How Did Successful High Schools Improve Their Graduation Rates?

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Abstract: *The researchers surveyed 23 North Carolina high schools that had markedly improved their graduation rates over the past five years. The administrators reported on the dropout prevention practices and programs to which they attributed their improved graduation rates. The majority of schools reported policy changes, especially with suspension. The main interventions that showed positive impact were improvements in academic support, school/classroom climate, and transition from middle to high school. School districts did support their schools, but only 61% gave additional financial support. Several school administrators reported success of specific programs, teachers having engaging lessons and high expectations, close monitoring of students, giving students more chances to succeed, and improved individual/family support as contributors to their improved graduation rates.*

Four-year-cohort graduation rates in North Carolina school districts (North Carolina Department of Public Instruction [NCDPI], 2012a) range from a high of 91.7% for students in Elkin City Schools to a low of 21.4% for students in Scotland County Schools. The variability of four-year-cohort graduation rates increases when one examines school level data. Several schools have graduation rates of 100%, but unfortunately the rates do go as low as 21.4 % for one school (NCDPI, 2012a). One of the goals of the Race to the Top Grant awarded to North Carolina (NCDPI, 2010) was to increase the graduation rate from 71.5% in 2010 to 86% by 2017. North Carolina has been successful in increasing the overall graduation rate of the state since 2006 to the current 77.9% (NCDPI, 2012b).

Several schools have increased their graduation rates markedly over recent years. Given the priority on increasing school graduation rates, our study asked the following questions: How did schools that markedly improved their graduation rates accomplish their success? Additionally, what can we learn from these schools about the process of school improvement?

Literature Review

Increasing the high school graduation rate is a top priority for education both locally (Yeboah, Faulkner, & Appiah-Danquah, 2010) and nationally (Bridgeland, Balfanz, Moore, & Friant; 2010; Editorial Projects in Education Research Center, 2010; Heckman & LaFontaine, 2010). Dropping out of school is not only a personal issue for the student but is also a social and economic issue for communities (Bridgeland et al., 2010; Yeboah et al., 2010). The relationship between poverty and dropping out of school has been long established (American Psychological Association, 2012). The following list was adapted from the American Psychological Association to illustrate the economic impact of dropping out and increased likelihood of poverty:

- Approximately 12 million students are predicted to drop out over the next decade or so, costing the U.S. about $3 trillion.
- In 2009, the average annual income for a high school dropout was $19,540, compared to $27,380 for a high school graduate.
- The national unemployment rate as of January 2012 is 8.3%. For individuals without a high school diploma it is 13.1%, compared to 8.4% for high school and 4.2% for college graduates.

While increasing graduation rates is currently a national and state priority, this has not always been the case. For example, although North Carolina's ABC's school reform and accountability model was introduced in 1996-97, it was not until 2006 that the requirement to calculate graduation rates, and to hold schools accountable for their graduation rate, was introduced. Prior to 2006, a primary focus of North Carolina's ABC's was raising standards, including raising requirements for graduation, which likely contributed to an increase in the dropout rate. As Rothstein (2002, p. B8) noted in his article, "Dropout Rate Is Climbing and Likely To Go Higher,"

> With so much attention paid to test scores, an equally important gauge of school performance has mostly been overlooked. High school dropout rates seem to have jumped. . . . changes in dropout rates attract little notice, partly because they are difficult to calculate.

North Carolina, along with many other states, previously calculated dropouts on an annual basis—the difference in number of students who started and finished the school year. Consequently, reports of a 5% annual dropout rate did not provoke nearly the same level of concern as a 20% 4-year-cohort dropout rate.

Bloom (2010, p. 89), in his review of dropout prevention policies and programs, stated that

> Because of the high individual and social costs of ignoring high school dropouts, the arguments for investing more public funds in services, systems, and research for young people is strong. The paucity of conclusive evidence, however, makes it hard to know how to direct resources.

