

Turn On, Tune In, and Drop Out:
A Preliminary Exploration
of Mississippi High School
Dropout Rates 2002 to 2007

By

Jacob T. Walker, M.S.

Sheril Smith, Ph.D.

Dwight Hare, Ph.D.

CHAPTER I

Introduction

“Turn on, tune in, and drop out.” Little did Dr. Timothy Leary, a former faculty member at Harvard, realize how well received—yet incorrectly interpreted—his anthem for the 1960’s LSD drug movement would be, then in 1967 and still today. While the average dropout rate for the United State has dropped considerably since the time of Leary’s famous speech from approximately 15% in 1970 to 9.4% in 2005, we still need to attempt to reduce it even further (Laird, et. al., 2007). It has been decades since the U.S. has seen any large scale reduction in the overall dropout rate. As of 2005, 3.4 million of the 36.7 million individuals aged 16—24 were dropouts (Laird, et. al., 2007). This number increases even more when the age is reduced to include younger students.

While dropout is a problem for the nation as a whole, it is an even larger problem a little closer to home here in Mississippi than many would like to acknowledge. In the state of Mississippi, the dropout rate is calculated using two approaches. The first is the traditional rate that looks at the percentage of students that drop out in a given four year period. The second is the cohort approach, which calculates the dropout rate based on an age cohort over a four to five year period. Using the cohort approach the dropout rate for the class of 2005 in Mississippi was 26.6%, almost three times the national average (Office of Research and Statistics, 2007).

Depending on the source and techniques used, the overall dropout rate for Mississippi is either increasing or decreasing. With the increased requirements placed on states due to the No Child Left Behind (NCLB) Act and requirements for data collection for the new Perkins IV funding, data collection has been improving in many states, including Mississippi. This coupled with the federal government requiring states to be more accountable for where their students are and where they go after graduation has created a need for expanded research efforts in this area. These requirements also makes it necessary to attempt to determine who will become dropouts as early as possible so that interventions can be put into place to retain them in school until completion.

Literature Review

The issue of dropouts has been studied for almost a century, starting in the 1920's (Egyed, et. al., 1994). As such it is seen that this is not a new problem that we are facing as a nation. This review is presented to address the impact of dropping out and the characteristics of students that drop out. First, impact will be discussed then demographic characteristics followed by family characteristics and academic characteristics.

Impact of Dropping Out

There are a number of negative outcomes that result from individuals dropping out of school that can range from economic, to criminal, to health related. Individuals that drop out of high school experience marriage at earlier ages, higher rates of teen pregnancy and parenthood, higher divorce rates later

in life, poorer health outcomes, and higher rates of criminal behavior early as well as later in life (Thronberry, Moore, and Chirstenson, 1985).

From the standpoint of economics, dropouts experience negative economic outcomes for their entire life cycle. A number of researchers have shown that individuals who graduate from college make more money than those who graduate from high school, and those that graduate from high school make more than those that drop out (Goldschmidt and Wang, 1999; & Jarjoura, 1993). Research has also shown that the unemployment rate for individuals that drop out tends to be much higher than that of graduates.

The differences between the economic outcomes of those that drop out of school, graduate from high school, and graduate from college are growing every year. In the middle part of the 20th century a high school diploma was viewed as a valuable commodity in the workforce. However, this is not the case in the modern world of changing technology and information expansion. Today, a high school diploma is the absolute minimum that an employer is expecting; it is more likely that he or she will look for some sort of formal training or certification, if not an actual college degree.

There are a number of other problems related to dropping out especially, in the realm of mental and physical health. Psychologically, individuals that drop out of high school can expect to experience an increased number of life disrupting conditions, than those that graduate from high school. For example, individuals that drop out tend to experience lower levels of self-esteem and self-worth, disrupted coping mechanisms that are normally developed through

puberty, and rejection from society creating psychological dysfunction (Kaplan, et. al., 1994). These individuals also experience higher rates of alcoholism and drug abuse alone or in combination with a number of other conditions.

The individual is not the only victim in the case of high school dropouts. The overall society is also placed at a disadvantage. Economically, dropouts make less money, spend more time unemployed, tend to have poorer health conditions, and have higher rates of childbirth than graduates; as a result dropouts tend to make use of social programs more often than graduates (Teachman, et. al., 1996). Therefore, dropouts contribute less to the tax structure while taking more from the system. They also experience higher rates of delinquency, addiction, and criminal behavior resulting in overcrowded prisons. Research shows that dropouts make up approximately 70—85% of individuals in prison (Stephens & Theodore, 1992). As a result, society is spending even more money on the maintenance of these individuals, as well as the families they tend to leave behind. Finally, the most needed area of spending related to dropouts is the millions of dollars spent on dropout prevention and job training for those who have dropped out of school.

