

Findings and Implications of the NASSP National Study of Leadership in Middle Level Schools, Volumes I and II: Teachers in Middle Level Schools

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This article examines and compares teachers in a national sample of middle level schools to those in a selected group of highly successful middle level schools. The context within which they work, their preparation, their level of implementation of middle level best practices, and their involvement as teacher leaders are discussed. Results show some similarities, as well as some distinct and important differences in the two sets of teachers. Recommendations are made for teacher preparation programs as well as inservice professional development programs which can increase teacher effectiveness and are consistent with the expectations of No Child Left Behind.

The No Child Left Behind Act of 2001 (NCLB) unequivocally asserts that the academic achievement of students is directly related to the competence of their teachers. A recent U.S. Department of Education (ED) report states that teacher quality is more closely related to student achievement than other factors such as class size, spending, and instructional materials (2002). This national recognition of the importance of teacher quality is consistent with previous research. In 1998, Kati Haycock, executive director of the Education Trust, called a highly qualified teacher the most important ingredient to learning. Several other educators and school reform advocates have framed their convictions regarding school improvement and increased student achievement on the axiom that good teaching matters (Sanders & Rivers, 1998).

Although few educators dispute the importance of a quality teacher in every classroom, there is growing dispute as to its definition. In NCLB, congress has grounded the rhetoric almost exclusively in content knowledge and certification, focusing on rigorous subject matter preparation (Public Law 107-110, Section 9101 [23]). The National Forum to Accelerate Middle Grades Reform has taken a different approach, focusing on three goals, one of which is academic excel-

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lence, and adding goals related to developmental responsiveness and social equity (Arhar, 2003). The National Middle School Association (NMSA; 1995) has stated that it is important that only the very best teachers, those who understand the subjects they teach *and the development of early adolescents*, should be permitted to work with early adolescents (emphasis added). Jackson and Davis (2000) confirmed this as a priority when they called for teachers who are “*expert at teaching young adolescents*” (p. 23, emphasis added). Clark and Clark (2002) set the stage for the recognition of the ultimate importance of the teacher at the middle level almost 10 years ago, stating that “when all is said and done, the quality and character of the individual teacher personality is of more importance in facilitating learning than the content, materials, or organizational arrangement” (p. 54).

Despite the ambiguity as well as the highly politicized context of the exact definition of effective and/or highly qualified teachers, parents and principals know that teacher quality matters, and that good teachers make a difference. This article specifically examines data related to middle level teachers at the beginning of the 21st century. A national sample of middle level teachers is compared to a sample of teachers in highly successful schools, and recommendations are made to enhance teacher effectiveness. The article begins with a summary of the characteristics of the middle level schools at the dawn of the new millennium, followed by the characteristics of middle level teachers, the instructional context in which they work, and their involvement in school leadership. Implications are discussed and recommendations made that are consistent with the mandates of NCLB, and which address teacher recruitment, professional development programs, development of interdisciplinary curriculum and integrated instruction, and the development of skills required for teachers to be effective team members and teacher leaders.

These issues are examined through a synthesis of the data on teachers from the *National Study of Leadership in Middle Level Schools (NSLMLS), Volumes I and II* (Valentine, Clark, Hackmann, & Petzko, 2002; Valentine, Clark, Hackmann, Lucas, & Petzko, in press). The research design for the NSLMLS (2002) was constructed as the third of three “decade studies” that focused on middle level schools and their leaders, sponsored by the National Association of Secondary School Principals (NASSP). Consistent with the NASSP studies conducted in 1980 and 1992, middle level schools were defined as those serving young adolescents in any structural combination of grades 5 through 9. In the spring of 2000, principals of all middle level schools in the United States were invited to participate in the study, which involved an online collection of survey data. The questionnaire consisted of five sections. All principals were asked to complete the first four sections and were randomly assigned to one of

the four subdivisions of the final section. More than 1,400 principals completed the questionnaire during the spring and summer of 2000.¹

Phase II of the study identified and examined highly successful middle level schools. Schools were initially identified through a call for nominations, which was sent to state education officials and higher education faculty members. Nominated schools were asked to complete a comprehensive questionnaire which addressed five specific areas: the process by which change had come about in that school; the school's values, beliefs, vision, mission, and goals; the unique challenges faced by the school; student outcomes that demonstrate the school's success; and implementation of each of the recommendations from *Turning Points 2000* (Jackson & Davis, 2000). In addition, parents, teachers, and students were asked to respond to specific surveys addressing their school's programs and practices. Scoring rubrics were developed for each question, and potential raters were tested for interrater reliability. Only raters with reliability scores of .90 or higher were permitted to score responses.

