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Junior High School Predictors of High School Dropout, Movement Into Alternative Educational Settings, and High School Graduation: Implications for Dropout Prevention

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In order to develop, implement, and evaluate dropout prevention efforts in junior high schools, school social workers need to be aware of early adolescent predictors of later high school dropout. The present study examines junior high school predictors of high school dropout, movement into alternative educational settings, and high school graduation. A wide range of student, mother, and teacher measures were collected at the end of the school year (spring 1985). Data for 1,781 sixth- and seventh-grade students and their teachers, in addition to a subsample of mothers, were analyzed. High school graduates were found to have higher grades, fewer absences, higher perceptions of their abilities, and lower reports of misconduct and substance use in

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comparison to those who dropped out of school (dropouts) and those who moved into alternative educational settings (drop-alts). Additionally, dropalts had lower self-esteem and higher reported family income in comparison to dropouts. Implications for dropout prevention and intervention efforts, as well as for future research, are presented.

School social workers are in strategic positions to develop, implement, and evaluate dropout prevention efforts in the schools (Allen-Meares, Washington, & Welsh, 1996). However, in order to identify the targets for dropout prevention as early as junior high school, we need to know the early adolescent predictors of later high school dropout. The present study was designed to examine junior high school predictors of high school dropout using a large, longitudinal data set so we may begin to identify areas for dropout prevention efforts during early adolescence.

Approximately 20% of a school cohort will leave school early (Dryfoos, 1990). Studies have found that students who drop out of school are more likely to be unemployed, involved in crime, using mind altering substances, and experiencing health and marital problems when compared to those who graduate (Dryfoos, 1990; Dupper, 1993; McCaul, Donaldson, Coladarci, & Davis, 1992; W. T. Grant Foundation, 1988). As a result of these difficulties, high school dropouts cost the nation significant amounts of money in terms of lost taxes, mental health services, remedial programs, and rehabilitation (W. T. Grant Foundation). Thus, researchers and practitioners have studied many factors associated with dropping out in order to identify those factors that should be the focus of prevention efforts.

Dupper (1993) identified numerous correlates of school dropout in the literature, including low self-esteem, low perceptions of ability, difficulty getting along with teachers, dislike for school, high absenteeism, low parent educational attainment, low parent educational values, low parent educational expectations for their children, high parent punitiveness, and poverty. Unfortunately, few studies have examined whether these factors influence future high school dropouts as early as their junior high school years, a time when students face multiple individual, social, and institutional changes that place them at increased risk for having difficulty at school (Eccles et al., 1993; Wheelock & Dorman, 1988).

This study assesses individual, family, and environmental factors as perceived by students, mothers, and math teachers in order to examine early adolescent risk factors for later high school dropout. Three educational groups are compared: those who graduated from traditional public high schools, those who dropped out of high school completely, and

those who moved into alternative educational settings. We compared those who dropped out of school completely with those who took advantage of alternative resources because of the potential future benefits of remaining in some form of educational setting. Thus, we studied the early protective factors associated with movement into alternative educational settings in order to identify targets of intervention within the group of students who decided to leave school early.

In sum, we hypothesize that high school graduates and those who leave school early will differ in their school-related attitudes and behaviors during early adolescence, with high school graduates demonstrating the most positive attitudes and behaviors. We also predict that family resources such as maternal education and family income, as well as family relations, will differentiate between those who leave school and those who remain. Finally, we believe that mother and teacher assessments of student attitudes, abilities, and characteristics will also relate to students' later educational decisions.

Method

Study Overview

Data were collected as part of a larger study of adolescent development which began in 1983 (Michigan Study of Adolescent Life Transitions). This survey study was designed to examine a wide range of student, parent, and teacher attitudes, beliefs, and behaviors relevant to early adolescence, academic achievement, and the transition to junior high school. The sample was drawn from 10 districts in southeastern Michigan. Approximately 2,200 students and their math teachers completed surveys in the spring of 1985, at the end of the students' sixth-or seventh-grade years. All of the students' parents were invited to participate in the study, and approximately 700 mothers filled out surveys. School record data were collected on all students for the 1985 and 1990 school years.