The National Dropout Prevention Center (NDPC) identifies 15 evidence–based, effective strategies for dropout prevention (NDPC, 2012). However, as Bullmaster (2005) noted in an examination of districtwide high school reform, "How change is put into effect determines how well it fares—the right reforms wrongly implemented will not accomplish intended goals" (p.11). Further, Shore (2003) cautions that "The same remedy will not work in every community . . . to be effective, programs and policies need to identify and address local conditions" (p. 4). Rumberger (2011) after thoroughly reviewing the literature on dropping out of school also recommended that implementation of dropout prevention strategies must be conducted at the district level, taking into consideration capacity, appropriate strategies, technical assistance, and sufficient time to adequately measure student outcomes. In conclusion, while evidence-based, effective strategies exist, the implementation of strategies and local factors need to be taken into consideration.

Heightened interest in reducing dropout rates has also led to expressions of caution. Rumberger (2011) lists several federal grants and media programs that have focused on the dropout crisis in the country. At the same time he cautions not to overgeneralize the findings. Even though students who drop out of school who are from low socioeconomic means generally have poor prognosis of future success, there are multiple examples of individuals who have dropped out of school and have gone on to be highly successful.

Additionally, there are debates over how the numbers of dropouts are calculated. In one diagram in his book, *Dropping Out,* Rumberger demonstrates eight different ways a single cohort of students could have their graduation rate calculated. Depending on which data one includes, the same group of students had graduation rates ranging from 66% to 76% (Rumberger, 2011, p. 71). Increasing the complexity of determining graduation rates, students who graduate with a GED (General Education Development) test are not counted as graduating even though they often can go on to employment or postsecondary opportunities at a higher rate than students who drop out without receiving any diploma (Rumberger, 2011).

Finally, the general literature on school reform offers insights on the process of change and particularly the relationship between educational research and practice. Burney's (2004) analysis of the obstacles to transforming schools states: "To be sure, educational research has produced a rich body of knowledge, but it is shared only haphazardly among teachers . . . Teachers have come to regard autonomy and creativity—not rigorous shared knowledge—as the badge of professionalism" (p. 526-528). At the same time, Burney (2004) argues that teachers possess important "craft knowledge" but "this knowledge is largely hidden because there are no institutional arrangements for codifying, legitimating and sharing it. Teachers have little sense of belonging to a professional community" (p. 527). Burney goes on to say that "only by recognizing and using both sources of knowledge [research and craft] can educators truly transform our schools and turn teaching into a true profession" (p. 526).

Method

We examined high school graduation rates in North Carolina, comparing the 2006 graduation rate with the 2010 graduation rate for each high school. Schools with less than 100 students were excluded. The top 50 high schools that showed the most improvement were sent a link to an online survey. The participants were the identified administrators who were the most responsible for dropout prevention at 23 schools, demonstrating a 46% return rate. The schools and their graduation rates are listed in Table 1. The increases in schools' graduation rates ranged from 16.7% to 31.3%.

The participants responded to an online survey that was developed by the researchers. Questions were included that addressed the risk factors and best practices as identified by the National Dropout Prevention Center (2012; Hammond, Linton, Smink, & Drew, 2007). A main topic of interest was whether schools had implemented changes that affected the whole school or whether the changes were targeted specifically to students at risk of dropping out. We were also interested in the schools' policy changes and interventions that the administrators credited with making the most impact on improving the schools' graduation rates. The role of school districts in relation to the changes implemented by individual schools was also examined.

Results

Participants

Twenty-three school leaders responded out of the 50 requests providing a response rate of 46%, which is above the average online survey response rate of 32% (Hamilton, 2003). This response rate is considered an adequate response rate for online surveys (Nulty, 2008). The 23 school leaders were identified as the persons most knowledgeable about dropout prevention at their schools. The participants consisted of 14 principals, three assistant principals, three dropout prevention coordinators, one guidance counselor, one head of student services, and one student support specialist. See Table 1 for a listing of the 23 schools.

