operational. The second, the series of workshops, did not propose any direct action.

Early in the 1940's the decision was made to change the nature of the primary and elementary cycles, grades one, two, and three, and grades four, five, and six. A Manual of Information prepared by Lutz and dated 1945 states:

> The kindergarten-primary unit shall constitute a flexible, ungraded cycle in which children will progress at their own rate and in which such adjustments as seen advisable shall be made within the cycle after proper consideration by teacher, principal, and parent. The advice of the supervisor and workers in the medical and child welfare departments shall be used when needed. It is understood that adjustments may be made at any time, either upward or downward, from one group to another in a class, or from one class to another.
>
> Much in-service training for many people should be given in seeing that adjustments during the primary cycle are being made at irregular times rather than being handled as failures at the end of the semester as was formerly done. Further in-service training with teachers should be given to be certain that proper adjustments are made by the child after a change has been made.
>
> This flexible ungraded primary cycle plan shall be in effect in all buildings by September, 1945.
>
> During the last year of this flexible, ungraded primary cycle, a careful evaluation of the intellectual, social, emotional, and physical development of each child shall be made to determine his fitness to go on to the intermediate level. In this evaluation use shall be made of cumulative records, of achievement

> and ability tests, of teacher, principal, and parent judgments, and the advice of the supervisor and workers in the medical and child welfare departments.[1]

The wording of the discussion about the intermediate cycle is identical to that presented about the primary cycle. There are two additions, however:

> With the consent of the Superintendent and the Board of School Trustees other pupil progress plans may be tried upon an experimental basis. The results of such experiments shall be made available so that, after a time, the most effective plan may be selected for the city.[2]

> As rapidly as feasible, a program of four periods of academic work for each child shall be put into effect. Instruction in social studies, reading and English, mathematics, spelling and handwriting shall be given in these four periods. It is suggested that, as a general policy, physical education be held to one period per day, that home economics and industrial arts be eliminated at this level, that more craft work be included in the present art program, that health and safety be made a definite part of the science work, and that the activities in the foregoing fields and in the auditorium be so planned as to integrate within and add to the basic general education program.[3]

No mention is made in these plans of the departmentalization and platooning that was characteristic of these first six grades in Gary. The basic structure, then, was presumably not to be changed. Exactly how the non-graded cycles were to be operationalized is not specified. The Board of School

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[1] Charles D. Lutz, Manual of Information, Gary Public Schools, Gary, Indiana, September, 1945, pp. 19-20.

[2] Ibid., p. 20. [3] Ibid.

Trustees had been presented with and had accepted this plan on June 8, 1943,[1] and it had directed that the plan go into effect in September, 1943. The Manual of Information, cited above, set September, 1945, as the target date. By this time the plan had been languishing for two years and would continue to do so. The two non-graded cycles never came into being.

An in-service program was created in 1944. These in-service workshops were held annually until the middle 1950's at St. Mary's Lake Camp in Battle Creek, Michigan and in Gary for those who were unable to get away for the three days each workshop lasted.[2]

Records from only the 1950 workshop are available. The 1950 workshop participants were divided into six groups, each with a discussion topic. The six topics were: (1) Effective Methods of Developing Democratic Group Responses in the Classroom; (2) Changing the Curriculum Through the Use of Pupil Personnel Services; (3) Using the Community as a Learning Resource in the Modern Curriculum; (4) Methods of Developing Effective Citizens; (5) Implementing Democratic School Administration; and (6) What is the Role of Parents and Citizens in the Total Educational Program? Each group wrote a position

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[1] Minutes of the Meetings of the Gary Board of School Trustees, Gary, Indiana, June 8, 1943.

[2] Proceedings of Summer Workshop, Gary Public Schools, "New Trend in Education, In-Service Education Recommendations," St. Mary's Lake Camp, Battle Creek, Michigan, June 28-30, 1950, p. 2.

summarization as the last task of the workshop. Group 2 which dealt with changing the curriculum through the use of pupil personnel services reported:

> The answers given by the teachers and by the pupils reveal the trend away from the subject-centered approach to the child-center approach. There seems to be a need for courses that fit one for social adjustment and prepare one for work immediately after high school.[1]
>
> The curriculum of the school, if it is functional, is a series of experiences that grow out of interests, needs, and abilities of children. Planning a curriculum is a continuous process to which educators, pupils, and parents may contribute.[2]

These two paragraphs warrant several different comments. First, a "progressive education" tone is present and only shortly before the death of the Progressive Education Society. Second, instead of discussing how the curriculum could be changed (note the lack of recommendations), the statement reflects a change that seemingly already apparent, i.e., "The answers . . . reveal the trend . . ." The change it would seem, if we accept this at face value, had already implicitly occurred without the direction or guidance of the school system; only by reflection by the individuals involved was the trend revealed. Third, the only mention of curriculum as manifest in courses was heralded by "There seems to be a need for . . ." Fourth, and ironically, in 1950 there had not been a functioning committee concerned directly with the curriculum of any subject matter area or grade level (except the special case of

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[1] Ibid., p. 13.

[2] Ibid.

social studies which will be reported in Chapter IV) for at least ten years, nor would there be for six more years. In addition, of the elementary subjects, half were being taught without benefit of any curriculum guide; textbooks were changed every five years; yet ". . . curriculum is a continuous process . . ." Of course, this discussion group could have reflected the initiative of individual teachers for revision and improvement of curriculum within each classroom. Again, however, we will invoke the case of social studies as evidence that this was not happening.

Discussion Group II went on to make one recommendation--that a two-day workshop should be held before the 1950-51 school year began. The first day would be given to over-all planning by individual teachers; the second day would be devoted to initiating a plan for stressing child-centered approaches in the classroom.[1] The pre-school workshops begun in 1947 had obviously been discontinued by 1950. The group concluded its report with an exact repetition of the first paragraph quoted above.

In the fall of 1950 a similar workshop was held in Gary. Again, Group II (with different individuals participating) is of interest. The discussion topic was "Curriculum Development in Terms of the Needs of Pupils." Its report begins,

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[1] Ibid., p. 14.

> In order to arrive at some common basic understandings, we discussed the meaning of the terms curriculum and needs of pupils. We agreed that curriculum means all of the experiences that pupils have under the direction of the school. There are, therefore, no extra curricular activities. We discussed the needs of pupils from two points of view: namely, that of the pupils and that of the adults. We found that, according to psychologists, the basic needs of people are: ego status, social status, and emotional status. We mentioned that all children need physical well-being and mental health, self-esteem, social recognition, and to develop an appreciation for the values associated with democratic living. We also noted the ten imperative needs of youth, as stated in Planning for American Youth; and we accepted the seven cardinal principles of education: citizenship, worthy use of leisure time, command of fundamental processes, health, worthy home membership, vocational guidance, and ethical character. In conclusion, we accepted "A Pattern of Objectives for Curriculum Planning" as outlined in the policy manual for the Gary schools, because we felt that it embodied all the essential needs from both the pupil's and the adult point of view. Throughout our discussion we stressed the preservation of the democratic society and the need to develop good citizenship for the good of a democratic society.[1]
>
> We decided the ideal curriculum provided a body of experiences that will help every child develop wholesomely to his maximum capacity of achievement, according to his unique needs and interests. Necessarily, therefore, the curriculum is constantly changing.[2]

The curriculum was not changing in Gary, at least by design, because no one was attempting to change it, with perhaps the exception of the group that produced this report. They, however, spent their time accepting the work of other groups and individuals and made no recommendations for change.

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[1] "Report of the Conference on School Problems," Gary Public Schools, Gary, Indiana, November 14-17, 1950, p. 58.

[2] Ibid., p. 58.

Between 1942 and 1955 Gary was typical in its lack of concern for and success in changing curriculum. World War II had produced both a baby boom and a moratorium on new construction.

> As the '50's opened, construction, rather than curriculum, was uppermost in the minds of education's managers. The staggering task of accommodating a 33% increase in students, of training, recruiting, and employing 50% more staff, and of designing and managing a building and equipment program that multiplied by six in twelve years was draining the intellectual energies of most school people.[1]

In 1947 a building and sites survey of Gary was done by a committee from The University of Chicago.[2] The Survey erred seriously in its projections by underestimating the number of students the school should expect and, as a result, the number of schools needed to accommodate them. The Gary school system, already overcrowded in 1947, was faced with a serious housing problem until the early 1960's.

The building program was expensive; the results, of course, were tangible. While curriculum operates daily without scrutiny by local residents, housing or lack of it, is quite visible. Between 1942 and 1955 the attentions of the Board of School Trustees were focused on buildings, not on curriculum. This was true not only of the Board but also of citizens who spoke at Board meetings. Parent groups continually

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[1] National Society for the Study of Education, The Curriculum: Retrospect and Prospect, 70th Yearbook, Part I, 1971, p. 46.

[2] Committee on Field Services, Survey Report, School Buildings and Sites, Gary, Indiana, The Department of Education, The University of Chicago, 1947.

protested about the over-crowding, the double shifts, and the church basements and the like rented by the Board to serve as temporary classrooms.[1] No groups or individuals spoke about curriculum.[2] The housing problem was eventually solved, but it took time, money, and energy of many people in the school system. While attention was focused on construction, curriculum languished.

Curriculum in Gary was receiving no attention, but there were committees of teachers in the school system at work on other matters. The Public Administration Service survey report noted this in retrospect:

> The administration and the Board of School Trustees in Gary should recognize and make greater use of the resources within the faculties of the schools. The use of faculty committees by the previous administration /that of Charles Lutz/ had much merit in it, particularly in the preparation of the lists of supplies and equipment for purchase. Consideration should be given to extending and increasing faculty participation in the development of policies and the planning of the school program.[3]

Committees had other purposes than preparing lists. There were four different committees concerned with building policy, but Superintendent Lutz was not the chairman of any one of them. In addition, there were numerous budget committees,

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[1] Minutes of the Meetings of the Board of School Trustees, Gary, Indiana, 1942-1955.

[2] Ibid., 1942-1955.

[3] National Education Association, Committee for the Defense of Democracy Through Education, Gary, Indiana, A Study of Some Aspects and Outcomes of a General School Survey (1957), p. 30.

some of which had similar purposes.[1] Yet several subject matter areas and grade levels had no curriculum guides. Included were language arts and social studies for grades four through six and science for four through six; the music guides for grades four through six, arithmetic guides for all elementary grades, and the grades one through three science guides were all found to be deficient by the PAS.[2]

While the school was focusing its attention on its building program, many essential elements of the Wirt system were disappearing--the school day had been shortened, elementary students were increasingly being housed in separate "feeder" schools, students no longer attended school on Saturday, the building-repair emphasis in shop classes had been discontinued although homemaking classes still operated the school cafeteria, the auditorium period was required only for the middle grades, and most elementary students were no longer departmentalized.[3]

> These modifications have not been in any sense systematic, however, or aimed at adjusting the program to a different educational process. They have been steps of expediency forced on the system primarily by growing population and by resistance to the extended school day, platooning of small children, and related aspects of the Wirt system.[4]

> In general, it may be stated that the Gary system, in drifting away from the Wirt plan, has perpetuated the disadvantages of the program while losing whatever advantages it had.[5]

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[1] The Public School System of Gary, Indiana, Public Administration Service, 1955, p. 24.

[2] Ibid., pp. 60-66. [3] Ibid., pp. 7-8. [4] Ibid., p. 8.

[5] Ibid., p. 8.

Despite the fact that feeder elementary schools were built between 1942 and 1955, these new schools reflected old construction policies. Extensive auditoriums, gymnasiums, and shower and locker facilities were constructed although use and the curriculum did not warrant the building of such facilities.[1]

The 1943 and 1945 decisions to make grades one through six non-graded had not been put into operation. Platooning and departmentalization continued. The exact points at which elementary students were no longer platooned and no schools were unit (K-12) schools cannot be determined. Circumstances in the separate schools varied, and changes were dictated by these circumstances. No records were kept in any of the schools. Board decisions are of no value because they were not carried out, again because of circumstances. By some time in the early 1960's vestiges of the Wirt plan had faded completely.

In 1955 Charles Lutz was relieved of his duties because the Board was dissatisfied with the school system. The Board had commissioned another general survey of the school system, this time by the Public Administration Service. The PAS released its report in 1955, and Lutz was soon fired. Inevitably, the PAS survey was criticized by many individuals in Gary as being a "hatchet job." In addition, both the American Association of School Administrators and the Mississippi Valley

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[1] Ibid., p. 8.

Superintendent's Association asked for an NEA investigation.[1] As a response to these requests, the NEA Commission for the Defense of Democracy Through Education investigated both the circumstances surrounding and the content of the PAS report. The Commission found that the PAS report had indeed been a hatchet job but that many of its recommendations were appropriate.[2] Alden H. Blankenship was hired as the new superintendent in 1956. Dissatisfaction with Lutz's administration of the school system and the "good" recommendations of the PAS report offered a mandate for Blankenship to begin to make changes.

## Curriculum and an Illusion of Change, 1956-1970

Although Blankenship was only the first of three superintendents and several acting superintendents of the Gary school system between 1956 and 1970, the changes made while he was superintendent from 1956 to 1963 established a pattern which continued throughout the period.

The PAS survey had criticized both the organization of the school and curriculum. Organizational changes were made quickly. The assistant superintendent for business affairs had departed with Lutz. He was replaced, and a new accounting system was installed. In 1956, responsibility for curriculum,

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[1] NEA, p. 7.

[2] Ibid., p. 4.

once Wirt's, later that of building principals, was given to subject matter supervisors. The supervisory positions were new and created at the recommendation of the PAS survey.[1]

The lack of curriculum guides was remedied beginning in 1956 but only halfway. The concern was with secondary curriculum. Blankenship quickly established a curriculum committee structure which produced the 1958 Gary Curriculum Guide, Grades 7-12.[2] Thirteen committees, each focusing on one subject matter area, worked through the 1956-57 and 1957-58 school years to produce new guides. We will examine the work and product of the science committee in Chapter V and the vocational education committee in Chapter VI. As we shall see, these committees proposed new courses and, in some cases, different content for existing courses. The proposals were not put into operation, however.

The flurry of curriculum revision and development found between 1956 and 1958 slowed only slightly after these years. From 1957 to 1970 the Board of School Trustees, which had to approve all new curriculum guides, did so at the rate of an average of seven per year; 1964 was the peak year with seventeen.[3] After a period of no curriculum development between 1938 and

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[1]Public Administration Service, p. 81.

[2]Ibid., pp. 60-66.

[3]Board Minutes, 1957-1970.

1955, the Gary school system in 1956 entered a period of concentrated effort to revise curriculum. In this respect Gary was a typical school system.

Curriculum, Top Priority

"By 1960, whenever curriculum and construction came in conflict, curriculum expenditures won."[1] By 1960 Gary was beginning to catch up in its struggle to house all students properly. Although the student body was growing at the rate of about 1750 students per year in the late 1950's, the building program undertaken during the 1950's was having an effect. In 1960 Superintendent Blankenship estimated that in the previous four years the percentage of inadequately housed students had dropped from nearly half to less than one-fifth, from 17,000 out of 36,000 in 1956, to 10,000 out of 39,500 in 1958, and to 8,000 out of 54,000 in 1960.[2] When school opened in September of 1965, no elementary students were on double shifts for the first time in twenty years.[3] The new buildings, first opened in 1965, had been in the planning and construction stages for several years and thus overlap the concern for curriculum which began in Gary in 1956.

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[1]National Society, p. 48.

[2]Four Years of Progress, 1956-1960, Gary Public Schools, School City of Gary , 1960), p. 12.

[3]Board Minutes, May 25, 1965.

Curriculum was the focus of the Gary school system between 1956 and 1965. In April of 1959, the Board approved for the first time the hiring of teachers during the following summer to develop new curriculum guides.[1] In November, approval of a daily planning period for all teachers was given.[2] In December, 1961, the Board approved hiring teachers to work on Saturday mornings developing and revising curriculum.[3] In September, 1961, approval was given for hiring teachers to work after school in developing curriculum.[4] The Board minutes between 1962 and 1966 show an increasing number of approvals for extra pay to teachers for extra curriculum work after school, on Saturday mornings, and during the summers. The numerous new and revised curriculum guides presented to the Board for approval during these years reflect the extra pay and the time spent. But, as the examination of science, social studies, and vocational education in Chapters VI, V, and VI will show, curriculum committees were <u>not</u> instrumental in bringing about change. The pattern that emerges before 1960 is also present after 1960--when the initiative for changing or adding courses is not accompanied by newly available funds, change does not occur--with very few exceptions.

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[1] <u>Ibid</u>., April 14, 1959.

[2] <u>Ibid</u>., November 24, 1959.

[3] <u>Ibid</u>., December 13, 1960.

[4] <u>Ibid</u>., September 26, 1961.

There were new courses and new units developed and added to the existing program between 1960 and 1970. In 1960 a unit "teaching about communism, not teaching communism" was requested by a Board member. The idea is raised and pursued during the Board meetings between April and October, and a new curriculum guide for teaching the unit was approved on October 11, 1961.[1] Foreign language was offered in the elementary schools for the first time; funding was from NDEA, first a pilot program in 1964-65 and then extended to fifteen more schools for the 1965-66 school year.[2]

A course entitled Preview of Occupations was offered in 1965-66 to students of ages thirteen through fifteen; 90 per cent of this program was funded by the Economic Opportunity Act.[3] A three-year pilot program in economics was approved to begin in 1966-67 under the auspices of the Joint Council on Economic Education.[4] Head Start and Upward Bound programs were started. On May 2, 1966, Board approval was given for a one-semester course in Computer Math and Programming; funding was from Title III of the Elementary and Secondary Education Act, the Bell Telephone Company, and International Telephone and Telegraph.[5]

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[1] Ibid., October 11, 1960.

[2] Ibid., May 26, 1964 and March 23, 1965.

[3] Ibid., June 22, 1965.

[4] Ibid., January 25, 1966.

[5] Ibid., May 2, 1966.

Late in the 1960's Afro American history courses were created; some began in second grade. The impetus for these new history courses came both from parents who spoke heatedly at numerous Board meetings during the late 1960's and from outside funding sources.[1] The Afro American history issue was the only issue directly concerned with a course or series of courses that was raised and debated at Board meetings. The series of meetings at which there was conflict was the only group of meetings in which a number of parents were vocal about curriculum during the thirty years examined in this study.

Between 1966 and 1970 almost no new curriculum guides were presented to the Board for approval. The time and energies of the Board were taken up instead by federal projects: learning about them from the superintendent, approving funding applications, and listening to progress reports.

Between 1940 and 1970 the school system in Gary changed organizationally; responsibility for curriculum was located in different places at different times. In this context, then, we will now examine in detail curriculum change and development in three subject matters--social studies, science, and vocational education.

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[1] Ibid., numerous Board meetings.

CHAPTER IV

# INTERGROUP EDUCATION: THE SOCIAL STUDIES CURRICULUM AND RACIAL INTEGRATION, 1943-1955

> In our study of hall order, cla sroom, assembly, and playground behavior we are considering these following points as essential in developing self-control and harmonious relationships. (1) Sense of respect for self, others, property, authority, group decisions; (2) Sense of responsibility in the home, church, school, community; (3) Spiritual values such as kindness, friendliness, sympathy, understanding, courtesy.
>
> (1) Lock central entrance doors during the lunch periods. (2) Have boys and girls enter the halls through their respective gym courts in the morning and after lunch. (3) A coach shall be stationed at each gym court entrance at the end of each hour of the day. (4) Cut the number of metal hall passes from two to one for each teacher. (5) Need for definite policy for infringement of hall rules. . . . (14) There is need for a new elementary building.[1]

In the early 1940's racial unrest and confrontation in several cities in the country, including Gary, gave birth to the idea that intercultural education should become a part of social studies programs. Part of the social studies curriculum in Gary, then, came under examination between 1943 and 1947. In 1945, during this period of concern for the social studies

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[1] "Report of the Conference on School Problems," Gary Public Schools, Gary, Indiana, November 14-17, 1950, pp. 65-66.

curriculum, there were several racial strikes in the Gary schools. The strike problem joined the perceived curriculum problem as an intercultural concern of the school system. By 1947 the strike had been settled, an integration policy put into practice, and an intercultural curriculum had been designed. In 1955 the schools were operating without threat of strike, the integration policy was well-established and operational, but the intercultural curriculum was used by no more than a handful of teachers.

As evidence for these statements is offered and we trace and analyze the two intercultural problems, we will see that vigorous and successful energies of the school system were directed toward maintaining the smooth delivery of the educational service; attempts to alter that service, i.e., to put an intercultural curriculum to use, were much less vigorous and almost totally unsuccessful. The failure of the new curriculum was the result of values, both in Gary and across the country, which affected the creation of teaching technology for, the administrative support of, and the teacher resistance to intercultural education.

On September 18, 1945, a majority of the white students at Froebel School in Gary went out on strike protesting the integrated nature of the school. The initial demand of the striking students was the reassignment of all black students to "their own" school. Although this demand was to change over

the next two years while strikes and the threat of strikes continued, the essential issue facing the school system was that of racial prejudice.

Gary civic and school officials viewed this potentially explosive situation as two separate but related problems, one short-term, the other long-term. The short-term problem was seen in terms of three sub-problems. First, the striking students must somehow be returned to their classes. Second, the strike had to be contained. Although none of the other seven unit schools was integrated (one enrolled only black students, the other six only white students), it was feared that either a strong stance on integration or determined action against the strikers by the Board of School Trustees might initiate sympathetic strikes in other schools. Finally, and this aspect essentially encompasses the other two, the schools had to be kept continually operating, and the threat of their closing had to be eliminated; in other words, the even flow of educational services had to be maintained.

A long-range solution to the second problem emerging from the strike situation was seen in the establishment of an intercultural education curriculum in the social studies program. Even before the strike, race relations had been viewed in Gary as a problem that could have a curricular remedy.[1] It was felt

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[1]James H. Tipton, Community in Crisis, The Elimination of Segregation from a Public School System (New York: Teachers College, Columbia University, 1953), p. 6.

that students could profit from knowledge about racial and cultural differences; they needed to study patterns and effects of discrimination; and they needed to examine their own values and prejudices. These general student needs, however, were not the impetus that initiated work on an intercultural curriculum. Students all over the country had had similar needs for many, many years, yet few schools were actively concerned with them. The impetus, instead, was a series of race riots in the early 1940's, specifically the Detroit riot of 1943, combined with the realization that a similar outbreak could occur in Gary.[1] The city of Gary was segregated, and the Gary schools, with the exception of Froebel, were segregated; within Froebel there was some segregation by classes.