Sample

The sample comprises primarily European American (90%), working-to middle-class families. Fifty-four percent of the sample is female (n = 962) and 46% of the sample is male (n = 819). Mean age at the time of the 1985 survey was 14 years. Most students were in the seventh grade (90%). Some students were in the sixth grade as a result of mixed-age classrooms during the first wave of data collection (10%). On average.

mothers had taken some college courses or had received some technical training beyond high school. The mean family income reported by the mothers fell in the 30,000-40,000 range. Most were married and living with their partners (78%), 8% were divorced, and 14% were in other marital categories. All of the students' math teachers participated.

Measures

Dependent Variable Students were grouped into three educational categories based on 1990 school records. Data from a subsequent survey were used to determine unclear educational status. In cases where educational status was unclear from the record or the survey data, we attempted to contact the participant to get a schooling history. After contacting such participants, we placed them in the appropriate groups based on their reported status as of the summer of 1990. These groups were identified as follows: dropouts (n = 125; 7%)—students who left school because they were experiencing mental health problems, did not attend class, were working, were pregnant, attained legal age and decided to quit, joined the military, were expelled for disciplinary reasons. got married, ran away from home, entered drug rehabilitation, or were experiencing family problems; drop-alts (n = 74; 4%)—students who moved into an alternative education program, an adult education program, or a military school or religious academy, and students who transferred to a delinquent program or completed a GED as of summer 1990: and high school graduates (n = 1.582; 89%)—students who received a high school diploma or were on track for high school graduation at the time of data collection in 1990. Students who moved or left school and could not be placed into the above categories were excluded from the present analyses (n = 469).

Independent Variables Measures were created based on factor analyses and on a priori conceptualizations of theoretical constructs. A Cronbach's alpha was calculated for scales that contained more than one item. Alphas ranged from .53 to .90 with an average alpha of .81. A more detailed description of the scales is available by contacting the first author.

Student Measures Students were asked to respond to a number of Likert scale items designed to assess their perceptions, beliefs, and behaviors across multiple domains. These included attitudes toward school; perceptions of academic, social, and sports abilities; perceptions of the

importance of academics, sports, and social activities; educational expectations; anxiety; self-esteem; depression; participation in deviant activities; school aggression and misbehavior; time spent on academics, on sports, and with friends; involvement in group activities; perceptions of parental strictness; and perceptions of friends' influence. In addition, record data information including academic marks in math and English and number of absences were also assessed.

Maternal Measures Mothers were asked to respond to a number of Likert scale items designed to assess their perceptions of their child's attitudes toward school; their perceptions of their child's academic, sports, and social abilities; the values they held for their child; their educational expectations for their child; their school involvement and satisfaction; their reported family income; and their level of education.

Teacher Measures Math teachers were asked to rate each student on persistence, need for discipline, fighting, social interests, absences, adjustment to junior high school, and how well the teacher knew the student.

Results

Four separate MANOVAs were run on record data, student measures, maternal measures, and teacher measures, respectively. Overall F values for each MANOVA were significant at p < .001, indicating that the groups differed significantly on the independent predictors while taking into account the interrelations among the predictors. This reduces the likelihood of Type I error. Because of the large sample size, only variables with univariate F values significant at the p < .01 level were further examined to determine which subgroups differed significantly from each other. Group differences at the p < .05 level were examined as a result of reduced sample sizes for these post hoc analyses. Results are reported in Tables 1 through 3.

The majority of the mean-level differences on student, mother, and teacher measures existed between the high school graduates and members of both of the drop groups. In comparison to the high school graduates, the dropouts and drop-alts had more absences (p < .01), lower math and English grades (p < .01), lower self-perceptions of academic ability (p < .01), lower educational expectations (p < .01), lower academic values (p < .01), more dislike for school (p < .01), higher public anxiety (p < .05), higher test anxiety (p < .05), higher reports of

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Table 1 Means and Standard Deviations for Student Measures by **Educational Status**