Data from the 272 nominated schools were analyzed through the use of rubrics developed for each question. Schools were scored on each question, with scores totaled and a final recommendation made. Recommendations were based on the following scale: 4 = the school clearly belonged in the set of 100; 3 = the school should be given careful consideration; 2 = the school appeared to be lacking exemplary qualities needed; and 1 = the school clearly does not belong in the set of 100. Every school was rated by at least two raters. If a school was rated by one rater as a "2" and another as a "3," a third rater was added. Every school identified by both raters as a 2 or below was juried by a review panel of four members. Schools were ranked according to total scores and then further analyzed and selected with respect to scores as well as geographic dispersion. The 98 schools selected represented 49 states.²

This article addresses data related to teachers in both phases of the study. Results are reported and comparisons made between the national sample and the identified highly successful schools regarding the context and environment of middle schools, the leaders and leadership structures, educational programs and instructional practices, and school improvement methods (see the Appendix).

¹ To ensure data integrity, a poststudy data analysis was conducted on grade organizational patterns, community type, and gender, including an analysis of respondents, nonrespondents, and comparison of responses from the first 100 and last 100 completed returns (Valentine & Lucas, 2001). An examination of the grade organizational patterns represented by respondents showed no significant differences from the total population of 14,107 middle level schools. Analysis of community type disclosed a slight underrepresentation of urban schools. Rural schools were slightly overrepresented. Poststudy data analysis suggested that men were somewhat overrepresented in this sample; male principals completed 75% of the returns, whereas female principals completed 25%. Although the gender distribution of the entire population of middle level principals could not be determined, approximately 65% of K-12 principals in the United States are men (National Center for Education Statistics, 2000).

² For complete information on the research design for Phase II of the NSLMLS, see Valentine et al., in press.

General School Characteristics

During the past 30 years, the campaign to develop schools designed to meet the unique needs of early adolescents has made great strides. Paul S. George told middle grades educators in 1999 that the “middle school movement is ...the most successful grass roots movement in American educational history” (Jackson & Davis, 2000, p. 1). The educational context in which middle school teachers taught in the year 2000 follows, including notable differences in highly successful schools and the national sample.

School configuration. Fifty-four percent of the highly successful schools reported grade level configurations of grades 6–8, with the next most frequent configuration serving students in grades 7 and 8 (21%). The once dominant structure of grades 7–9 was used in only 8% of the schools, having decreased from 42% in 1980. Schools that were a part of the national sample reported grade level configurations equivalent to the national sample.

School size. Considerable differences were reported, however, in the size of the schools. In the national sample, schools with less than 600 students continued to represent the largest element of middle level schools (51%). The data from the highly successful schools did not show any evidence that large schools were becoming extinct; 49% of those schools reported student enrollments of 800 to 1,400 students. In both groups, approximately 85% of the students were served in schools with enrollments of 400 to 1,400.

Student attendance. In the past 30 years, there has been significant progress in improving student attendance in middle level schools. In 1980, only 19% of the schools surveyed reported average daily attendance rates in excess of 96%. This had increased to 42% in the national sample in 2000, and in highly successful schools the average was 51%. Schools with attendance rates of 90% or higher increased from 79% in 1980 to 94% of the national sample schools in 2000 and 97% of the highly successful schools.

Attendance as related to free/reduced-price meals (FRM). The 2000 study revealed significant differences in average daily attendance when the data were disaggregated according to the percent of students who qualified for FRM. Schools with a high incidence of FRM had much lower attendance rates than schools with a low incidence of FRM. For example, 62% of schools with 0% to 10% FRM reported 96% or higher attendance, compared to 14% of the schools with 91% to 100% FRM. Although many middle level schools have achieved excellence in student attendance, it is evident that the challenge still exists for schools of poverty.

Per pupil expenditure (PPE). More than 60% of the schools reported an annual per pupil expenditure of \$4,000 to \$6,999. It was only at the extreme ends of the spectrum that differences were noted in highly successful schools

as compared to national sample schools: 24% of the national sample schools reported PPE of less than \$4,000, compared to only 11% of the highly successful schools. In contrast, 12% of the national sample schools reported a PPE of \$7,000 or more, compared to 22% of the highly successful schools.

