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AUTHOR Henry, Kenneth J.; And Others
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ABSTRACT

This paper examines school, family, and community factors related to the academic success of economically disadvantaged Appalachian students. In two middle schools in Appalachian Kentucky and Tennessee, 245 students who received free or reduced-price school lunches completed the Rural School Success Inventory (RSSI) and a writing sample about aspirations and world view. Academically successful students were defined as having both a grade point average above 2.5 and an average standardized test score above the 50th percentile. Results of the writing sample indicate that at both schools, the majority of students wanted to attend college, to marry in their early twenties, to obtain a good-paying job, and to reside in another state. On the RSSI, economic characteristics had little power to differentiate high and low achievers, but family interactions were critical factors linked to school performance. These factors include: student participation in family activities, the parent-student relationship, and the emphasis placed on education by the family (as evidenced by parent involvement at school, parent educational attainment, reading at home, and studying with siblings). At the Tennessee school, high achievers were more likely to be involved in extracurricular activities and to live close to school. (Contains 51 references.) (SV)

Linking Inputs and Outcomes: Achievement Among Economically Disadvantaged Appalachian Middle Grades Students

Kenneth J. Henry, Ed.D.
Union College
Barbourville, KY

Dwight Hare, Ph.D.
Mississippi State University
Starkville, MS

Margaret Phelps, Ed.D.
Tennessee Technological University
Cookeville, TN

Susan Raftery, Ph.D.
Auburn University
Auburn, AL

Ann Franklin, M.A.
Tennessee Technological University
Cookeville, TN

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I. Introduction

Economically deprived children have been studied from a myriad of viewpoints in recent years. In fact, academic data bases are replete with citations that deal with economically deprived students and school performance. Most (if not all) studies dealing with the school performance of children from low socioeconomic status homes operate from aggregate data that are centrally reported and accessible. These data have resulted from traditional reporting systems wherein data from single schools are reported to school districts, districts compile data for all schools in their jurisdiction, and states aggregate data from each district. The reported data take the form of either inputs (activities and services provided by schools) or outputs (indices of school performance, usually grades and standardized test scores as well as a host of data pertaining to such outcomes as attendance rate, retention rate, graduation rate, and the percentage of students who go on to post secondary education).

These mechanisms for reporting on and studying the school performance of low socioeconomic students have served to enlighten educators and policy makers, yet simultaneously, they have served to confuse. When policies pertaining to economically disadvantaged students are evolved, decision makers are likely to inform themselves with data developed via the traditional aggregate mechanisms. Traditional definitions of at-risk have been developed based on socioeconomic status, parental educational background, and other types of aggregated data. These data, although useful to examine a group of students, do little to ensure that policies are developed that address the needs and concerns of individual students.

As early as 1971, Daniel L. Stufflebeam identified several key ingredients of effective evaluation programs. The model proposed by Stufflebeam would have evaluators consider the context within which the data are developed, the inputs related to the outcomes observed, the processes utilized to generate the outcomes, and the outcomes (or product). During the decade of the 1980's education was roundly criticized for a seeming lack of effectiveness via some 30 national reports and 300 state task forces (Cross, 1984), yet careful study of the reports reveals recommendations primarily focused on inputs (e.g., time, teacher qualifications, etc.) and

outcomes (e.g., graduation requirements, testing programs, etc.) (Passow,1983). The current restructuring movement in education is based primarily on rearranging school inputs and processes to generate better outcomes, evidencing little consideration of either inputs not controlled by the school or the context within which schooling occurs.

Students come from different backgrounds, they live in diverse communities, and they have different expectations for their educational attainments (i.e., they intend to use their education in differing ways). The same is true for economically disadvantaged students, and the study of the schooling endeavor as it relates to them must involve careful consideration of the context within which it takes places, the inputs that students bring to school, the inputs provided through the school, the processes employed by the school, and the eventual outcomes of schooling.

To fully understand the schooling process--the context, inputs, processes, and outcomes--knowledge from several disciplines must be utilized. Interdisciplinary study of the classroom, instruction, school, home/family, and community must be carried out as part of a cogent, rational research agenda (Ralph, 1988). In turn, policy decisions affecting economically disadvantaged students must be rooted in data derived from research that accounts for the interaction among personal, socio-cultural, and school-related factors (Jachman, 1987).

II. Purpose of the Study

The purpose of this study was to determine what school, family, and community factors separate economically disadvantaged Appalachian middle school students who succeed in school from those who do not. Specifically, this study sought to fulfill the following objectives:

1. To identify those economically disadvantaged students in the sample who are successful in school;
2. To identify those economically disadvantaged students in the sample who are not successful in school;
3. To describe the context within which these students live and go to school;
4. To identify what family characteristics differ between successful and unsuccessful economically disadvantaged students in the sample;

5. To identify what school-related characteristics differ between successful and unsuccessful economically disadvantaged students in the sample;

6. To identify what community characteristics differ between successful and unsuccessful economically disadvantaged students in the sample.

III. Review of the Related Literature

Rural schools account for nearly two-thirds of the schools in the United States and educate from one-fourth to one-third of all public school students (Stephens, 1988), yet when the phenomenon of economically deprived students has been studied, nearly all researcher attention has been given to inner-city students. The research on at-risk students has evolved around two basic themes--socioeconomic factors and cultural factors. The review to follow will examine these two themes as they relate to rural school students. In addition, the review of literature below will address school inputs and processes as well as the emerging consensus pertaining to the study of school effectiveness in relation to specified outcomes.

Socioeconomic Status

The impact of socioeconomic status (SES) on school performance is evidenced through the value placed on education by children and families from different social classes and through differential educational aspirations (Lareau, 1989). Educational performance of students is more heavily influenced by socioeconomic and associated characteristics than by what actually occurs in school (Hobbs, 1990). Schooling, especially for low SES students, has been held out as a vehicle of empowerment (Schorr, 1989), yet the cycle of poverty described by the Heller Report of the early 1960's is still evident.

Education Week (1986) reported that the birth rate is linked to social class, i.e., birth rates are increasing for lower social classes but are declining for higher social classes. As a result poor children are over represented in the school population. The national decline in test scores is not coincidental to the increase in children in the United States who live in poverty (Hobbs, 1990).

Rural areas have a disproportionately large segment of the nation's poor and economically marginal (Lichter & Costanzo, 1987). Most of the 242 persistent poverty counties in the country

since 1950 are rural southern counties (Bender et al., 1985). In 1985 the rural poverty rate was 18.3% whereas the urban poverty rate was 12.7% (Brown & Deavers, 1988).

Brown and Deavers point out:

> In rural areas, poverty among older persons fell from 23 percent to 18 percent, and the rate for youths rose from 17 percent to 24 percent. The diminished economic position of children is related to changes in households and family structure, and especially the increase in families maintained by women with no spouse present .... 58 percent of rural children living in female-headed families are poor compared with 18 percent of children living in other family types. The child rate of poverty has increased for all residence and family types since 1973 (p. 5).

