

**The Relationship Between The Dropout Rate And The
Unemployment Rate**

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Abstract

This article examined the relationships between the dropout rate, the unemployment rate, and the percentage of population employed in manufacturing. The researchers used 1990-91, 1991-92, and 1992-93 dropout data from each of 105 school districts and unemployment data for each of the 100 counties in North Carolina. Results indicated a correlation of $-.1167$ ($p = .043$) between the unemployment rate and the dropout rate. This indicated that when the unemployment rate is high, the dropout rate tends to be lower. The correlation between the percentage of the population employed in manufacturing and the dropout rate was $.27$ ($p = .000$). This indicated that the dropout rate rises as the percentage of the population employed in manufacturing rises.

This study posed two important research questions: (a) What is the relationship between dropout rate and unemployment rate? (b) What is the relationship between unemployment rate and the percentage of the population employed in manufacturing? The nature of these relationships, which is not addressed in current literature, could help school personnel and community leaders to further address the school dropout problem. To answer these research questions, the unemployment rate and the dropout rate for each of the 100 counties and 105 school districts in North Carolina were analyzed. In addition, a literature review of relevant related articles was conducted.

Early research by Weber (1988) regarding dropouts tried to determine if an increased number of vocational credits toward high school diplomas would deter students from dropping out of school. Weber conducted an analysis of several items from the National Center of Educational Statistics High School and Beyond study. The results showed that the dropout rate for the academic student was significantly less than the dropout rate for the vocational student.

Peng and Takai (1983) illustrated the complexity of the dropout dilemma using the High School and Beyond (HSB) longitudinal data. A key finding of Peng and Takai was that most of the dropouts reported they regretted their decisions to leave school early. Within a two- year period after dropping out, the participants in the study reported unemployment in addition to poor job satisfaction because of being trapped in low-paying jobs.

McCaul (1989) used data from the National Center of Educational Statistics' High School and Beyond (HSB) study to identify some of the consequences of dropping out of school. More specifically, the study looked at salary for current job, work satisfaction, extent of unemployment, and number of jobs held.

Almost 600 dropouts participated in all four areas of the HSB study as well as over 1,300 graduates. Analysis revealed that dropouts reported lower work satisfaction, changed jobs more often, and experienced longer periods of unemployment as compared to the high school graduates.

Pittman (1991) conducted research to determine what effect personal and social characteristics had on students' decisions to drop out of school. The two different samples used for the study were drawn from participants of the HSB study. The first sample consisted of 1,114 high school graduates and an equal number of high school dropouts. The students were matched on variables such as region of residence, community size, gender, and 10th-grade reading comprehension. The second sample matched students based on gender, socioeconomic-economic status, 10th-grade reading comprehension, and school attended. Two hundred sixty-three high school graduates and 263 high school dropouts comprised this sample. Data for the study were collected from a survey that students completed during the first year of HSB. Factors influencing the decision to drop out of school were divided into 12 categories that represented a school's academic and social atmosphere. Two of the most important factors were a student's interest in school and the student's relationship with school staff.

Roderick (1994) found that students who were retained previously were substantially more likely to drop out of school than students who had not experienced retention, especially at age 16. The study, based on 707 students in the Fall River, Massachusetts public school system, found this relationship while controlling for background and school performance through sixth grade. The study found that students who were retained before sixth grade often experienced substantial disengagement during the middle-school years. This disengagement would often manifest itself through declines in attendance.

Wylie and Hunter (1994) created a profile of a typical south Georgia student who is at-risk of dropping out of school. The purpose of their study was to identify dropouts, the reasons they leave school, and to determine what type of programs would best help keep them in school. The sample consisted of 18 educators and 36 students. Data collector observations and descriptions of six dropout prevention programs also were used in the study. Interviews of the subjects were analyzed and produced characteristics of at-risk students. The three key characteristics were in the following categories: academic, personal, and social. Lower IQ scores, being behind in reading and math, low grades, grade retention, more absenteeism, and more discipline referrals were all considered academic. The personal category was comprised of being older than most of the other students in the same grade, being of a minority race, being of the male gender, and having low self-esteem. Finally the social category included: lower socioeconomic status, having parents who dropped out of school, less participation in school activities, and peers who dropped out of school.