After the Detroit riot, the Gary Chamber of Commerce appointed a race relations committee that included several school employees as members. As if in concert, the Board of School Trustees in December, 1943, engaged the Bureau of Intercultural Education, a New York based consulting firm, to begin working with representatives of the school in designing an intercultural education program. Although several meetings of Bureau and school people had been held by the time of the first strike, no curriculum had been designed. With the advent of the strike period, Bureau assistance was sought and received

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[1] Ibid., pp. 18-24.

on both the short-range problem of keeping schools functioning and the long-range problem of curriculum.

Because keeping the schools open naturally seemed to be the immediately serious problem facing the school system in 1945, most efforts during 1945 and 1946 were directed toward its solution. Numerous statements were released by different organizations in Gary condemning the strike. Meetings were held involving the Board, school personnel, striking students, and their parents. Pleas were heard from individuals and groups in Gary as well as other places. Enforcement of the truancy laws was threatened; parents were to be charged with encouraging truancy.

The strike was handled successfully. By December, 1946, the Board felt that the situation was sufficiently calm to pass a resolution affirming the principle of geographic attendance areas for all schools. For the first time black students would not be forced to attend the all-black elementary and secondary schools. The policy was to be activated with the opening of school in September, 1947. Only students from kindergarten through sixth grade were to be affected. With each succeeding year the policy was to be applied to one more grade until the entire system was integrated.

Work on the long-range problem of creating programs in intercultural education was also begun during 1945 and 1946. Two different committees were created to deal with the problem.

A Democratic Living Committee was appointed in each of the eight schools. One teacher from each of these eight committees also served on a city-wide Democratic Living Committee.[1] These committees, however, did not work on intercultural curricula. Their activities were confined to conducting workshops, meetings, and conferences and to providing a systematic means by which efforts of individual teachers could be communicated throughout the system.[2] Although the committees were quite active, they were not charged with either producing tangible results or evaluating any effects they may have had.

A second city-wide committee was appointed with the specific task of designing an intercultural curriculum. Despite scant resources (no released time or extra pay were provided, and materials about intercultural relations were not easily found) a total of nearly fifty teachers, building on earlier work done in conjunction with the Bureau, completed their task by the end of the 1945-46 school year. One teacher in each school tried the curriculum during the 1946-1947 school year. However, the program was allowed to end with the end of the one-year trial; it did not spread system wide or even throughout any one school. No attempt was made to assess the value of the program, so it was never known if the program was successful

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[1] Dana P. Whitmer, "Proposed Extensions in the School and Classroom Programs of Intergroup Education in the Public Schools of Gary, Indiana" (unpublished Ph.D. dissertation, Ohio State University, 1949), p. 39.

[2] Ibid., pp. 39-40.

or not. A few of the teachers who helped design the program continued to review and use it on their own initiative. At no time during the remainder of the period under study was there an attempt to revive the intercultural curriculum. By 1955 only vestigal remnants remained, and these in isolated classrooms.[1]

A comparison of the efforts expended, methods employed, and ultimate results of the short- and long-range problems of maintaining the school service and designing and implementing an intercultural education curriculum is revealing. The efforts to keep the school open were more organized, more effective, and involved more people. In short, resources of time, money, and energy were successfully employed to solve the problem. The long-range problem, however, was not solved. The intercultural curriculum was never used by other than a few teachers.

Primary efforts of the school system were directed toward the maintenance of schooling; efforts to change that schooling were almost totally ineffective. This will be illustrated by a detailed account of the history of the strike and the development of the social studies curriculum; it will be shown that two factors caused the failure of curricular changes. First, the school lacked sufficient resources to bring about such a change; and, second, the political process of curricular change was

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[1] Interview with Dr. Marie Edwards, Supervisor of Social Studies, Gary Public Schools, November 7, 1971.

affected by the nature of the change sought. Both the structure of the educational organization and the values of school personnel served to restrict usage of those resources that were available.

The Student Strike

The strike that began at Froebel School on Tuesday, September 18, 1945, continued until the following Tuesday when the strike leaders suspended it, acquiescing to a demand by the Board of School Trustees. Had the strike continued, the Board would have refused to hear the pleas of the strikers at its regularly scheduled meeting that night. The strike resumed, however, the next day because the Board refused to act on the demands of the striking students.

Feeling that the Froebel principal was pro-black student and anti-strike, the striking students demanded his replacement. This demand was partially agreed to with the hope that the strike would be ended and Froebel kept integrated if the principal were sacrificed. Instead of immediately replacing him, however, the Board asked a committee composed of four Gary residents and three professors of educational administration to look into his administrative practices; accordingly, the principal was given a leave of absence. On the first day of the principal's leave, October 1, all students returned to their classes.

On October 23 the investigating committee reported favorably on the principal. Enraged by this seeming betrayal, the strike committee, this time backed by many of their parents, called a second strike to begin on October 29. The demand this time, however, was the integration of all Gary schools and parks. It is clear that this was an insincere demand made to engender similar strikes in other schools. The demand was accompanied by the dispatching of committees composed of striking students to the other schools in the district. The committee assumed that schools which would be affected by a city-wide integration policy would strike in protest while schools that would not be affected would strike in sympathy. An examination of the patterns of segregation in Gary will illustrate just how radical the demand was.

The pattern of segregation in the Gary schools was not uniform. There were twenty schools in operation, the eight unit schools built during the superintendency of William A. Wirt plus twelve newer elementary schools. Six of the unit schools enrolled only white students, one enrolled only black students; Froebel enrolled roughly 30 per cent black students. Likewise, ten of the elementary schools were white, one was black, and one was integrated. One strange aspect of the segregation pattern was the existence of the all-black elementary school and one of the all-white schools on the same site. Each had its separate playground, flag, principal (one black and one white), and teaching staff (one all white, the other

all black). These two schools convened and dismissed fifteen minutes apart to reduce street fighting among the children.

School attendance was not based on geographic location of residence. White students living in areas served by the all-black schools had the option of attending other schools and were transported by bus to schools outside these areas. Black students had no such option but were assigned to schools. Only the two integrated schools registered students openly from the surrounding neighborhood. Again, white students had opportunity to attend different schools.

Total integration within these two schools was not the case, however. All students were admitted equally to classes and to participate on the track, football, baseball, and basketball teams. Swimming and vocal music were segregated activities. Black students were not allowed to participate at all in band, orchestra, drama classes and productions, or school social functions. Because black students were not allowed to attend class meetings at which class officers and student council representatives were elected, their only student government representatives were selected by the Junior-Senior Social Club, an organization created specifically to arrange social activities for black students.

This pattern of segregation prevailed throughout Gary. With one exception, Gary parks and beaches were segregated. There were two white hospitals and two black hospitals; the white hospitals admitted black patients but not black doctors

or black applicants for nursing school. Although the YWCA was integrated, the YMCA, like the Boy Scouts and Girl Scouts, was segregated. The churches were segregated, and black and white pastors had their separate ministerial associations. The Gary Board of School Trustees had never had a black member, but then a representative of organized labor had never served on it either. As of 1946 the Gary Chamber of Commerce represented all local business firms except those that were black-owned. Until 1944 when the all-white Gary Parent Teacher Organization was denied membership in the Indiana Parent Teacher Association because of racism, no black parents belonged to such an organization in Gary. The local PTA was established and chartered on an integrated basis in 1945.

Housing in Gary was markedly segregated in 1945, accounting in some measure for the failure of the Froebel strike to spread city-wide. Black families were restricted to living in the central area of the city where much of the housing was substandard. Employment opportunities for blacks were restricted to semi-skilled and unskilled jobs. The one Gary organization which was integrated and in which there was considerable interaction of blacks and whites was the Congress of Industrial Organizations local in the United States Steel mill.

That the strike demand to integrate all the schools was a ploy is easily seen in light of the near-total segregation in Gary. The hesitation of the schools to use force to end

the strike is equally understandable. Segregation had had time to become deeply rooted in Gary in the years since its founding.

The second Froebel strike started on October 29 and ended on November 10. The Parents' Committee which had emerged during the second strike had traveled to Indianapolis to present its demands to the State Superintendent of Schools. He was unsympathetic to their cause and asked that they help end the strike. The State Superintendent's rejection combined with the fact that no further support for the strike was materializing in Gary brought the second strike to an end.

Yet a third strike was called for March 5, 1946, with the demand again for integration of the school system. However, before the strike could occur, the combination of the efforts of organizations and individuals and the threat that truancy laws would be enforced convinced the students that their efforts were in vain. The strike teams that the strike committee had dispatched to other schools had met with little sympathy and support. Although there had been no clear directions about integration from the Board, the strike had been effectively ended one hundred sixty-seven days after it began. School was again operating smoothly with no threats of closing to concern it. Success in reaching this point resulted from a combination of many efforts.

Ending the Strike

The attitudes and actions of all the individuals and groups involved in ending the strike would fill a book; representative selected examples will have to serve here to indicate the range of efforts.

The first official action of Superintendent Lutz was to ask for strong anti-strike statements from community leaders and organizations. His request was responded to by the superintendent of the U.S. Steel mill, the police chief, the mayor, four members of the Board of School Trustees, and editorially from the Gary Post-Tribune. Yet, despite the individual statements of the Board members, the Board was unwilling to take an official stand on the strike; thus, in its first statement issued on September 21, 1945, it was unclear what the Board planned to do.[1] The next step by the superintendent was a series of face-to-face and telephone conversations with as many local leaders as could be reached, asking them to speak against the strike at the September 25 board meeting. Again, response was good.

Financial support from the Julius Rosenwald Fund was offered jointly to the Bureau of Intercultural Education, the Anselm Forum (a Gary civic organization), and the school. The Forum used the money to establish and maintain an office for

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[1]Tipton, p. 37.

public education during the strike; the Bureau and the school used the money to hire substitutes for any Froebel teachers who wished to spend their time contacting students and parents in an effort to convince them that students should return to school.[1]

By the fourth of October additional statements condemning the strike had come from the League of Women Voters, the YWCA, the United Council of Negro Organizations, and the teachers union. In October, one hundred fifty different local organizations were represented at a meeting called by the mayor. Again, the intent was to formulate plans for ending the strike and to demonstrate overwhelming community condemnation of the actions of the striking students.

The Anselm Forum, the Julius Rosenwald Fund, the Bureau, and the school combined resources and efforts to sponsor an appearance by Frank Sinatra on November 1, 1945. Sinatra sang and severely criticized the strike. The additional voices of Edna Ferber, Carl Sandburg, Bill Mauldin, Clifton Fadiman, and William L. Laurence were heard pleading for an end to the strike at a Victory Bond rally on November 4.

Within Froebel itself a new student council, representing both black and white students had been elected. Working closely with the principal who had also formed a local citizen's group,

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[1] Ibid., p. 38.

the student council formulated and carried to homerooms plans to end the strike.

Several local organizations started programs of their own. For example, the League of Women Voters with the help of some high school social studies teachers sponsored a series of studies of delinquency, recreation, and housing. The Urban League and the Downtown Methodist Church offered tours for high school students through the area around Froebel School so that students could see the living conditions there. The YWCA, Anselm Forum, Women's Forum, Urban League, and the League of Women Voters conducted a workshop to train human relations leaders on April 1 and 2, 1946.[1] The American Council on Race Relations had field workers in Gary helping local CIO leaders plan educational activities which would develop more democratic human relations among union members.

Once the strike and the threat of strike had ended and the new Board policy on integration approved, efforts to educate the community about the policy were undertaken. Superintendent Lutz and several other school administrators explained reasons for the policy and its likely effects to groups of parents and various civic organizations. Between September, 1946 and August, 1947 when the integration policy was to go into effect, school officials participated in over two hundred different meetings.[2]

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[1] Ibid., p. 48.

[2] Ibid., p. 165.

As was feared, several school strikes occurred when school opened in the fall of 1947. By this time, however, the community programs had had their effect. The Board acted quickly to cancel athletic events, to apply truancy laws, and to notify parents of striking students that they were breaking the law by encouraging truancy. As a result, the strikes did not gain momentum, and the school was operating smoothly within two weeks. The firm action of the Board was in marked contrast to its actions in earlier years. In 1943, for example, the Board had readily acquiesced to parent protests and demands involving the Froebel swimming pool. As a result, black boys were allowed to use the pool only Friday afternoons after three o'clock. The pool was thoroughly cleaned over the week-end and was ready for use by white boys again on Monday. During the Froebel strikes, the Board did not take a clear stand until it was reasonably confident that Gary would accept a change from segregation to integration in the schools.

The efforts of numerous groups and individuals had prepared the city for the change, however. The meetings, workshops, and programs had obviously been of value. Individuals and organizations from within and outside Gary, including the school administration, had been successful in their efforts. Curiously, despite obvious contributions they could have made, teachers were almost wholly excluded from all the activity, and there is no evidence that they were insisting on any larger role. And, with the exception of the director of guidance and

one assistant superintendent, no school administrators were asked to help the superintendent during this time.

Some reasons for this will be suggested later; a few examples of the absence of teacher and administration participation can be offered. The Froebel faculty was not convened in a meeting to discuss the strike until two weeks after it had started. There were city-wide committees of teachers including a Committee of Teacher Participation, a Committee on Pupil Planning, and a Committee on Community Relations. "Events moved so fast, however, and top school administrators were so busy in their various areas that the teacher committees often seemed to be marking time."[1] The proposal that an experimental curriculum in intercultural education be designed and tried came not from the administration or the teachers but from a representative of the Bureau.[2] Several administrators complained loudly at a meeting with the superintendent on May 9, 1947, that they knew nothing of what was happening. Superintendent Lutz realized that he had been "very busy" and had not thought to convene his entire staff to inform them of his plans.[3]

Teachers and administrators, however, were involved with other activities within the school, and it is to these activities that we now turn.

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[1] Ibid., pp. 118-119.

[2] Ibid., p. 119.

[3] Ibid., p. 130.

## Designing an Intercultural Curriculum

While the strike situation was settled and the Board moved toward an integration policy, progress was being made in developing an intercultural curriculum for social studies. Before this movement is detailed, however, the Gary social studies curriculum of the early 1940's and the national context of social studies education must be sketched.

The Purdue Survey of the Gary schools, released in 1942, asserted that the social studies curriculum in 1940 was in an absolutely static condition.[1] Course offerings were not uniform from school to school. Ninth graders were offered ancient history as an elective in all schools; tenth graders were offered modern history as an elective. United States history was required of eleventh grade students as was one semester of civics and one semester of economics for seniors. In addition, some schools offered a course called community civics in ninth grade and an American problems course in grade twelve. As can easily be seen, students dropping out before their junior years could completely avoid social studies. Although the system required students to carry three "solid" subjects each semester, this requirement could be fulfilled with science, mathematics, and English courses. The courses offered bore no relationship to one another, and no attempt was being made to

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[1] The Purdue University Survey of the Gary Schools, 1942, p. 189.

teach social studies conceptually so that student learnings could be built.[1]

Instead, "The pattern of instructional procedures was depressingly uninspiring. With the exception of some few individual teachers, mastery of isolated facts was the major apparent objective of instruction."[2] In addition,

> The stereotyped question and answer procedure was distressingly common. Limited use of reports and individual projects was observed.
>
> Instructional aids of a visual or auditory nature were seldom utilized. Reference material of a nature to encourage broad and extensive reading by pupils was little apparent. Little use was made of community facilities and resources in the study of local civic or social problems for the very obvious reason that little if any attention was given to such aspects.[3]

This last point was given additional emphasis. "The whole program succeeded in avoiding the study of contemporary economic, civic, or social problems except as the ingenuity of the teacher could introduce this element incidentally."[4] As Gary teachers were hired with the provision that they teach "in the way Gary teachers teach," to rely on the incidental ingenuity of teachers to deal with contemporary problems seems rather quixotic.

There was no secondary social studies curriculum guide; the single textbook used for each course served as "What was taught." Beyond this, there was no provision for renewal in social studies.

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[1] Ibid., p. 188. [2] Ibid. [3] Ibid. [4] Ibid.

> The supervisory program largely consisted of an attention to routine administrative and clerical services. Teachers were furnished little assistance in improving their teaching or re-examining their program. No encouragement was offered and, in fact, they were discouraged from exercising any individual initiative. There was absolutely no evidence of any professional leadership being exerted in the direction of teacher improvement or curriculum study.[1]

The involvement of the Purdue staff in the schools resulted in some change even prior to the release of the Survey. By early 1942 a general course in citizenship was being offered to freshmen in some of the eight schools, and social studies teachers in some had begun to meet to discuss the program.[2] However, the curriculum was still the text; contemporary issues had not been included. Teaching methods had not changed; primary outcomes were still isolated facts.

The Purdue Survey criticisms of the Gary social studies program were not based on cited examples of exemplary programs in existence elsewhere, however. Nor were the criticisms directed specifically to a lack of consideration of intercultural relations in the school. Intercultural education is our concern here, however, so a look at the general state of intercultural education and its presence in schools is in order.

## Intercultural Relations, A New Educational Concern

The Purdue Survey did not focus on the lack of intercultural education curricula in the Gary schools because such

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[1] Ibid., p. 187.

[2] Ibid., p. 189.

were to be found nowhere. There were sporadic outbursts of racial violence in the United States in the first four decades of the twentieth century, but schools were not formally attempting to deal with the problem. One investigation of typical social studies courses revealed that,

> They /teachers/ discovered that their current masterials and teaching were far from satisfactory. Their methods tended to convey the impression that the population of the United States is characteristically Anglo-Saxon, Protestant, and white. Their students learned a great deal about the traditions of New England, about the values of Nordic white men, and about the Protestant religious ideals. The courses of study, texts, and classroom discussions conveyed little about the values and aspirations of other American cultural groups. What effort that was made in this direction usually took the form of special instructional units expounding the "contributions" made by different racial or ethnic groups. Seldom were "contributions" treated as part and parcel of American culture. It seemed, then, that the teaching of history tended to reinforce the ethnocentric conceptions of the dominant groups of people instead of developing concepts useful to an objective and comprehensive picture of the American peoples and their roles in shaping our culture.[1]

The 1943 Detroit riots that stimulated concern in Gary had similar effects in many other cities.[2] The concern seemed to take two forms. One was civic: mayors' councils, governors' committees, and civic unity councils were created in many places. Roughly three hundred such organizations were formed

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[1]Hilda Taba, Elizabeth Hall Brady, and John T. Robinson, Intergroup Education in Public Schools (Washington, D.C.: American Council on Education, 1952), p. 38.

[2]Ibid., p. 15.

during 1944. The second involved the schools. It was being felt that schools could play a more active role in dealing with human relations. At the same time it was realized that the methods and materials for doing this did not exist. As a result, several research projects and experimental programs were begun.

National societies and organizations began to devote attention to intercultural education in the middle and late 1940's, each emphasizing that it was entering unexplored territory. Bulletins number 24 and 25 from the National Council for the Social Studies appeared in 1949; the first used the term pioneer and frontier to describe its efforts; the second was an anthology of human relations articles collected for easier use by teachers.[1] The ninth yearbook of the John Dewey Society stated that "Intercultural education is new to our schools and to our people, new both in effort and in name."[2] The forty-fourth yearbook of the National Society for the Study

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[1] Hyland W. Crary and John T. Robinson, America's Stake in Human Relations (National Council for the Social Studies, Bulletin Number 24, September, 1949); Howard H. Cummings, (ed.), Improving Human Relations (National Council for the Social Studies, Bulletin Number 25, November, 1949).

[2] William H. Kilpatrick and William Van Til, (ed.), Intercultural Attitudes in the Making, Ninth Yearbook of the John Dewey Society (New York: Harper and Brothers Publishers, 1943), p. 1.

of Education argued that no domestic issue was in more need of consideration in schools than intercultural affairs.[1] However, no specific attention beyond this statement was devoted to the issue in the yearbook!

One brief description of experiences resulting from several attempts to establish intercultural education program is offered here as a basis for comparison with a similar attempt in Gary.

> Normally a three-year sequence was needed to develop a fairly mature program in one school or group. The first year was generally devoted to analyzing problems, gathering and interpreting data, and assessing needs. Often, small-scale experimentation with certain aspects of the projected plans took place, such as trying out discussion of fiction for purposes of extending sensitivity or grouping children by sociometric information. The activities of the first year also served for training and orientation of teachers and for efforts to involve those not initially concerned or interested. The second year was devoted to developing an action plan and to experimenting with some portion of the plan to test its feasibility and to gain skills needed to conduct the program. By the third year, more or less comprehensive plans for the program had been made. This year, then, was devoted to testing the plan as fully as possible, to further training in skills, to revision of plans, and to evaluation.[2]

When the Gary schools were faced with the strike in 1945, then, there were almost no organized sources of materials or

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[1] American Education in the Postwar Period, Part I, Curriculum Reconstruction, National Society for the Study of Education, Forty-Fourth Yearbook (Chicago: The University of Chicago Press, 1945), p. 240.

[2] Taba, p. 61.

organizations to which they could turn. Traditional textbooks were not treating the subject. A technology for dealing with intercultural problems did not then exist, and Gary teachers were left to their own devices. We can now look at the ultimate result of the Gary teacher efforts to design and implement an intercultural curriculum.

## Social Studies in Gary, 1955

We will begin by examining the social studies curriculum of 1955. For two reasons little would be gained by tracing changes between 1945 and 1955. First, records of meetings, considerations, and decisions of those involved in designing a curriculum were not kept. The evolutionary process cannot be treated as a result. Second, the attempt to establish an intercultural curriculum was such a failure that little purpose would be served by considering seriously what actually was done.

According to the Public Administration Service survey of the Gary school system, the social studies program in 1955 was much the same as it had been in 1942. Students had only a slightly larger number of courses from which to chose; no course, however, was concerned wholly with intercultural relations, nor was any course in part intentionally devoted to that topic. Instructional methods had not changed markedly in twelve years. "The instructional methods used by Gary secondary school teachers show a strong tendency to be subject-matter centered. In only a small number of the total classrooms visited was adequate

attention being given to the interests of the students."[1] There were no curriculum guides; instruction was centered around the texts in use.

The strongest criticisms leveled in 1955 was not directed toward the curriculum itself but toward organizational arrangements for evaluating and improving it. There were simply no mechanisms at all which were systematically reviewing and redesigning either the social studies or any other curriculum.[2]

The 1955 Public Administration Service (PAS) survey report from which the above criticisms were taken was followed the next year by a survey by the National Education Association's National Commission for the Defense of Democracy Through Education. Acting on the complaint that the PAS survey had been requested by the Board to justify the firing of Superintendent Lutz, the Commission reviewed the methods and findings of the PAS. Although some tactics and results of the PAS were deplored by the NEA Commission, the portions of the PAS survey dealing with program and curriculum were found to have been "constructive" and ". . . written in a very objective and fairminded manner."[3] Referring to the General Education Board survey of

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[1]The Public School System of Gary, Indiana, Public Administration Service, 1955, p. 81.