Policies

In response to the question of whether the school implemented policy changes that affected the whole school or just students at risk, 70% of the schools reported having policy changes that impacted their whole school and 96% stated they had policy changes that impacted at-risk students. School leaders were asked to identify which changes in school policy had the largest impact on their school's improved graduation rate. The school policies addressed included tardies, late work, and suspensions. Changes in suspension policies received the largest support with 66% school leaders in agreement (see Figure 1).

When school leaders were asked to describe policies that impacted their students' graduation, they listed the following (18 schools commenting, some schools made more than one comment):

Table 1

North Carolina High Schools With Large Graduation Rate Improvements

Name	4yr % 2006	4yr % 2010	Difference 2006-2010
Manteo	61.0	92.3	31.3
Northeastern	53.8	82.8	29.0
Northampton High West STEM	65.9	93.9	28.0
Swansboro	62.8	86.9	24.1
Southside	58.3	82.1	23.8
Southern Vance	45.7	68.9	23.2
Ben L. Smith	57.0	80.1	23.1
Mooresville Senior	64.0	86.0	22.0
Jacksonville	65.6	87.1	21.5
White Oak	64.5	85.5	21.0
Northern Vance	51.1	71.5	20.4
Shelby	58.8	79.1	20.3
Polk County	65.9	86.0	20.1
Northside (1)	61.1	80.3	19.2
Franklin	62.4	81.1	18.7
Bunn	61.9	80.6	18.7
Westover	59.7	78.2	18.5
South Brunswick	62.2	80.0	17.8
Richlands	70.8	88.5	17.7
Northside (2)	67.5	85.0	17.5
Statesville	68.0	84.8	16.8
Northern Nash	58.5	75.2	16.7
Northhampton East	58.3	75.0	16.7

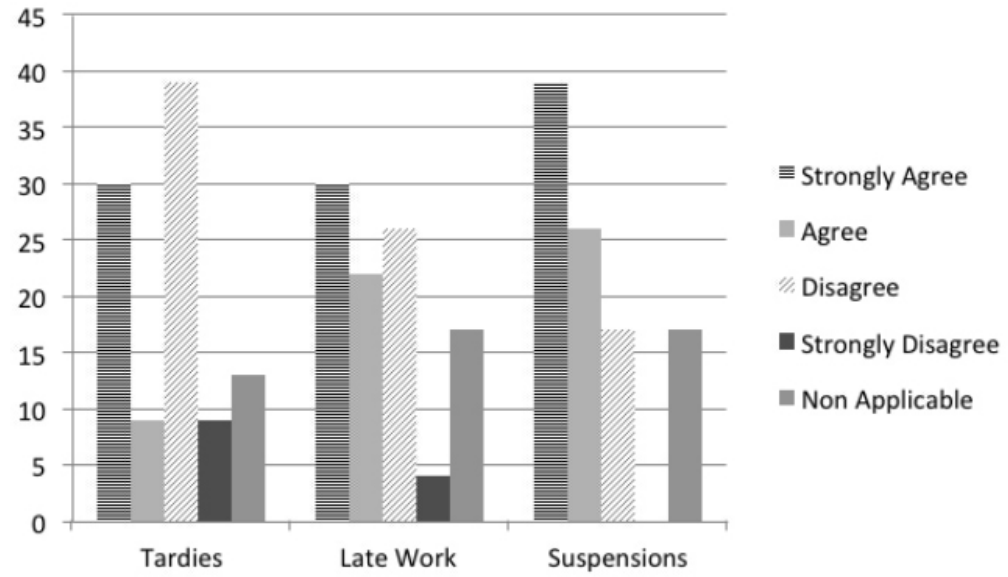

Figure 1. Administrators' (*n* = 23) perceptions of impact of policy changes on graduation rates.

- Attendance and tardy changed/enforced/monitored (33% of schools).
- Special programs (e.g., AVID, Mentoring, Freshman Academy; 33% of schools).
- Credit recovery (online; 44% of schools).
- In-school suspension (e.g., at a church or on Saturdays; 33% of schools).
- No failure/all work made up/late work (11% of schools).
- Graduation coach/family meetings (11% of schools).
- 20-21 credits option (22% of schools).
- Caring staff, caring school culture (11% of schools).