The makeup of the household directly impacts the eventual success (or lack of success) of students. There is a relationship between the intellectual environment of the home and the measured IQ of children. In addition, the home environment predicts school achievement as well as the IQ of the student (Trotman, 1977). Early influences of the home on the eventual school performance of students is strong and lasting. Entwisle and Hayduk (1988) report that the influences of parents and teachers on student performance in the early grades hold four to nine years later. In fact, much of student performance in school can be accounted for by student academic self-concept, and the academic self-concept of students is influenced more by their parents' appraisals than by their actual achievement (Phillips, 1987).

Higher SES students score higher on standardized achievement tests than lower SES students (Lark, 1984; Teddlie, 1984, 1987; Gibbons, 1986; Schmitt, 1988). Family structure also directly impacts student performance, particularly for low SES students. Generally, students from two-parent homes outperform students from single-parent homes on measures of school achievement (Peterson & Zill, 1986; Myers, Milne, Baker, & Ginsburg, 1987; Stevenson & Baker, 1987). This is particularly important for students from lower socioeconomic homes due to the fact that lower family income mitigates against school performance. Low SES students from two-parent homes also perform better than low SES students from one-parent homes (Allan & Tadlock, 1986). Thus low socioeconomic status students from single-parent homes are subject to double jeopardy for poor school performance.

Behavior problems of children are associated with marital disruption and tend to increase with multiple disruptions (Peterson & Zill, 1986). Children from mother-only households are more likely to engage in deviant behavior than children from two-parent households or households in which a non-father male is present (Dornbusch et al., 1985). Steinberg (1987) reports that children from single-parent and two parent homes with a stepparent are more susceptible to antisocial peer pressure than are children from families with both natural parents present, and Myers, Milne, Baker, and Ginsburg (1987) report that children from one-parent families misbehave more often in school. High and persistent conflict in intact households is also associated with increases in negative benavior by children (Peterson & Zill, 1986).

A great deal of study has been conducted in recent years regarding the link between mothers who work and the school performance of their children. The basic principle underlying this research is that mothers who work function less effectively in nurturing their children, principally as this role impacts schooling. The evidence pertaining to the impact of working mothers is somewhat contradictory, however.

Myers, Milne, Baker, and Ginsburg (1987) found that students whose mothers work received lower grades and scored lower on standardized achievement tests than students whose mothers did not work. Lempers, Lempers-Clark, and Simons (1989) declare that family economic hardship is directly related to feelings of depression and loneliness by children. These feelings spring from less parental nurturance and inconsistent discipline in the home. When other family characteristics are controlled, children of mothers who work briefly or who decrease their working pattern over time achieve somewhat lower than children of mothers who have never worked. Children whose mothers increase their working hours or maintain their current working hours are not adversely affected (Heyms & Catsambis, 1986). However, employment of the mother may have positive effects on the school achievement of low socioeconomic status children (Milne, Myers, Rosenthall, & Ginsburg, 1986).

The educational level of parents is also an important adjunct to school achievement. It is generally accepted that as the socioeconomic class of parents rises so does the educational level

they have attained. Most research points to the mothers' educational attainment as the key to school success for children. The educational attainment of the student's mother is positively associated both with academic performance and aspirations (Myers, Milne, Baker, & Ginsburg, 1987). Mothers who have higher educational attainment are more involved in their children's education. Better school performance stems from this involvement, not from the mother's educational level alone (Stevenson & Baker, 1987).

Strategies for the management of children's schooling do not vary by socioeconomic status, but the implementation of those strategies does. Mothers with a college education are more likely to take action based on better knowledge about their children's schooling. These parents have more contact with teachers and tend to choose college preparatory experiences for their children regardless of their children's prior school performance. Higher SES students tend to do better in school because their parents possess better skills for academic management (Baker & Stevenson, 1986).

School personnel often allocate poor school performance of low SES students to low parental aspirations for their children and a resulting lack of parental support. But Lareau (1987) reports that low SES parents hold high aspirations for their children's school performance. They differ from higher SES parents in that they tend to allocate responsibility for their children's school performance to teachers while higher SES parents tend to view responsibility for their children's school performance as shared by teachers and family members. This is manifested through differing patterns of parental involvement in their children's schooling.

Helge (1990) reports that a higher percentage of rural children than non-rural children are considered by school officials to be substance abusers, to be sexually active, to suffer from depression, to be involved in crime, and to be victims of child abuse. In effect, school officials are describing a family structure in rural homes characterized by factors which operate to lower school achievement.

Cultural Factors

The school operates within the framework of the larger community. The lines of contact between the student and the community, between the student and the school, and between the school and the community are not always clearly delineated. Cole and Griffin (1983) caution that school failure is not caused by a single institution such as the school or family. Failure (and success for that matter) occurs as a result of the nexus of several components. SES, culture, and school inputs and processes are intertwined in student performance in school.

Trueba (1989) argues that culture provides the foundation for the motivation to succeed in school. Bourdieu (1977a; 1977b; 1984; 1987) suggests, however, that socioeconomic status affects the cultural resources available in the home; therefore, student success in school becomes a function of culture. Some school children are isolated due to the school's failure to account for the culture of the larger community and the congruence (or lack of it) between the expectations of the school and those of the community (Delgado-Gaitan, 1989). Ultimately culture influences how and what people learn (Berliner & Casanova, 1985; 1986a; 1986b).

School Factors

The school is the vehicle through which culture and socioeconomic status most prominently reveal themselves, particularly in student academic performance. The climate of the school, teacher and student expectations, community values, and parental aspirations and expectations all converge within the framework of the school.

Student perceptions of the school are key ingredients for academic performance. Early school success leads to success later in school, and early school success is primarily associated with school climate (particularly teachers' perceptions of it), student maturity, and student academic self-image (Pallas, Entwisle, Alexander, & Cadigan, 1987).

Teachers play a critical role in how students eventually come to perceive themselves in the academic arena. Alexander and Entwisle (1987) found that low SES students of high SES teachers experience greater difficulties in school than students whose socioeconomic

backgrounds more closely approximated their teachers'. Low SES teachers' interactions with higher SES students did not affect the performance of students to the degree that high SES teachers' interactions with lower SES students did.

The academic experiences of students in school are often influenced by socioeconomic factors. Vanfossen, Jones, and Spade (1987) found a direct link between SES and high school curriculum tracking. Factors associated with ultimate curriculum track location included: number of courses taken, academic performance, educational and occupational aspirations, satisfaction with school, perceived values of friends, self-esteem, extracurricular participation and leadership, eventual enrollment in post secondary education, disciplinary climate, and teacher interactions/expectations. Student aspirations to attend college and having friends with similar aspirations increase the likelihood of the student enrolling in college-preparatory high school courses (Alexander & Cook, 1982).

Student time and effort toward school success is also highly influenced by factors within the school. Natriello and McDill (1986) found a direct impact from teachers', parents', and peers' expectations on the time students spent studying , yet only teachers' and peers' performance expectations had a positive impact on student performance.