[2]Ibid., pp. 80-81.

[3]Gary, Indiana, A Study of Some Aspects and Outcomes of A General School Survey, National Education Association, Committee for the Defense of Democracy Through Education, 1957, p. 18.

1918 (discussed under some of its eight separate titles in Chapter II) and the Purdue Survey of 1942, the Commission went on to state,

> In spite of some undesirable elements in the PAS survey report, it contains a number of recommendations that should be carried into effect. The Gary Board of School Trustees, the school administration, the teachers, and the citizens of the community should give continuing study to the earlier survey reports. The Gary school system would have deserved less of such criticisms as appears in the PAS report if the Board of School Trustees had carried out recommendations of earlier surveys.[1]

Reference was being made here to the overemphasis on preparing students for college and low achievement scores, both of which had been pointed out in the earlier surveys. The lack of structure for curriculum revision was a third continuing criticism. Under William A. Wirt's superintendency from 1906 to 1938 the Gary schools had no curriculum revision in progress because the entire program was very tightly controlled by Wirt who wanted no changes made. The extreme decentralization of decision-making under Charles Lutz had produced no change in program. The lack of organizational structure to provide for curricular revision was one contributing factor to the failure of the intercultural curriculum.

## Involvement of the Teachers

By 1955, of course, an intercultural curriculum may have faded from use even though it had been prominently used at one

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[1] Ibid., p. 30.

time. Such is, however, not the case. A doctoral dissertation written by an administrator in the Gary schools in 1947 illustrates this.[1]

> There has been much activity in the Gary schools regarding race relations. A considerable amount of this has been related to the Intercultural Policy and means by which it should be implemented. A lesser amount of emphasis has been related to the educational aspects of intergroup relations. The city-wide Democratic Living Committee has devoted thought to intergroup education and has served as a means of communication among schools. A considerable number of short workshops, conferences, and meetings have been held in which intergroup education has been considered. Individual teachers have attended summer intercultural workshops. One experiment in intergroup education involving the several schools has been carried on. Bulletins to teachers from supervisors have included considerable material on intergroup education. A seventh and eighth grade science curriculum has been developed in which a strong emphasis on intergroup relations appears. Individual schools and teachers have engaged in special projects designed to influence the intergroup attitudes of children. These all may be characterized as influences which undoubtedly have resulted in special efforts by some teachers and schools toward the provision of learning experiences in intergroup relations. These have, however, only been influences. There has been no planned program through which the majority or even a large number of teachers have worked toward common ends in intergroup education. The programs of intergroup education which have been developed, while being influenced by those above mentioned activities, have depended largely on the individual interests, initiative, and enthusiasm of the principals and teachers in the schools.[2]

Although this quotation needs detailing, it states well the extent to which there was directed effort toward inclusion of intercultural curricula in the Gary schools.

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[1] Dana P. Whitmer, "Proposed Extensions in the School and Classroom Programs of Intergroup Education in the Public Schools of Gary, Indiana," unpublished Ph.D. dissertation, Ohio State University, 1949.

[2] Ibid., pp. 39-40.

There was no significant agency within the Gary school system which was supporting curriculum development; responsibility for program evaluation and revision was left to each school and its principal. The administrative hierarchy while Charles Lutz was superintendent consisted of Lutz who had two assistant superintendents, one for business affairs, and one for educational affairs. Serving under the assistant superintendent for educational affairs were two supervisors, one for the elementary grades and one for the high schools. Between these two individuals and the separate building principals there was no one. The two supervisors had over 650 teachers with whom they were expected to deal. The impossibility of close relationships with any one subject matter area is clear. Principals, then, were responsible for curriculum.

In only one Gary school was any school-wide attention devoted to intercultural education. This attention took the form of a statement of principles presented to the faculty. No attempt was made to put the principles into operation, however.[1]

In the absence of organized effort on the part of the system and individual schools, teachers were left on their own. Individual efforts were neither numerous nor extensive. In 1947 forty per cent of all Gary teachers felt that intergroup education was important, but only seventeen per cent claimed

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[1] Ibid., p. 219.

to be providing appropriate experiences as an integral part of classroom work.[1] Thirty-nine per cent stated that the text in use was rigidly adhered to while an additional 57 per cent said it was closely followed with some provision made for assigned or pupil initiated projects which were related to the course.[2] In the subject matter areas of science, social studies, and English, 19 per cent of the teachers above the primary level stated that they used teaching units that were somehow concerned with greater understanding of intercultural problems.[3] Six per cent indicated use of "scientific" units on race, group differences, and discrimination.[4] There was almost no attempt to use minority group speakers in classrooms, to arrange for discussion in classes between white and black students about intercultural relations and problems, or to visit local organizations concerned with minority groups.[5] In no school or class was there any systematic effort to observe attitudinal change on the part of the few students being taught about intercultural relations.[6] No teachers were involved in in-service programs.[7] A total of 20 per cent of Gary teachers served on the Democratic Living Committees, 9 per cent worked on planning curriculum, and 25 per cent were involved in various kinds of study groups concerned with intercultural relations.[8]

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[1] Ibid., p. 228. [2] Ibid., pp. 248-249.
[3] Ibid., p. 268. [4] Ibid., p. 271. [5] Ibid., p. 332.
[6] Ibid., p. 371. [7] Ibid., p. 396. [8] Ibid., p. 399.

These statistics were gathered in 1947, a year and a half after the Froebel strikes had ended but during the first year of the integration policy; there had been a few short strikes at the beginning of the school year. Compared to other school systems, the concern for intercultural relations in Gary may have been high because of the conflict. As the studies by Taba, Brady, and Robinson (cited earlier) indicate, some school systems were making concentrated efforts to improve intercultural relations by intervention through the curriculum. Moreover, Dana Whitmer's dissertation from which the above statistics were taken, not only surveyed administration and faculty attitudes and practices but proposed steps to be undertaken in the Gary schools to use curriculum to promote better race relations. The response to the problem in Gary was not one of attempting to change attitudes and values but rather one of legislation; truancy laws were enforced and an integration policy established. The efforts made to smooth the way for the integration policy were directed toward the community, not through the schools.

Gary did devote attention to intercultural education. A curriculum was developed, and it was tried by a limited number of teachers for a year. Most of these teachers served on the various committees in existence during the 1945-47 school years. They used, refined, and used again the materials they helped develop and were still improving and using the units

in 1955.[1] For example, Marie Edwards, now supervisor of social studies but previously a classroom teacher, began teaching a course in world problems in 1948; until at least 1954 there were no textbooks available for the course. Dr. Edwards designed and compiled her own materials.[2]

To say, then, that no attention was paid to intercultural education would be incorrect; in fact, it received quite a bit of attention. A curriculum was written, and efforts were made to include it in the secondary social studies program. These efforts were at best partially successful. The question that must be answered then is why the curriculum was not widely used. Suggested explanations have appeared in the narrative to this point; direct attention can now be given to them.

## The Dynamics of the Change Process

The school system in Gary was faced with the problem of racism which was disrupting one school and threatening to disrupt others. The threat of strikes, of course, had to be stopped in order to maintain the functioning of the schools. In addition, it was thought that intercultural education might help prevent further strikes.

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[1]Interview with Dr. Marie Edwards, Supervisor of Social Studies, November 11, 1971.

[2]Interview with Dr. Marie Edwards, November 11, 1971.

The initial demand for the creation and use of an intercultural curriculum came from the civic elite, the Board, and the superintendent. This demand appears to be a beginning attempt for the school to assume some of the strain of social change. As has been shown above, segregation patterns in Gary were such that integration and racial harmony were not highly valued in Gary. The continuing pattern of this segregation in the 1940's and 1950's, the integration of the schools being the notable exception, is evidence of this value. The school strikes, of course, are further evidence.

Despite this early demand for an intercultural curriculum, those individuals making the demand soon withdrew their support. In the face of apparent community values, the Board and administration were not quick to act directly to end the Froebel strike, and a school integration policy was a year and a half in the making.

The continued functioning of the school was highly valued; despite numerous discussions and speeches at Board meetings and letters to the Gary Post-Tribune, one searches vainly for something about curriculum. The issue was always the immediate rather than the long-range concern. Whatever the reason, Gary residents either did not value an intercultural education program, were unaware that such a thing could be included in the school program, or were not directly concerned with curriculum at all. Although race relations in Gary in 1945 and 1946 were potentially explosive, it is doubtful that

most Gary residents were aware that an intercultural curriculum was being considered as a possible solution. Minutes of the meetings of the Board offer no evidence that the Board was in any way involved in curriculum other than its initial approval of retention of the Bureau of Intercultural Education.

The school administration, namely Superintendent Lutz and two or three close associates, were, like the community, heavily involved with the strike, much less so with curriculum. Superintendent Lutz seems to have based his actions on his perceptions of community values. He often stated that, given the chance on a secret ballot, 80 per cent of the Gary residents would vote for segregated schools.[1] Although Lutz worked hard at ending the strike and involved as many community leaders and organizations as he could, he excluded school personnel from both the decision-making process and even from knowing decisions once they were made. As stated above, it was representatives of the Bureau that re-focused attention on curriculum once the Froebel strike had started.

The teachers in Gary appear to have, with a few notable exceptions, involved themselves neither in ending the strike nor in designing and using an intercultural curriculum. As indicated earlier, each school was responsible for curriculum revision. Although the Democratic Living Committees, the intercultural education curriculum committee, and the social studies teachers

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[1] Tipton, p. 8.

who had organized and become part of the National Council for the Social Studies could, and perhaps should, have been responsible for making intercultural considerations a part of social studies, responsibility was still nominally that of principals and teachers in each school.

Of the eight principals of the eight unit schools, only four felt that direct attention should be given to intergroup relations. Three felt that "a good school program" was sufficient, and one did not know.[1] No school was involving parents and pupils in dealing with intercultural relations. Two principals felt that the race issue was "too hot" to involve parents, and two wanted no planning at all.[2] No principal had established any committee of teachers to work on any kind of curriculum revision.[3] Seven principals stated that they did not approve of school involvement in community problems of any kind.[4] Most principals felt that an intercultural education program would be enhanced with a good in-service program for teachers, but not one of the principals had started such a program.[5]

The attitudes of the teachers are similar to those of the principals. Five hundred of the six hundred fifty Gary teachers were polled in 1947. Sixty-two per cent of the teachers questioned stated that they felt good intercultural attitudes

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[1] Whitmer, p. 219. [2] Ibid., p. 220.

[3] Ibid., p. 240. [4] Ibid., p. 310. [5] Ibid., p. 396.

would result naturally from "a good basic education"; 27 per cent felt that they opposed stressing intercultural education because it would stir up trouble.[1] Several reasons for these attitudes were offered.

> Two much direct emphasis hinders rather than helps.
> Haven't encountered many problems along this line.
> Our community is not bothered with too many problems like this.
> More important aspects of teaching need attention.
> In social studies, one has so much work to finish each semester.
> In our school, too much stressing causes antagonism.
> I feel it stirs up trouble.
> Too much time is required for clerical and routine matters.
> Good human relations cannot be taught like arithmetic. They depend on human nature. As long as there is greed and selfishness in human beings, there will be trouble. Time is now filled with regular school work.[2]

Of the teachers questioned, many offered reasons to justify their feeling that a good intercultural education program could not be conducted. Forty-five per cent cited a lack of time, 46 per cent said that classes were too large; 21 per cent said that the course of study was already too time consuming; 19 per cent had too many home and school responsibilities already; and 14 per cent said they did not know what to do.[3]

In summary, the two perceived intercultural problems received different treatments and, as a result, were not equally

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[1] Ibid., p. 229.

[2] Ibid., pp. 421-22.

[3] Ibid., p. 426.

successful. The problem of keeping the schools operating was the more pressing of the two. In fact, the only pressures to design and use an intercultural curriculum came from the teachers who served on the curriculum committee and the Democratic Living Committees and from the Bureau. Superintendent Lutz was instrumental in recognizing the race problem, in retaining the Bureau, and in establishing the committees, but when the strikes began, he withdrew his support. His time was properly taken up by efforts to end the strike; his belief that 80 per cent of the residents of Gary preferred segregation might have led him to support strongly curricular intervention in the value development of students. However, Lutz no doubt wanted to avoid the strong-arm tactics of Wirt that had been criticized by the Purdue Survey. Lutz, having recently decentralized responsibility for curriculum decision-making, certainly did not feel that curriculum was his responsibility. There were no community pressures on Lutz or the Board to design and implement a curriculum; the community pressures were for ending the strike and, at least from the civic elite, for integrating all of the schools. The city of Gary had been through two difficult years; everyone no doubt felt a sense of relief that the race issue could be forgotten at least for a while.

With no pressures or support from the community, the Board, or the administration, the only groups wanting an intercultural curriculum were the teachers and the Bureau. The Bureau was hired in a consulting role. As such, it could

encourage but not demand, and it certainly could not impose a curriculum on the school system. And, as we have seen, a majority of both teachers and principals had many reasons for not working toward the implementation of a new curriculum. That left only the Bureau and a few teachers.

The problems faced by these two groups were numerous. First, the teaching technology they needed was in its embryonic stages and, as a result, neither abundant nor easily available. What was available was not pulled together into a useable form. Second, the support needed was not available. The committee was obviously aware that over two hundred meetings were held for the purpose of ending the strike and smoothing the way for the integration policy. And it was certainly aware that Lutz was a driving factor in setting up and participating in these meetings. Yet the pro-curriculum group was given no released time to develop curriculum, was given no money for materials, and was not kept informed by Lutz of what he was doing about the strike and the integration policy. Support for the pilot project lasted only one year and was then withdrawn without an evaluation of the project. But, there was no one to do any evaluating in 1947; the school did not have a testing or evaluation department, and no other systematic evaluation was going on in the system. Finally, there were no established communication channels through which information about the curriculum

could be disseminated, and had there been, such information would most likely been ignored because of the attitudes of most of the teachers.

Those teachers who wanted the intercultural curriculum, who designed it, and who used it may have reached a large number of students between 1946 and 1955. The original intention of the superintendent, the Board, and the Bureau had been to use the curriculum city-wide in all social studies classes. This initial objective was not met.

The interesting contrast, of course, is between the way in which the strike situation was handled and the way in which the designing of a new curriculum was handled. Efforts directed toward maintaining the operations of the school were considerably more extensive and successful than were efforts to implement an intercultural curriculum. More meetings are held, more people were involved, and certainly more money was spent in maintaining the service than was done in changing the nature or improving the quality of that service.

# CHAPTER V

## THE NEAR-REALIZATION OF AN IDEAL, SCIENCE CURRICULA, 1956-1968

In 1956 in Gary a curriculum committee was formed for the purpose of improving the secondary science program and courses within it. The efforts of this committee resulted in a new curriculum guide which listed an expanded course offering and outlined content, outcomes, and materials for each course to be offered. Ambitious in scope but conservative in course specification, the new curriculum guide had no discernible effect on science teaching in Gary. Between 1960, two years after the guide was available, and 1968, science education in Gary began to change slowly as several new courses were added and approaches, anticipated outcomes, and methods of teaching changed. In addition, there were new or remodeled laboratories in all schools, and new equipment for them had been purchased. The Gary school system, given its own resources, was unable to produce change despite considerable effort between 1956 and 1960. Without direct effort of the school system, however, the changes mandated earlier began to occur after 1960. As evidence for these assertions is presented, the curriculum in 1956, 1960, and 1968 explicated, and the process of change

examined, we will see that technological and structural factors plus the unavilability of resources prevented the occurrence of curriculum change between 1956 and 1960. By the later date new technologies and new resources were available and produced the very changes sought earlier. A structural reorganization in 1956 could not produce curriculum change yet it occurred after 1960 despite the same structure. Curriculum change, then, occurred between 1956 and 1968 not as a result of planning and effort but by happenstance.

In 1956 the science program of the Gary high schools was similar to the science programs found in most schools in the country. One science course was required for graduation; most students took either general science in grade 9 or biology in grade 10. A few students took physics which was offered, like general science and biology, in all eight of the Gary high schools. Chemistry was also available, but in only four schools. No advanced courses were offered in any of the sciences. With respect to courses offered, Gary was alightly ahead of the national averages. Only half of American secondary schools offered physics, for example.[1]

Science instruction in Gary was also, it would seem, typical. Science was presented as a body of derived conclusions. These "facts" of science were found in the textbooks

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[1]National Society for the Study of Education, Rethinking Science Education, Fifty-ninth Yearbook, Part I (Chicago: The University of Chicago Press, 1960), p. 94.

around which instruction was centered. In the two Gary schools that had laboratories, some of these derived conclusions were proved again through experiments arranged by the teachers and conducted by the students. Instruction in the other six unit schools was confined to the classroom. A limited number of films, slides, and film-strips which supplemented the material in the text were available. The outcome of science courses in Gary, as elsewhere, was the mastery of content; the scientific ability of students was measured in terms of their memory of scientific facts.[1]

By 1968 much had changed in Gary, yet again, Gary's science program was typical. All Gary schools in 1968 offered, in addition to courses in bio-physical science, biology, and physical science, first and second years of physics and chemistry. Courses were differentiated as to method and purpose so that students could select from among them according to their own wishes; gifted students and students with special interests in science had an opportunity to explore their fields of interest in some depth.

The earlier conception of science as a body of fact had changed, at least in terms of the curricula in use, to science as a process of enquiry. As a result, science classes in Gary as often as not met in the new or remodeled laboratories found in all eight of the city's high schools. The number of topics

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[1] Ibid., p. 196.

to be "covered" in each course had been reduced, permitting exploration of a selected few in more depth. This exploration was undertaken through use of the textbooks, the laboratory manuals, and a rather wide array of supplementary materials and audio-visual aids.

There is an accepted, and accurate, explanation for this massive change in secondary science programs between 1956 and 1968. In the area of science education this twelve-year period was characterized by a national concern for the quality of high school science curricula. Economic and national defense needs seemed to necessitate more and better trained technical manpower. Reaction to these needs was forthcoming from groups previously uninvolved with schools: professional scientists, philanthropic foundations, and the federal government. Huge sums of money were made available for new organizations such as the National Science Foundation (NSF), which sponsored several curriculum studies, e.g., the Physical Science Study Committee (PSSC), the Biological Science Curriculum Study (BSCS), and the Chemical Education Materials Study (CHEM Study). Private foundations also contributed resources to these projects. The new curriculum projects and the legislation, when their effects were combined, were instrumental in bringing about the changes in science education during the twelve years under examination. Each of the three curriculum projects produced one or more "packages of science," e.g., PSSC Physics, which were easily adopted by schools in lieu of new textbooks. These packages

allegedly reoriented science from content to enquiry and thus from classroom to laboratory courses. The concomitant local school needs for more and better facilities and equipment and properly-trained teachers were partially met by portions of NDEA and by teacher institutes funded by NSF. Schools quickly responded by adopting the new programs and by accepting the federal money on a matching basis. Teachers, too, responded by attending the institutes and by choosing to use the new programs.

This explanation of how science programs were radically changed in a short period of time is inadequate in two ways. First, although it is essentially accurate, it is too brief and cryptic; this insufficiency will be alleviated later. Second, and more importantly, it serves, by virtue of its national orientation, to obscure the character of change in local schools. The explanation only tells us how the new packages were created, how they differed from existing curricula, and that they received wide acceptance. We are not told why the programs were successful. What was the nature of the process of local change? Who was responsible for it? What were considerations that were made? Was the process one of politics, power, and bargaining? Were the dynamics of the process in the 1960's after the money and the packages were available different from those of 1956?

Prescription and Change

At any given time in the schools there are simultaneously in existence both the reality of the classroom teaching of a subject matter and the ideal program as envisioned by researchers and other leaders in the field. The ideal and the real never coincide. Prescriptions, exhortations, and models of the ideal program are always available to school administrators and teachers, the people primarily responsible for curricular decisions. Where there are not value conflicts, such as in the case of social studies reported in Chapter IV, elements of the ideal are often incorporated into curriculum guides. The balance of the guides is not created ex nihilo.

The guides, once they are finished, are a curious mixture of what already exists and what is being aimed for. Change is undertaken piecemeal; the program and courses as they exist are the basis from which there are departures just as the existing content of any one course is the basis from which changes in that course are made. Unless the program, course sequence, and course contents are discarded in their entirety, portions of the old curriculum reappear in the new curriculum guides. These reappearing portions are already in use; resources for their use are available and are being exploited. Changes prescribed by guides may or may not, however, be feasible; the possibility of their use depends on the availability of resources. Provision of these resources is neither the responsibility nor the prerogative of the curriculum committee making the changes,

however. For example, no committee can simply order that new teachers be hired, that new laboratories be built, or that additional equipment be purchased. If the proposed changes actually occur, it is because of decisions outside the curriculum committee's range of responsibility and power.

The curriculum committee could, of course, focus only on the content of the courses being offered; the content could be reordered and the emphases and anticipated outcomes shifted. Even if this were the case, however, teachers would need training to teach the "new" courses properly. Again, resources for their re-training could not be commanded by the curriculum committee.

It is occasionally argued that the extent to which a curriculum committee proposes changes is related to its knowledge of the prescriptions found in the current literature in the subject matter field. The literature provides only prescriptions, however, not resources. Knowledge of the literature may be related to proposed changes; such knowledge is not related to the realization of changes.

Those responsible for the new science programs in the 1960's could be justifiably proud of their work because they had done something quite different from the usual idealizing and prescribing. Their success in changing science education arises from the nature of their accomplishments. Instead of only prescribing they actually created usable programs and so provided for schools what schools themselves could not provide.

These curriculum projects, then, had, in attempting to close the gap between resources and ideals, created an easily adopted technology. Few local schools could command resources to have even considered such an undertaking on their own.

The new programs were accompanied by two other resources the schools could not provide on their own. The federal legislation offered 50 per cent of the funds necessary to establish the requisite milieu, that is, non-textual materials, equipment, and laboratories, for using the packages, and the NSF institutes trained teachers to use the materials. In the space of a few years the resources that local curriculum committees were unable to command by themselves were made available to them.

However, not all schools adopted all of the new packages; some schools adopted none of them. It is the local rather than the national perspective, then, that must be the focus of examination of change in science education between 1956 and 1968. Adoption or non-adoption of the new programs is the result of decisions in local schools which, one by one, re-examined their programs and did or did not alter them. To answer the questions not answered by the national explanation we turn now to the development of the science program in Gary between 1956 and 1968.