Measures (scale points)	Graduates (SD)	Dropouts (SD)	Drop-alts	· F
	(30)	ושני	(SD)	(p-value)
School records				
Absences (days)	6.97	13.51	12.44	46.55
	(6.52)	(9.63)	(10.27)	***(000.)
Math grades (16)	10.76	7.59	8.56	53.76
	(2.99)	(3.21)	(4.22)	(.000)***
English grades (16)	10.52	7.66	8.35	49.94
	(2.88)	(3.06)	(3.55)	***(000.)
School				
Like school (7)	5.12	4.68	4.48	7.70
zac serioor (/)	(1.63)	(1.78)	(1.31)	(.000)***
Reasons for coming (7)	4.18	3.84	4.18	2.95
Reasons for coming (7)	(1.48)			
Desiding described durable and (4)	, ,	(1.51)	(1.38)	(.053)
Positive teacher treatment (4)		2.90	2.94	0.06
	(0.89)	(0.85)	(0.76)	(.946)
Safety worries (5)	1.83	1.88	1.75	0.65
	(0.92)	(1.05)	(0.78)	(.520)
Self-concept				
Academics (7)	5.03	4.31	4.36	37.02
	(0.99)	(1.05)	(1.12)	***(000.)
Making friends (7)	4.86	4.89	4.73	0.15
	(1.24)	(1,28)	(1.08)	(.860)
Looks (7)	4.45	4.44	4.17	0.51
,	(1.33)	(1.29)	(1.32)	(.602)
Sports (7)	4.97	5.08	4.73	0.41
3porta (77	(1.45)	(1.43)	(1.43)	(.663)
	(*******	,,	(1.15)	(.000)
Values	E 25	4.00	4.05	4.5.4
Academics (7)	5.25	4.98	4.95	4.84
E. (7)	(1.07)	(1.12)	(1.15)	**(800.)
Sports (7)	5.38	5.18	5.37	0.89
	(1.61)	(1.79)	(1.67)	(.410)
Social (7)	5.65	5.49	5.53	1.89
	(1.03)	(1.14)	(1.04)	(.151)
ducational expectations				
Attend 4-year college (4)	3.19	2.70	2.93	22.80
, in the contract (i)	(0.80)	(0.95)	(0.78)	(.000)***
A . 13 5et	. ,	V= := = 2	\ - /	()
Mental health				
Public anxiety (4)	2.16	2.33	2.39	5.10
·	(0.85)	(88.0)	(0.82)	(.006)**

Table 1 Means and Standard Deviations for Student Measures by Educational Status (continued)

Measures (scale points)	Graduates (SD)	Dropouts (SD)	Drop-alts (SD)	<i>F</i> (ρ-value)
Test anxiety (7)	2.68	2.96	2.95	5.29
iest anxiety (7)	(1.39)	(1.36)	(0.39)	(.005)**
Social anxiety (4)	2.89	3.00	2.94	1.73
	(0.68)	(0.71)	(0.73)	(.178)
Self-esteem (4)	2.87	2.85	2.63	7.77
	(0.63)	(0.63)	(0.72)	(.000)***
Depressive symptoms (7)	2.67	2.84	2.74	3.79
	(0.89)	(1.04)	(0.92)	(.023)
	(0.09)	(1.04)	(0.92)	(.025)
Behavior				
Smoking and drug use (5)	1.20	1.67	1.63	43.06
	(0.59)	(1.11)	(1.02)	(.000)***
Student misbehavior (13)	0.86	1.77	1.75	34.23
	(1.57)	(2.05)	(2.31)	(.000)***
School aggression (13)	3,06	3.84	4.06	8.41
	(3.33)	(3.58)	(3.77)	(.000)***
Time use				
Academics (4)	2.18	2.14	2.31	0.65
Academics (4)	(0.74)	(0.73)	(0.86)	(.523)
Sports (4)	3.19	3.22	3.38	0.83
5p010 (4)	(1.06)	(1.04)	(0.85)	(.437)
Friends (5)	2.09	1.75	1.74	7.27
Therias (5)	(1.22)	(1.17)	(1.04)	(.000)***
Group involvement (6)	1.91	1.81	1.69	0.68
Group involvement (o)	(1.47)	(1.60)	(1.6)	(.504)
• •	(1.47)	(1.00)	(1.0)	(.504)
Family				
Strict parents (4)	2.06	2.17	2.19	7.00
	(0.58)	(0.67)	(0.60)	(.001)***
Strict curfew (7)	5.34	4.89	5.00	7.16
	(1.34)	(1.53)	(1.61)	(.001)***
Desire to run away (5)	1.86	2.12	2.43	13.04
	(1.19)	(1.40)	(1.21)	(.000)***
- riends				
Negative influence (7)	2.98	3.28	3.52	8.12
regarite illianice (//	(1.24)	(1.45)	(1.27)	(.000)***
	(1.4.4)	(1.40)	(1.47)	(.000)