Henry, Bobbett, & French (1990) found that the context of successful rural high schools differed significantly from the context of other successful high schools. Although the schools in their study were characterized by high proportions of at-risk students, successful rural high schools were able to perform admirably in terms of student performance on regularly reported outcome measures by focusing on individual student needs while maintaining high expectations for achievement for all students.

Emerging Consensus on School Effectiveness Related to Outcomes

Many states are now preparing expanded versions of aggregated reporting systems to account for a refined focus on educational outcomes. An indicator system, or framework into which an array of indicators are placed for review and analysis, seems to be the route most states are

taking to ensure necessary modifications in policy and practice related to stated goals or outcomes (Kaagan & Coley, 1989).

Well designed indicator systems place input and process data within a framework that allows relationships among them to be examined. This linking of inputs and processes with outcomes is the general framework of favor among the states (Kaagan & Coley, 1989). The Rand Corporation sponsored a project to improve reporting of mathematics and science achievement (Shavelson, McDonnel, Oakes, Carey, & Picus, 1987) which illustrates this concept. The model identifies inputs as fiscal and other resources; teacher quality; and student background. These inputs influence what occurs within the processes identified as school quality, curriculum quality, teaching quality, and instructional quality. Theses processes develop outcomes identified as achievement, participation, and attitudes and aspirations. All factors in the model are viewed as interrelated, but primary consideration is given to those factors controlled directly by schools.

Effective reporting systems must meet three key features identified by Kaagan and Coley (1989) as requisite for a successful indicator system: (1) school level data are available, (2) information pertaining to the quantity and capability of school staff is available, and (3) the unit of data collection is clearly identified as the student. Data are then aggregated to the class, the school, the district, and finally the state as a whole.

IV. Design of the Study

Subjects

The subjects for this study were 429 students from two rural Appalachian middle schools in the adjacent states of Tennessee and Kentucky. In order to preserve the anonymity of the schools and students, the schools were given pseudonyms based on the state flower (i.e., the Tennessee school was called Iris Middle School [Iris], and the Kentucky school was called Goldenrod Middle School [Goldenrod]). The schools were chosen because of the concentration

of free and reduced lunch status students in each; therefore, the student population contained a dense cluster of economically disadvantaged students who are traditionally defined as at-risk for school failure. Middle schools were chosen for this study to reduce the effect of school dropouts on the results.

Subjects were divided into three distinct groups indicative of their lunch status and thereby their socioeconomic status (i.e., full price lunch students, reduced price lunch students, or free lunch students). Of the total sample, 227 were females and 202 were males. There were 177 students (92 females and 85 males) who paid full price for their school lunch, 45 students (26 females and 19 males) who paid reduced price, and 200 students (104 females and 96 males) who received free school lunches.

The proportion of students who were considered economically disadvantaged (i.e., either free or reduced price lunch) varied somewhat between the two schools. The proportion of economically disadvantaged students in Iris was 48.3% (51.2% for 7th graders and 45.6% for 8th graders), whereas the proportion of economically disadvantaged students in Goldenrod was 64.9% (64.3% for 7th graders and 65.4% for 8th graders). The male/ female at-risk ratio was stable across grades. For the total sample, 58.1% (58.8% for 7th graders and 57.4% for 8th graders) of the students were considered economically disadvantaged. In order to be faithful to the purposes of the study, those students who received reduced-price and those who paid full price for their school lunches were eliminated from the data analyses in order to ensure that only low socioeconomic status students were studied.

Data Collection

The professional staff of the two schools were highly involved in the planning and execution of the study. The staff of the schools in the study extracted student permanent record data, coded each record with a control number, and administered the inventory used in the study. It is important to note that all student data collected from permanent records and inventory responses were provided to the research team anonymously, but the data collected in the inventory were

linked to the permanent record of each student through the control number assigned by the schools' professional staff.

Grades, standardized test scores, and number of days absent were extracted by local school personnel from the permanent records of subjects. The two schools in the study did not report grades in the same subjects, (i.e., Goldenrod and Iris had somewhat different curricula) nor did they report standardized test scores on the same nationally normed tests. Therefore, for purposes of this investigation, student grades in English, mathematics, science, and social studies were averaged and assigned to one of two categories (0-2.5 or > 2.5 overall grade average). Student standardized test scores in mathematics, language, science, and social studies were also averaged and assigned to one of two categories (0-50th percentile or > 50th percentile).

All students were administered the Rural School Success Inventory (RSSI) (Phelps, Smith, Raftery, Mulkey, McNamara, & Henry, 1990) that addressed family/home factors, community factors, and school factors. The RSSI is a base instrument that was adjusted in collaboration with the school personnel to fit the characteristics of each school and community (e.g., places of employment of parents). The RSSI was administered during each student's English class in short intervals; therefore, the process of survey administration was accomplished over the course of a series of administrations.

Each student completed a writing sample during regular English class activities. The writing sample was intended to develop data pertaining to the student's aspirations and also to obtain data regarding the student's world view. Students were asked to respond to the following writing prompt:

> Assume that it is the year 2000. You are attending a community celebration in "Name of Town". In the space below describe the major events in your life since 1991. Be sure to include education, job, marriage, children, income, place where you live, etc. Use complete sentences.

A qualitative study of each community/school was also conducted. This activity was carried out over the course of several days of site visits through direct observation, source document research, and interviews. The data developed from this activity set the context within which the

students in the two schools live and work.

Data Analyses

Student grades and standardized test scores were used to differentiate between those economically disadvantaged students who were successful in school and those who were not. Students with a grade average in English, mathematics, science, and social studies above 2.5 **and** average standardized test scores on the mathematics, language, social studies, and science sections above the 50th percentile were considered successful (Iris=27; Goldenrod=35). Students with a grade average in English, mathematics, science, and social studies below 2.5 **and** average standardized test scores on the mathematics, language, social studies, and science sections below the 50th percentile were considered unsuccessful (Iris=11; Goldenrod=51). These two groupings provided the basis for analyses of the survey data and the data from the writing samples.

Survey data were analyzed via crosstabs to determine significant differences between the two groups on each survey item. Results were then used to construct a matrix to graphically depict where differences between successful and unsuccessful economically disadvantaged students existed.

Writing samples were read and coding categories developed pertaining to the students' aspirations and world view. Results of the coding and use of relevant quotations from the writing samples were used to develop an holistic portrait of economically disadvantaged students in the two schools.

Qualitative data were analyzed and reported via an holistic overview. The conduct of the qualitative study allowed for utilization of structured and unstructured observations as well as structured and unstructured interview responses.

V. Findings

The findings below are presented in two major categories with sub categories in each. To begin, findings from the ethnographic study of the two communities are presented with analyses and major findings from writing samples of students from each. Findings from analyses of the RSSI are next presented followed by a combined analysis of all findings.

Iris Qualitative Findings

Interstate 40 runs east and west in Tennessee from Memphis through Nashville to Knoxville, Along I-40 east of Nashville, set off from the interstate and hidden in the hills, is Iris County. it is about as poor a place as one will find in Tennessee, but it is as pretty a place as one could ever see.