Policy changes were important, but since the beginning policies varied from school to school, the changes were also tailored to the school and student population.

Student Characteristics

When asked to identify student characteristics targeted through school initiatives, the top two, receiving 100% support, were low achievement and poor attendance. The next two, receiving 90% support, were student misbehavior and students who are retained. Students with low school commitment, low education expectations, and early parenting also figured prominently. These priorities are very similar to national trends (see Figure 2; NDPC, 2012).

Evidence-Based Interventions

Many of the evidence-based interventions identified by the National Dropout Prevention Center (2012; Hammond et al., 2007) were used by the 23 schools as reported by the administrators.

The interventions that were implemented for all students were as follows: School/Classroom Environment (91%), Academic Support (87%), Transition From Middle to High School (83%), Afterschool Programs (80%), Behavioral Interventions (71%), and Mentoring (50%). For at-risk students, the four highest scoring interventions implemented were Mentoring (50%), Pregnancy Prevention (46%), Family Engagement (25%), and Life Skills Development (25%; see Figure 3).

When the school leaders were asked, "Identify the four strategies that were most significant in improving your school's dropout rate," the results were somewhat different. In this case the most effective interventions were: Academic Support (91%), School/Class Environment (61%), Transition From Middle to High School (61%); Behavioral Interventions (48%), Afterschool Programs (48%), Family Engagement (43%) and Mentoring (30%; see Figure 4).

However, when asked whether selection of an evidence- or research-based model was a significant factor in improving the school's graduation rate, only 56% agreed. The respondents identified additional interventions that worked at their particular schools (eight schools commenting, some schools made more than one comment):

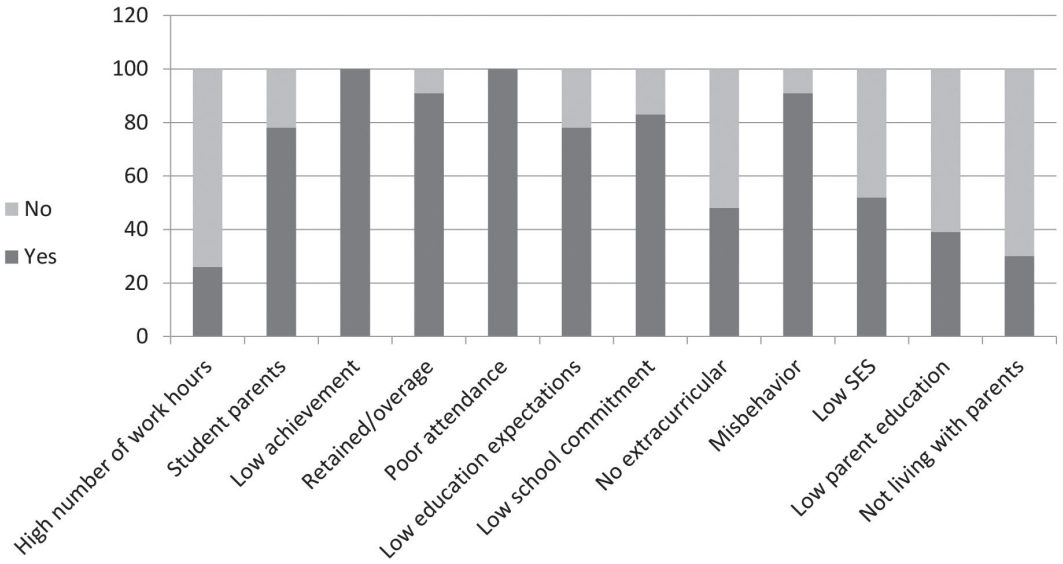

Figure 2. Characteristics of students at risk of dropping out of school targeted through school initiatives (n = 23).