Class size. Class size did not appear to be reflected in these expenditures in highly successful schools. For both groups of schools, the most common class size ratio was one teacher to 21 to 25 students. It was curious to note that highly successful schools were slightly more likely to report class sizes over 25 than were schools in the national sample (39% compared to 32%). Because middle level best practices call for “teachers (to) have the opportunity to know (students) well enough to understand them and treat them as individuals,” the cost benefit of class size warrants further investigation (Carnegie Council on Adolescent Development [CCAD], 1989, p. 37).

Student achievement data. The concept of adequate yearly progress, as popularized by NCLB (2002), was not a part of either Phase I or Phase II of this study. Because schools had not been asked to report achievement data in the earlier decade studies, and due to the complexity and unreliability of comparing data across states, the question was not asked of either the national sample schools or the highly successful schools.

Schools in the 2000 study were asked, however, how they used achievement data, and the kind of effect standardized test data was having on their schools. Principals of highly successful schools reported that standardized testing had a more positive effect on their schools than did the national sample principals. Most noticeable was that 67% of the highly successful school principals claimed that standardized testing had a very positive or positive effect of student motivation toward achievement, compared to 56% of the national sample. In addition, 59% of the highly successful school principals stated that standardized testing had a very positive or positive effect on student achievement itself, compared to 54% of the national sample.

More than 90% of both samples reported that they used student achievement data, as well as discipline, attendance, and other data, to define and understand success. Nearly 80% of both samples reported that they use that data to monitor progress and adjust their school improvement plan.

Violence. The tragic incidents of violence in some schools in the late 1990s did not extend to most middle level schools in this study. In fact, violent acts toward students and adults appeared to be decreasing. Thirty-five percent of the national sample schools and 45% of the highly successful schools said violence toward adults had decreased in the past 10 years, and 45% of the national sample, as well as 58% of the highly successful schools, indicated that violence toward students had decreased. Only 3% of the highly successful schools reported that violence toward adults had increased, compared to 16% of the nat-

ional sample. Eight percent of the highly successful schools reported an increase in violence toward students, compared to 17% of the national sample. It was noted that within the last 5 years, virtually all of the schools had undertaken one or more measures to reduce violence. The most common measure was the development of a crisis management plan, followed by closer relationships with law enforcement, and conflict resolution or peer mediation programs. A notable difference in the two sets of schools was evident with regard to changes in the discipline plan. Whereas 74% of the national sample indicated that they had strengthened or made disciplinary consequences more consistent, this was reported by only 57% of the highly successful schools. Similarly, 51% of the national sample had “significantly toughened disciplinary regulations,” compared to only 28% of the highly successful schools. Although generally positive, these results do not support complacency: teachers in 16% of the national sample of middle level schools and 17% of the students in the same sample report increasingly violent situations and almost half of them have seen no improvement despite substantive efforts to reduce violence.

In summary, middle level teachers at the beginning of the 21st century are likely to be teaching in schools of 400 to 1,400 students in grades 6–8. Unless they work in schools of poverty, they are more likely to see higher attendance rates in their classes than did their predecessors. They are likely to have seen a decrease in student violence and to have participated in one of many initiatives to decrease potential violence. These contexts change only slightly for teachers in highly successful schools: their schools tend to be larger, have slightly larger class sizes, and the per-pupil expenditure is about the same as in the national sample. Yet student attendance is higher and a decrease in violence toward teachers and students has been reported. The highly successful schools have not relied as heavily as the national sample schools on an increase in the severity of the discipline plan to decrease violence. The discrepancies regarding class size and discipline plans warrant further investigation, whereas other similarities suggest that factors other than the general context of a school are instrumental in its ability to effectively implement middle level best practices.

Teacher Characteristics

The importance of teachers who are knowledgeable about and committed to early adolescents has been a basic doctrine throughout the history of middle level education (CCAD, 1989; McEwin, Dickinson, Erb, & Scales, 1995; NASSP, 1985; 1992; NMSA, 1995; Valentine & Mogar; 1992). In *Turning Points 2000*, Jackson and Davis (2000) corroborate that tenet, stating that “increasing middle grades teachers’ knowledge and skills before and during their tenure is critical to the success of middle grades education” (p. 94).

NCLB (2002) adds the requirement that all middle level teachers be “highly qualified” in each subject area they teach. This study examined the professional characteristics of middle level teachers both in the national sample, as well as in selected highly successful schools.

Certification. The results of this study confirm those of other studies. Although progress has been made in the area of certification specific to the middle level, there is still much work to be done (Gaskill, 2002; Jackson & Davis, 2000).