Note: Sample sizes for school record data were as follows: graduates, n = 815; dropouts, n = 96; drop-alts, n = 48. Sample sizes for the rest of the student data were as follows: graduates, n = 1,582; dropouts, n = 125; drop-alts, n = 74. ** $p \le .01$; *** $p \le .001$

Table 2 Means and Standard Deviations for Maternal Measures by Educational Status

Measures (scale points)	Graduates (SD)	Dropouts (SD)	Drop-alts (SD)	F (p-value)
Demographics				
Family income (5)	3.88	2.92	3.57	7.98
	(1.22)	(1.19)	(1.38)	(.000)***
Maternal educational level (9)	4.11	3.20	4.04	4.40
	(1.52)	(1.23)	(1.19)	(.013)
School .				
Satisfaction with school (7)	4.76	4.96	4.39	0.84
	(1.54)	(2.01)	(1.83)	(.432)
Involvement in school (4)	1.86	1.84	1.61	0.64
	(1.03)	(1.14)	(0.84)	(.526)
Parenting				
Strictness (4)	2.52	2.52	2.48	0.05
	(0.62)	(0.59)	(0.67)	(.947)
Perceptions of child's ability				
Academics (7)	5.38	4.67	4.48	12.52
	(1.06)	(1.28)	(1.10)	(.000)***
Sports (7)	4.70	4.96	4.70	0.40
	(1.44)	(1.84)	(1.26)	(.668)
Making friends (7)	5.21	5.22	5.39	0.28
	(1.13)	(1.32)	(1.06)	(.758)
Values for child				
Academics (7)	6.11	5.96	6.07	0.46
(, ,	(0.80)	(0.98)	(0.77)	(.632)
Sports (7)	3.70	4.00	3.91	0.71
	(1.50)	(1.23)	(1.41)	(.493)
Involved with opposite sex (7)		3.01	3.80	3.85
involved with opposite sex (7)	(1.15)	(1.25)	(1.27)	(.022)
Educational expectations				
Attend 4-year college (4)	3.06	2.56	2.70	6.33
y y- (-)	(0.82)	(0.92)	(0.82)	(.002)**
Perception of child's attitudes				
Child turned off to school (7)	2.59	3.68	3.70	10.41
	(1.58)	(1.93)	(2.01)	(.000)***

Note: Sample sizes were as follows: graduates, n = 640; dropouts, n = 25; drop-alts, n = 23. **p < .01; ***p < .01

Table 3 Means and Standard Deviations for Teacher Measures by Educational Status

Measures (scale points)	Graduates (SD)	Dropouts (SD)	Drop-alts (SD)	·
Know student well (7)	4.83	4.78	4.78	0.21
	(1.12)	(1.13)	(1.14)	(.807)
Student's adjustment to junior high (7)	5.13	4.18	4.60	45.08
	(1.23)	(1.32)	(1.38)	(.000)***
Social interests interfere (7)	3.53	4.71	4.26	35.15
	(1.79)	(1.77)	(1.83)	(.000)***
Absences interfere (7)	2.11	3.17	2.78	40.50
	(1.43)	(2.06)	(1.65)	(.000)***
Student gives up easily (3)	1.79	2.18	2.01	37.03
	(0.56)	(0.59)	(0.63)	(.000)***
Student is not disciplined (4)	3.64	3.08	3.31	50.75
	(0.65)	(1.00)	(0.90)	(.000)***
Student gets into fights (3)	1.32	1.70	1.52	51.80
	(0.44)	(0.62)	(0.58)	(.000)***

Note: Sample sizes were as follows: graduates, n = 1,633; dropouts, n = 148; drop-alts, n = 91. **p < .01; ***p < .001

smoking and drug use (p < .01), higher reports of misbehavior at school (p < .01), higher reports of aggressive behavior at school (p < .01), higher perceptions of friends' negative influence (p < .01), and more desire to run away from home (p < .01). In addition, drop-alts indicated that they spent the most time with their friends (p < .05) and that their parents were the strictest (p < .01) of the three groups. Dropouts had the most lenient curfew (p < .05) of the three groups. Both dropouts and high school graduates reported higher levels of self-esteem (p < .01) in comparison to drop-alts.