To understand Iris County, the people who used to live there, and the people who live there today, one has to understand the contradiction of a picture with beauty and poverty painted with the same brush; one has to understand the breathtaking sight of sheer cliffs with a waterfall at dusk and the heartbreaking sight of habitable houses foreclosed and boarded standing beside inhabitable homes inhabited by children grown old before their time.

Iris County is an old county. It was settled by hardy pioneers who could tame the hillsides and eke out a living from the wildlife of the woods, and from small farms and gardens in the rocky hillside soil. Iris City was settled by those who could capitalize on the river running through town. Iris City became a distribution and shopping center. It was where city merchants offered a place to trade for those who traveled the river and for those who lived in the hills. Staples like sugar, salt, and coffee were traded for furs, tobacco, grain, etc. At one time there were farms of some size along the river and in other low-lying areas. Timber was available but difficult to harvest. Even today, one can see a barren hillside with a knob of trees too difficult to reach on the crest of the hill.

Iris City grew along with Iris County. As the county seat, Iris City became a meeting place and shopping center for the county. River trade was developed and low-skill, low-pay industries

located there. Car dealerships and lawyers and doctors offices opened up, and Iris City took on the prospect of continued good times. It was a good place to raise a family. The pace was slow, but families had everything they needed.

The consolidation of smaller rural schools saw an increase in the size and structure of the schools in Iris City. One teacher from a rural school notes that there was an elementary school about every three miles before consolidation so students would not have to walk so far to school. High school students, what few there were, had to ride a bus to the more centrally located high school. Consolidation sent the rural elementary students to the more urban setting of Iris City (population < 1000), leading to rural students losing individual security found in the smaller rural school setting.

Economic changes nationally and the involvement of the federal government locally brought lasting changes to Iris City and Iris County. The national recessions and sagging agricultural markets hit the area hard. Most local industries were cut-and-sew operations--fairly inexpensive to set up and to close down. Some Iris County natives call them rape factories because they use the women and leave them with nothing.

Agriculture has never been a major source of revenue for Iris County, but it had been a steady employer and a reasonably reliable source of income; however, farms were lost to the high interest rates of the 1970's and many were consumed by the federal government in plans to create lakes in areas along the river. These lakes were to serve as major recreational spots and, many locals hoped, would serve to bring in outside moneys for economic development. The project also took many hillside homes with small gardens and some hillside farms as part of the recreational lands associated with the lakes project.

Iris City also began to see a change in its businesses and in its people. The development of Hub City and Hub County (adjacent to Iris County) as a major industrial, economic, transportation, and educational site hastened an exodus from Iris City. Over a period of time, local service and car dealerships in Iris City could not compete with the higher volume dealers in Hub City. Malls and discount stores in Hub City attracted shoppers from Iris. The development

of Hub City as an industrial site was spurred by the presence of major improvements in its highway transportation, making markets in North Carolina, Kentucky, Virginia, Georgia, South Carolina, Alabama, Mississippi, and west Tennessee easily accessible. The presence of a public school system with a reasonably good reputation was an important plus for Hub City.

Hub City is very much a white collar town when compared to Iris City. It reflects a growing cultural diversity and a more cosmopolitan atmosphere than does Iris City. The irony here, of course, is that Iris City, which developed as the transportation and city life for Iris County, is losing its business and people to the transportation and city life of Hub City.

The western section of Iris County contains the lake and recreational area of the federal flood control project. While riding through Iris Hills West, one is struck by the vast amount of property indicated to be "recreational" or "public hunting," or property developed for "public use." There remains, however, a goodly number of acres under cultivation, particularly in burley tobacco. Many homes, but not so many trailers, have small gardens.

The hills of east Iris County do not reflect the presence of the federal project as does Iris Hills West. Though there appears to be more relative wealth in East Iris Hills, there also appears to be more poverty. That is, though the average family income of East Iris Hills and West Iris Hills may be the same, East Iris Hills appears to reflect a wider range of wealth (families with higher incomes and families in absolute poverty) and less middle ground.

Between the hills of east and west Iris County lies Iris City. It is an old town, grown older by vacant buildings. The Iris River flows through the town, and there has long been hope of developing the river as a major mode of transportation. Houses in town are older, and have stayed in the same families by passing from generation to generation.

There are no new houses being built in Iris City. Outsiders who move to Iris City and want to live in town are now finding families selling the old family home because the younger generation chooses not to settle in Iris City. The most recent construction projects have been a restaurant out of town near the interstate and two liquor stores. The restaurant hopes to capitalize on those out-of-county residents who come into Iris County to use the recreational opportunities created

by the federal project. The liquor stores are in response to the changing needs of nearby Hub City since it is dry and the closest liquor stores are in Iris City.

The major construction projects of the past few years, however, have been federal housing units. One unit is for adults, and a number of those adults have been misplaced by creation of the lake. Two other units are for families with low incomes. One unit was one of the first low income housing units built in the section of the state, and the other was in response to the perceived need for additional housing.

There is some concern in Iris City that additional units are not needed to meet local demand; they believe there are sufficient units for the people of Iris County. The new units, they claim, will be for people outside Iris County who will bring their problems with their transfer payments.

One other area of construction has been cabins built on the side of hills inside or near Iris City. For less than $20,000 one can buy five acres and a cabin. The cabin is finished on the outside, unfinished on the inside. For a little more, of course, the inside can be finished too. Locals are divided in their opinions about these cabins, for some see them bringing in outside money; others believe they will bring nothing. They see these outsiders shopping in Hub City and simply exploiting the recreational opportunities in Iris County--they take and never give.

Local officials are attempting to attract industries that are higher paying than the "rape factories," but they know they must fight the image of the available local male labor forces as "real 'go-getters'" who take their wives to work in the morning and go get them in the afternoon. They are caught in the dilemma many small, rural communities face: they want to attract higher paying industries so people with greater skills will want to live there, but know their only real chance is to attract those low skill, low wage jobs the undereducated locals would qualify for.

A school administrator in Iris County said that the best students from the best families have been leaving Iris County for generations because there are no jobs and no future to hold them there. It was like milk, he said: the cream rises to the top and is skimmed off, and each year there is less cream. This same administrator said some of the better known physicians and other professionals in Tennessee were from Iris County. They came from families that helped settle

and develop Iris City. Their fathers were doctors and lawyers and bankers and store owners in Iris City who were influential in local affairs. When the sons and daughters were educated, there was not enough "practice" and profit to go around, so many left. Hub City, he said, was one-half Iris County.

Another school administrator sees an increase in the emotional and educational problems students are experiencing. More than one in every six students has been diagnosed as a special education student. Some claim it is a result of an increase of students with lower abilities and readiness for school. Some claim it is the result of generations of inbreeding among those who live up in the hills. Still others claim this is directly related to a bad crop of marijuana a few years ago. The belief is that the mothers-to-be smoked the bad pot while pregnant and that this is the natural result.