## Science, 1956-1958: Effort Without Change

A revision of the Gary science program was begun in 1956. Two factors combined to cause this undertaking. First, the PAS Survey of the Gary schools had just been released. All

subject matter areas of the school had been criticized; science received its share of criticism. In 1956 there were no curriculum guides for any of the science courses. Second, a new superintendent of schools had just been appointed. These two events precipitated the creation of a network of curriculum committees, one for each of the subject matter areas. The result was The Gary Curriculum Guide, Grades 7-12, which was ready for use when school opened in the fall of 1958. Before examining this document, however, we must trace its development.

## Science in Gary, 1956

As we have said, the Gary science program in 1956 consisted of four courses, each a year in length; general science, biology, chemistry, and physics. Students attending the schools not offering chemistry were usually permitted to enroll in the course at another school. The teaching of all of these courses was handicapped by inadequate facilities.

> Classes are large but science classrooms are small, and equipment is obsolete. Superintendent Blankenship says frankly that only one school--Froebel--has an up-to-date laboratory. Emerson school has a fairly good laboratory, but its equipment is obsolete.[1]

In the absence of curriculum guides, the textbooks served to organize what was taught. As a result, "The instructional methods used by Gary secondary teachers show a strong tendency

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[1] The Gary Post-Tribune, Gary, Indiana, January 23, 1958, p. 6.

to /be/ subject-matter centered. In only a small number of the total classrooms visited was adequate attention being given to the interests of the students."[1]

Typical Science Programs

Despite this rather uninspiring picture of science education in Gary, the city's program was typical of that in other schools. During the Progressive era and the days of the great debate over the essential purpose of American education, science curriculum had received little scrutiny or care. In 1956, only one in twenty high school students took a physics course; barely half of American high schools offered such a course. Table 2 gives the national percentages of schools offering and students enrolling in science courses.

TABLE 2*

| | % of High Schools Offering | % of Students Enrolling |
|---|---|---|
| General Science | 85.3 | 21.8 |
| Biology | 90.3 | 20.5 |
| Chemistry | 63.8 | 7.5 |
| Physics | 56.8 | 4.4 |

*National Society, Rethinking Science Education, p. 94.

[1] The Public School System of Gary, Indiana, Public Administration Service, Chicago, 1955, p. 81.

As Table 2 indicates, general science and biology were the only two courses widely offered and the only two taken by many students. Other generalizations about science courses in the 1950's have been made.

> The pattern of courses and instruction was not particularly inspiring. The length of the typical class is fifty-five minutes. In most schools the basic text appears to dominate the science offering. Teachers continue to use standard science equipment, filmstrips, slides, models, charts, and transparencies.[1]

"Syllabi, courses of study, and curriculum guides have long been little more than outlines of science content, the implementing details of which were designed for the purpose of promoting the mastery of the subject matter."[2]

The Ideal Program, 1956

The typical science program differed markedly from the ideal program envisioned in the science education literature. One prescribed change was the scheduling of classes a year earlier than customary so that enriched, advanced courses could be offered.[3] In grade 9, for example, general science, general physical science, and biology should be offered.[4]

A second prescription concerned the emphasis in science. The essential goal of science education was to foster enquiry rather than to master content.

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[1] Ibid., p. 89.

[2] Ibid., p. 196.

[3] Ibid., p. 89.

[4] Ibid., p. 160.

> Educators who are concerned with giving nonscientists an education in science that will be both lasting and useful are apt to believe that a sense of understanding what science is and how scientists work is more important than all the rest.[1]

> . . . Though we teach the same science, or some of it, we may need a change of emphasis, more thorough teaching of the topics treated, instead of descriptions and results; more emphasis on where scientific knowledge comes from, how it is gained, codified, reinterpreted with the help of speculation; more use of rough estimates rather than too much concern for precise measurements; altogether, more emphasis upon creating a feeling for science as a structure of facts, laws, models, or speculations.[2]

Ultimately it was hoped that science programs, when changed in prescribed ways, would appeal to a larger percentage of students. Science was seen as having growing importance in all areas of life.

> The emerging science revolution, together with the trend toward world industrialization, demands a program of science education with new dimensions. More than a casual acquaintance with scientific enterprise is essential for effective citizenship. It is apparent that now is the time to evaluate and redefine the purposes of science teaching.[3]

The logical methodological change to accompany these prescriptions was to move instruction from the classroom to the laboratory. Only by experimentation could students begin to understand how scientific knowledge was discovered and ordered.

## The Work of the Science Committee

The Public Administration Service survey of the Gary schools, released in 1955, gave little guidance to the subject

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[1] Ibid., p. 19, emphasis in the original.

[2] Ibid., p. 22.

[3] Ibid., p. 18.

matter committees as they began to meet. Subject matter criticisms were general rather than specific in nature. Only where special weaknesses were found were specific precriptive comments made. No unusual weaknesses were found in the science program.

The survey tended to focus on the organization of the schools rather than the curriculum. Two organizational arrangements which had curricular ramifications were cited. The first concerned the lack of any mechanism for curricular evaluation and improvement. As discussed in Chapter II, Superintendent William A. Wirt had, from 1906 to 1938, headed a very centralized school administration. To correct the excesses of this administration, Superintendent Charles Lutz, who served from 1942 to 1955, radically decentralized the system. Curricular revision became the responsibility of principals and their faculties. This arrangement, when combined with the second structural facet criticized by the Survey, the lack of supervision of instruction, resulted in the near-total absence of curriculum evaluation and revision in the Gary schools. In the words of the Survey,

> In Gary, curriculum development machinery at the secondary level exists largely in name only. Vital parts are missing. Apart from the testing program there is no research staff of any kind to provide information vital to the planning process. There is an urgent need for additional supervisors or consultants in the central office. They are needed in the special fields of (1) social studies and language arts; (2) science and mathematics; (3) business education, and (4) arts. With an enlarged staff of this sort, it would be possible for the secondary school teachers in several fields to effect a complete evaluation of their programs at least once every three years and to make those changes which such an evaluation proved to be

> needed. Supervisors must, of course, devote a portion of their time to instructional development. In the work of curriculum planning and evaluating, it is essential that more and more teachers out in the schools initiate and participate in the process and that principals likewise assume leadership in performance of this function.[1]

Correction of the two faults pointed out by the PAS Survey was begun immediately. A curriculum committee structure could be created easily; it cost no money for teachers were not given released time, they were not paid extra for curriculum work, and since 1956 was a textbook selection year, some committee structure was needed to make science selections anyway. Second, although adding personnel in the form of supervisors for several subject matter areas would increase the budget, the Survey was perceived as a mandate for change even though change might be expensive. Upon release of the Survey the Board which had initiated the Survey, asked for the resignation of Superintendent Lutz, offering to buy the remainder of his contract. The assistant superintendent for business affairs was also released. The search for the new superintendent was energetic, the intent being to find the best possible man regardless of the cost.[2] Superintendent Alden H. Blankenship was hired with the understanding that he was to make changes. The

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[1] The Public School System of Gary, Indiana, p. 81.

[2] This information was received in interviews with teachers, department heads, administrators, and secretaries, too numerous to list, who were associated with the Gary schools in 1955.

structure for curriculum revision was established, and subject matter supervisors were quickly hired.

The operating structure of the new curriculum committees was carefully conceived and then made known to everyone involved. At the lowest level were the committees of the whole in each subject matter area of each building. Both chairing these meetings and serving on the city-wide subject matter committees were the building department heads. Issues and details were worked out at these two lowest levels. Each level above these two had the power to veto any recommendation presented to it whereupon the issue would be returned to the lowest level.

The lowest veto level was that of the Planning Council which was composed of eight teachers and two principals all of whom were chosen not to represent subject matter fields but rather because of their "qualifications to study the entire curriculum." Proposals from all the city-wide subject matter committees were submitted to the Planning Council for consideration. If approved at this level, the recommendations were submitted to the principals who met as a body. Once approved by the principals, recommendations still had to be approved by the assistant superintendent for instruction, the superintendent, and finally, by the Board.[1]

Work on the Gary Curriculum Guide, Grades 7-12 took two years. At its regular meeting on April 22, 1958, the Board was

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[1] The Reporter, February 5, 1958, Volume I, Number II.

was presented with the document, and Board approval was given on May 13, 1958.[1] At the same time the Board was reviewing the Guide, it was revealed that two school administrators had

> . . . presented the Curriculum Guide to the State Department of Public Instruction where it was seen as ". . . a complete and detailed piece of work." The officials of the State Department of Public Instruction also described it as ". . . a very tangible contribution to the progress which is being made in the program at Gary," and added that the various committees who served in preparing this Curriculum Guide are to be congratulated for their effort and thoroughness.[2]

In the face of such praise we must turn to the work of the committees generally, and the science committee in particular, to see what was done.

The subject matter committee was to consider four questions in creating its guide. First, what is the best program in secondary education for boys and girls? Second, what courses should be offered? Third, when should they be offered? And, fourth, in what order should they be offered? These four questions became two tasks that had to be undertaken by each committee. First, they had to establish the structure of courses in their fields. Second, they were to describe each of them. Each course description was to be written in terms of (1) the major areas or topics to be covered, (2) emphases or

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[1] Minutes of Meetings of the Gary Board of School Trustees, April 22, 1958 and May 13, 1958.

[2] The Reporter, May 14, 1958, Volume I, Number 17.

outcomes, (3) typical activities, and (4) aids for instruction and evaluation.[1] To expand the information given in the resulting charts, a one-paragraph description of each course was also to be written. Records of the meetings of the committees and thus of alternatives considered and the process of decisions reached were not kept. The interim reports and final decisions are informative, however.

Publicity releases about the work of two committees, in particular science and mathematics, fostered great expectations.

> A year before the Russian Sputnik hurtled skyward, School Superintendent Alden H. Blankenship realized that the Gary Schools should afford better opportunities for students in the fields of science and mathematics.
> To meet the challenge, the superintendent organized two committees to modernize the curriculum. As a result of this committees' studies, Gary schools today are farther ahead in their program planning than most city schools, as many have not yet tackled the job.[2]

It is interesting to note that this release appeared to attempt to capitalize on what was assumed to be a common fear that Communist technology was far ahead of that of the United States. In the quoted article no mention was made of the other eleven committees or the impetus which led to their creation.

The practical result of the work of the science committee was not so sweeping or significant as the praise given the report might lead one to expect. By January 1958, after working

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[1] The Gary Curriculum Guide, Grades 7-12, 1958.

[2] The Gary Post-Tribune, January 22, Volume I, Number 10.

nearly a year and a half, the science committee had decided on its focus which was to be on the courses offered rather than on their content. Its recommendations were to

> (1) increase minimum graduation requirements in science for all students from one to two units, (2) enable students with special interests in science to get more training, and (3) establish a science program for students with outstanding abilities.[1]

The course sequence designed by the committee is shown in Table 3.

TABLE 3*

| | | |
|---|---|---|
| Grade 9 | Bio-Physical Science, Parts A and B<br>Biology | |
| Grade 10 | Bio-Physical Science<br>Biology<br>Chemistry<br>Physics | only for students in advanced programs |
| Grade 11 | Physics<br>Physical Science | |
| Grade 12 | Physics<br>Chemistry<br>Physical Science<br>Advanced Chemistry<br>Advanced Physics | prerequisites: biology, chemistry, and physics |

*Curriculum Guide, 1958, not paginated.

In addition to the sequence chart, each course was outlined. Figures 3 and 4 are the examples for physics and biology. The descriptions are fairly cryptic indeed and offered little guidance

[1]The Reporter, January 22, Volume I, Number 10.

Fig. 3.--Physics Curriculum, Gary Public Schools, 1958.

FIGURE 3*

PHYSICS
Grade 11 or 12

| Major Areas | Emphases or Outcomes |
|---|---|
| I. Mechanics<br>A. Weights and measures<br>B. Machines<br>C. Mechanics of liquids and gases<br>D. Motion | I. Mechanics<br>A. Ability to use English and metric units<br>B. Quantitative and qualitative understanding of the laws governing matter at rest or in motion<br>C. Ability to apply principles to such commonplace matters as driving an automobile |
| II. Heat energy<br>A. Temperature, expansion, measure and transfer<br>B. Freezing, boiling, and melting<br>C. Weather<br>D. Work from heat energy | II. Heat energy<br>A. Understanding of the nature of heat and of its effects on matter<br>B. Ability to apply principles to the understanding of heat engines |
| III. Electrical energy<br>A. Electrons<br>B. Electric currents and resistance<br>C. Series and parallel circuits<br>D. Power, heat, and light<br>E. Chemistry of electricity<br>F. Magnetism<br>G. Induction and condensers<br>H. Motors and generators | III. Electrical energy<br>A. Understanding of the nature of electricity and magnetism<br>B. Practice of safety in the home and elsewhere<br>C. Ability to apply the principles of electricity in the home and elsewhere |
| IV. Sound energy<br>A. Nature and measurement of sound<br>B. Vibrations and waves<br>C. Music and other uses | IV. Sound energy<br>A. Understanding of the phenomena of sound<br>B. Knowledge and appreciation of musical instruments and of the reproduction of music and voice. |
| V. Light<br>A. The nature and measurement of light energy<br>B. Optical instruments<br>C. Spectra and color | V. Light<br>A. Understanding of the phenomena of light<br>B. Ability to apply principles to the understanding and use of cameras, projectors, etc. |

FIGURE 3--Continued

| Major Areas | Emphases or Outcomes |
|---|---|
| VI. Modern physics<br>A. Gaseous conduction<br>B. X-rays<br>C. Radio and television, radar<br>D. Electronic eye<br>E. Radioactivity<br>F. Atomic energy | VI. Knowledge of recent developments in atomic physics and electronics |

| Typical Activities | |
|---|---|
| I. Listening to explanation of new concepts and principles<br><br>II. Participating in class discussion<br><br>III. Performing experiments<br>A. Recording data<br>B. Making calculations<br>C. Checking results<br><br>IV. Studying text and references<br><br>V. Viewing films and filmstrips<br><br>VI. Listening to outside speakers<br><br>VII. Making field trips<br><br>VIII. Writing tests<br>A. "Open notebook" tests<br>B. Essay type<br>C. Standardized tests | I. Textbook<br>Blackwood, Herron, and Kelly, High School Physics, Ginn and Company, Chicago, Illinois<br><br>II. Supplementary books<br>Dull, Metcalf, and Brooks, Modern Physics, Henry Holt and Company, Chicago, Ill.<br><br>Glasstone, Sourcebook on Atomic Energy, D. Van Nostrand Company, Princeton, New Jersey<br><br>Richardson and Cahoon, Methods and Materials for Teaching General and Physical Science, McGraw-Hill Book Co., New York, New York<br><br>Sutton, Demonstration Experiments in Physics, McGraw-Hill Book Co.<br><br>Elliott and Wilcox, Physics, A Modern Approach, The Macmillan Co.<br><br>White, Modern College Physics, D. Van Nostrand Co., Princeton, N.J.<br><br>H. Ruchlis, Exploring Physics, Harcourt, Brace and Co., Chicago, Ill. |

FIGURE 3--Continued

III. Workbooks and manuals
Turner, Discovery Problems in Physics, College Entrance

Blackwood, Herron, and Kelly, Workbook and Laboratory Manual, Ginn and Company, Chicago, Ill.

Brooks, Directed Activities in Physics, Oxford Book Co.

Idelson and Miner, Fundamental Activities in Physics, Republic Book Company

IV. Laboratory Equipment

V. Films and filmstrips

*Ibid., no pagination

Fig. 4.--Biology Curriculum, Gary Public Schools, 1958.

FIGURE 4*

BIOLOGY
Grade 9 or 10

| MAJOR AREAS | EMPHASES OR OUTCOMES |
|---|---|
| I. Meaning and scope of biology | I. Understanding the principles involved in the study of living things |
| II. Insects<br>A. External features<br>B. Internal structure<br>C. Arthropods and classification<br>D. Entomologists | A. Structure<br>B. Life history<br>C. Life processes<br>D. Composition<br>E. Life functions<br>F. Adaptations |
| III. Plants<br>A. Cells, tissues, organs, systems<br>B. Classification<br>C. Food manufacture<br>D. Structure of leaf, root, stem, flower, fruit, seed, etc.<br>E. Ecology, local flora<br>F. Geographical distribution<br>G. Collections | II. Becoming aware of the living world and how it can be improved<br><br>III. Understanding and appreciating the economic importance of all living things<br><br>IV. Understanding of general and specific classifications of living things |
| IV. Chemicals<br>A. Physical and chemical concepts | V. Understanding need for and methods used in conserving natural resources |
| V. Invertebrates<br>A. Protozoa<br>B. Anthropoids, such as crayfish, etc.<br>C. Earthworms<br>D. Other simple animals<br>E. Ecology and local fauna | VI. Establishing good health and safety habits<br><br>VII. Understanding how to prevent and to control communicable diseases |
| VI. Vertebrates<br>A. Fish, frogs, birds, reptiles, etc.<br>B. Biology of all higher animals<br>C. Ecology | VIII. Understanding characteristics of bacteria and their effects on health<br><br>IX. Developing recreational interests and hobbies and wise use of leisure time |

FIGURE 4--Continued

| MAJOR AREAS | EMPHASES OR OUTCOMES |
|---|---|
| VII. Human physiology and anatomy<br>A. Structure of human body--circulatory, skeletal, respiratory, digestive, etc. systems<br>B. Nutrition | X. Developing vocational interests<br>XI. Developing the power of accurate observation and a scientific attitude<br>XII. Appreciating the beauty and wonder of nature |
| VIII. Health and hygiene<br>A. Community hygiene<br>B. Personal hygiene | |
| IX. Heredity<br>A. Health, eugenics, evolution | |

| TYPICAL ACTIVITIES | AIDS FOR INSTRUCTION AND EVALUATION |
|---|---|
| I. Listening and contributing to class discussion | I. Textbook<br>Moon, Mann, and Otto, Biology, Henry Holt and Co., Chicago, Illinois |
| II. Studying text | II. Supplementary books<br>Dodge, Smallwood, et al., Elements of Biology, Allyn and Bacon Co., Chicago, Ill. |
| III. Observing demonstrations | |
| IV. Performing experiments | |
| V. Writing reports, summaries of experiments, notes, etc. | |
| VI. Reading reference materials | Ella T. Smith, Exploring Biology, Harcourt, Brace Co., Chicago, Ill. |
| VII. Making scientific observations | Vance and Miller, Biology for You, J. B. Lippincott Co., Chicago, Ill. |
| VIII. Observing visual aids | |
| IX. Presenting and listening to special reports | Ralph B. Swain, The Insect Guide, Comstock's Handbook, Doubleday Company, Garden City, New York |
| X. Working with microscopes | |
| XI. Drawing | Ralph Buchsbaum, Animals Without Backbone, University of Chicago Press, Chicago, Illinois |
| XII. Dissecting | |

FIGURE 4--continued

| TYPICAL ACTIVITIES | AIDS FOR INSTRUCTION AND EVALUATION |
|---|---|
| XIII. Participating in field trips | Roger T. Peterson, A Field Guide to the Birds, Houghton Mifflin Company, Chicago, Ill. |
| XIV. Collecting and identifying plants and animals | Charles Deam, Trees of Indiana, State Dept. of Conservation |
| XV. Working on projects | National Association of Biology Teachers, Conservation Handbook, Interstate Publishing Company, Danville, Ill. |
| NOTE: The work with plants may be divided between autumn and spring to achieve maximum benefit from outdoor resources | Scheinfeld, Human Heredity Handbook, J. B. Lippincott Co., Chicago, Illinois |
| | III. Workbooks |
| | Greene and Baily, Problems in Biology, Allyn and Bacon Company |
| | Otto and Blanc, Biology Investigations, Henry Holt and Company |
| | Remley and Harer, Fundamental Activities in Biology, Republic Book Co., Flushing, New York |
| | IV. Audio-visual aids |

*Ibid.

to teachers. No where was mention made of attempting to re-orient science courses from content to enquiry. Within the framework of responsibility, resources of time and money, and access to other decision levels of the school, the science committee appears to have produced a "good" document.

As suggested above, however, new curriculum guides are usually a mixture of what is real and what is ideal. The science committee had no more access to or control over the hiring of additional teachers or the building of additional rooms to provide for the new courses than they did for building new laboratories and equipping them. That part of the new guide that called for additional courses, then, was taken from the literature as the ideal; there was no reason for the committee to think that the new courses could actually be offered in all schools within the next ten years. In fact, the full program of courses was not offered in all schools until 1963, and this was the result of the availability of resources from outside the school as will be shown later.

Since the curriculum committee had merely to ho[illegible]hat provisions could be found for the new courses, the question o[illegible] their effect on the curriculum of each course is of inte[illegible]est. Since they could not command the necessary resources f[illegible] the number and sequence of courses, could they change the conte[illegible] and focus of any single course? The answer again is [illegible]. They were not provided with time or money to develop the[illegible]wn materials. In fact, the committee did the easiest [illegible]ng

could do. From the primary textbook for each course, they simply copied the chapter topics into the major areas column of the guide for each course as shown in Figure 5. For example, the guide for the physics course to be offered to eleventh and twelfth grade students was to cover six topics. The six topics appear in both the Guide and the table of contents in the text in the same order. They are, of course, the conventional topics dealt with in physics courses of the time. Evidence that the guide for the physics course was merely "lifted" from the table of contents lies in comparing the chapter titles from the text and the sublisting in the Guide. In the first section, Mechanics, several of the chapters were lumped together thus reducing the number of subtopics listed in the Guide. Forces, for example, covers the four chapters in the text which deal with force. The second section, Heat, is reproduced nearly exactly in the Guide. The next four chapters, fourteen through seventeen, are lumped together, but the words used are exactly the same. The last section is the clearest indication that the table of contents was simply "copied" to make the Guide. For the last five chapters, no attempt was made to paraphrase.

The new text that had been selected was traditional.[1] Although the unit titles of the old physics series editions of which had been used in Gary for more than fifteen years prior

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[1] Interview with Floyd Flinn, Supervisor of Science, Gary Public Schools, September 14, 1971.

Fig. 5.--Physics Topics, 1958 Curriculum Guide and Selected Textbook.