“The sad fact remains that the majority of teachers throughout the history of the middle school movement have not been educated to teach at this level” (Dickinson & Butler, 2001, p. 8). This study revealed that approximately half of the schools in both groups still employ a majority of teachers with secondary certification. Thirty percent of the schools in both samples employed a majority of teachers with elementary certification. On a more positive note, the percentage of schools with a majority of teachers who hold middle level certification had increased from 11% in 1980 and 1992 to 18% in 2000, and to 25% in highly successful schools. The implications of these data, specifically with reference to NCLB, are discussed later in this article.

Teacher gender. Despite a common acceptance of the importance of male role models for young adolescents, the schools in this research reported a growing predominance of female teachers. Eighty-nine percent of the national sample schools and 96% of the highly successful schools reported that they had more than 50% female faculty members. This disproportion has increased since 1980 from 62%. Although consistent with national data in elementary and high schools, this trend does not negate the potential detrimental effects of middle schools with few positive male role models (Columbia Group, 2002). A more diverse population of middle level educators remains a goal that is yet to be accomplished.

Principals’ concerns and opinions about teachers. When principals were asked about their perceived roadblocks to success in their schools³, noteworthy discrepancies occurred between the national sample and the highly successful schools. Sixty percent of the national sample school principals claimed that the “lack of knowledge among staff regarding programs for middle level students” was a moderate or serious concern. This was true for only 30% of the highly successful school principals. “Variations in the ability and dedication of staff members” was a moderate to serious concern for 73% of the national sample schools and for only 57% of the highly successful schools. When asked to comment on the general quality of the work of the teachers, 67% of the national sample rated their teachers as excellent and 29% rated them as “good.” The highly successful schools principals

³ Roadblocks were defined as obstacles that prevented the principals from providing leadership in the creation and maintenance of outstanding middle level schools.

indicated an even higher level of praise: 100% rated their teachers as good to excellent, with 90% in the “excellent” category. Principals were in closer agreement, however, that the inability to provide time for teacher planning and professional development was a significant roadblock, with 75% of the national sample schools and 62% of the highly successful schools identifying it as a moderate or serious concern.

In summary, the teachers in both sets of middle level schools in 2000 were likely to be women, and although not licensed specifically for middle grades, most of the principals rated them as “good to excellent.” Principals of highly successful schools perceived their teachers as more skilled, dedicated, and knowledgeable about middle level programs than did their national sample counterparts. Principals in both sets of schools were concerned about providing the necessary time for teacher planning and professional development. The speculation that these greater knowledge and skill levels have considerable influence on student achievement is not unjustified.

Implementation of Middle Level Best Practices

Interdisciplinary instruction, instructional strategies that emphasize student engagement, common planning time, advisory groups, and heterogeneous grouping have long been recognized as hallmarks of the middle school movement. The NSLMs investigated the extent to which these practices were implemented in both the national sample and the 98 highly successful schools.

Organization for instruction. The percentage of schools in which teachers work in interdisciplinary teams has increased dramatically since 1992, when 57% of middle level schools implemented the teaming concept to a full or partial degree (Valentine & Mogar, 1992). In 2000, 95% of highly successful schools and 79% of the national sample schools were implementing interdisciplinary teaming. Eighty-one percent of the highly successful schools and 55% of the national sample schools reported full implementation. An interdisciplinary schedule, defined as one in which core classes are blocked and scheduling within that block is left to the discretion of the core teachers, was used by 62% of the highly successful schools and 42% of the national sample schools. The most common team size was four teachers. Math, science, social studies, and English/language arts were core team subjects in 90% of the schools with reading added in about half of those teams.

Common planning time for core teachers was scheduled in over half of the schools. Fifty percent of the schools reported that teams spent 2 to 4 hours a week working together, and another 36% of the highly successful schools and 22% of the national sample schools reported that teams worked together for more than 4 hours each week. When it was necessary to replace a team member, more than 60% of both sets of schools reported that the

administration made the selection following input from team members. In 16% of the highly successful schools and in 9% of the national sample schools, the team members made the selection themselves.

Advisory groups. Jackson and Davis (2000) asserted that “when students make a lasting connection with at least one caring adult, academic and personal outcomes improve” (p. 143). However, they also speak to the difficulty with effective implementation of advisor–advisee programs, as well as the potential disadvantages that arise from ineffective program execution. Their concerns may well be reflected in the results of this study. Only 47% of the highly successful schools and 32% of the national sample schools had fully implemented advisor–advisee programs, and most indicated intent to continue with their current level. Neither group of middle level principals rated “regularly scheduled advisory programs” as important as interdisciplinary teaming, nor did either set of schools implement them to the same extent. Ninety-six percent of the highly successful schools and 77% of the national sample schools rated interdisciplinary teaming as “very important,” whereas 61% of the highly successful schools and 48% of the national sample schools rated advisor–advisee programs at the same level.