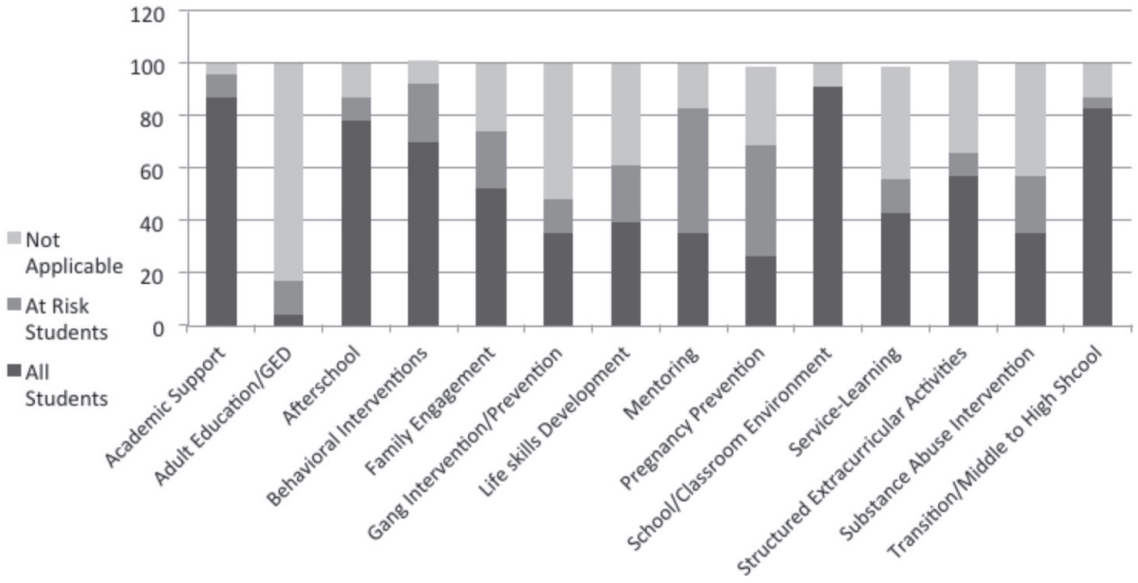

Figure 3. Interventions used to increase graduation rates (n = 23).

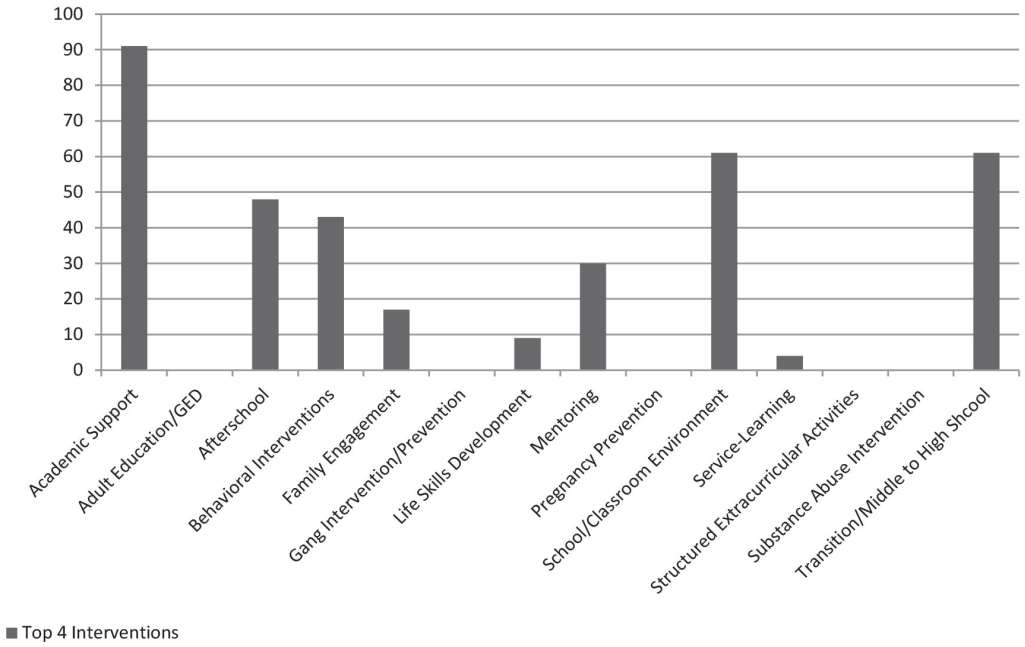

Figure 4. Top four interventions for dropout prevention (n = 23).