FIGURE 5*

| CURRICULUM GUIDE | TABLE OF CONTENTS |
|---|---|
| I. Mechanics | Mechanics |
| A. Weights and measures | 1. Measurement, Force, and Friction |
| B. Machines | 2. Work and Power, Pulleys |
| | 3. Other Machines |
| C. Mechanics of liquids and gases | 4. Pressure in Liquids |
| | 5. Buoyancy |
| | 6. Atmospheric Pressure |
| | 7. Compressed Gases |
| D. Forces | 8. Forces between Molecules |
| | 9. Forces Acting Together |
| | 10. Velocity and Acceleration |
| E. Motion | 11. Force and Acceleration |
| | 12. Motion in Curves; Centrifugal Force |
| | 13. Energy and Momentum |
| II. Heat | Heat |
| A. Temperature, expansion, measure and transfer | 14. Temperature |
| | 15. Heat Causes Expansion |
| | 16. How we Measure Heat |
| | 17. Heat Transfer |
| B. Freezing, boiling, and melting | 18. Freezing and Boiling |
| | 19. Evaporation and Boiling |
| C. Weather | 20. What makes the Weather |
| D. Work from Heat Energy | 21. How We Put Heat to Work |
| III. Electrical Energy | Electricity |
| A. Electrons | 22. Electrons, Protons, and Neutrons |
| B. Electric currents and resistance | 23. Electric Currents and resistance |
| C. Series and parallel circuits | 24. What Makes Electricity Flow? |
| D. Power, heat, and light | 25. Electric Power, Heating, and Light |
| E. Chemistry of Electricity | 26. How Liquids Conduct Electricity |
| | 27. Voltaic Cells |
| F. Magnetism | 28. Magnetism |
| G. Induction and condensers | 29. Electromagnets and Electric Motors |
| H. Motors and generators | 30. How Magnetic Fields Increase Currents |

FIGURE 5--Continued

| CURRICULUM GUIDE | TABLE OF CONTENTS |
|---|---|
| IV. Sound Energy | Wave Motion and Sound |
| A. Nature and measurement of sound | 31. Vibrations and Waves |
| B. Vibrations and waves | 32. Sound |
| C. Music and other uses | 33. Music and Musical Instruments |
| V. Light | Light |
| A. The nature and measurement of light and energy | 34. Illumination and the Velocity of Light |
| | 35. Reflection and Refraction |
| | 36. Lenses and the Camera |
| B. Optical Instruments | 37. Other Topical Instruments; Curved Mirrors |
| C. Spectra and color | 38. Spectra |
| | 39. Color |
| VI. Modern Physics | Electronics and Nuclear Physics |
| A. Gaseous conduction | 40. Gaseous conduction and X-rays |
| B. X-rays | |
| C. Radio and Television, radar | 41. Radio and Electronic Eye, Television |
| D. Electronic Eye | |
| E. Radioactivity | 42. Radioactivity and Atomic Energy |
| F. Atomic Energy | |

*Oswald H. Blackwood, Hilmer B. Herron, and William C. Kelly, High School Physics (Chicago: Ginn and Company, 1951), table of contents; Curriculum Guide, 1958.

to the 1956 adoption, were slightly different, the topics to be covered were the same as in the new High School Physics:[1] Mechanics molecules, force and motion, energy, machines, heat, light, electricity, and modern physics. In addition, the approaches of the two textbooks were the same.[2]

To supplement the course outlines, a one-paragraph description of each course was written. As Figure 6 reveals, however, these descriptions were concerned not with content or emphasis but with prerequisites and credits.

The outcome of the work of the science curriculum committee was, then, insignificant, although paradoxically, it was praised by the State Department of Public Instruction. Their curriculum consisted of two things: a hoped-for sequence of courses which would or would not be realized through conditions and actions over which the committee had absolutely no control, and a faithful rewording of the chapters of the textbook together with a series of possible activities, that could be used to reach the goals, and a list of books that could be used. The science committee, created to bring about change by program improvement, had changed nothing. By the time the Gary Curriculum Guide, Grades 7-12 was completed in 1958, there were movements in the national science picture, however, which later resulted in considerable change in the Gary science program.

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[1] Blackwood, Herron, and Kelly, High School Physics.

[2] Interview with Floyd Flinn, September 14, 1971.

Fig. 6.--Course Descriptions from the 1958 Curriculum Guide.

FIGURE 6*

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Physical Science--Grade 11 or 12. Physical Science is offered in the eleventh or twelfth grade as a course in general science. Juniors or seniors who have had only Bio-Physical Science are urged to take Physical Science. It may be counted as the unit of science required for graduation; however, it is not a college preparatory course. Credit is not allowed for physical science in addition to credit for either Chemistry or Physics.

Biology--Grade 9 or 10. Biology is offered as a somewhat specialized science for students who are ready for it in the ninth or tenth grade. It may be applied as one unit of required science; however, students who are following the special or college preparatory sequence usually will need, and are urged to take, Chemistry and/or Physics after completing Biology. Students who are following the accelerated sequence must take Biology in the ninth grade. For many others, it may be preferable to defer it to the tenth grade.

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*Curriculum Guide, 1958.

## The National Picture in Science Education

Conventional wisdom says that the successful launching of the Russian Sputnik I in 1957 resulted in a massive concern for science. In fact, a concern for science and mathematics education had begun several years before 1957 and had gained considerable momentum by that time. We have already discussed the prescriptions from the literature of the 1950's, and they need be mentioned here only to remind us of them. Beyond these prescriptions, however, several concrete actions were taken to strengthen school science teaching. In fact, so much effort, time, and money were spent during the 1950's and early 1960's that a few examples will have to serve here to characterize the efforts.

The National Science Foundation was established in 1950 and throughout the period under study increased the scope of its activity and its funding. In 1956 President Eisenhower established the National Committee for the Development of Scientists and Engineers, "in view of the nation-wide critical shortage of scientific and engineering manpower and the need for such manpower in expanding programs involving national security."[1] All departments and agencies of the government were directed to work with the National Committee in support of its programs and to re-evaluate and strengthen their own contributions in helping solve the science "problem." In 1954

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[1]National Society, p. 174.

72 per cent of the 664 private philanthropic foundations were either expressing an interest in or actually contributing to educational projects. Of the 371 million dollars given to support various projects, it is believed that education was receiving over one-half.[1] By 1958, a total of thirty-nine federal departments and agencies including the Naval Research Laboratory, the National Bureau of Standards, the Public Health Service, and the United States Office of Education were involved with science education.

The two major thrusts emerging from this array of participants, however, were the curriculum study committees and NDEA, and so we will focus primarily on them. The concerns and aims of the three curriculum studies attended to here were similar. "Since the purpose of a curriculum is to induce changes in students, the type of curriculum to which a student is exposed is of paramount importance."[2]

> The vacuum created by the lack of a centralized control of education, such as that exercised by the ministries in other countries, had led to the tacit assumption of the function by textbook publishing houses. The most widely sold of the books prepared by textbook publishers in effect became the curriculum for the nation.[3]

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[1] Ibid., p. 186.

[2] Arnold B. Grobman, The Changing Classroom: The Role of the Biological Science Curriculum Study (Garden City, New York: Doubleday, 1969), p. viii.

[3] Ibid., p. 3.

These two statements, in and of themselves, may not appear alarming. When combined with the belief that the publishing companies were producing textbooks which emphasized the mere learning of scientific facts and the knowledge that these facts were not necessarily the most important ones for high school science students to learn, the idea that science curricula were in need of improvement becomes painfully evident.

With the granting of $143,000 in the fall of 1958 to the American Institute of the Biological Science, parent organization of the Biological Science Curriculum Study, an ". . . Essentially autonomous organization of high school biology teachers and college biologists concerned with the improvement of biological education,"[1] work began on BSCS materials.

Recipient of a total of $10,000,000 from the NSF and other agencies, BSCS attempted to do for high school biology what PSSC was already doing for physics.

> The emphasis is taken off memorization, excessive terminology, and routine laboratory exercises and is placed on the nature of science, on the men who have worked as scientists, and on scientific inquiry. These, the BSCS feels, are best learned in the laboratory and through interaction in meaningful discussion periods.[2]

Such an aim was drastic indeed for the public schools. The basic goals of biology education were to be changed as well as the means for achieving them. The practical import from the view of the schools was again seemingly overwhelming. The new

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[1] Ibid., p. 1. [2] BSCS Bulletin #3, p. 1.

goals had to be understood and accepted; teachers had to be extensively retrained so they would use the new curriculum correctly; and new facilities and equipment had to be provided.

The broad concern for curriculum centered around the quality of that curriculum while local schools had to face the problem of money. And, funds were available. Title III of NDEA provided for ". . . Acquisition of laboratory or other special equipment, including audio-visual materials and equipment and printed materials (other than textbooks), suitable for use in providing education in science, . . . minor remodeling of laboratory or other space used for such materials or equipment; . . ."[1] At the same time, workshops were provided by the NSF for retraining biology teachers in the same way that physics teachers were being retrained. These provisions left the schools with the task of providing half of the funds for remodeling laboratories and classrooms and buying the necessary equipment.

Unlike PSSC, the BSCS produced a group of materials from which a selection could be made. Fearing a "halo effect" and the resulting "national curriculum" that their work might produce, the Committee decided to produce three different versions, each for a tenth grade biology course for average and above-average students.[2] First generally available for the fall of

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[1]Grobman, pp. 62-63.

[2]National Defense Education Act, PL 85-864, Section 303 (a) (1).

1963, the three versions were commonly referred to by the colors of their covers: green, blue, and yellow. The Blue Version presented the fundamental concepts of biology through ". . . The development of ideas and the experimental approach to physiology and bio-chemistry"; The Green Version was ". . . built around a natural history or ecological approach to biology"; and the Yellow Version represented ". . . a fairly traditional approach."[1]

Like PSSC Physics, the BSCS materials were exceedingly popular. In the 1963-64 school year, the first in which the three versions were generally available, BSCS materials accounted for 200,000 out of the 750,000 biology books sold, nearly enough to put a copy in the hands of every tenth grade biology student in the country.[2]

PSSC, actually the first of the three curriculum studies of interest here, had a history very similar to that of BSCS. Established in 1956 with grants totaling over two million dollars, PSSC was funded by a variety of contributors including the NSF, the Ford Foundation, the Alfred P. Sloan Foundation, and the Fund for the Advancement of Education.[3]

CHEM Study, with grants from NSF totaling over $2,800,000 between 1959 and 1968, established four goals:

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[1]Grobman, p. 17. [2]Ibid., p. 178.

[3]National Society, p. 187.

> (a) to diminish the current separation between scientists and teachers in the understanding of science; (b) to encourage teachers to undertake further study of chemistry courses that are geared to keeping pace with advancing scientific frontiers, and thereby improve their teaching methods; (c) to stimulate and prepare those high school students whose purpose it is to continue the study of chemistry in college as a profession; (d) to further in those students who will not continue the study of chemistry after high school an understanding of the importance of science in current and future human activities.[1]

Traditional chemistry courses were seen as overemphasizing chemical history, descriptive detail, and out-dated technology, underemphasizing the unifying concepts and principles of chemistry, and as being devoid of meaningful laboratory work.[2]

Materials produced by CHEM Study included a text, a laboratory manual, a teachers' guide, two series of tests, two programmed sequences in mathematical skills, twenty-six movies for classroom use, several film loops and filmstrips detailing the movies, and teacher guides for all filmed materials.[3]

Although only certain aspects of each of the curriculum studies has been touched upon here, the studies are sufficiently similar that more need not be told. Of interest, of course, is the focus on the quality of education in science being offered high school students. The focus of the Gary science curriculum committee was quantity, the number of courses to be offered.

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[1] Richard J. Merrill and David W. Ridgway, The CHEM Study Story (San Francisco: Wm. H. Freeman, 1969) pp. 1-2.

[2] Ibid., pp. 26-27.

[3] Ibid., p. 2.

Change in the Gary Science Program, 1958-1968

The adopted text, High School Physics, was used in all of the physics courses in Gary during the 1958-1959 school year. In the summer of 1959 one teacher, described by Floyd Flinn, supervisor of science in Gary, as an "institutor" (meaning one who avidly searches for and attends all available institutes), attended a PSSC summer institute. He was the first Gary science teacher to attend such an institute. Despite his enthusiasm for the program, this "institutor" did not choose to use Physics during the 1959-1960 school year but persuaded a colleague both to use portions of Physics and to attend a winter institute. Floyd Flinn also became aware of PSSC Physics during the summer of 1959 while on a traveling program to Michigan State University. He returned to Gary enthusiastic about the program but felt that before teachers should use it, they should want to use it and should attend an appropriate institute.

No encouragement was needed to get teachers to apply for and attend the institutes. Tuition and materials for the institutes were free. In addition, the NSF paid, tax free, $75.00 per week for the teacher attending plus $15.00 for each dependent for each week the institute lasted. The Gary schools accepted attendance at institutes as course work which would advance a teacher on the salary schedule, and some teachers were able to get Masters Degrees in their subject matter fields through the institutes.

As a result, Physics spread quickly throughout all the Gary schools. In the 1960-1961 school year, it was in use in two schools. The following year two more schools offered it, bringing the total to four, half of the Gary schools. By the fall of 1965, Physics was being taught by at least some teachers in seven of the eight schools. The following year, 1966, was again a text-adoption year, and Physics was selected to be used by all physics teachers.

The BSCS materials had a similar history in the Gary schools. Again, teacher by teacher, beginning in 1963-1964, BSCS materials began to be used. There was less agreement among teachers, however, than with Physics. The adoption year was 1966. Although Supervisor Flinn and the eight individual school science department chairmen selected the official texts on the basis of the indicated wishes of the teachers, no clear mandate emerged in regard to BSCS. As a result, biology teachers were asked to vote. When the results were tabulated, it was found that half of the teachers wanted the BSCS blue version, half did not want to use BSCS materials at all. Interestingly enough, the green version had been used by none of the Gary science teachers; the yellow version had been used without incident; the blue version had been the object of controversy because of its strong evolutionary orientation. Students from strongly fundamentalist religious backgrounds and a few parents protested. This difficulty swayed the department heads and

Supervisor Flinn to choose the BSCS yellow version as the official text despite its lack of support among the teachers.

There is no apparent reason that biology teachers did not accept the new curricula in the same way the physics teachers did. There are no distinguishable differences between the two groups in preparation for teaching, in general qualifications, or in years teaching in Gary, although a smaller percentage of biology teachers than physics teachers attended the NSF institutes.

Chemistry teachers approached roughly the degree of agreement reached by the biology teachers. Again, use was occasional throughout the schools once CHEM Study was available in 1963-1964. By 1966, however, when the new official texts were to be selected, few of the chemistry teachers had had an opportunity to become acquainted with the materials. As a result, teachers were permitted to select the materials they wanted to use within each school. Four schools chose to use CHEM Study, four chose other materials.

By 1967 the Gary science program had changed, much in the same way that science programs across the country had changed. In Gary PSSC and BSCS were used in all physics and biology classes while CHEM Study was used in half of the classes. Figure 7 gives comparable percentages for schools of 750 to 1,999 in student population in 1967.

FIGURE 7*

| | New Physics | New Chemistry | New Biology |
|---|---|---|---|
| Indiana | 32.7 | 32.7 | 52.7 |
| National | 49.5 | 47.6 | 64.9 |

*James B. Conant, The Comprehensive High School (New York: McGraw-Hill Book Co., 1967), p. 57.

Not all teachers had chosen to use the new materials in Gary. Reasons for this lie in the perceptions teachers had of the materials. Although the comments do not clearly articulate how teachers felt about the new curricula, they are suggestive. Examples include, "Too much emphasis on science," and "I prefer more traditional materials."[1]

All Gary science teachers who applied to attend training institutes were accepted at least to one institute. Exact figures are not available, but roughly 75 per cent of the Gary science teachers had attended one or more institutes. The initial enthusiasm for the new curricula wore off quickly once teachers began teaching them. As Herron suggests, only from a different perspective, teachers did not feel comfortable with the new materials once they were in use. Instead of openly expressing the problems they were having, teachers did the best they could. Only when Supervisor Flinn taught a course using

[1]Interview with Floyd Flinn. Supervisor of Science, September 14, 1971.

the new materials was he aware that there were problems in using them. Upon expressing his amazement at the difficulties he found, he was quickly inundated with complaints from the other science teachers. They really did not like--or did not know how to use--the new materials. Informal observation by Flinn indicated that the new materials were being used in much the same way the traditional ones had been used.

Contrasting the two periods of 1956 to 1958 and 1958 to 1970, several interesting differences and similarities emerge. In the earlier period there was a strong demand for change; in the latter, the demand was present in a national context but was very subtle. There was no overt demand placed on the system. During the years 1956 to 1958 a structure for making and approving change was carefully designed and used; during 1958 to 1968 the desires of the teachers who were not organized into formal committees were channeled through the science supervisor. In the earlier period there were no resources available to the curriculum committee; there was no money for extra pay, budget, or access to the budgeting portion of the school structure. In the later period large amounts of money were available for remodeling laboratories, equipping these laboratories, and purchasing instructional aids. In both periods, the "curriculum" was the text or materials in use; in the 1958 Guide content was cryptically outlined; no further guide was written. In both periods, teachers were not happy with what

they had been using and appeared eager to make changes. Once changes were made, however, teachers were not particularly happy with them.

What, then, can be said about curriculum change and the school? First, when change was demanded, no changes occurred. The school did not add new science courses or change the content of the courses already in existence despite the demands for change and the curriculum guide of 1958. Resources for adding teachers to the faculty, purchasing additional equipment, and building and remodeling laboratories could not be commanded by the science curriculum committee. Despite the efforts of the committee, change did not occur. Those portions of the Guide which described the existing courses were copies from texts in use. Instead of producing change, then, the new Guide was successful only in describing the status quo.

Second, a demand for change may result in only the superficial appearance of change. Despite acceptance and praise of the 1958 Guide, it made no changes. Third, the creation of the organizational structure for change did not guarantee that it will occur. The curriculum change mechanism was elaborately articulated in 1956, but change did not occur until resources from outside the system were made available. Interestingly enough, once the money was available, the matching funds were provided by the school system. The Gary school system did not produce change in its science

program between 1956 and 1960 despite effort to do so. The availability of new funds after 1960 was enticing but not necessarily for the reasons anticipated at the national level. The national focus was on the quality of science education in schools, for both the nature of courses taught as reflected in both trained teachers and aims of the curriculum and the materials and equipment used in those courses. Local schools, such as Gary, were unable to improve their individual programs and so eagerly accepted the funds but without an on-going commitment to the new curricula. The new facilities, equipment, and materials could be used equally well with the new materials or the old traditional ones. Teachers attended the institutes but not necessarily for the reasons anticipated by the NSF. Science programs in Gary, then, changed only after new funds were available and only because those funds were available.

CHAPTER VI

# TOWARD A MODEL VOCATIONAL EDUCATION PROGRAM, 1940-1970

> It is not within the province of this report to lay down even a suggestive outline of a school building program for the future. One vital lack is so evident that it would almost surely be in any building program. We think the need is so evident that even considerable sacrifice might be undergone to meet that need with little delay. Gary needs a large, modern, vital trades and industries school. It would find that such a school would be a blessing to many of the high school youth who can hardly get what they need under present arrangements.[1]

> In organizing its curriculum within a broad pattern of social integration, the school must recognize the importance of full individual development and must start with the study of each child's particular aptitudes, abilities, social heritage, and developmental needs. Its offerings must be in terms of experiences interesting to the child at the time and valuable in making experiences in later periods meaningful.[2]

Gary, Indiana is a steel town; the city grew after 1906 in response to United States Steel Corporation's need for workers in the new mill there. The fortunes of the city and the mill

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[1] Final Report, Purdue Survey Committee, p. 277.

[2] Board Policies Manual, Board of School Trustees, Gary, Indiana, 1948.

are closely tied; when there has been a reduction in steel production, unemployment in Gary has risen drastically. Traditionally United States Steel (USS) has been both the largest employer and the largest taxpayer in Gary. In 1971 USS's property tax assessment was 46.5 per cent of the total assessment for the school district in Gary;[1] over one-half of the current USS employees live in Gary, and over half of all entrants into the apprenticeship programs are graduates of the Gary schools.[2] Competitors include Inland Steel, Youngstown Sheet and Tube, Bethlehem Steel, and Midwest Steel. Gary, then, is the heart of a steel area.

Paradoxically, Gary, until 1968 had an inadequate vocational education program. Before 1968 students in the Gary high schools had little opportunity to prepare themselves for either apprenticeship programs in the steel mills or other kinds of trades and vocations. Gary high school graduates did become employees of the mill; they were rarely well prepared in or even introduced to the vocational area they were entering.

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[1]Statement of W. A. Walker, Chairman, Finance Committee, United States Steel Corporation, before the U.S. Senate Subcommittee on Intergovernmental Relations, June 26, 1972.

[2]Interview with Randy Smith, Director of Personnel, United States Steel Corporation, August 2, 1972.

[3]J. B. Carr, General Supervisor, United States Steel Corporation, Gary Works, speech to Gary Career Center students, February 21, 1972.

The Gary school system was not unaware that its vocational education program was considered inadequate. Several times during the period examined, 1940 to 1970, the deficiency was noted, and recommendations to correct it were made. The Purdue University survey of the Gary school system, released in 1942, criticized the existing vocational education program and recommended that the first priority for building construction be a vocational-technical high school.[1] The Purdue Survey was criticizing the program established during the superintendency of William A. Wirt between 1907 and 1938.

Between 1942 and 1955 the schools in Gary, and also the vocational education program, changed very little. As a result, the same criticisms made of the vocational education program in 1942 were made again in the 1950's. A U.S. government pamphlet in 1954,[2] the Public Administration Service survey of the Gary school system in 1955,[3] and the National Education Association investigation in 1957[4] all criticized the vocational education program. Recommendations of possible solutions were offered to alleviate the difficulty; the school system, however, was able

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[1] Final Report, Purdue University, p. 277.

[2] A Policy for Skilled Manpower, National Manpower Council (New York: Columbia University Press, 1954).

[3] The Public School System of Gary, Indiana, Public Administration Service, 1955, p. 17.

[4] Gary, Indiana, A Study of Some Aspects and Outcomes of a General School Survey, National Education Association, Committee for the Defense of Democracy Through Education, 1957, p. 18.

to put only a few of the recommendations into effect before the middle 1960's. By that time the earliest recommendations for reform were over twenty years old.

Yet, the school system in Gary did not totally ignore the recommendations; effort was made after each criticism to improve the vocational education program. In 1942 after the release of the Purdue Survey, the Board of School Trustees resolved to rename the shop at Froebel School the Gary Trade and Technical Center.[1] The new center apparently did not function according to intentions, for in 1944 the Board resolved again to establish a technical school at Froebel.[2] The effect of these two decisions, however, was to narrow the vocational education program because shops at the other unit schools were closed in anticipation of the operation of these centers. By 1955 the vocational education offering in Gary was almost nonexistent.