Problems among the students themselves seem to develop along the city students-country students dimension. It is well documented in the literature of rural schools that this rift is an all too common occurrence. Country kids, of course, don't play sports because they do not have transportation home after practice. City kids are more likely to go to college. In small towns and counties like Iris, it is not unusual to have these problems.

Another difference is that the rural kids don't have time for the diversion of sports and school but must get on with the business of life. Two eighth-grade students (one from the country and one from the city) who served as guides for a tour of the middle school both had played basketball the previous year, but only one (the girl from Iris city) played during the current year. The city girl was described as the best student in her class and had been identified by Duke University through their academic talent search. She was considering which college she would choose; she couldn't wait to go off to school. She vowed not to attend the college in Hub City like her sister even if she were offered the same full scholarship. She wanted to get away, and Vanderbilt (in Nashville) was almost too close.

The other girl lived in the hills and had no thoughts about going to college, though her grades were good enough. Her sister had played basketball in the seventh grade but got pregnant and

never came back to school. The principal feared the same would happen to this girl too.

The housing projects have created problems in this rural school not unlike those of the inner city. Often problems between kids at school can be traced to problems between these kids or their families that had their beginnings back in the project. The middle school has initiated programs to influence community perceptions of education and schooling as a form of response. The principal has begun an extracurricular activities function that has been most popular and has used this to get parents into the school. The principal has also made sure the middle school is the site of community functions and that the facility is available for use by eligible community groups. Like the old rural schools in Iris County, the building is being used as a social center and, while there, community members are being made aware of the academic functions as well.

Major Findings From Iris Writing Samples

Eight major findings emerged from examination of the writing samples of economically disadvantaged students in Iris Middle School. Quotations from students appear as they did in their writing sample (i.e., they appear unedited).

1. Students have a desire to enter college.

The desire to enter college was almost universal among these students. Although they sometimes failed to make the connection between the amount of time or training needed to access their desired profession, nearly all students did connect schooling with a better lifestyle.

2. The majority will seek professional jobs.

The majority of the students in this school stated that they aspired to professional jobs. One student's statement proves illustrative: "I went to school for three and a half years. When I was 21, I got a degree in broad cating. . . . I was accepted to the channel 8 news broadcasting team. I was hired as the main broadcaster. My husband and I bought a Buick Regal. My husband is a brain surgen and makes $200,000.00 a year. I make $100,00.00 a year."

3. The majority have a desire to be married at least by the early twenties.

The majority of these students intend to be married and raising a family by their early

twenties. One student wrote: "I am now 22 years of age. I have finished high school and I am now in college to be a vetinarian. . . . I (don't) have much to be proud of except my education, because I live at the dorm, and I'm not married, but I'm engaged, and I don't have any children."

4. Financial stability is important.

Not surprisingly, financial stability is important to these economically disadvantaged students: "He works in a factory. I work at Walgreens. . . . My income is 40,000 dollars every year. Willianis is 30,000." Another student zeros in on his intended career and simultaneously assesses the economic prospects: "I will have my mechanic's degree. I will be a big time mechanic, and I will work for Ryder Truck Rental, Incorporated. That's if it's still around in Tennessee."

5. The males want to be professional basketball players.

6. The majority want to live out-of-state.

The majority of students express a desire to live out-of-state, echoing the outward migration from Iris County: "We live in California in a beachfront house." "I finish high school and I started working in a factory. I drive a 57 chevy. I make 500 a week. I live in Hawaii in a two story house."

7. The majority mention a desire to live in nice homes.

8. The occupations females choose for their spouse are not the occupations males choose for themselves.

Goldenrod Qualitative Findings

There is a common misconception that isolated rural, particularly mountainous, areas are where the road ends. Actually, it is where roads and rivers begin. Goldenrod County is a place where one can see a trickle become a stream and a path become a road.

People do not get to Goldenrod by accident. Roads do not pass through; they start there and go somewhere. If one is there, one is looking for the place or is badly lost.

Goldenrod is a couple of stores and gas stations and a post office surrounded by a series of small communities. It has an elementary school over in one of the residential areas, and a junior-

senior high school across town. The junior-senior high is an old building right next to a medical-dental clinic and just across the street from an old, closed coal processing plant. The streets are narrow and winding, suddenly becoming a curving road out of town and up the path that leads to an abandoned coal mine.

The history and effects of coal are everywhere. There was, of course, a Goldenrod before there was the business of coal, but that seems lost under the coal dust and behind the miner camps. Timber used to be a big industry, but it was lost for years to coal. It has made a comeback, but the timber industry has seen better times.

The houses are very small and are right next to the road and very close together. The majority of homes were old camp homes for miners and were intended as basic shelter. The mine foremen's homes are set off from those of the miners. They are much larger and are on larger parcels of ground.

The old camp homes are privately owned now and are often painted in bright, basic colors. Maybe they seem so much closer together now than they used to because they are so bright, and the yards have flowers and cars and trucks.

There is an often unrecognized relationship between the roads and the houses. The old camp houses were close to the road leading to the mine. The road was narrow because the traffic was light and most folks walked. As roads were improved and widened, they "moved" closer to the houses. So, to say the houses were built right next to the road does not tell the story of how the road was really built right next to the house.

Another relationship worth mentioning is where one can build a house. One needs flat ground to build a house, or the house has to be built into or around the ground that is there. Flat ground in the mountains is not plentiful, and available space is used as best as possible. For example, one can be riding along a narrow road cut into a mountain side; on one side it goes straight up and on the other it goes straight down. It is not uncommon to see a flat piece of ground 25 feet wide and 50 feet long with a trailer on it.

The limited space for building a house influences the size of the house--small area, small

house. People living in large houses have a room (or two) called a storage room. The small houses do not have extra space, and what might be stored inside a large house must be stored outside a small house. Sometimes a shed is built, but often it is not, and what at first glance may seem to be trash is really treasures stored in the only available space.

The old camp communities have strong traditions and rich histories. Many small communities had schools (usually lower grades) at one time, but they have been lost through years of consolidation. Attempts are still being made to close the smaller schools and send the students down the road to a school closer to Goldenrod.

The kids from all the communities attend the junior-senior high school in town, but the teachers say that they can just about tell where the students are from by the way they behave and dress and act. One community is close to an open mine on the other side of the mountain, and many of the fathers are employed there. The community income is relatively high and the kids do well.

Another community consists of families who have lived there for so long that everyone is related. Outsiders say they tend to marry someone from that community and each generation gets "worse." A school administrator notes a disproportionate number of discipline and academic problems come from this community.

Many of the communities are inhabited with older folks who survived years in the mines. Many draw social security, black lung payments, and/or miner's retirement pay. The general belief is that every time an old person dies, Goldenrod income is drastically reduced.

A large number of these retired folks have their grand kids living with them. The parents of these kids are off working in other states or are looking for work. Many parents live in urban areas and send the kids back home where it is safer. School events are well attended and grandparents are treated like parents. Most teachers grew up in Goldenrod communities, or in Goldenrod County, and know the community families well.

There are few black families in the communities of Goldenrod. One small community was a black miner's camp, but most black families have left. Those who remain are usually retired,

often raising grand kids who plan on leaving.