Seeing that dropping out does not only affect the individual but his or her family and society as a whole, it is important that educators and society understand what leads an individual to become a dropout. A number of researchers have shown that the process of dropping out is not instantaneous or strictly linear but much more of an evolving and intertwined dynamic process (Astone, & McLanahan, 1991). If we are able to determine what it is that

influences an individual to become a dropout and identify those factors early enough in the process, we can implement strategies to keep individuals in school and hopefully reduce the impact of future outcomes that can result from individuals dropping out of school for the individual and society.

Demographic Characteristics

There has always been an assumption that boys are much more likely to drop out than girls, but research actually shows that boys are only slightly more likely than girls to drop out (Haveman, et. al., 1991). The difference of gender is seen mainly in the reasons why boys drop out versus why girls drop out. Boys are more likely to drop out due to choosing to go to work over going to school, whereas girls are more likely to drop out to help take care of their families (Haveman, et. al., 1991).

The role ethnicity plays in the dropout rate is a little bit clearer than the role of gender. The effect of ethnicity follows a fairly stable path showing that Hispanics drop out more than blacks, who drop out more than whites (Kauffman, et. al., 2001). The Hispanic population has a unique situation, when examined by subgroup (i.e. Mexican, Cuban, Haitian, ect.) there are a number of confounding factors that influence dropout rates that may exist for one subgroup but not others. Such factors include but are not limited to; time period historically in which they immigrated, number of generations that have been in America, and language.

Family Characteristics

There are also a number of family characteristics that impact the overall likelihood of a student dropping out. A couple of major family level variables that have been seen to impact the student dropout rate are mobility and socioeconomic status.

As far as family mobility is concerned, students that experience a large number of moves requiring them to change schools multiple times experience a higher likelihood of dropping out than their stable peers (Rumberger, & Palardy, 2005). The role of socioeconomic status is connected to mobility issue as well as dropping out. Students that are poorer experience increased rates of changing schools. Poorer students have also been seen to be more likely to drop out in general. This problem is made even worse when combined with the issues of race, gender, and mobility (Haveman, et. al., 1991).

Academic Characteristics

Academic characteristics of a dropout have been documented over the years and tend to hold true. Retention, achievement, absenteeism, and discipline have all been seen as contributors to the likelihood of a student dropping out.

The research shows that students who are held back one year have a 45% higher risk of dropping out, while those that are held back two years are 90% more likely to become a dropout (Mann, 1986). Combine the problems associated with retention with those of academic achievement, and the problem becomes even larger. Dropouts are more likely to be low performers scoring in

the lower 25% of the class. It has been shown that failing a standardized achievement test increased the likelihood of dropping out of school even for those with good academic records (Goldschmidt, & Wang, 1999). Relating this back to ethnicity, it is seen that the effect of grades is almost twice as important for whites and Hispanics dropping out compared to blacks (Ekstrom et. al., 1986)

Attendance and discipline are other areas that impact students' likelihood of dropping out of school. As far as attendance is concerned, increased attendance increases the possibility of dropping out. This is even more important because those that have high rates of absenteeism in elementary school will continue to have that same pattern in high school, whereas those that had good attendance in lower grades but had higher rates in high school have different probabilities of dropping out (Kronick & Hargis, 1998). Discipline in general as well as that related to suspensions and expulsions is also a very important predictor when dealing with dropouts. Students with disciplinary problems are more likely to drop out than those without problems. When this issue is combined with the issue of ethnicity, a double jeopardy effect is seen. It has been found that in study of black students that 80% that had been suspended dropped out before finishing high school (Goldschmidt, & Wang, 1999).

Hypothesis/Research Question

Research Question 1

Is there a significant difference in the demographic, family, and academic characteristics of dropouts and non-completers versus completers?

Hypothesis 1

There will be a significant difference between completers and dropouts based on socioeconomic status, gender, race, age, academic promotion, absences, school problems, and suspensions.

This hypothesis will be tested using percent completers, percent dropouts, and percent non-completers along with the covariates of free and reduced lunch status, gender, race, date of birth, on time promotion to the 10th grade, on time entrance to the 9th grade, number of credits earned in the 9th grade, number of absences in the 9th grade, number of incidents in the 9th grade, and number of suspensions in the 9th grade.