Mothers of early adolescents who ended up leaving school early were more likely to describe their adolescents as "turned off" to school (p < .01), had lower perceptions of their adolescents' academic abilities (p < .01), and held lower educational expectations for their adolescents (p < .01), p < .05). In addition, mothers of dropouts reported significantly lower family incomes than mothers of students who graduated from high school (p < .01) and mothers of students who moved into alternative educational settings (p < .05).

Junior high school math teachers reported that dropouts and dropalts had higher levels of maladjustment to junior high school (p < .01),

tended to give up more easily (p < .01), let social interests interfere with schooling (p < .01), had absences that interfered with school (p < .01), were more likely to be disciplined (p < .01), and were more likely to be caught fighting in school (p < .01) in comparison to those who stayed in school until graduation. In addition, teachers of students who dropped out completely reported more maladjustment to junior high (p < .05) and more fighting in school (p < .05) in comparison to drop-alts.

Discussion

In order to design effective dropout prevention efforts during junior high school, school social workers need to be aware of the early adolescent predictors of later high school dropout. This study explored the mean-level differences between high school graduates, those who leave school completely (dropouts), and those who move into alternative educational settings (drop-alts). In general, by early adolescence students who later leave their high schools evidence a broad array of behavioral and attitudinal signs that are indicative of school and family struggles. According to the adolescents, their mothers, and their teachers, those who leave school early are not as successful at or engaged in learning, have more negative attitudes and affective experiences in relation to school, and are more likely to be involved with negative peer groups and in deviant activities. In addition, their families are more likely to be struggling in terms of their relationships and their finances. These findings suggest that a multifaceted approach to dropout prevention aimed at school performance and attitudes, anxiety, deviant activities, peer groups, and family relations and resources is a beginning point for the development of dropout prevention efforts in junior high school settings.

The grades and attendance results indicate that programs designed to increase student performance and attendance in educational settings are warranted. Both Caliste (1984) and Charney (1993) describe individual and group approaches to increasing student performance and attendance that have shown modest effectiveness.

Early adolescents who end up leaving school early also differ from high school graduates in terms of their lower academic values, dislike for school, lack of persistence on school tasks, lower educational expectations, and lower perceptions of academic ability. The mothers of these adolescents corroborate these findings, as reflected by their lower ratings of their adolescents' academic abilities, and their lower educational expectations for their children, in comparison to mothers of high school

graduates. Although school achievement strongly affects these attitudes, it has also been found that significant others such as parents and teachers shape adolescents' values, expectations, and perceptions of abilities, even when previous school performance is controlled for (Eccles, Adler, & Kaczala, 1982; Eccles, Kaczala, & Meece, 1982). Thus, school social workers may play a role in encouraging students, parents, and teachers to examine their beliefs and values in order to clarify the multiple influences on such views. Doing so in early adolescence may help to interrupt the process of school disengagement before such beliefs become more internalized and further embedded within a broader identity.

Those who leave school early report significantly more anxiety about test taking and public speaking than high school graduates. We know little about how to assist students with high test-taking and public-speaking anxiety within the school setting. Social workers in junior high school settings can be instrumental in identifying youth whose anxiety levels may be interfering with normative school tasks. Helping these students cope with their anxiety, as well as working with teachers to help them understand the students' difficulties, may contribute to a more comfortable learning environment that reduces anxiety and enhances school achievement.

Many in-service programs in the schools are devoted to esteem-building activities with the goal of increasing student engagement. Yet our findings suggest that this relationship is complex, and that perhaps it is not as salient as it is often thought to be. For instance, high school graduates and those who leave school completely report similar levels of self-worth in early adolescence. This finding may be indicative of dropouts' use of domains such as social relations and deviant activities as alternative sources of self-worth as early as junior high school. Thus, a challenge for school social workers and staff is re-engaging students who become emotionally distant from and uninterested in academic performance and learning, as opposed to increasing general self-esteem.