Communities like those in Goldenrod, and the people who live there, are generally self-sufficient. They look after their own, and they don't need much from the outside. The junior-senior high school exhibits these characteristics. Two examples illustrate this well.

The students from the communities of West Goldenrod love it there. They would like to live and work there, to raise their families there, to hunt and fish and enjoy the outdoors there. But the jobs necessary for economic survival are not there. The adults in the community have known, the students now recognize, and the school is responding to this fact.

The adults recognize the students will have to leave to find jobs to support a family. They know success in the outside world requires an education, and that an education requires access. Access has taken two very different paths to the same goal.

The school faculty say the school will do whatever it takes for the students to be successful. Their students were not being successful at college, in part because they had not taken the necessary higher level (math, science, language) courses needed for college success. The school now uses satellite instruction extensively, and students are much more successful in college.

Preparing the students for college, however, did not ensure the students could afford to go. An alumni association was formed during the 1980's with the goal of funding college educations for the future generations of West Goldenrod. Each year a homecoming weekend is attended by graduates (some from as far away as Florida and New York) and money is raised for scholarships. In recent years some $40,000 to $50,000 is awarded annually (*Whatever it takes*).

There is a sign in the counselor's office which sums well the family atmosphere, future orientation, and essence of hope of West Goldenrod. It says: "Superman lived with foster parents."

Major Findings From Goldenrod Writing Samples

Ten major findings emerged from the analysis of writing samples of economically disadvantaged students from Goldenrod Middle School. Quotations from students appear as they

did in their writing sample (i.e., they appear unedited).

1. **The majority of both males and females have a strong desire to marry at an early age.**

Throughout the writings of students from Goldenrod Middle School, a recurring theme of early marriage was noted. Many students indicated that they met their husband or wife and married while in college. Many also indicated that they had a child while in college.

2. **The majority of both males and females have a desire to enter college, but for a maximum of four years.**

The desire to go to college was strong among these students. Many who speak of going to college indicate that they will pursue professional degrees such as law or medicine. They do not, however, indicate spending time in college beyond the initial four years.

3. **The majority mention obtaining a "good" job.**

4. **Basically, the males are interested in becoming a professional athlete and/or joining the military.**

Three examples are illustrative: "Well after I got out of Goldenrod I went to college at N.C. State. I played basket ball (and) I was the star player. Year 1998 I was (the) first round draft pick 1 for the Chicago Bulls." "I got married had to kids and play football for the L.A. Raiders. I am the best on the team. I havent did much but a good life." and "I joined the are force. . . . I got my major in law. I now fly a F-14 TOMCAT."

5. **Basically, the females are interested in securing jobs as teachers, nurses, lawyers, and doctors.**

A quote from one student illustrates this finding: "I am a nurse and my husband is an environmental engineer."

6. **The majority are planning on residing in another state.**

One student declared: "I got a scholarship, i lived on campus until I completed law school. Then I left for Central Park, New York."

7. **The names chosen for children are Scottish and Irish.**

True to the Scotch-Irish heritage of many of the peoples of Southern Appalachia, these students chose Scotch/Irish names for their children. One student stated: "I'm 23, married with

one kid (Angus McKinnon)."

8. Occupational expectations and salary estimations are often not realistic.

Several students expressed high occupational aspirations, but many did not realistically assess the educational requirements or the salary benefits. One student wrote: "I graduated from college in the year 2000, at age twenty-two. I got my degree as a pediatrician. My income ranges from 3,000 to 3,500 dollars a year." Another student wrote: "I have a high school education. . . . I got my major in law. I now fly a F-14 TOMCAT. I also teach night classes at the local college. My income is 500 thousand a year. My wife's income is 300 thousand a year. She works on computers." A third student unrealistically assessed the future: "My husband works in the coal mines and makes 2,000 dollars a week." Yet another student declared: "For our income we get $48 million dollars."

9. These students have definite visions of the good life.

Goldenrod students have positive outlooks for the future with definite visions of a good life in front of them. One student described it this way: "I'm driving towards Goldenrod still shocked that they let me out of the state pen. (Ha! Ha! just kidding.) I'm going to a celebration were having, three years of conservation. Now that all the mines have closed down. No chemicals have been dumped in the river (and) there isn't nothing which can upset nature. No trash spoils the scenery, people come from miles around to fish and hunt." Another described the good life with a family orientation: "After I got out of High school I tried college, but it just wasn't for me. From there I went to vocational school and studied to be an electrician. I install everything to light fixtures in new homes to wiring in hugh office buildings. Its a nine to five job. it pays well and keeps my family happy."

10. These students express a great deal of concern for the environment and for helping people.

Perhaps because of the influence of the mines on the environment, or for some other reason not apparent, these students express concern for helping people and for preserving and cleaning up the environment. One of the statements above pertaining to the good life directly supports

this finding. Another student wrote: "(My husband) Jody helps people over in Africa. He takes them medicine, food, water, and clothes. I am working to help keep the environment clean and safe. I try to stop air polution and water polution. For the animals and for the humans to. When our kids grows up I hope they get a education and take care of the people and the environment like we did."

Findings From Rural School Success Inventory Analyses

Subjects in the study were narrowed to those who were economically deprived by determining their lunch status (i.e., if they paid full price for their school lunch, paid reduced price for their school lunch, or received a free school lunch). Students who received free school lunches were identified as economically disadvantaged and selected for further study. Subjects were then subdivided by their average academic achievement as either high achievers (i.e., average English, mathematics, science, and social studies grades above 2.5 **and** average standardized test scores in language, mathematics, science, and social studies above the 50th percentile) or low achievers (i.e., average English, mathematics, science, and social studies grades below 2.5 **and** average standardized test scores in language, mathematics, science, and social studies below the 50th percentile). The subdivided groupings were used for crosstabs analyses of responses to the RSSI and findings are presented below (complete statistical analyses are available from the research team upon request). Only those items that were significantly different at alpha .05 contributed to the findings.

Student responses to the items on the RSSI were subdivided into three categories: (1) economic characteristics, (2) school characteristics, and (3) sociological characteristics. These three categories provide the framework for the findings below.

Findings From Iris RSSI Student Responses

The findings from RSSI analyses provide linkage between Iris student permanent record data and economic, school, and sociological characteristics. These findings are developed via analyses of individual student performance and responses. A summary of Iris RSSI responses is

provided in Figure 1 following the discussion of the findings.

Economic Characteristics

Of the multiple inventory items related to economic characteristics, Iris high achievers and low achievers differed on only 5. High achievers were more likely to live in a home that is air-conditioned (high achievers 81%; low achievers 40%). Higher achievers were also more likely to live in homes with a television. Ninety-two percent (92%) reported that their parents owned a television, but only 70% of low achievers reported that there was a television set in their home. Not surprisingly, then, 100% of high achievers responded that they had recently watched a videotape that they owned; however, 89% of low achievers (a higher rate than reported owning a television set) responded that they, too, had recently watched a videotape that they owned. Sixty-seven percent (67%) of high achievers responded that they owned a BB gun, but only 30% of low achievers did. Seventy-one percent (71%) of high achievers received an allowance (12% received $20 per week or more), and 60% of low achievers received an allowance (none received $20 per week or more).