Significance of the Study

What is the usefulness of this study? Seeing that the majority of dropout studies focus either on a specific local school system or the entire country, this study is very important because it allows us to examine what is going on with the students in the state of Mississippi. Examining social phenomena such as dropping out at such a large aggregate level as a nation, can cause one to overlook the important smaller area, or localized causes of variance that need to be understood to address the problem at a more finite level. As such, it is important to examine Mississippi as a whole, and then even at progressively smaller level aggregates of counties or districts separate from the nation.

This study is also important in that it will determine if there is a difference among completers as a group. Specifically, is there a difference in those that

graduate with a traditional diploma, a vocational diploma, or some other type of completion classification.

Finally, having the ability to be able to predict at an early age who is likely to become a dropout is beneficial to not only the individual but also to the schools, communities, and the state of Mississippi. It will allow for the creation of interventions that are specialized early on to increase retention in school and encourage continued education.

CHAPTER 2

Methodology

This study makes use of secondary data analysis to examine the dropout situation faced by the state of Mississippi. Using a historical perspective to look at dropout data using secondary data analysis is necessary because if one is to develop a prediction model to determine the likelihood of experiencing an event (dropping out), the individual must be examined retrospectively, having been given ample time to experience the event.

There are a number of researchers that make use of this approach to predicting dropouts. This approach is also necessary because attempting to collect data from every student in the state of Mississippi without the use of secondary data would be unlikely and virtually impossible.

Population

The population for this study includes every public school student that was enrolled in 9th grade for the first time in the 2002—2003 school year in the state of Mississippi. The initial population was 33,363 children, but individuals that

transferred out of state, transferred to a private school or to home school, and those that entered a GED program not sponsored by a Mississippi high school were excluded from the analysis due to the inability to determine final disposition at the end of the study period. This resulted in a final population of 30,112 students.

Data Sources

The data comes from the Mississippi Student Information System (MSIS) and was obtained from the Mississippi Department of Education (MDE) through a cooperative agreement between MDE and the Research and Curriculum Unit (RCU) at Mississippi State University. MSIS collects data on every student in the state each year and stores it in a database in Jackson, MS. The information that MSIS gathers is taken from each school individually and uploaded to MSIS through one of nine student packages that exists at the various schools in the state.

Table 1. Variables used in study

Variable	Type	Reference Category
High School Completion	Categorical	Completers
Gender	Binary	Male
Race	Binary	White Non-Hispanic
Poverty (Free/Reduced Lunch)	Binary	Private Pay
Mobility	Binary	Non-Mobile
9th Grade on Time Entrance	Binary	Yes
10th Grade on Time Promotion	Binary	Yes
9th Grade Credits Earned	Continuous	---
9th Grade Absences	Continuous	---
9th Grade Incidents	Continuous	---
9th Grade Suspensions	Continuous	---

Dependent Variable

The dependent variable for this study is a three category high school completion variable that classifies students as completers, non-completers, or

dropouts. Completers are any students that completed a traditional or occupational diploma, a certificate of completion, or an academically based GED anytime between August 2002 and May 2007. Non-completers are students that neither dropped out nor completed the graduation requirements for the state between August 2002 and May 2007. Dropouts are those students who officially withdrew from school and never reenrolled at any point between August 2002 and May 2007 or were classified by school personnel as dropouts. Students who dropped out and then returned were classified appropriately if they completed or not. The time frame of August 2002 to May 2007 is used because it allows for early completion by students, as well as students that did not make the traditional four year graduation date of May 2006.

Independent Variables

Gender is used as a dummy coded variable with male as the reference category. Race is dummy coded as white non-Hispanic and non-white with white non-Hispanic as the reference category. Poverty is constructed from free and reduced lunch status in the 9th grade and dummy coded as free/reduced and private pay with private pay as the reference category. Free lunch requires a child to be a member of a family that is less than or equal to 100% of the poverty line, while reduced lunch requires a child to be a member of a family that is less than 150% of the poverty line.

Student mobility is also used in this analysis. Student mobility is determined by the number of schools a child was enrolled in during the 2002—2003 school year. This was then dummy coded with students who had more

than one school in a year classified as mobile and those with only one school as non-mobile with non-mobile as the reference category.

To capture the academic achievement of a student, a number of variables were used including the following: starting the 9th grade on time, on time promotion to the 10th grade, number of credits awarded in the 9th grade, number of absences in the 9th grade, number of disciplinary incidents in the 9th grade, and number of suspensions in the 9th grade.