As we have already seen, one response of the Gary school system to the recommendations of the Public Administration Service survey of 1955 was the appointment of curriculum committees in each of the subject matter areas. The vocational education committee, like the other twelve committees, spent two years preparing its new curriculum guide. This guide will

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[1] Minutes of Meetings of the Gary Board of School Trustees, May 12, 1942.

[2] Ibid., December 12, 1944.

be examined in detail later; briefly, it recommended establishing three new centers, one each for distributive, business, and industrial education and the creation of several new shop courses. The three centers were put into operation but only insofar as no funds were needed for remodeling or equipping the existing facilities; the new courses were not offered until 1968. The practical effect of the 1958 curriculum guide, then, was minimal.

Suddenly in 1963 the Board of School Trustees passed a resolution calling for the construction of a new technical-vocational high school. Plans for the new building were to embody many of the recommendations from the earlier survey reports. Although ground breaking was delayed for two years, construction did begin in 1965. The Career Center, Gary's new area technical-vocational high school opened in September, 1968. After twenty years of sporadic attempts by the school system to provide an adequate vocational education program, success was inally achieved. Two factors brought about this success: first, the technical-vocational school became top priority for construction, and second, money from outside the school system became available to help finance the building.

Criticisms of the vocational education program in Gary between 1940 and 1960 suggested that the program was inadequate; the criteria selected and the programs with which that in Gary was compared differed from one set of criticisms to the next. The 1954 Skilled Manpower Policy compared the program in Gary

with those in comparable cities.[1] The two major surveys of the Gary school system, the Purdue survey and the PAS survey, did not indicate existing models used for comparison. Examination of the general literature about the state of vocational education programs reveals that the vocational education program in Gary was comparable to programs in most schools; this suggests that the survey criticisms of Gary were made in terms of an ideal program, one which existed only in the prescriptive literature.

The vocational education program in Gary in 1942 differed little from the typical program. The Forty-Second Yearbook of the National Society for the Study of Education[2] did note emerging trends, but vocational education was not being revolutionized. High schools generally focused their attention on the college-bound students; cooperative vocational programs or vigorous in-school training experiences were the exception rather than the rule.

The field of vacational education as found in school programs had progressed little by 1965. Schools were making very small contributions to the national work force.[3] The

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[1] A Policy for Skilled Manpower.

[2] National Society for the Study of Education, Vocational Education, Forty-Second Yearbook, Part I (Chicago: The University of Chicago Press, 1943), p. 33.

[3] National Society for the Study of Education, Vocational Education, Sixty-Fourth Yearbook, Part I (Chicago: The University of Chicago Press, 1965), p. 4.

college preparation emphasis was still prevalent; non-college bound students were not being given opportunities equal to those of their college-bound peers to spend their high school years preparing for vocations.[1] Both nationally and in Gary more students ended their formal schooling with high school graduation than went on to college, yet in Gary, as elsewhere, this larger group was not offered a comprehensive in-school experience to prepare them for trades.

Traditionally there has been a conflict between proponents of academic education and proponents of vacational education. Vocational education has been viewed skeptically by schoolmen. Somehow providing academic work as a basis for good citizenship and possible college entry has usually appeared to be somehow "better." Vocational education has been thought to be for the less intellectually capable student. Students, themselves, have no doubt felt that enrollment in vocational courses somehow attached a stigma to them.

There have, however, been national manpower concerns since 1940. At various times during the period under study the federal government increased its financial support of public school vocational education programs. During World War II money was made available for schools to improve their vocational education facilities as support for the war effort. Although funds were cut back after the War, the new equipment and

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[1] Ibid., p. 109.

facilities constituted an ongoing investment which the schools could use as they wished. The largest expenditure for vocational education by the Federal government, however, came during the war on poverty during the early 1960's.[1] The most significant legislation was the Vocational Education Act of 1963. It is no coincidence that the Gary Board of School Trustees decided to build the Career Center after the passage of this act. The act did what the surveys, the prescriptions, and the efforts of a few individuals in Gary between 1940 and 1963 could not do--provide resources to the school system.

No technical-vocational school was built in Gary until the middle 1960's because the school system could not both maintain itself and build such a school. Providing desks and books for all students served by the school system was the top priority item for the Gary Board of School Trustees between 1940 and 1965. In 1965, for the first time in twenty-five years no schools had double shifts, and no students had to attend classes in rooms other than those intended for schooling, e.g., church basements and gymnasiums.[2] As we shall see later, during the period examined there was greater demand for desks for all students than for a vocational high school.

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[1] Vocational Education, The Bridge Between Man and His Work, U.S. Advisory Council on Vocational Education, 1968, p. 157.

[2] Board Minutes, May 25, 1965.

The school surveys were not considered to be serious demands on the system for the establishment of a vocational school. As was suggested in Chapter III, many individuals in Gary felt that the Purdue Survey of 1942 did not understand the Gary school system in its own terms; thus, the Survey's recommendations were not taken seriously. The Public Administration Service survey was felt to be a "hatchet job" undertaken by an organization not qualified to assess a school system. Yet, despite these feelings about the surveys, changes in the vocational education program in Gary were made in response to the recommendations of the surveys provided no cost was involved. Thus, some changes were made easily; they cost nothing. Other changes which would have cost money were not made.

Although the need for a technical-vocational high school existed and was realized for over twenty years, pressures on the school system to build such a school were never great. The only continually vocal spokesman advocating the construction of such a school was Louis McElroy, supervisor of vocational education in the school system for many years. Local industry, parents, students, and other educationally interested groups and individuals did not put pressure on the school.

Thus, the issues surrounding the long-standing problem, the obligation of Gary to establish a vocational-technical school, were those of pressures and resources. Despite the need, between 1940 and 1960 the resources were unavailable. When resources were made available, however, the Career Center was built; an

increase in pressure on the school system is not discernible. To illustrate this, we must examine in detail the development of the vocational education program in Gary and describe the process as the curriculum changed.

## The Wirt Years: Assumptions, Reality, and Criticisms

The vocational education program in Gary under the superintendency of William A. Wirt has been discussed in Chapter II; we need only to review its features here. Vocational education fell under the work aspect of the Work-Study-Play Plan. The early emphasis was on practical experience, e.g., building and repairing desks, tables, and chairs, setting type and printing books and school forms, and raising a garden. By having students engaged in "real" tasks such as these, it was thought that the offerings were truly vocational. The distinction between vocational education and industrial arts in the Wirt system was not explicit, however. Industrial art courses are customarily offered in grades seven through nine and are exploratory in nature. Their function is to introduce students to a variety of vocational areas so that informed occupational choices can be made. Vocational education courses are usually offered only to students in their last three years of high school. The purpose is to teach students skills in the jobs they wish to secure after high school graduation. Such courses with their job preparation orientation are considered better taught when they are offered in rooms specifically designed

for the job and when they met for two or three consecutive class periods daily.

Wirt's intention for shop courses was neither to expose students to occupational categories nor to prepare them for specific jobs; rather, he wanted to keep students busy. The confusion as to the goals of the offerings which resulted from these mixed purposes led to an increasingly chaotic and diminishing array of courses. Between 1906 and 1938 the emphasis on maintaining and furnishing the schools decreased. Nothing replaced this emphasis. Shops were not kept well-equipped. By 1935 shops that had been models in 1920 were inadequate. The decreasing concern for shop courses was evident in 1937 and 1939 when the last two unit schools constructed, Edison and Wirt, were designed and built with no shops other than for mechanical drawing.[1] In the other six unit schools at this time students could take different shop courses, but they had little opportunity to receive directed pre-vocational experience.

The first major assessment of the Gary school system after 1918 was the Purdue Survey of 1942; the criticisms of the vocational education program are the same as the more general criticisms of the system as a whole and quite similar to those made by the PAS survey thirteen years later. The major

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[1] Interview with James Fallace, Assistant Director, Career Center, October 11, 1971.

criticisms addressed the nature of the vocational education curriculum and the provisions for systematically reviewing and revising it.

The Survey first took note of the history of the schools and the relationship between the schools and the city. Whatever the virtues of the Wirt Plan in its earlier years, the Report implied that they were no longer present. It was suggested that there was no provision in the Wirt system for keeping up-to-date. ". . . as time has gone one, there has been a tendency for the program (vocational education) to become narrower instead of broader; the unparalleled advancements that have come about in our industrial society have not been accompanied by similar advances in the Gary school program.[1]

> If the industrial city of Gary is vitally concerned with its own needs and welfare it cannot afford to be disinterested in the kinds of pupil services which it can guarantee to its present and future citizens. An important part of this service may be found in the school's industrial arts program and in its vocational trade and industrial education program.[2]

Underlying this statement are the assumptions that the citizens of Gary were concerned and that they were capable of doing something about it. As will be shown later, there is no evidence to suggest that they were at all concerned with or able to bring about change.

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[1] Final Report, p. 21.

[2] Ibid., p. 277.

While these comments of the Survey only foreshadow the more specific criticisms that were to follow, the fact that the vocational education program was not adequate was strongly implied. One reason for the deficiency is found in an organizational property of the Wirt system with which later generations of school people had to contend. The first six high schools in the Gary system had been built during the Wirt years and according to Wirt specifications. One aspect of the vocational portion of each of the schools was the unit shop. With a shop arrangement such as this, only one kind of activity could be carried on in any shop. Each shop was so designed and equipped that to use it for purposes other than those intended by the creator would have required remodeling. "While many school systems utilize the unit-shop system with varying degrees of success, a number of undesirable practices are apt to result from this type of organization, particularly in the lower grades.[1]

The unit shop organization created problems for both industrial arts and vocational education. An exploratory program in industrial arts was very difficult to conduct without a rather elaborate scheduling of students whereby classes would rotate from shop to shop over a nine or eighteen week period. On the other hand, to justify using the shops for vocational purposes, classes had to be larger than just a handful of

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[1] Ibid., p. 281.

students. In order to make up large classes, students for one class had to be drawn from several different grade levels. These classes occasionally contained students ranging from grade five through grade twelve. Instructors in these classes were then faced with the problem of teaching this wide variety of individuals. And, of course, no fifth grade pupil could be considered as enrolled in vocational training.

As a result of this organizational difficulty, most classes were designed to be industrial arts rather than vocational classes. The scheduling of the classes also tended in this direction.

> While there are a few classes scattered throughout the schools of Gary that meet on a three-hour-per-day basis, and that are reimbursed from Smith-Hughes and George-Deen funds, in general, . . . Gary has not developed the all-day trade-preparatory approach.[1]

The Purdue Survey indicated that unless changes were made in the ways in which the vocational education curriculum was reviewed, improvements in the curriculum itself were unlikely.

> It appears that there has been no organized effort to follow-up graduates and dropouts from the Gary schools. Without such a follow-up, school authorities cannot possibly know how successfully students are being trained. Hand in hand with this vagueness regarding the whereabouts of one-time students goes the tendency to measure training success purely in terms of college entrance.[2]

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[1] Ibid., p. 283.

[2] Ibid., pp. 283-84.

Closely tied to the need for data about graduates, the skills they possessed, and the jobs they found was the need to know the kinds of jobs for which students should be prepared

> There is little evidence that prior to the appointment of the present Director, ample effort had been made to weld together the interests of management, labor, and the schools. Virtually no attempt had been made to keep industrial training activity in the secondary schools in tune with changing industrial practice. However, at the present time significant moves in this general direction are being taken. The present Director has organized a General Advisory Committee composed of equal representatives of management and labor.[1]

The latter portion of this quotation may appear to be complimentary. What was not stated was that in order to qualify for state and federal funds, Gary had to have some kind of advisory council. The question of how this council was actually used is, of course, an entirely different matter; as we shall see, the council did not function at all.

Another major criticism not so much of the vocational education program as such but of the school administration concerned the utilization of federal funds available for vocational education. Since the passage of the Smith-Hughes Act of 1917 federal involvement in vocational education had been steadily growing. Smith-Hughes funds were available to schools through the states for ". . . the purpose of paying the salaries of teachers, supervisors, and directors of agricultural subjects, and the teachers of trade, home economic, and industrial

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[1] Ibid., p. 283.

subjects . . ."[1] Comparisons of funds received by Gary with those received by three other Indiana cities, South Bend, Evansville, and East Chicago showed that Gary was not getting all the money available to it. While Gary was receiving $0.78 per student in grades eleven and twelve, South Bend was getting $1.34, Evansville $2.32, and East Chicago, $2.76.[2] "It seems logical to assume that vocational education in Gary could be expanded in such a manner that a fair share of the cost could be reimbursed from state and federal funds.[3] It is impossible to determine exactly why Gary was not taking advantage of these funds. A possible reason can be offered. In order to receive these funds, Gary would have had to conform to the guidelines and, thus, to make changes. One such change would have been making vocational courses three hours per day; another would have been remodeling some of the unit shops so that they would have been suitable for vocational training. As we have suggested at several points in the study, the Wirt system of education was thought to be the best by nearly everyone in Gary. The perpetuation of it by Charles Lutz is testimony to this. In order to qualify for the federal funds, changes would have had to be made, not only in the vocational education program,

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[1]Public Law 347, February 23, 1917.

[2]Purdue Report, pp. 285-86.

[3]Ibid., p. 284.

but in the entire system. In 1942 this was possible but highly unlikely. The Wirt system was much too popular and much too entrenched.

Following its criticisms, the Purdue Survey staff made recommendations for changes it felt desirable.

> The survey staff has attempted to demonstrate through an analysis of the present program and through a consideration of the limited extent to which Gary participates in Federal funds that the present situation in Gary in trade-preparatory or pre-apprenticeship training is not adequate; the staff has also tried to show that the general educational objectives of Industrial Arts are not being met adequately. It is, therefore, proposed that any changes or developments at the secondary level in the future consider four more or less separate and distinct areas: (1) the Industrial Arts program in the unit schools; (2) the trade-preparatory program to be housed in a separate building; (3) a special or opportunity school to be housed separately and apart from the trade school; and (4) a vocational distributive and commercial program.[1]

The recommendation about a separate vocational school was made again in greater detail. "A separate Vocational and Adult Center (also to house distributive and commercial programs) should be set up and students who expect to enter apprenticeships in the skilled trades and who expect to enter semi-skilled areas should transfer to such a school.[2] Details about a co-operative program were offered,[3] and it was suggested that a Distributive Occupations Coordinator be hired. "George-Deen funds under present State Board regulations can be obtained

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[1] Ibid., p. 287. [2] Ibid., p. 288.

[3] Ibid., p. 289.

for the reimbursement of such a coordinator's salary to the extent of approximately 5/8 of the amount paid. The Board might well give consideration to the immediate appointment of such a coordinator."[1]

Finally, the Purdue Survey staff made an unsupported but very serious criticism. "That Gary graduates in general do not have adequate trade-preparatory training is supported by comments by employment office workers and others in local industry."[2] Unfortunately, the Survey did not indicate which industries had expressed this dissatisfaction. As a result, this criticism of high school graduates must simply be added to the other criticisms without its having shed any light on exactly why the vocational education program in the Gary schools was in such bad shape.

Gary Program Typical, 1942

The state of vocational education as it existed in schools throughout the country was reviewed, at the same time the Purdue Survey was written, in the National Society for the Study of Education's Forty-second yearbook entitled Vocational Education.[3] The findings and prescriptions of the Yearbook provide a standard with which vocational education in

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[1] Ibid., p. 289.

[2] Ibid., p. 283.

[3] National Society for the Study of Education, Vocational Education, Forty-Second Yearbook, Part I (Chicago: The Department of Education, the University of Chicago, 1943).

Gary can be compared. Although the statements made in the Yearbook are very general in nature, the concerns are very similar to the concerns found in the Purdue Report.

According to the yearbook, World War II was beginning to stir an interest in technically-trained manpower.

> The urgent demand for technically trained workers for the war industry has made everyone conscious of the importance of vocational education. New schools have been developed and the programs of existing schools have been expanded to meet this demand
> We have never before witnessed as great an effort to strengthen and to extend the program of vocational education in the schools of this country.[1]

Sources other than the yearbook noted emerging trends.

> . . . (4) industry is turning more and more to the schools for industrial education, (5) industry is more willing to make available its shops and laboratories for cooperative training of youth. . . . (7) another trend is the setting up of advisory committees to work the coordinator in carrying on the educational programs in trades and industry.[2]

The yearbook implied that schools were beginning to be viewed by industry as potential training grounds for future employees. The essential question that industry was asking itself was whether it would be cheaper to train new employees after they were hired or to help the schools provide the shops, teachers, and equipment to do the task. The main argument against permitting the public schools to do the task was that

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[1] Ibid., p. 33.

[2] Herman LeRoy Shibler, "Cooperative Vocational Education and the Public High School," unpublished dissertation abstract (Columbus, Ohio: The Ohio State University, 1942), p. 256.

keeping shops up-to-date both in equipment and practice was expensive. Industry always had the necessary equipment on hand and could, in a short period of time, train an employee specifically for the task he would be doing. As of 1942, industry was still opting for training their own workers and encouraging the schools to concentrate on "citizenship" education.

> The present-day high school provides fairly well for the 20 to 30% of youth who are going into white collar jobs and learned professions, but it does not provide for the remaining to to 80% who are going into unskilled and semi-skilled jobs. Nor does it provide adequate work experiences for either group while in school or during the after-school transition period.[1]

Labor unions were expressing more interest in vocational education. In 1937 the AF of L passed a resolution calling for a more active interest of affiliates in vocational education. The CIO had no such resolution but the practical cooperation of CIO locals in New York City was evidence of the same concern.[2]

The yearbook did not indicate that a typical vocational education program was much different from the one being offered in Gary. Despite the trends and emerging concerns, vocational education was not a major concern of most school systems. In Gary, as elsewhere, the emphasis of the school was not on vocational education but on preparation for college. The traditional conflict between academic and vocational programs was

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[1] Ibid., p. 260.

[2] National Society, p. 74.

found to be more pervasive in Gary because of the total program of the schools. "Such attitudes which exist in most cities have been magnified in Gary by the extreme emphasis which has been placed on academic and college preparatory training in the high schools."[1] Although 51 per cent of graduating students expressed an intention to go to college, less than 10 per cent actually did in 1941.[2] Returning now to the narration of the history of the vocational education program in Gary, we can see how slowly this college preparation emphasis actually changed.

The Board appeared to take the PAS criticisms and recommendations as a mandate for change. The Froebel School Shop Building, in 1942, was renamed the Gary Trade and Technical Center.[3] At the December 12, 1944, meeting of the Board, it was resolved that upon the recommendation of the superintendent in addition to the technical school in operation at Emerson School, a technical school be established at Froebel.[4] One immediately wonders what happened to the Gary Trade and Technical Center established only two years earlier. The same fate that would befall the technical school at Emerson befell the one at Froebel. (And, the technical schools at Emerson and Froebel did

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[1] Purdue Report, p. 290.

[2] Ibid., p. 290.

[3] Board Minutes, May 12, 1942.

[4] Ibid., December 12, 1944.

not materialize in any real sense.) A minimum amount of remodeling of facilities was done, certainly not enough to compensate for the loss of shops at the other schools. The creation of these two centers resulted in less of a vocational education program. The effect of these two decisions was to reduce vocational offerings in the other six Gary secondary schools because shops in other schools were closed in anticipation of the opening of the new Centers.[1]

For the next decade, 1945 to 1955, the concerns of the Gary school system, like systems everywhere were largely taken up by simply providing buildings and seats for all enrolled pupils. As shown in other chapters in this study, there was almost no concern for the curricular program as a whole or for particular aspects of it, including vocational education.

Part of the reason that nothing was done about vocational education is that no one was concerned about it. The recommendations and criticisms of the Purdue Survey was taken seriously only by teachers and administrators who were directly concerned with vocational education. During the time span of 1942 and 1955 no parent or other interested Gary resident spoke at Board meetings in favor of an expanded vocational education program. The only mention made of vocational education in the minutes of

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[1]Interviews with Andrew White, Director, Gary Career Center, February 3, 1972, and James Fallace, Assistant Director, Gary Career Center, February 3, 1972.

[illegible] meetings of the Board is in reports of [illegible]he handful of individ[illegible] who took advantage of the new 1941 Indiana law which provided compe[illegible] for travel to conventions and the like. The Board expressed no a[illegible] interest, the Superintendent and his assistants were doing nothing, [illegible] teachers spoke in favor of vocational education.

How could there have been no interest at a[illegible] such an industrialized city? As mentioned several times earlier in this story, until 1956 the primary concern of the schools was with the building program. On numerous occasions, Gary parents appeared at meetings of the Board to protest overcrowding and acc[illegible]. That the program would somehow provide time and space for[illegible] was more important than what it did with the students once they [illegible]re housed.

The technology nee[illegible]d to conduct a comprehensive vocational education program was [illegible]ertainly available to the Gary schools; such a program was expensive. The decision of whether or not to spend the money was, of course, made on the basis of priority. High[illegible] in priority was the housing of students; and new and remode[illegible] buildings are expensive. Provision for expanded vocational education offerings could have occurred in Gary provided that n[illegible] new buildings were called for. The Purdue Survey recommended s[illegible]h[illegible]tely housed vocational facilities but did not neces[illegible]rily call for [illegible]y new buildings. Therefore, the renaming of the shop facili[illegible]s at F[illegible]ebel and Emerson chools

actually satisfied the recommendations of the Purdue Survey. As has been stated, however, the practical import was to curtail rather than to expand the program.

Vocational Education in Gary, 1955

In 1955 another major survey of the schools was commissioned by the Board. Inevitably, the Public Administration Service survey[1] included criticisms and recommendations similar to those of the Purdue Survey. PAS, like the Purdue staff, took cognizance of the philosophical roots from which vocational education in Gary had sprung. William A. Wirt's ideas and programs were described. The PAS survey found it fortunate that by 1955 the emphasis on repair and maintenance of buildings and equipment had almost disappeared from shop classes.[2] Insufficient progress had been made, however, in changing from the kindergarten through twelfth grade organization of the schools. Elementary classes were still using the shops, and students of widely ranging grade levels were still scheduled into the same classes.

The root cause of the inadequacy of the vocational education program was stated and found to be the same as it was thirteen years earlier.

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[1] The Public School System of Gary, Indiana (Chicago: Public Administration Service, 1955).

[2] Ibid., pp. 7-8.

> Evidence of the existence of this outdated philosophy which views the secondary school as an institution predominantly devoted to preparing youth for college is present in the Gary public schools. Such evidence takes the form of a preference for students who will enter college and an apathy toward all others.[1]

This condition, however, was still the norm for public schools.