School Characteristics

High achievers and low achievers in Iris differed on only three school-related factors. Thirty-eight percent (38%) of high achievers reported that their siblings studied with them nearly every time they did their homework, but none (0%) of the low achievers did. High achievers were more likely to be involved in 4-H projects (high achievers 72%; low achievers 11%). Parents of high achievers were much more likely to attend a school function. Fifty-two percent (52%) of high achievers responded that their parents had attended a school function during the previous year whereas only 11% of low achievers responded that their parents had.

Sociological Characteristics

By far, sociological characteristics predominated the findings in the Iris sample. Twenty-one (21) inventory items were significantly different between the two groups. These differences

center on family characteristics and interactions, on use of leisure time, and on community interactions.

The locus of the workplace of the father and mother was significantly different between high achievers and low achievers. Both the father and mother of high achievers were more likely to work closer to home than were the father and mother of low achievers. Among high achievers 73% reported that their father worked in Iris County; 76% reported that their mothers did too. Among low achievers only 33% reported that their fathers worked in Iris County; 38% reported the same for their mothers.

Family interactions also clearly delineated high achievers from low achievers. Thirty-seven percent (37%) of high achievers reported that their parents read to them almost every day when they were younger, but none (0%) of the low achievers did. Fifty percent (50%) of low achievers responded that they had recently gone horseback riding with their family, but only 15% of the high achievers responded that they had; and 20% of the low achievers reported having recently attended an automobile or bike race with their family, but none (0%) of the high achievers did. Conversely, 62% of high achievers responded that they had gone on picnics with their family during the summer, but only 30% of the low achievers did.

Family travel also differed significantly between high and low achievers. Ninety-six percent (96%) of high achievers responded that their family had gone on a vacation trip during the past year, but only 18% of the low achievers responded that they had. Thirty eight percent (38%) of high achievers reported having gone to Nashville recently, but only 10% of low achievers reported having recently traveled to Nashville.

They ways that Iris students dealt with their problems differed significantly. High achievers were much more likely to talk with their parents or other family members about their problems. Fifty-two percent (52%) responded that they would talk with their parents about a problem, but none (0%) of the low achievers responded that they would; and 40% of high achievers responded that they would talk with another family member about their problems, but none (0%) of the low achievers responded that they would. Low achievers, on the other hand, were much more likely

to take their problems to their teacher. Sixty-seven percent (67%) responded that they would talk with a teacher about a problem, but only 16% of the high achievers responded that they would.

Reading materials in the form of books were more readily available in the homes of high achievers. Ninety-six percent (96%) of high achievers reported having paperback books in their homes while 78% of low achievers did. Ninety-three percent (93%) of high achievers also reported having hardback books in their homes while 67% of low achievers did.

Social activities differed between high achievers and low achievers. Ninety-two percent (92%) of high achievers reported that they had recently attended a church activity with their family, but only 67% of low achievers reported that they had. Eighty percent (80%) of high achievers reported that they had recently attended a community social activity with their family, but only 50% of low achievers reported that they had. Low achievers were more likely to have friends visit with them at their homes frequently. Sixty percent (60%) of low achievers responded that they had friends visit with them at their homes nearly every day, but only 15% of high achievers did. Low achievers also reported spending more time talking with friends on the telephone. While 88% of high achievers reported spending 30 minutes or less daily talking on the telephone with friends, only 50% of low achievers reported the same; 50% of low achievers reported spending over 30 minutes daily talking with friends on the telephone, but only 12% of high achievers did.

Low achievers were likely to live further from the school than were high achievers. Forty percent (40%) of high achievers responded that they lived within a mile of the school. None (0%) of the low achievers lived within a mile of the school.

Figure 1
Differences Between High and Low Achievers
Iris Middle School

Economic Characteristics

1. High achievers were more likely to live in air conditioned homes.
2. High achievers' families were more likely to own a television and videotapes.
3. High achievers were more likely to receive an allowance.

School-Related Characteristics

4. High achievers' siblings were more likely to do homework when they do.
5. High achievers were more likely to be involved in extracurricular activities (particularly 4-H).
6. High achievers' parents were more likely to have attended a school function in the past year.

Sociological Characteristics

7. High achievers' mothers and fathers were more likely to work closer to home.
8. High achievers' parents were more likely to have read to them daily when they were younger.
9. Low achievers were more likely to go horseback riding or to an automobile or bike race with their family.
10. High achievers were more likely to have gone on a summer picnic with their family.
11. High achievers were more likely to have gone on a family vacation during the past year.
12. High achievers were more likely to have traveled recently to Nashville with their family.
13. High achievers were more likely to discuss problems with their parents or another family member.
14. Low achievers were more likely to discuss problems with a teacher.
15. High achievers were more likely to have both paperback and hardback books in their homes.
16. High achievers were more likely to have recently attended a church or community social gathering with their family.
17. Low achievers were more likely to have friends visit their home daily.
18. Low achievers were more likely to spend more than 30 minutes daily talking with friends on the telephone.
19. Low achievers were more likely to live further from school.

Findings From Goldenrod RSSI Student Responses

The findings from RSSI analyses provide linkage between Goldenrod student permanent record data and economic, school, and sociological characteristics. These findings are developed via analyses of individual student performance and responses. A summary of Goldenrod RSSI responses is provided in Figure 2 following the discussion of the findings.

Economic Characteristics

As was the case with Iris, there were few economic characteristics that differed between high achievers and low achievers in Goldenrod. In fact, there were four. The availability of television differed between high and low achievers. All (100%) high achievers reported watching television at home while 89% of low achievers reported that they watched television at home. Ninety-one percent (91%) of high achievers reported watching cartoons in the last week, as did 71% of low achievers did. Low achievers were more likely to hold a part-time job. Fifty-seven percent (57%) of low achievers held part-time jobs while 39% of high achievers did.

School Characteristics

Several school-related characteristics differed between high and low achievers. Low achievers reported being in trouble more often in school for using tobacco and for fighting. Seventeen percent (17%) of low achievers reported getting in trouble at school recently for using tobacco, but none (0%) of high achievers reported that they had; and 23% of low achievers reported getting in trouble at school recently for fighting, but only 4% of high achievers reported that they had.

Low achievers' responses also indicated unrealistic appraisals of their academic performance. Eight percent (8%) of low achievers reported an academic average of "A." Although all low achievers had grade averages below 2.5, eleven percent (11%) reported that they were on the honor roll, and 6% responded that they participated in the gifted student program.

Low and high achievers differed significantly as to what subjects they preferred in school. Forty-two percent (42%) of low achievers responded that their favorite school subject was art,

music, or physical education, but only 23% of high achievers did. Seventy-seven percent (77%) of high achievers responded that their favorite school subject was one of the traditional disciplines (English, mathematics, science, or social studies) while only 58% of low achievers did.