Ability grouping. A review of the middle level literature base reveals a strong opposition to the practice of “tracking” students according to ability level. *Turning Points* (CCAD, 1989), *This We Believe* (NMSA, 1995), and *Turning Points 2000* (Jackson & Davis, 2000) each discourage the rigid sorting of students by perceived academic ability. Slavin (1995) summarized this resolve, stating that “no one could argue that ability grouping is beneficial to students in general” (p. 221). The fact is, however, that in more than 80% of schools in the study, students were ability grouped either into distinct classes or within a heterogeneous class. Highly successful schools are slightly less inclined to ability group into specific classes than are national sample schools (61% compared to 72%), but more likely to group within classes (23% compared to 13%). Neither group of schools indicated intent to change their practices regarding ability grouping.

Whether or not a school endorses or sanctions ability grouping, the assurance of mastery for all students remains a critical issue for middle level teachers. An effective middle school should be organized to “allow some students to learn as fast as they can while ensuring that others will be allowed to learn as slow as they must” (Toepfer, 1992, p. 240). The national sample data showed that when students did not demonstrate content mastery, only 49% of the teachers created additional learning activities for the students and only 60% of those teachers changed the student’s grade when mastery was achieved. Conversely, 45% of the teachers assigned a grade a student earned and moved the entire class to the next unit of study. It is evident that

almost half of the middle level teachers in this study are not teaching to assure that all students achieve mastery, nor is there any assurance that their students have the prerequisite skills for subsequent learning activities and concepts. The professional development implications are significant, and are discussed later in this article.

Teacher Involvement in School Leadership

In 1975, Lortie depicted teachers as lonely, performing their craft in separate rooms, working in isolation, having little or no collegial contact, and busy with mundane tasks rather than interacting with colleagues in creative ways. Since that time, teacher empowerment and leadership have been promoted and eventually recognized as an essential component of successful schools. Frymier (1987) stated that teachers would be essential to any attempt to improve education. Barth (1990) suggested that a school's capacity to improve from within was based on "how ownership for school decisions is distributed" (p. 37). He further maintained that "leadership must emanate from many sources in interaction, including teachers, principals, parents, and students." (p. 117) Thus, the calls for teacher empowerment and leadership in *Turning Points* (CCAD, 1989) were not unique to middle level schools, but rather a part of a broader recognition of the power of shared decision making.

One of the major recommendations of *Turning Points* (CCAD, 1989) was that decisions concerning the experiences of middle grade students should be made by the adults who know them best. Principals in both phases of NSLMLS indicated that this recommendation was the fourth most important of the eight *Turning Points* recommendations, following create a community of learners, teach a core of common knowledge, and ensure success for all students. In *Turning Points 2000*, Jackson and Davis (2000) reconceptualized the recommendation stating that governance should be systematically inclusive, collaborative, and focused on the improvement of student learning. This study validated that teachers are critical components of school governance as members of school leadership teams, as grade level team leaders, and as constituents of the faculty.

Leadership teams. Eighty-eight percent more than of the national sample schools and 94% of the highly successful schools reported the existence of some sort of school leadership teams, an increase of more than 20% since 1992. The role of the leadership team was typically advisory, which was defined as "making recommendations" (Valentine et al., 2002, p. 48). In both sets of schools, leadership teams had more decision-making authority in issues regarding reform initiatives, development of vision/mission/goals, and student behavior than in issues of curriculum, budget, and hiring. When queried about participation in the school improvement process, the leadership teams

in the highly successful schools were more likely to have been involved in every element of the school improvement process than were the national sample leadership teams.

Team leaders. In schools that employed teaming, 86% of the highly successful schools and 71% of the national sample schools had designated team leaders, and the most common method of determining team leadership was for teachers to select their own leaders. Team leaders served on the leadership team in 52% of the highly successful schools and 44% of the national sample schools. In the national sample, the actual level of decision-making authority of team leaders was less than that of school leadership teams, but more than the faculty as a whole. In comparison, team leaders in highly successful schools had as much or more participation in most areas of decision making than did the leadership team.