Starting the 9th grade on time was constructed using the student's date of birth, and if the student was under 16 years old by the end of 9th grade they were classified as on time, and if the student was 16 years or older they were classified as not on time, with on time being the reference category.

On time promotion to the 10th grade was constructed using a promotion indicator that was present in the data set. The promotion indicator is coded as 1 and 0 with 1 representing those that were promoted to the 10th grade at any given time during the 2002—2003 school year and serves as the reference category.

The remaining variables of number of credits awarded, absences, incidents, and suspensions are continuous interval variables taken directly from the original dataset.

Analyses Used

The first step in analyzing the data required cleaning the data. Next, descriptive statistics were run on each of the variables included in the study. This was then followed with by a multinomial logistic regression and

accompanying fit tests to determine model suitability. In the analyses completers are compared to non-completers and dropouts.

Multinomial logistic regression is particularly useful for research like this in which the dependent variable is categorical. This approach is similar to an ordinary least squares approach but takes into consideration the fact that categorical data is rarely fit to a normal curve and adopts nonlinear fitting procedures to limit the dependent variable.

CHAPTER 3

Findings and Conclusions

Descriptives

In Table 2, the descriptives for the entire population are provided in column 1. Columns 2, 3, and 4 are the descriptives for each of the subcategories of the dependent variable, in the order of completers, non-completers, and dropouts. Column 2 shows that 76.3 % of students enrolled in public school completed with only 10% dropping out and 13.2% being non-completers in the five years. The overall population is split fairly evenly on the variables of gender, race, and poverty. Students that entered the 9th grade on time made up 79.7% of the population, with 87.5% of students being promoted to the 10th grade on time. And as far as student mobility was concerned, only 3% of the sample experienced being enrolled in more than one school.

Looking at column 3, we see a breakdown of completers. Compared to the overall population's 3% difference, we have approximately 10% more females than males, and are still fairly evenly split as far as race and poverty

status are concerned. There were approximately 10% more students that entered the 9th grade on time, and about 8% more students being promoted to the 10th grade on time. There were almost half as many students—only 1.8%—that experienced enrollment in multiple schools.

Table 2. Descriptives for entire population, completers, non-completers, and dropouts

Categorical Variables	Total	Non-		
	Population	Completers	Completers	Dropouts
High School Completion				
Completers*	76.30%			
Non-Completers	13.20%			
Dropouts	10.50%			
Gender				
Male*	48.50%	45.70%	55.60%	59.90%
Female	51.50%	54.30%	44.40%	40.10%
Race				
White Non-Hispanic*	48.90%	50.90%	44.30%	40.40%
Non-White	51.10%	49.10%	55.70%	59.60%
Poverty (Free/Reduced Lunch)				
Private Pay*	47.00%	50.40%	38.50%	33.10%
Free/Reduced Lunch	53.00%	49.60%	61.50%	66.90%
Mobility				
Non-Mobile*	97.00%	98.20%	93.40%	92.50%
Mobile	3.00%	1.80%	6.60%	7.50%
9th Grade on Time Entrance				
Yes*	79.70%	88.20%	56.70%	46.20%
No	20.30%	11.80%	43.30%	53.80%
10th Grade on Time Promotion				
Yes*	12.50%	95.40%	65.30%	58.00%
No	87.50%	4.60%	34.70%	42.00%
Continuous Variables				
	Mean	Mean	Mean	Mean
	(std. dev.)	(std. dev.)	(std. dev.)	(std. dev.)
9th Grade Credits Earned	5.97 (2.09)	6.52 (1.56)	4.57 (2.48)	3.86 (2.66)
9th Grade Absences	9.02 (11.08)	6.52 (7.25)	15.00 (15.32)	19.56 (17.05)
9th Grade Incidents	0.51 (1.69)	0.336 (1.31)	0.899 (2.24)	1.26 (2.71)
9th Grade Suspensions	0.186 (0.71)	0.105 (0.48)	0.373 (0.99)	0.543 (1.30)

*=Reference Category

Column 4 shows the results of non-completers. Compared to completers, there were approximately 10% more males than females and 6% more non-whites than whites among those classified as non-completers. There were 12% more students in poverty among non-completers compared to completers. Concerning on time promotion, comparing the completers and non-completers there was a 32% increase in those that were not on time entering the 9th grade and a 30% increase in those not promoted to the 10th grade on time. Non-completer students saw over three times the student mobility rate of completer with a rate of 6.6%

In column 5, the descriptives of those classified as dropouts are seen. As a group, there were 20% more males than females to drop out. There was a fairly even split between whites and non-whites as well as poor versus non-poor. Of those that dropped out, 53.8% had not entered 9th grade on time, and 42.0% were not promoted to the 10th grade on time. Dropouts also had the highest rate of student mobility over four times that of completers at 7.5%.