Educational aspirations also differed significantly between low and high achievers. When asked how far they planned to go in school, 11% of low achievers responded that they planned to go until they could drop out, but none (0%) of the high achievers did. Forty-four percent (44%) of the low achievers said they planned to graduate from high school (but to go no further) while 26% of the high achievers planned to end their education with high school graduation. Only 3% of the low achievers planned to attend college (but not graduate) while 13% of the high achievers had the same plan. Thirty-six percent (36%) of low achievers stated that they planned to graduate from college, but 57% of the high achievers stated that they did.

A similar pattern emerged when respondents were asked what they planned to do when they got out of school. Seventeen percent (17%) of low achievers and 9% of high achievers responded that they planned to get a job in Goldenrod County. Seventeen percent (17%) of both low and high achievers stated that they planned to go somewhere else to get a job. Again, post secondary educational aspirations proved quite different between low and high achievers. Only 37% of low achievers but 74% of high achievers stated that they planned to go to college after they got out of school. Eleven percent (11%) of low achievers said they would join the military, and 6% said they would go to vocational school, but none (0%) of high achievers said they would join the military or go to vocational school.

Sociological Characteristics

Several (8) sociological characteristics differed between low and high achievers. For Goldenrod students, the father emerged as the key family figure. Twenty-two percent (22%) of low achievers reported that their fathers worked during the evening, but no (0%) high achievers reported that their fathers worked during evening hours.

Low achievers' fathers had lower educational attainment than high achievers' fathers. Twenty-four percent (24%) of low achievers' fathers (but only 15% of high achievers' fathers) had less than a high school education. Only 30% of low achievers' fathers had graduated from high school, but 45% of high achievers' fathers had graduated from high school (20% had some college, but none had graduated). Forty-six percent (46%) of low achievers' fathers were high school drop outs, but only 30% of high achievers' fathers were.

Family interactions also differed between high and low achievers. Forty-five percent (45%) of high achievers reported missing school in the past year to travel with their family, but only 21% of low achievers reported that they had missed school in the past year to travel with their family. Seventy-eight percent (78%) of high achievers (but only 57% of low achievers) reported going hunting or fishing in the past three months (indicating interaction with their father); however, 14% of low achievers reported missing school to go hunting or fishing in the past year. Although a higher proportion of high achievers reported going hunting or fishing with their father in the past three months, none (0%) reported missing school to do so in the past year. A significantly higher proportion of low achievers (66%) reported going on family picnics during the summer than did high achievers (43%).

A higher proportion of low achievers reported using tobacco and alcohol than did high achievers. Forty-six percent (46%) of low achievers (but only 17% of high achievers) reported using tobacco within the past month, and 24% of low achievers (but only 5% of high achievers) reported drinking alcohol within the past month.

Figure 2
Differences Between High and Low Achievers
Goldenrod Middle School

Economic Characteristics

1. High achievers were more likely to have access to television and to watch cartoons and other programs at home.
2. Low achievers were more likely to have part-time jobs.

School-Related Characteristics

3. Low achievers were more likely to have been in trouble at school recently for using tobacco or for fighting.
4. Low achievers were more likely to unrealistically appraise their academic performance.
5. Low achievers were more likely to prefer art, music, or physical education.
6. High achievers were more likely to prefer English, mathematics, science, or social studies.
7. Low achievers were more likely to plan to drop out of school.
8. Low achievers were more likely to plan to end their education with high school graduation.
9. High achievers were more likely to plan to graduate from college.

Sociological Characteristics

11. Low achievers' fathers were more likely to work during evening hours.
11. Low achievers' fathers were more likely to have less than a high school education.
12. Low achievers' fathers were more likely to have dropped out of high school.
13. High achievers' fathers were more likely to have graduated from high school and attained some college education.
14. High achievers were more likely to have missed school in the last year to travel with their family.
15. High achievers were more likely to have gone hunting or fishing recently with their father.
16. Low achievers were more likely to have missed school recently to go hunting or fishing.
17. Low achievers were more likely to have gone on family picnics during the summer.
18. Low achievers were more likely to have recently used tobacco or to have drunk alcohol.

VI. Conclusions

Although study of economically disadvantaged students has taken many tracks in recent years, data developed from individual school records has not been widely reported. This study was an attempt to begin to link individual data extracted from school records with inputs (both outside and inside school) and processes through examination of outcome data pertaining to individual students. It is important to reiterate that the findings and conclusions from this study resulted from examination within low SES student groups; therefore, SES was removed as a variable accounting for school achievement.

The conclusions below address the findings reported from the study.

1. **Economic characteristics are limited in their power to differentiate between successful and unsuccessful economically disadvantaged students.**

This conclusion might seem obvious at first, yet much of the literature pertaining to school performance centers on the differences between sociological class of students. Although students expressed a desire for the good life, and economic considerations were a central theme of their wirtings, these variables had little relation to their ultimate school performance.

2. **School-related characteristics are important considerations in determining what separates successful economically disadvantaged students who achieve in school from low achieving economically disadvantaged students.**

As the findings from both the writing samples and the RSSI indicate, student aspirations to continue their education differ between high and low achievers. The literature pertaining to school success contains plenty of studies that support this notion. Student dissonance between their expectations and the requisite training and education are serious concerns that need to be addressed. In addition, low performing students' tendency to over-estimate their school performance indicates that they have not made the linkage between school success and success later in life.

Much of the literature indicates that students who are economically disadvantaged misbehave in school more often than those who come from middle-class families. In fact, the data from the qualitative research in this study indicates that perhaps teachers and administrators are

participating in a self-fulfilling prophecy. They may be guilty of expecting students from certain locales or from certain families to behave poorly and to perform poorly in academics as well. These expectations, when set in motion and communicated through various channels, may be met by the students. Certain data from the RSSI indicate that students who are low achievers do get into trouble in school more often than students who are high performers. The question remains, however, if this is a symptom or a cause of poor school performance.

3. **Sociological characteristics, especially family interactions, are critical factors related to the school performance of economically disadvantaged students.**

The data from both schools in this study are consistent in that they indicate that the interactions that take place within the family are critical factors linked to school performance. Higher achieving students' interactions with their families and communities are such that their world view is broader than that of lower achieving students. Furthermore, higher achieving students' families seemed to place more importance on education (as evidenced by the educational attainment of their parents, family interactions such as reading to younger children, and studying with siblings). This emphasis on education showed in higher educational aspirations from higher achieving students. Students whose families interacted via such activities as family vacations or trips or community/church social activities also performed better in school.

VII. Recommendations for Further Research

The authors make the following recommendations for further investigation:

1. Study the linkage between the same variables studied among economically disadvantaged students with middle-class students.
2. Study how the culture of the community contributes to or detracts from interventions to address characteristics found to be different between high performers and low performers.
3. Use data from other locales to replicate this study to determine if regional differences occur.
4. Address policy implications via studies conducted pertaining to economically disadvantaged students to ensure that their needs are actually met via policies developed at the state and national level.

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