> Most schools have supplemented the traditional subjects by the addition of some physical education, arts, and music activities. Fewer schools have provided facilities and personnel for the teaching of agriculture, business, industrial and home economics education. In general, high school facilities and administrators are more concerned about the education of the smaller percentage who will go to college than they are about the mass of youth, most of whom will take their places as producers in the community as soon as they leave school, and consequently disproportionate emphasis is still being given to the traditional academic areas.[2]

There were few vocational education courses offered in Gary in 1955. "The present program provides arc and gas-welding and machine shop at the Froebel School and auto mechanics at the Emerson School. That is the extent of it."[3] "The absence of day-trade training programs in the Gary schools is almost tragic."[4] PAS went on to state just how tragic the situation was.

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[1] Ibid., p. 74.

[2] Harold M. Byram and Ralph C. Weinrich, Vocational Education and the Practical Arts in the Community School (New York: The Macmillan Company, 1956), p. 161.

[3] Purdue Report, p. 92.

[4] Ibid., p. 92.

> In general, it may be stated that the Gary school system program in vocational education is almost non-existent, in spite of the fact that the community provides greater opportunity for conduct of such a program than almost any other in the United States.[1]

PAS offered five specific criticisms of the program: (1) there was a lack of facilities and no drive to create them, (2) there were insufficient personnel to promote the program; (3) there was a lack of adequate guidance personnel; (4) there was a lack of a good industrial arts program to permit interested students to explore the field; and (5) there was still the problem of the unit school organization.[2]

More searching for causes of the deplorable state of the program was undertaken:

> Unfortunately, the top leadership in the Gary school system has taken little positive action to provide an adequate vocational program. A vocational supervisor works alone under discouraging handicaps and in the face of general administrative apathy. The fact that a position of coordinator in the vocational field has been vacant for many months has little bearing on the problem. There is no plan for expanding vocational facilities; no plan for providing adequate physical areas for instruction when admittedly existing areas are woefully poor; no program to speed up the flow of instructional supplies, even the deliveries are commonly months delayed. There is a genuine need for a completely new approach to the vocational program in the Gary schools.[3]

Given these criticisms of the vocational education program, PAS found little difficulty in making recommendations. The recommendations made bear a strong resemblance to those presented by the Purdue survey thirteen years earlier. Two general curricular patterns were suggested:

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[1] Ibid., p. 17. [2] Ibid., p. 92. [3] Ibid., p. 17.

> (1) the addition of day-trade programs in those schools containing grades ten through twelve, conducting them as part of the so-called comprehensive high school.
>
> (2) designate and establish a central vocational-technical high school to house all of the day-trade vocational programs now operating and those that should be added at the earliest possible date. Such a technical high school should, of course, include the basic general education program as well as the vocational program.[1]
>
> Additional day-trade programs should be developed as the result of study of the occupational needs of the city, county, and metropolitan area.[2]
>
> Consequently, it is recommended that Froebel School be converted by the fall of 1956 into a vocational-technical high school and that all day-trade programs be concentrated there as soon as possible. All Froebel students other than those enrolled in the vocational high school program should be transferred to other schools.[3]

An additional recommendation was the appointment of a representative lay advisory committee. Thus, the one bright spot found by the Purdue Survey, that of an existing advisory committee, had, over the thirteen years, disappeared.

Because of the charges leveled at the PAS survey and staff (discussed in earlier chapters), the NEA conducted a follow-up survey. Although the NEA Commission questioned some of the sections of the PAS survey, the chapter on vocational education was said to ". . . appear to be written in a very objective and fair-minded manner with an effort to validate

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[1] Ibid., p. 93.

[2] Ibid., p. 93.

[3] Ibid., p. 93.

conclusions."[1] Interestingly enough, PAS had stated that local employers had expressed some dissatisfaction with the local high school graduate. The NEA survey attacked this statement.

> On page 13 /of the PAS report/ is found the statement, ". . . A number of local employers indicate dissatisfaction with the Gary school product." There is nothing to indicate how many employers were included in the sample that expressed such dissatisfaction, nor is there any evidence submitted to indicate whether or not Gary was out of line with similar communities.[2]

## Toward a Model Program, 1955-1970

The Gary Board appeared to take the PAS criticisms and recommendations as a mandate for change.

> Discussion was held in regard to the recommendation of the Public Administration Service report pertaining to a city-wide vocational high school and the construction of new buildings. It was moved by Mrs. Standley, seconded by Bishop Allen that the Board authorize discussions with the Superintendent, architects, and the Public Administration Service survey staff, of the matters pertaining to a vocational high school, new building construction, and the business and financial operation of the School City before taking any action.[3]

Authorizing discussions was an old and familiar technique in the Gary school system. It simply meant that nothing was to be done. The pressing problems for the Board actually were

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[1] National Education Association, Committee for the Defense of Democracy Through Education, Gary, Indiana, A Study of Some Aspects and Outcomes of a General School Survey, 1957, p. 18.

[2] Ibid., p. 19.

[3] Board minutes, October 11, 1955.

business organization and buildings. The Gary schools were far from having adequate space for all enrolled students, and the assistant superintendent for business affairs had departed with Superintendent Lutz when the PAS report was released. The entire business department had to be completely revamped, and the Board was rightly concerned that the results of the overhaul would be superior to the system discarded.

Late in 1955 Alden H. Blankenship became the new superintendent of the Gary schools. In view of the sweeping denunciations of the curricular program made by PAS, a first order of business was to begin reform. As we have noted several times earlier, thirteen committees were appointed to revise curriculum. Accompanying change in organization for curriculum revision and the work of these curriculum committees, came a publicity campaign which matched the one noted earlier for science.

> A cooperative vocational education program will be launched with the opening of the second semester of the school year in accord with the policy adopted by the Board of School Trustees at their meeting of December 23.
>
> Froebel, Horace Mann, and Emerson will be the schools to initiate the program. Emerson will concentrate on distributive education, Froebel, industrial education, and Horace Mann, business education.[1]

An advisory committee was to be established to assist with the program. The article went on to say that federal and state funds were hoped for to help pay the costs for teachers and coordinators.

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[1]The School City of Gary, School Service Center, The Gary Public Schools Reporter, January 8, 1958, Volume I, Number 9.

> The program is seen as a means of increasing the vocational opportunities available to high school students through utilizing community resources. Students will get training both on the job and in the classroom.
>
> Comparative vocational education will be organized and conducted as an integral part of the high school curriculum and will be designed to provide general and specialized education.[1]

"Louis A. McElroy, director of adult and vocational education, called the project the first step in a program which will culminate in the building of a full-time vocational high school for Gary."[2] The reasons for the minimal changes in vocational education are apparent. "The school administrator /McElroy/ said that the Cooperative Vocational Education program is natural for Gary because school facilities are limited and there are no finances or facilities available for vocational-technical school functions."[3]

The Gary schools were spending funds to improve facilities needed in light of curriculum change in academic areas. New science and foreign language facilities and equipment were purchased during the early 1960's. Although it appears that vocational education was again placed at the bottom of the priority list, in fact, the Gary school system was doing the wisest thing. NDEA funds were available for up to half of the

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[1] Ibid., January 8, 1958, Volume I, Number 9.

[2] The Chicago Tribune, January 19, 1958, Part 3, p. 2.

[3] Gary Post-Tribune, January 21, 1958, p. 2.

cost of the new science and foreign language facilities and equipment. According to the PAS survey, science and foreign language needed attention as much as vocational education did; the Gary schools were simply being prudent. Vocational education had not been completely forgotten. The curriculum committees that had been working for two years on the entire grades seven through twelve programs reported that, "The cooperative vocational education program which provides integrated on-the-job and classroom training in the business, distributive, and industrial occupations, is also included in the secondary sequence. Further study will be given to other phases of vocational education."[1] These other phases were assumedly included in the vocational curriculum committee report which appeared in 1958 in the Gary Curriculum Guide, Grades 7-12. The intentions of the new curriculum guide were ambitious (see Table 4). The guide outlined a program which was to expand from just machine shop and arc welding at two schools to one which included first and second years of printing and two years of technical training in each of the areas of appliance repair, engineering, auto mechanics, and electronics, and these offerings were to be available at all schools. The fate of these intentions was the same as those of the science committee. The Gary school system did not offer the expanded number of courses until after outside funds became available and a technical-vocational school

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[1] The Reporter, March 19, 1958, Number 1, Number 14.

TABLE 4

SEQUENCE CHART FOR TRADE AND INDUSTRIAL (VOCATIONAL) EDUCATION*

| GRADE 9 | GRADE 10 |
|---|---|
| Machinist I | Machinist I |
| Welder I | Machinist II |
| Metal Grades-Related Subjects I | Welder I |
| | Welder II |
| | Metal Trades-Related Subjects I |
| | Metal Trades-Related Subjects II |

| GRADE 11 | GRADE 12 |
|---|---|
| Machinist I, II | Machinist I, II, III |
| Machinist III | Machinist IV |
| Welder I, II | Welder I, II, III |
| Welder III | Welder IV |
| Metal Trades-Related Subjects I, II | Metal Trades-Related Subjects I, II, III |
| Metal Trades-Related Subjects III | Metal Trades-Related Subjects IV |
| Printing-Compositor I | Printing Compositor I |
| Printing-Pressman I | Printing-Compositor II |
| Technician-Appliance Service I | Printing-Pressman I |
| | Printing-Pressman II |

TABLE 4--Continued

| GRADE 11 | GRADE 12 |
|---|---|
| Technician-Engineer-Aide I | Technician-Appliance Service I |
| Technician-Automotive I | Technician-Appliance Service II |
| Technician-Electronic I | Technician-Engineer-Aide I |
| | Technician-Engineer-Aide II |
| | Technician-Automotive I |
| | Technician-Automotive II |
| | Technician-Electronic I |
| | Technician-Electronic II |
| | Cooperative On-the-Job Training |
| | Related Study (Coop. Ed.) |

*The Gary Curriculum Guide, Grades 7-12, 1958.

was a reality in 1968. The only expansion in the vocational program between 1958 and 1968 was into the three cooperative programs just discussed. Because the primary training in the cooperative programs was offered on the job, the school system could offer the programs with a minimum of expense. The rest of the program outlined by the new curriculum guide, however, could not be offered without extensive remodeling, constructing, and equipping of proper facilities. Much of the work of the vocational committee, then, like that of the science committee, had been to no avail.

From 1958, when the Board accepted the curriculum guide, until 1962 vocational education was not discussed at Board meetings. On January 9, 1962, discussion was opened again, and approval for construction of a technical-vocational school was urged by one Board member. Final approval, however, did not come until three years later, after the Vocational Education Act of 1963 was passed. At the March 24, 1964 meeting of the Board, Superintendent Lee Gilbert cited a new ruling on vocational education from the State Department of Public Instruction calling for a curriculum allowing for at least one vocational education major for all schools of 1200 or more students. Gary did not comply at that time, but it probably would when the anticipated technical-vocational school became a reality, according to the superintendent.[1]

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[1]Board minutes, March 24, 1964.

The United States Congress by virtue of passing the Vocational Education Act in 1963 had suddenly changed the picture. Like the earlier NDEA, half funds were to be provided for remodeling and/or new construction.

There were no new pressures on the school system between 1963 and 1965 to approve construction of the vocational school. There had been, of course, numerous recommendations to do so for twenty years. By 1963, the over-crowding problems which had also plagued the system for twenty years, was nearly solved. The school system was then in a position to turn its attention to the need for the vocational school.

The Career Center, 1968

At a total cost of $4,290,121, over one-third of which ($1,508,544) was reimbursed by the Vocational Education Act of 1963, the Gary Area Technical Vocational High School (commonly called the Career Center) was built.[1] Although physically separate, the Career Center was designed as part of the existing structure of each of the city's high schools. Open to all juniors and seniors who qualified, the school has a maximum capacity of 825 students. There are four daily shifts: morning, afternoon, evening, and late night. Day students spend one-half of each day at the Career Center and the other half at their home schools where they enroll in non-vocational courses.

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[1] Interviews with Gregory White, Director, and James Fallace, Assistant Director, Career Center, February 3, 1972.

The vocational curriculum is divided into nine clusters: building construction and maintenance, business and commerce, communications, extractive industries, health and personal services, mechanics and metalworking, textiles and leather, special services, and technology. When the school opened, preparation for twenty-five vocations was offered in fields such as carpentry, baking, data processing, cosmetology, horticulture, and welding.

Because of its curriculum and its policies for admitting students, the Career Center fulfills the recommendations of the school surveys. The building is constructed so that if program changes are needed, the building can easily be modified. An advisory committee was formed to plan the curriculum and the building; it was still operating in 1970 but on a reduced scale.

## Slow National Movement, 1965

In the years between approval and actual completion of the new vocational-technical school in Gary, the NSSE devoted another issue to vocational education. Earlier prescriptions had not yet been fulfilled, and it looked as if Gary had somewhat outdistanced the field. "By the middle of the twentieth century enrollments in the program of vocational education had increased significantly, but the contributions of the public

schools to the actual needs of the labor force was small.[1] Many of the perennial problems still existed.

> The high school has an obligation to prepare its graduates for employment as well as for higher education. Instead of facing up to this task, most high schools have organized their curriculum primarily to prepare their graduates for college. A relatively small percentage of the high schools include salesmanship as part of the curriculum, and fewer include distributive education in their vocational education offerings. This is true despite the fact that only three out of every seven high school students enter college, and only two graduate.[2]

> While a few communities have demonstrated initiative in developing experimental pre-vocational training for many of these young people, and others have developed effective work-study programs, the vast majority of communities have not even recognized the existence of the problem. The major challenge to vocational education below the college level is to help develop imaginative solutions for the difficult problem presented by this sizable group of young people who are being stultified by the present system.[3]

Lack of concern in the local communities seemed to be part of the problem. "Arousing the community to a degree of concern for the manpower posture of the community is the first step in the development of an active manpower policy.[4] Numerous vocational-technical schools had been built, but whether or not they were doing the job asked for was not clear. "Some

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[1] National Society for the Study of Education, Vocational Education, Sixty-Fourth Yearbook, Part I (Chicago: The Department of Education, The University of Chicago, 1965), p. 4.

[2] Ibid., p. 109. [3] Ibid., p. 35.

[4] United States Advisory Council on Vocational Education, Vocational Education, The Bridge Between Man and His Work, (Washington, D.C., 1968), p. 45.

persons contend that the legislature (by virtue of the Vocational Education Act of 1963) has narrowed the offerings in vocational schools and that school authorities have not developed programs in keeping with actual needs but have followed rather blindly the development of programs that are aided with federal funds.[1]

The Vocational Education Act of 1963 was passed with specific goals in mind. The money from it, however, was available to all schools whatever their purposes. "The prelude to the Vocational Education Act of 1963 was a national attack on poverty and unemployment. The unique feature of this attack has been the growing emphasis on the development of human resources."[2] The focus was on those segments of the population traditionally denied access to employment for a variety of reasons, one of which was inadequate education and training. The purposes of the Act were not necessarily the purposes of the local school districts, however. "Vocational education programs and services have not expanded rapidly in response to the needs of people in metropolitan areas, particularly for the culturally and economically disadvantaged, and the residents of slums and ghetto neighborhoods."[3]

Summary

From several points of view, it can be (and was) argued that Gary should have continually provided a good vocational

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[1]National Society, 1965, p. 191.

[2]U.S. Advisory Council, p. 157.

[3]U.S. Advisory Council, p. xxxiii.

education program; motivational to encourage students from working-class homes to complete high school and practical because of the local need for trained workers. Both the Purdue Survey of 1942 and the PAS survey of 1955 implied that a good program was necessary because of the industrial nature of Gary and the surrounding area. Both also stated that local employers were dissatisfied with Gary high school graduates. Unfortunately, neither survey was explicit about either its assumptions or its sources. If we assume that local employers were dissatisfied, such dissatisfaction could have been because students were not vocationally prepared or because they were not generally well-educated.

Whatever the theoretical importance of these arguments, the fact is that the vocational education program was notoriously inadequate (by nearly any standard) between 1940 and 1968. Despite criticisms of the program in 1942, 1954, 1955, and 1957, the program grew narrowed until 1958. And, despite several attempts to improve the program, the addition of three cooperative programs in 1958 was the only improvement operationalized until 1968 when the Career Center opened. Built and equipped partially by federal funds provided under the Vocational Education Act of 1963, the Career Center fulfilled the earlier recommendations, some of which were twenty-six years old.

For several reasons the vocational education program in Gary received little attention for many years. First, there

was not discernible pressure to improve it. As both major surveys noted, the emphasis in Gary was on academic rather than vocational education. Other than the surveys, no one was vocal about the program. Parents, teachers, students, industry, and Gary residents all were silent. Gary and its school system, as we noted, were typical in these respects. The Gary program was comparable with most in the country during the period studied, and an academic focus was characteristic of most schools in the country. The advisory committees that were periodically established appear to have had no effect on the program, either. There is no evidence that they (other than the committee which helped plan the Career Center) even convened for any period of time after their creation. It can be argued, and no doubt was, that the best preparation the schools can offer students who will begin work right after high school graduation is a good general academic education. On-the-job training offered by employers, it can be argued, is less expensive, more up-to-date, and more efficient.

A second reason that the vocational education program was not improved was the lack of money. Until the middle 1960's, the Gary schools were unable to provide buildings and desks for all students. The rapid growth in student population and the difficulties in securing building materials as a result of World War II were problems with which the school system had to contend long after the war was over. When the school system

did begin to spend money to change curriculum, it was the academic curriculum that received attention first, and rightly so because of the federal funds available for change in the academic subjects. The vocational education changes that were attempted before the Career Center was built cost nothing. In 1942 and 1944 the Board simply re-named the shop facilities at Emerson and Froebel. The cooperative programs begun in 1958 cost the school system very little because the training facilities were located out of the schools and in the community. The new courses outlined in the 1958 curriculum guide were not offered until 1968 because to have offered them earlier would have been quite expensive. Edison and Wirt Schools had been built with facilities only for mechanical drawing. Shops in the other schools were neither numerous, well-equipped, nor easily used because they had been neglected for many years. The program that did exist in 1958 was centered at Froebel and Emerson. By the middle 1960's, however, the system had caught up with the size of its student population, and federal money was available to help build a technical-vocational school.

A third factor in accounting for the lack of change in the vocational education program in Gary is that little change was occurring in curriculum in any subject matter in Gary between 1940 and 1956. Through these years the stamp of William A. Wirt on the system was pronounced. To have made changes would have meant denying the greatness of the Wirt system. Few school systems in the country were concerned with

curriculum during these years. Gary could, of course, have established a model vocational education program during these years; other programs would necessarily have been sacrificed. The devotion to the past in Gary prevented this from happening, however. After 1956 curriculum began to receive attention both in Gary and nationally. By this time, however, the school system was unable to make changes given the limits of its resources. The Board had authorized consideration of a new vocational-technical school several times yet only after federal funds were available was its resolution carried out.

# CHAPTER VII

## SUMMARY AND CONCLUSIONS

This study examined change and the dynamics of change in aspects of the curriculum of the Gary, Indiana public schools from 1940 to 1970 in an attempt to explore in a single case a paradox posed by two generalizations about the course of change in the curriculum of the American school during these years: unprecedented amounts of money, time, and energy were spent, both locally and nationally, on designing new goals for the school and new curricula; yet, despite these efforts schools tended to respond to demands for change only slowly. This study has asked how so much effort resulted in so little return.

In this chapter we will briefly review our findings, discuss the patterns which emerged from the examination of the process of change in Gary, and suggest some policy implications emerging from the findings.

### The Gary Schools, 1940-1970

Between 1907 and 1938 William A. Wirt, as superintendent of schools, designed and operationalized a school system in Gary that was both an alternative to traditional schools of the time

and resistant to change. The features of the Wirt (or Gary) Plan--unit form of organization, platoon plan, and lengthened school day and year--and the bread curriculum it offered were widely acclaimed and copied between 1910 and 1925. However, by 1938 when Wirt died, the system was neither popular nor visited; few school systems in the country were using any portion of the Wirt Plan. But in Gary the plan was in full use. Inevitably the curriculum of the Gary school system after 1940 was affected by the Wirt Plan but also by national developments in curriculum, by forces outside the system, and by perennially scarce resources.

After 1940 three factors compelled the continued use of the Wirt Plan in Gary. First, the students, alumni, teachers, and residents of Gary were fiercely loyal to the Plan. Despite personal coldness and brusqueness, Wirt had garnered a large and devoted group of people around him and his schools. Second, the eight schools in use in Gary in 1940 had all been constructed specifically to house the Wirt Plan. Enrolling all students from kindergarten through twelfth grade, each school would have required considerable modification to be suitable to a different (and more traditional) educational program. Third, the personnel of the school system had been recruited and then trained in the school system in a way that insured their loyalty to and perpetuation of the Wirt system.

However, these three factors insured only the continuation of the outward visible structures of the Wirt Plan. These structures had been designed purposefully to embody a form of education

that Wirt had designed self-consciously to be an alternative to the dominant patterns of American education. Inevitably, with Wirt's death in 1938 Gary was faced with a major decision: Should they seek to renew Wirt's form or should they become like other school systems? They avoided decision by commissioning a survey of the school system. The survey criticized the tight administrative control exercised by Wirt and the curricular uniformity among schools and generally static condition curriculum was in; it questioned the platooning and departmentalization of the elementary grades; it severely criticized curriculum and instruction in specific subject matters, vocational education in particular; and it observed that it was time for Gary to realize that its school system rather than being the model it once was, had become anachronistic and that, instead of assuming it was watched and copied, should begin to observe other systems with an eye toward its own improvement.

Although it was widely felt in Gary that the survey did not understand the school system, the Board of School Trustees had both to deal with the survey report and to hire a superintendent to replace Wirt. It chose Charles Lutz, an employee of the Gary school system for the previous eighteen years, and in so doing chose to perpetuate the Wirt Plan. As was to be expected, Lutz made few changes in the school system.

One major decision he made was to de-centralize curriculum decision-making. Under Wirt principals had been only business managers of their schools; under Lutz they were given responsibility.

for curriculum development. Despite this de-centralization, there were instances of system-wide attention to curriculum during Lutz's superintendency. The first was an attempt to change the platooning and departmentalization of the elementary grades to a continuous progress, non-graded organization. Although this new plan was approved in 1942 and again in 1944, it was never operationalized. Eventually elementary students were no longer platooned and their subjects were all taught by the same teacher, not as a result of the decisions, but by expediency, one school at a time between 1945 and 1960. Twice in 1950 conferences were held at which attention was given to curriculum on a system-wide basis. In both cases, the groups which met to consider curriculum did not propose change but rather considered what had been happening in the past. The groups looked to the past rather than the future.