Multinomial Logistic Regression

Multinomial logistic regression was used to analyze the competing risk of dropping out, and being a non-completer relative to being a completer using data from the 9th grade, as seen in table 3. For both dropouts and non-completers, all variables examined were significant at the $p < .001$ level except for suspensions, which were significant at the $p < .05$ level. Males have a relatively slightly higher risk of being a non-completer (16.06%) and an even greater risk of being a dropout (30.30%) compared to females. From the standpoint of race, the relative

risk of being either a dropout (23.59%) or a non-completer (23.35%) compared to a completer is approximately the same for either classification with an overall higher risk for whites than non-whites.

Looking at more family level measures, we have poverty and mobility. The likelihood of being either a dropout (-32.66%) or a non-completer (-20.54%) is reduced for those of higher household socioeconomic status, as measured by free and reduced lunch status compared to private pay. And as for mobility, the relative risk of being either a dropout (-29.86%) or non-completer (-34.93%) is decreased compared to being a completer for those that are non-mobile versus mobile.

Table 3. Multinomial logistic regression for relative risk for school dropout and non-completion relative to completion for first time 9th graders in 2002-2003

Variable	Dropout vs Completer			Non-Completer vs Completer		
	b	sig.	%a	b	sig.	%a
Gender	0.26	***	30.30%	0.15	***	16.06%
Race	0.21	***	23.59%	0.21	***	23.35%
Poverty	-0.40	***	-32.66%	-0.23	***	-20.54%
Mobility	-0.35	***	-29.86%	-0.43	***	-34.93%
Entrance to 9th	-1.43	***	-76.14%	-1.18	***	-69.42%
Promotion to 10th	-1.09	***	-66.42%	-1.20	***	-69.86%
Credits 9th	-0.23	***	-20.19%	-0.16	***	-15.01%
Absences 9th	0.06	***	5.73%	0.05	***	4.66%
Incidents 9th	0.07	***	7.45%	0.04	***	4.40%
Suspensions 9th	0.07	*	6.92%	0.06	*	6.45%
N	30,112					
LR chi2	9379.85					
Probability >chi2	0.000					
BIC	-9173.60					
Pseudo R2	0.219					

*=p.<.05 ***=p.<.001

a. $((e^b-1)*100)$

Finally, from the standpoint of student academic achievement, we have the measures of on time entrance to the 9th grade, on time promotion to the 10th grade, credits earned in the 9th grade, and the number of absences, incidents,

and suspensions from the 9th grade. On time entrance to the 9th grade and on time promotion to the 10th grade had the overall greatest impact on reducing the risk of being a dropout or a non-completer compared to a completer. On time entrance to the 9th grade provided a reduction in the risk of being a dropout of 76.14% and a non-completer of 69.42%, relative to being a completer for those that entered the 9th grade on time. On time promotion to the 10th grade reduced the risk of being a dropout by 66.42% or being a non-completer by 69.82%, relative to being a completer for those that were promoted on time.

The number of credits earned in the 9th grade is a good predictor of future performance, so it is expected that the more credits earned early on the more likely one is to finish school. The data shows that for every additional credit earned, the risk of being a dropout relative to a completer is reduced by 20.19%, and for non-completers relative to completers is reduced by 15.01%.

Not all academic achievement is measured by grades and on time entrance and promotion; therefore, behavior in the academic environment has to be considered as well, for example, the effect of absences, suspensions, and incidents. The effects of these are seen in that, if you are not at school you cannot learn, if you do not feel you are a part of the group you will act out getting in trouble, which depending on severity can lead to suspension and even more time out from school. Each of the measures of absences, incidents, and suspensions had an increased risk of being a dropout or a non-completer relative to being a completer. For each additional absence experienced by a student, the risk of being a dropout increased by 5.73%, and of being a non-completer by

4.66% relative to being a completer. Each additional incident resulted in an increased risk of being a dropout of 7.45% and a non-completer of 4.40% relative to being a completer. And finally, for each additional suspension experienced by a student, the risk of being a dropout was increased by 6.92%, and of being a non-completer by 6.45% relative to being a completer.