Students who chose alternative educational settings have significantly lower levels of self-esteem in comparison to both high school graduates and dropouts. It is possible that students who use alternative education have a unique set of early adolescent family or social experiences that we have yet to uncover. It should be noted that in the present study, both the dropout and drop-alt groups include a diverse set of students. Therefore, future research should examine differences between various subgroups of dropouts and those who choose alternative education options in order to refine our understanding of these groups and develop appropriate interventions.

The relation of deviant activities and perceived negative peer influence to school dropout illustrates the need for school social workers to identify students engaged in problematic within-school and out-of-school behaviors earlier, and to directly intervene in such behaviors. This may include within-school and out-of-school substance abuse programs, conflict and anger management programs, and alternatives to suspension. School social workers must keep in mind that participation in deviant activities and conflict within the school environment may reflect the emergence of a youth's social identity based on rejection of conventional norms (MacLeod, 1987; Willis, 1977). These students tend to gravitate toward peers engaged in similar behaviors and begin to build a strong social identity that stands in contrast to those who accept and are rewarded by conventional school norms. Therefore, school social workers must challenge themselves to be allies of youth that reject and are rejected by the conventional school system.

Both dropouts and drop-alts report wanting to run away more than graduates, reflecting a general undercurrent of family difficulties for these early adolescents. Drop-alts felt their parents were more strict than students who later graduated, which may reflect the parents' need to control these adolescents. Alternatively, these parents may have a stricter, authoritarian parenting style that contributes to rebellion in the early adolescent (Steinberg, 1990). Dropouts had more lenient curfews in comparison to early adolescents who graduated from high school, which may reflect a more lenient, permissive parenting style that is mismatched with the early adolescents' need for limit setting (Steinberg, 1990). School social workers can fulfill multiple functions in relation to these family issues. They may serve as primary interpreters of students' family situations to school staff, provide in-school opportunities for students to talk about family issues and provide guidance in their learning to cope, provide opportunities for in-school involvement and success, hold parenting workshops, and make relevant referrals to local agencies or therapists.

The results indicate that sixth- and seventh-grade teachers possess the ability to identify students who are at risk for dropping out. This is significant considering that only math teachers were involved in the present study. Therefore, an efficient way for school social workers to identify junior high school students at risk for later school dropout is the use of teachers' assessments of students' persistence, adjustment, and behaviors in school. However, we also need to examine further the roles that teachers' expectations and perceptions of the students play in influencing student outcomes. In particular, school social workers need to know

more about the teaching and classroom practices that are effective or detrimental for at-risk students so they may encourage and support positive classroom environments.

In comparison to dropouts, drop-alts have mothers who report more family income, suggesting that financial resources serve as a protective factor when students experience school difficulties. Therefore, school social workers may be more important in facilitating movement into an alternative educational environment for students whose families are struggling financially.

In sum, the present study identifies many early adolescent predictors of later high school dropout. School social workers should become involved in dropout prevention efforts if they exist, but they should also work to create such programs if they are presently absent from their junior high school setting. Although the present study examined critical junior high school predictors of high school dropout that provide a basis for dropout prevention efforts in the middle grades, it should be cautioned that this study did not examine critical individual differences such as gender and race in relation to school dropout, or important environmental factors, such as school climate and policies, that contribute to early school dropout. Future research needs to examine such factors in order to refine dropout prevention approaches. Finally, the effectiveness of dropout prevention and intervention efforts during early adolescence needs to be documented, and school social workers should be involved in evaluating such initiatives.

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A Reachable Goal: An Attendance Program That Works for School Social Workers With Too Little Time and Too Much to Do

Marion Huxtable

The article describes an attendance program designed to improve the attendance of elementary school students who missed 20 or more days during the previous school year. The program uses little time and can be carried out by a school social worker or social work intern. The program uses positive reinforcement. The average improvement in attendance of the students in the program was highly significant and the program has been reproduced by different workers at different schools.

More than a decade of educational reform has brought assorted changes to public education, yet schools across the country are still bedeviled by declining reading and math test scores. School reform has largely followed the recommendations given to the Secretary of Education in 1983 in the report "A Nation at Risk" (National Commission on Excellence in Education). The report's recommendations on curricula, standards, teaching practices, and reorganization have produced an array of changes such as the resurgence of phonics, the institution of testing requirements in most states, the growth of charter schools, and the collapse of bilingual education. The one recommendation that has received

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