During Lutz's superintendency curriculum changed only in small ways and individual classrooms because of the efforts of individual teachers. In 1943 because of racial difficulties in several northern cities, the Bureau of Intercultural Education was hired to assist teachers in Gary in designing an intercultural curriculum for the schools. Before any progress was made, white students at Froebel School, the only of the eight unit schools which was integrated, went on strike demanding that black students be sent to a different school. The strike was ended six months after it began, and within two years an integration policy for the school system was put into operation. The

effort to put an intercultural curriculum into use was not equally successful.

In the 1946-47 school year one social studies teacher in each school used the new intercultural curriculum. At no time did the school system actively support the new curriculum financially; nor did it encourage teachers to use the curriculum. At the end of the year the school system withdrew support for the program. From then on, only teachers who wanted to use the curriculum did so, and these were few in number. Throughout the rest of Lutz's superintendency, curriculum in Gary was left unattended. As a result, in 1955, curriculum was much as it had been in 1942.

Gary was typical in this respect, however. Few schools in the country were concerned about curriculum between 1940 and 1955. Most of them were facing the same problems Gary was: a rapidly growing student population, a teacher shortage, and an inadequate number of classrooms. The World War II baby boom and building materials shortage combined to cause a serious housing problem for most school districts. The energies of school boards and administrators and large portions of school budgets were expended on construction rather than curriculum. In the case of social studies, Gary was typical, too. Intercultural relations in 1945 was an emerging concern not of school systems but of educational organizations and researchers who were conducting pilot programs. It would be twenty years before textbooks and teaching began seriously to reflect the concern.

Yet between 1942 and 1955 many features of the Wirt system disappeared. The last two of the eight unit schools were built in 1937 and 1939. After that, feeder elementary schools were built but not because of a policy decision by the Board. By 1955 schools housed nearly any combination of grades--K-3, K-4, K-5, K-6, K-8, and K-12. The school day and year had both been shortened, again because of circumstances. The school system found it less expensive to shorten the time students spent in school, and parents and teachers approved of the change. Elementary students in feeder schools were not platooned or departmentalized. Yet, these new elementary schools were constructed along the same lines as the unit schools, with elaborate "special" facilities. The emphasis in shop classes had shifted away from repair and maintenance of the schools although home economics classes still prepared and served hot lunches. Auditorium was no longer required of all students and was eventually dropped entirely.

In 1955 Charles Lutz was fired; a new survey of the schools by the Public Administration Service (PAS) released at this time, offered many of the same criticisms the Purdue Survey had thirteen years earlier and recommended reform. The static nature of the curriculum, the remnants of the Wirt system, the lack of organized change, and the lack of a mechanism for curriculum improvement were all criticized. As a result, a new superintendent, Alden Blankenship, was appointed with a mandate for change; he revamped much of the school administration including

the business and finance department and established a network of thirteen curriculum committees to develop curriculum guides for all secondary subjects. These committees worked for two years to produce The Gary Curriculum Guide, Grades 7-12. The changes proposed for some subject matters were far reaching.

The science committee proposed to increase the high school science program from four courses, not all of which were offered in every school, to a total of nine courses including advanced courses in chemistry and physics, to offer these courses in all schools, to change the emphasis in science from content to inquiry, and to move science teaching from traditional classrooms into laboratories. On most counts, the science program in Gary in 1956 was typical of those found in most high schools. The proposed changes found in the 1958 guide reflected the prescriptions in the science education literature at that time. However, these proposals were not translated into new programs. Only two of the eight schools had laboratories that approached adequacy, and no financial provision was made to remodel and equip new ones; new teachers were not hired to teach the new courses; and there was no provision to re-train teachers to teach inquiry instead of content.

However, the changes proposed by the science guide did begin to occur after 1960 when the combined effects of the National Science Foundation and the National Defense Education Act began to appear in schools. The resources provided to the Gary school system by NDEA and NSF included new science curricula--PSSC Physics, BSCS Biology, and CHEM Study materials--

institutes to train teachers to use the new curricula, and money to remodel and equip science laboratories. Outside sources did for science education in Gary what the school system did not do for itself. With these changes teaching in Gary kept pace with progress being made throughout the country. The resources available to Gary were available to all school systems, and the program in Gary followed national trends.

The proposals made in the 1958 Curriculum Guide by the vocational education committee fared no better than those of the science committee. The vocational education committee had to deal with the criticisms and recommendations of the PAS survey and also similar ones from the Purdue Survey. Both had recommended the creation of a separate vocational-technical school and cooperative vocational programs. But, after 1942 the vocational program decreased in scope until, in 1955, it was almost non-existent. Board decisions in 1942 and 1944 to create centers where vocational education programs would be housed had resulted in the narrowing of course offerings in other schools but not the operation of the new centers. The 1956 curriculum committee came after the PAS survey; it recommended that an expanded list of courses be offered and that three cooperative programs be established. While the cooperative programs were established and were still in operation in 1970, the new courses were not offered until 1968. The cooperative programs were easily established ... their cost the school system very little money. New courses, however, required ... aled and equipped shops, and

the system could not assume these costs. By 1965 the school system had nearly solved its overcrowding problem, and it could receive money for constructing a vocational-technical school through the Vocational Education Act of 1963; work on construction of the Gary Area Technical Vocational School was begun, as a result, in 1965 and completed in 1968.

This brief summary serves as a reminder that although the Gary school system changed comparatively slowly in the thirty years examined, it was a different system in 1970 than in 1940. Most city school systems had gone through a similar transformation in these years. Yet change in most cities occurred as it did in Gary--haltingly. As in any class of institutions, there are these individual institutions which are considered to be more "progressive," those which adopt new practices more quickly than others. Between 1940 and 1970 the school system in Gary was not considered to be progressive. It neither adopted new practices from the prescriptive literature as quickly as other schools nor made the changes prescribed by the major surveys. However, this is not to say that change was not occurring.

## Kinds of Change

Examination of the Gary school system in 1970 reveals that all of the recommendations made by the Purdue Survey of 1942 for the subject matters of concern here had been put into effect. Change occurred, but it was alow in coming. The recommendations of the 1956 PAS Survey--many of them the same as those suggested by the Purdue Survey--had similarly been put into effect.

But to focus on demands for change and to ignore the dynamics of change can be misleading. And to focus on mandates and their consequences is to ignore changes that occurred without planning.

There seem to have been three kinds of change occurring in the Gary school system between 1940 and 1970. First, there were small scale changes in methods, materials, and emphases made by individual teachers in their classrooms. The continuing efforts of a few social studies teachers to work with the intercultural curriculum after 1947 is an example of this small-scale change. Second, there was change by drift; major changes occurred piecemeal over a period of time without a policy decision. For example, unit schools were replaced by feeder elementary schools. And third, there were deliberative and deliberate changes made at the policy level; the decision to make the elementary schools non-graded is an example of this.

The recommendations of the surveys represented the most demanding and organized forces on the school system for change. But there were other demands for reform. The intercultural education issue was raised by the superintendent although in clear response to demands from the environment. The concern of one Board member with communism was translated into a course. On the face of it, then, it would seem that school surveys, Board members, superintendents, and the State Department of Education (in the case of vocational education) all had the power to produce change in the school system, but this is not the case. There were numerous sources of demand for change, but not all of

the demands resulted in change. The 1946 social studies curriculum was never widely used; the intention of the Board and the superintendent in the 1940's to make the elementary schools nongraded was never realized; and some of the recommendations of the surveys were not carried out until twenty or more years after they were made.

As was suggested at several points in the study, the Gary school system was typical of most schools in many respects. Thus, in each of the three subject matter cases examined, had Gary followed through on the recommendations made for change, i.e., widely used the intercultural curriculum beginning in 1946, offered the expanded science program in 1958, and built the vocational-technical school in 1942, it would have been an educational leader, a model school system. However, Gary did not make the changes at those times but did so later, roughly in concert with many other school systems. Although some of the problems of the school system in Gary may have been unique, most were not. Nor was the repertoire of alternative solutions to problems or responses to demands for change unusual.

The school system in Gary always had a backlog of problems and recommended solutions, and it suffered sudden crises. Crisis received more attention than problems, e.g., settling the school strike received more attention than implementing the intercultural curriculum. In Gary, as elsewhere between 1940 and 1955, buildings received a great deal of attention; other matters, including curriculum, received much less. The Board

was not alone in ignoring curriculum. During these years little attention was paid by school personnel. And in Gary what attention that was paid was not fruitful; the social studies curriculum underwent minimal change, and non-graded classrooms did not come into being.

After 1956 curriculum appeared to receive much more attention in Gary and nationally. The building crisis had abated considerably, and it suddenly seemed as if the United States schools were underestimating the importance of curriculum, particularly in science, mathematics, and foreign languages. Scientists had long perceived this lack of concern, as was noted in Chapter V, but the general concern on the part of educators, politicians, and laymen came only with the launching of Sputnik.

Despite a concern for curriculum after 1956, the attention paid it was not exactly like that paid to budgetary matters or to buildings and sites. This difference is the result of the natures of the different kinds of concerns. New curriculum guides can be loosely equated with blueprints or accounting procedures in that they are of value as guides or specifications and take on meaning only as the directives they imply are operationalized. In the cases of buildings or accounting, the Board in Gary approved blueprints and procedures and then watched while the buildings were completed according to specification and audits were made. Board concern for curriculum, however, stopped with production of the guides. The buildings were constructed because the Board appropriated the money for them; curriculum

guides were not operationalized because the Board did not appropriate money. Board financial support was minimal in all three cases examined. The Board got exactly what it had ordered when it spent money for a new building. When it spent its money on curriculum, it got curriculum guides. But it had no idea what happened as a result of those curriculum guides. The Board lacked resources of both money and knowledge to insure that new curriculum guides resulted in improved teaching. It could not afford to re-train teachers, and it had no way of measuring the extent to which the new curricula were used.

New curriculum guides, however, represent a kind of change whether or not they are ever used. They serve as formal documents which are somehow satisfactory to those who demanded change. The 1958 Curriculum Guide, as we have suggested, did not produce change. Yet the State Department of Public Instruction was lavish in its praise of the document and the work going on in Gary. In Gary between 1940 and 1958 all change that occurred happened either by drift or was of the small-scale individual classroom variety. There were policy decisions about major changes; there was a new curriculum guide for all secondary subjects; there were publicity releases about curriculum change; in short, there was a lot of talk about change, but there was little in the way of actual deliberate change. Statements about change served in lieu of actual change; and no one was concerned enough to trace the process of change, to see that proposed change was carried out.

In 1957 federal involvement in education took on a new character. Support was given to bring about change. First, new curricula were produced, and then opportunities were provided for re-training teachers and assuring the proper equipment and materials. Change occurred, but only insofar as school systems were enticed into contributing matching funds for these efforts. Even then, in Gary, change was neither all encompassing nor lasting. Not all Gary science teachers chose to use the new materials. And, although the equipment and facilities produced by the federal involvement continue to be used, Gary science teachers in 1970 began to choose texts and materials other than those produced by the national science curriculum committees.

Change and the availability of resources seem often, but not always related. The social studies curriculum was not changed although the change would not have cost the school system much. Change in science and vocational education did not occur because the costs to the school system were greater than it could assume at the time while maintaining the construction program. By the time the overcrowding problem was nearly solved, federal funds designed to bring about the science and vocational education changes had been made available. The availability of funds for vocational education in the early 1940's had not produced change, however; Gary did not claim all of the funds it was entitled to.

Of the backlog of recommended changes with which the Gary school system dealt, some occurred without benefit of policy

decision. The several features of the Wirt Plan faded and disappeared during the thirty years studied yet the Board minutes do not show that they did so because of debate and decision. The unit school concept was initially violated in the early 1940's when the first feeder elementary schools were built. Although the decision to build these schools was made by the Board, it did not reflect a conscious effort to change the form of schooling in Gary. Unit schools were unwieldly because when first built they were too big for the number of students in the area they served. Because of the rapid growth of Gary, however, they soon all became overcrowded. Because of the delicate balance between academic and non-academic facilities demanded by the platoon plan, these schools were difficult to remodel and to add to. Construction of unit schools left the system with schools which did not adequately serve needs but which were difficult to alter.

The feeder elementary schools were constructed to provide for the complete Wirt course offerings, however, including auditorium and gym. The platooning and departmentalization continued within the feeder schools for some time. These forms of organization were discontinued one school at a time and piecemeal within each school as single classroom teachers began teaching more and more subjects to their homerooms. The conceptualizations we used--those of Parsons and Perrow--perhaps let us account for some of these anomalies. Perrow's conceptualization offered an analysis of schools in terms of goals which are derived from

societal values, technology which is the means available to achieve the goals, and structure which is the hierarchy of roles, with actors in these roles employing the technology. Parsons' conceptualizations identified groups and individuals concerned with schooling by locating them in a hierarchy of levels: community, managerial, and technical. The positing of the levels was to permit examination of the relationships among them.

As "sensitizing devices" for conducting the research, the conceptualizations were useful. Values, technology, and structure were considered as givens, the state of which at any time could affect curriculum change. At two points values impinged on the process of change. First, in the case of social studies nearly no one in the school system or the community valued use of the intercultural curriculum. Superintendent Lutz perceived (or at least assumed that he did) the attitudes toward the curriculum and thus withdrew school system support for the venture. Second, in the cases of science and vocational education, change was delayed because of priorities; these were assigned, presumably, on the basis of values. In neither case, however, does knowing this explain how general values were made known to the Board and the superintendent, or if they were. We do know that ending the school strike in 1945 and properly housing all students were highly valued because Gary residents were vocal on these issues. This suggests that the community valued the smooth deliverance of the educational service, but that values had little to do with the nature or content of that service.

Technology entered our thinking at this point. First, the means for the use of the intercultural curriculum did not exist, at least in a form that was easily employable. Materials were beginning to appear but not collected into texts or books of readings, and methods for teaching intercultural relations had not been designed. But while this lack complicated the task, it was not instrumental in deciding the ultimate fate of the curriculum; although it took effort, a curriculum and materials were put together. The intercultural curriculum failed not in its construction but in its use. Second, technology was too expensive, but in two ways. The vocational education technology was always available but always too expensive. Science technology was not available; the expense was in developing it. Once developed by the PSSC, BSCS, and CHEM Study committees, however, it was made available in easily adopted packaged form. The cost was no more than for traditional textbooks; once teachers became aware of the materials, they quickly began to use them. The availability of the new materials facilitated curriculum change in science.

Structure was of significance because of the responsibilities and privileges which accrued to different roles at different times. In all three cases examined, one of the obligations of the teacher role was to revise curriculum. The power to operationalize curriculum on anything larger than an individual classroom scope, however, was not that of teachers. Social studies teachers in the late 1940's and early 1950's were free

either to use or not to use the intercultural curriculum; this small scale change occurred in some classrooms. But the Board retained the authority to appropriate money to operationalize what committees of teachers had designed. By virtue of the way in which roles were defined, then, change was delayed and prevented. It was also facilitated, however, because at times principals were given responsibilities which were customarily not theirs. The elementary grades changed from being platooned and departmentalized to being self-contained, one school at a time and not by Board decision. The delegation of this responsibility was the privilege of the superintendent; principals did not simply assume authority because they wanted to.

The separation of curriculum designing and curriculum operationalizing appears to be a case of what Lortie refers to as "variable zoning."[1] Curriculum, seen as what goes on in classrooms, is the concern of teachers although the administration is ultimately responsible for it, while budgetary matters such as appropriations for science and vocational education curricula on a system-wide level are tightly controlled by the administration and/or the Board. In social studies in 1947, official support for the intercultural curriculum on a city-wide basis was withdrawn, but no teacher in his classroom was prevented from using it.

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[1]Dan C. Lortie, "The Balance of Control and Autonomy in Elementary School Teaching," The Semi-Professions and Their Organization, Amatai Etzioni, ed. (New York: The Free Press, 1969), p. 13.

The conceptualizations, then, were of value. They suggested both sources and individuals, each of which contained potential for input into the curriculum change process. They offered terms in which discussion of events in Gary could be couched. They served to locate and stabilize the subject matter of the study and suggested reasons that change did or did not occur. They did not, however, provide any means for explaining the process of curriculum change at given points in time.

To conceptualize change, we assumed that the process of curriculum change in Gary between 1940 and 1970 would be political in that decisions would be made by a legitimate authority who had to decide among competing values and participants rather than rational in that decisions would be made from among competing ideas. In fact, the process we observed suggested aspects of both. Decisions about what courses should be offered and what the content of these courses should be were made, insofar as they appeared in curriculum guides, seemingly by rational means. There was a strong correlation between the prescriptive literature and the changes proposed in all three cases. The question of what the school system should be doing, then, was answered rationally.

But, the operationalization of these courses depended on competing values and goals. While teachers made decisions about the form and content of courses, the Board decided whether or not the courses could be offered. But discovering how priorities were assigned was not possible in this study. Public clamor

on one issue such as overcrowding combined with silence on another such as curriculum certainly affected the setting or priorities. Community opinion which was expressed at Board meetings was a visible means by which the Board learned of the desires of the local residents; it had to respond to these concerns. The explanation of the question of priorities must be left to another study.

## The Findings of the Study

The major findings of this study are that first, curriculum and the process of curriculum change were neither highly visible to nor concerns of most people in Gary and its schools. Second, because of this low visibility, small-scale changes and drift were permitted but large-scale decisions were not operationalized. Now we can suggest why this might be so and why the school system did not change itself.

The school system in Gary had two functions during the years examined. The first, and more important of these functions, was the delivery of a service, i.e., schooling. The primary concern of the school system was with the smooth flow of the service and only secondarily with the nature of that service. The concern of Gary residents as expressed during the period examined was with maintenance of the school system and its service. The civic elite worked to end the racial strike but not to change curriculum. The primary concern of parents was with double shifts and overcrowding; this concern was not with the nature

of the service but with the failure of the school system to deliver its service smoothly and equitably. The Board focused its attention on buildings and finances, both essential factors in delivery. Available money was spent first on providing academic classrooms, books, and enough teachers. Once the delivery of the service was assured, any unused resources could be employed in changing the program. However, in Gary there was seldom unused money available.

The second function of the school system was to stay as current and modern as it could. Models of and prescriptions about what school systems should be like and what they should be doing were generated outside the system. But prescriptions were of value only inasmuch as they enticed schools to use any extra resources or to find additional ones; for much of the period studied, Gary did not respond to the prescriptions. Federal involvement and control of the overcrowding problem in Gary occurred roughly at the same time; at that point Gary began to respond to the prescriptions.

The Gary school system during the years examined was aware of educational prescriptions and changes occurring in other school systems. The major school surveys of the Gary system provided in their recommendations a model for the schools. The attempt to include intercultural education in the social studies curriculum in the middle 1940's was an attempt to operationalize a new and emerging idea. The science and vocational education curriculum committees of 1956 gave evidence of their awareness of current prescriptions in the changes they proposed. The new

science courses were those found in the science education literature of the time.

However, despite the awareness of new ideas and practices, the school system was unable to operationalize them. The maintenance function always took priority. While the formation and operation of curriculum committees gave the appearance of change, the committees, themselves, were unable to bring about city-wide change. Their proposals could, and no doubt did, produce change in individual classrooms. Change of any scope larger than individual classrooms, however, occurred only as support from the administration and the Board was offered.

However, the primary concern of the Board and the administration, was with buildings and finances. The elements basic to the smooth delivery of service, e.g., classrooms, books, and teachers, necessarily took precedence over special efforts and programs in any one subject area. Given the lack of community concern for curriculum, it is unlikely that the Board could be convinced of the wisdom of instituting a new (and probably expensive) program in science, for example, while there were many overcrowded classrooms and students on double shifts.

Identification and separation of these two functions permits us to look anew at the four rubrics outlined in Chapter I. First,identifying maintenance as the primary function of the school system suggests why adaptation and expenditure per pupil were found to be related. The wealthier a school district is the more likely it is to have resources available after maintenance

is provided for. School districts which provide funds in excess of those necessary for maintenance are more innovative because they can affort to invest resources in change.

Second, the myth of local control can now be seen in terms of the prerogative of a school district to tax itself beyond minimum maintenance support levels. If the local concern is only with maintenance or if the district is relatively poor, money can be provided only for maintenance, e.g., sufficient buildings, books, and teachers. Wealthier districts that so choose can provide funds as far in excess of those necessary for maintenance as they wish.

Third, prescription, both generally about schooling and specifically about subject matters and single innovations, always constitute a model, one toward which school systems are working. The range of resources available to school districts suggests a reason for the lag between the design of an innovation and its complete diffusion. Wealthier school districts (defined here as ones with funds far in excess of those needed for maintenance) can afford to try innovations and in so doing both serve as experimenters in which innovations are tried and as exemplars for less wealthy school districts. Because the federal money carried the stipulation that it could not be used to supplant existing programs, poorer school districts were enticed into trying innovations.

The diffusion literature explains both how knowledge about innovations spreads and why less wealthy systems feel some

pressure to conform, to always be as modern and current as possible. The relationship between career-oriented superintendents and innovative school districts may be correlational in that such superintendents quite likely gravitate toward the wealthier districts where resources for trying new practices are available.

The factors which most affected the process of curriculum change in Gary were money and means. Throughout the thirty years examined, the school system could not do all things at all times, could not build a technical-vocational school when it needed academic classrooms for many students, and could not remodel shops and laboratories and could not hire more teachers. Yet when national concern began to turn to curriculum in the late 1950's, concern in Gary did also. Federal money became available to make changes that had been recommended in Gary years earlier, and the school system found the matching funds. In all the subject areas examined, there was disjunction between designing curriculum and insuring that it would be used. When curriculum for use in individual classrooms was available, teachers were free to use it; when curriculum proposals called for the expenditure of money, however, teachers did not have access to the funds. The money was already employed in maintaining the school system.

The advent of federal money brought curriculum change. A question raised--but not answered--by this study concerns policy decisions about the flow of federal money. Federal money had been allocated for innovation and cannot be used to supplant

existing programs. It is also given with the stipulation that local districts assume the full cost of the funded program after a period of years. In Gary, however, with the exception of one very short-lived computer mathematics program and one science program, federal funds were continuing in 1970 for all funded programs. In a sense, federal funds appear to have become on-going subsidies for school systems. The interesting question raised, then, is one of identifying the point at which federal funds stop serving the innovation or "keeping current" function of school systems and begin to serve the maintenance function.

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