- peer and adult tutors, during and after school,
- response to intervention (RTI),
- small learning communities,
- student-led professional learning communities,
- individualized wraparound services,
- freshman academy,
- online instruction/credit recovery,
- college preparatory program, and
- grant-funded partnership with the YMCA.

School District Role

Respondents were asked about the role that the school district played in the changes the school had implemented. Only 30% of the respondents stated that the district led their dropout prevention efforts. Though 96% said they had district support for their initiatives, only 61% reported that this support included financial support. The schools described the following as their district support (18 schools commenting, some schools made more than one comment):

- 20-21 credit/computer programs (28% of schools),
- afterschool tutoring and transportation (22% of schools), and
- additional personnel (e.g., graduation coaches, student assistance program coordinators, social workers; 17% of schools).

Other district support mentioned by individual school administrators included professional development (RTI training), laptop computers, special programs, celebrations, general funds, mentoring, alternative schools, district resources/contacts, and district collaboration.

Instruction

The school leaders were asked if there were changes made to the curriculum to make it more relevant to students. Fifty-two percent of the schools reported making the curriculum more relevant to students. When asked if the school districts were hiring more interesting teachers, 78% reported increased efforts to hire more interesting teachers.

Overall

The final open-ended question asked the school leaders to describe how they had improved their schools' graduation rates. Twenty-two of the 23 schools responded, and several mentioned more than one way they had improved their school graduation rate. The following is a compilation of the responses.

1. Special programs were implemented in 26% of the schools. The programs were all different from each other and included a tutoring program, a literacy program, a freshman academy, a mentoring program, a college preparatory program, and a life skills program.
2. School culture of "high expectations" was pointed out by 22% of the schools, including one comment about having a "calm" atmosphere.

3. Teachers were mentioned by 22% of the school leaders and were described as caring, having engaging lessons, having high expectations, and being "smart with a heart."
4. Monitoring students and following up on attendance, achievement, and behavior was identified by 17% of the school leaders.
5. Working with students as individuals including their families was mentioned by 13% of the school leaders.
6. Giving students many chances to succeed was stated by 9% of the school leaders.
7. Additionally, individual school leaders also mentioned reducing credits for graduation and reducing suspensions.

Discussion

The schools selected in this study had all made significant improvements to their graduation rates ranging from 16.7% to 31.3% increase over a four-year period. There were common initiatives across many of the schools that administrators had implemented to increase their graduation rates. Examples of these included policy changes with regard to tardies, late work, and/or suspensions. In addition, 73% of schools indicated that they had made changes in dropout prevention policies that affected all students. However, there was a distinction between schools that primarily focused on relatively easy changes, most directly tied to reducing the dropout rate, and schools that engaged in more significant changes, affecting the structure or culture of the whole school. Examples of the former included changes in policy to reduce out-of-school suspensions, a reduced 20-21 credit hour graduation option for at-risk students, the hiring of a graduation coach, the use of Nova Net and credit recovery to allow students who had failed a course to repeat it online, and providing buses to enable afterschool tutoring.

More significant changes, typically affecting the whole school, were implemented in a small number of high schools. These changes included creating small learning communities, changing the culture of the school to be more student-centered and caring, the creation of an advisory for all students, and a freshman academy. However, most of the schools that implemented more significant changes also included changes specifically geared to reducing the dropout rate. Further, some of the schools that were primarily implementing changes focused on the dropout rate were also involved in other initiatives. For example, one school described having staff development for teachers "to create engaging lessons," and another school mentioned "hiring teachers who are smart with a heart."