Rumberger (1995) used the National Education Longitudinal Study (NELS) data from grades 8 through 10 as the basis for his research. Rumberger selected a sample of over 17,000 students in the eighth grade from NELS. Rumberger looked at a variety of factors as to why students drop out of school including: grade retention, change of school, parental involvement in school related activities, and socioeconomic status. After using regression analysis, Rumberger (1995) determined that a student retained for one grade was eleven times more likely to drop out. In addition, each change of school experienced by the student increased the student's chance of dropping out by 30%. According to Rumberger, the most powerful predictor of a student's completion of high school was the academic support factor of parental participation in school activities. Students whose parents did not expect them to finish high school were seven times more likely to leave school by the 10th grade than were students with supportive parents.

Method

A computer search of reports on high school dropouts and their lives after high school was conducted using the index compiled by ERIC (Educational Resources Information Center) as well as other computerized databases. The search yielded no reports pertaining to the topic of dropout rates and unemployment rates.

The data analyzed were from the 1990-91, 1991-92, and 1992-93 school years. Dropout data for each of the 105 school districts in North Carolina were obtained from the North Carolina Department of Public Instruction. Monthly unemployment statistics were obtained from the North Carolina Employment Security Commission. The monthly unemployment rate was calculated for each county. The researchers calculated this average rate by determining the mean unemployment rate for the months of September through May for each of the school years studied. Thus, the dropout rate for each school district was compared to the average unemployment rate in that county during the months from September through May for each of the three school years studied. Percentage of work force employed in manufacturing was obtained from the **County And City Data Book: 1994** (US Bureau of the Census, 1994). The Pearson correlation was used to analyze the relationship between the variables in question.

Results

During the 1990-91, 1991-92, and 1992-93 school years, the average dropout rate in the 105 school districts in North Carolina was 2.97 with a high of 6.57 and a low of 0.39 (see Table 1). During the same time period, the average unemployment rate per county was 6.59 with a high of 17.86 and a low of 2.53 (see Table 2). The Pearson correlation between the unemployment rate and the dropout rate was $-.1167$ ($p = .043$). This indicates that when there are many unemployed people, the dropout rate tends to be lower. This may be due to the fact that during times of high unemployment, personnel directors in business and industry use a high school diploma as a means to weed out candidates for employment. However, as the unemployment rate declines, business and industry personnel begin to seek employees. They may then drop the requirement of a high school diploma and raise initial pay scales to attract workers.

Table 1			
Dropout Rates in North Carolina for the School Years 1990-91, 1991-92, and 1992-93.			
	Dropout Rate		
	Average	High	Low
All counties	2.97	6.57	0.39
Counties with 33% or more in manufacturing	3.30	6.57	0.86

Table 2			
Unemployment Rates in North Carolina for the School Years 1990-91, 1991-92, and 1992-93.			
	Unemployment Rate		
	Average	High	Low
All counties	6.59	17.86	2.53
Counties with 33% or more in manufacturing	6.65	12.55	3.20

The second question of interest was, what is the relationship between the unemployment rate and the percentage of the population employed in manufacturing? The average percentage of the population per county employed in manufacturing was 29.1 with a low of 4.4 and a high of 52.0. The Pearson correlation between dropout rate and the percentage of the population employed in manufacturing was .27 ($p = .000$). This indicates that North Carolina counties that have a high percentage of the workers employed in manufacturing also tend to have higher dropout rates. This is an important relationship that has definite implications for school districts in counties with a high percentage of the work force employed in manufacturing. These school districts will be at a distinct disadvantage when trying to address the dropout rate as compared to school districts in counties that have a small portion of the population employed in manufacturing. To further explore this relationship, the correlation between dropout rate and the unemployment rate for counties with more than 33% or more of the work force employed in manufacturing was computed. The correlation was $-.193$ ($p = .035$). For the three years reviewed, counties that had 33% or more of the work force in manufacturing had an average dropout rate of 3.30, with a high of 6.57 and a low of 0.86 (see Table 1 for comparison to data for all counties). The reason the dropout rate is higher in counties with 33% or more of the population in manufacturing is a topic for future research. One area to investigate would be how different communities value education.

Discussion

Although the findings indicate a negative correlation between the dropout rate and the unemployment rate, no causal relationship has been established. Further research conducted in other states would help to clarify the relationship. However, counselors, school administrators, and community leaders should understand that this relationship exists and that some students may drop out if economic opportunities exist despite the efforts of school personnel. There also are some related questions that need further research. How do we prepare all students for future employment in a highly technological society? How do schools work with employers to ensure that all workers obtain a high school diploma?

Because many high school dropouts fail to reach their full potential as productive citizens, they often need government assistance. As welfare reform reduces funds for unemployment benefits, it will be imperative for educators to reduce the dropout rate. Professional educators and business executives need to work together to determine the needs of students in order to keep them in school through high school graduation.

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