Discussion

A number of interesting findings emerge from this data. First, the relationship between race and the odds of being a dropout versus a completer is of note, especially in this study because most literature highlights that non-white students are more likely to dropout than whites. This study shows that being white actually increases the odds of being a dropout in Mississippi compared to those that are non-white. This is an aspect that needs to be explored further and at a smaller level of aggregation to determine if it is possibly a localized relationship that is being overlooked due to aggregation.

Second, the extreme impact that the role of age has on the likelihood of completion was staggering. More than anything else, on time entrance into the 9th grade and on time promotion to the 10th grade reduced the risk of dropping out between 66—76% compared to those that were not on age.

While this is still just a preliminary investigation into this topic this study provides evidence for smaller area analysis of dropout data in not only the United States, but also within states individually and possibly even in counties or districts. The problem of dropouts is not new, but maybe the use of new

approaches to the research will help shed much needed light on a very grim matter.

Limitations

The main limitation of this study is that it only examines those that are in the 9th grade and forward. A much clearer picture could be produced if the study examined students further back in their academic careers to determine what early life experiences or situations helped lead them down the path to high school completion or dropout.

Another limitation of this study is that it only includes public school children in the state of Mississippi. Mississippi has a significant number of children that are enrolled in private schools, and since private schools are not required to report student level data to the MDE, a number of students are left out of this study. This same situation applies to the vast number of homeschooled children in the state as well.

Also, this data only contains those that were in the 9th grade in 2002-2003 anyone that moved into the state during the time under study is not included. This can lead to biased results and model misspecification.

References

- Astone, N.M., & McLanahan, S.S., (1991). Family structure, parental practices, and high school completion. *American Sociological Review*, 56(3), 309-320.
- Egyed, C.J., McIntosh, D. E., & Bull, K.S. (1998). School psychologists' perceptions of priorities for dealing with the dropout problem. *Psychology in the Schools*, 35(2), 153-162.
- Ekstrom, R.B., Goertz, M.E., Pollack, J.M., & Rock, D.A. (1986). Who drops out of high school and why? Findings from a national study. *Teachers College Record*, 87, 356-367.
- Goldschmidt, P., & Wang, J. (1999). When can schools affect dropout behavior? A longitudinal multilevel analysis. *American Educational Research Journal*, 36(4), 715-738.
- Haveman, R., Wolfe, B., Spaulding, J. (1991). Childhood events and circumstances influencing high school completion. *Demography*, 28(1), 133-157.
- Jarjoura, G.R., (1993). Does dropping out of school enhance delinquent involvement? Results from a large-scale national probability sample. *Criminology*, 31, 149-172.
- Kaplan, D.S., Damphousse, K.R., & Kaplan, H.R. (1994). Mental health implications of not graduating from high school. *Journal of Experimental Education*, 62, 105-123.
- Kaufman, P., Alt, M.N., & Chapman, C.D. (2001). *Dropout rates in the United States 2000* (National Center for Education Statistics 2002-114). Washington D.C. U.S. Department of Education.
- Kronick, R.F., & Hargis, C.H. (1998). *Dropouts: Who drops out and why-And the recommended action* (2nd ed.). Springfield, IL: Charles C. Thomas.
- Laird, J., DeBell, M., Kienzl, G., and Chapman, C. (2007). *Dropout Rates in the United States: 2005* (NCES 2007-059). U.S. Department of Education. Washington, DC: National Center for Education Statistics. Retrieved [November, 2007] from <http://nces.ed.gov/pubsearch>.
- Mann, d. (1986). Can we help dropouts: Thinking about the undoable? *Teachers College Record*, 87, 307-323.

- Office of Research and Statistics Mississippi Department of Education. (2005, August 07). *Mississippi Cohort Dropout and Graduation Rate Estimates*. Retrieved July 21, 2007, from <http://www.mde.k12.ms.us/Account/ORS/Dropout%20and%20Graduation%20Estimates%2001.doc>.
- Rumberger, R.W., Palardy, G.J. (2005). Test scores, dropout rates, and transfer rates as alternative indicators of high school performance. *American Educational Research Journal*, 42(1), 3-42.
- Stephens, R.T., & Theodore, R.J. (1992). Dropping out and its ultimate consequences: A study of dropouts in prison. *Urban Education*, 26(4), 401-422.
- Teachman, J.D., Paasch, K., Carver, K. (1996). Social capital and dropping out of school early. *Journal of Marriage and Family*, 58, 773-783.
- Thornberry, T.P., Moore, M., & Chistensen, R.L. (1985). The effect of dropping out of school on subsequent criminal behavior. *Criminology*, 26, 3-18.