The authors were interested to see which programs the administrators believed were the most effective. By listing the four most significant programs, we could see the administrators' choices often matched the interventions used for the whole school such as School/Classroom Environment, Academic Support, Transition from Middle to High School and Behavioral Interventions. But there was one major difference of note. Academic Support was a strategy used by 87% of the schools, but it was chosen as one of the top four interventions 91% of the time. School/Classroom Environment and Transition from Middle to High School were also nominated more than 61% of the time. All others were selected less than 50%.

The top interventions were implemented in a variety of ways. Academic Support, which was by far the top intervention, included tutoring, literacy programs, freshman academies, and college preparatory programs. Some academic support programs included study skills and other academic resiliency skills. The other well-rated interventions (61%) included School/Classroom Environment and Transition from Middle to High School. These interventions comprised of life skills curriculums, working with individual students and families, mentoring programs and credit reduction programs. It was mentioned that the schools often made changes that cannot be attributed to a specific program. These changes included high expectations, engaging instruction and a calm atmosphere, which may have been the results of policy changes such as giving students extra chances. Overall, any major school changes involved a lot of dedication and hard work by individuals in the schools who work with students.

As stated earlier, improvement of graduation rates was a local, state, and national priority: It would be difficult to find a high school that did not have a goal of increasing graduation rates. In 2011, North Carolina introduced a new high school accountability model in which graduation rate was one of four measures on which high schools are evaluated. This led to an expansion of credit recovery programs to help students who had dropped out of traditional high school make up their missing credits and still graduate. The credit recovery programs in North Carolina, which are often delivered online, required 20-21 credits (as required by the state) whereas many local districts have higher credit requirements, more in the 27-28 credit range. There was concern that credit recovery programs whether online or delivered in other formats may not be as rigorous as traditional high school classes (Center for Public Education, 2012). The study revealed that a main response widely held among administrators as to reasons for increasing graduation rates included changes in policies regarding suspensions, tardies, and late work. In relation to Burney's (2004) distinction between "craft knowledge" and "research knowledge," this main response might be seen as reflective of craft knowledge, i.e., shared practitioner knowledge, or possibly practitioner knowledge shaped by research. Only 56% of respondents indicated that selection of an evidence- or research-based initiative was significant to improving their school's graduation rate. This response would seem to support Burney's finding that, "To be sure, educational research has produced a rich body of knowledge, but it is shared only haphazardly among teachers" (p. 527).

While Burney's focus was on teachers, his observation would appear also to apply to administrators or education professionals. Although the majority of respondents uti-

lized research-based practices, it would appear that many administrators still work in isolation and may not see their connection to a larger professional community (Burney, 2004). This view would also appear to be supported by the finding that 70% of respondents indicated that their school district did not lead the change. Reducing the number of student dropouts appears to be a priority mainly for individual high schools. This image contrasts sharply with the view of school districts as "self-conscious 'learning organizations,'" that "promote and invest in learning throughout the system—in the central office, in schools, in cross-school teacher networks, in units such as the business office that typically are excluded from professional development focused on instruction" (McLaughlin & Talbert, 2003, p. 25).

Conclusion

Reducing the dropout rate is a national priority. The study identified changes implemented by high schools to reduce the dropout rate. The study also sought to distinguish between schools that are engaged in incidental change and the much smaller number identified as engaged in fundamental change. Based on multiple reports concerning the low overall proficiency of U.S. students on international comparisons, as well as the large achievement gaps among groups of U.S. students (Darling-Hammond, 2010), more schools should be pursuing fundamental changes. Our study reveals that while half of the schools indicated implementing research-based strategies, the response to the "dropout problem" often appears to be at the level of the individual high school, and in many cases lacks the leadership of a school district. Developing coordinated approaches to school improvement in the way that Burney (2004) and others have called for would appear to be an important next step in achieving more fundamental changes in the way teaching and learning are structured at the high school level.

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