Teacher leadership. It was evident from this study that many middle level teachers were significantly involved in leadership as faculty members, and to a greater extent in highly successful schools than in the national sample. Highly successful schools were more likely to involve the entire faculty in each phase of the school improvement plan than were national sample schools. Of particular note was the evidence that, as part of the school improvement process, 83% of the highly successful schools involved the entire faculty in a study of best practices for middle level schools, compared to 61% of the national sample schools. A distinct picture emerges when combining these data with previously mentioned data regarding faculty member involvement in the replacement of team members, the selection of team leaders, and involvement in the school improvement processes. Multiple opportunities and expectations for all middle level teachers to exercise leadership from beyond the classroom are clearly evident.

Implications and Recommendations

What do these results mean to the current middle school principal, university teacher preparation programs, and state and national organizations that serve middle schools? What significance do they hold for middle level teachers? If quality teachers are truly the answer to substantive school reform and success for all students, what actions and resolutions are compelled by this study?

Recruitment of Faculty

While under the auspices of NCLB, the recruitment process for new middle level teachers is likely to identify potential teachers who have had rigorous subject matter preparation and, thus, meet the statutory requirements, but who are not specifically trained to work with early adolescents. Absent from the congressional mandate is an imperative regarding expertise in developmentally appropriate pedagogy, or any knowledge of the social-emotional

needs of early adolescents. It will be of critical importance to principals that, as part of the hiring process, they assess not only the content knowledge of candidates but also that they go beyond the requirements of NCLB and assess knowledge of pedagogy and adolescent development as well. Considerable inservice training and professional development will need to occur in these domains to advance the skills of a highly qualified teacher into those of a highly *effective* teacher, as further explained in the following section.

It is also evident from this and other research that recruitment efforts must be enhanced for male teachers. The overwhelming dominance of female teachers in middle level schools simply does not provide the variety of role models and mentors needed by early adolescents. The basic human needs of a young person that are met by caring relationships with mentors and guidance in facing sometimes overwhelming challenges are significant in the development of the early adolescent (CCAD, 1989). Recruiting programs in which there is collaboration between higher education, K–12, and professional organizations have been successful in equivalent arenas and should be considered (Petzko & Searcy, 2001).

Design and Implement Inservice Professional Development Programs That Address Issues Critical to Effective Middle Schools

Because an overwhelming majority of middle level teachers have not been specifically prepared to teach early adolescents, the middle level principal must provide professional development that addresses instructional strategies that are effective for middle level learners with varying needs. If it is axiomatic that “no school, at whatever level, can succeed in its stated mission without the influx of specifically prepared professionals” (Dickinson & McEwin, 2002), then middle level leaders must take the initiative to ensure that their teachers become expert at teaching young adolescents, regardless of their preservice licensure. The NMSA maintains that one of the most effective ways of improving the learning of young adolescents is by improving the professional development of those who teach them (NMSA, 1999). This proposition concurs with recommendations by Flowers, Mertens, and Mulhall (2002), who called for specialized training regarding the developmental needs of young adolescents.

NCLB also recognizes the importance of training school personnel as part of the formula leading to higher levels of student achievement. Title I, Part A itemizes specific stipulations regarding staff member development. Key elements that are consistent with the results of this research are that all activities are referenced to student learning; activities are planned collaboratively by teachers, principals, and parents; schools use data to make decisions about staff member development activities; research-validated practices are used as a basis for activities; a long-term plan is developed; and professional

development is aligned with state standards and the local curriculum. The key component that is not validated by this research is the emphasis NCLB directs toward content mastery. Guidelines say that subject matter mastery for all teachers must be a top priority, and that a highly qualified teacher is measured by his or her subject matter competency.

The results of this study show that although content area mastery is a necessary qualification for successful teaching at the middle level, it is not sufficient. Knowledge of pedagogy and adolescent development cannot be omitted from the formula. It is noteworthy that teachers in highly successful schools have spent more time studying middle level best practices than have their national sample schools counterparts and that their principals perceive their knowledge of middle level issues as far less of a concern than do the national sample schools principals. It is also striking that 90% of the principals of highly successful schools assessed their teachers as “excellent,” compared to 67% of the national sample schools. The correlation between teacher quality, knowledge of middle level concepts, and identification as a highly successful school cannot be ignored. Programs that address middle level philosophy and best practices, as well as age-appropriate instructional strategies, must also be at the core of professional development in all middle level schools. The stipulations of NCLB do not prohibit professional development with this focus. The principal who addresses these issues as well as subject-area mastery, and who can articulate how such activities are references to student learning, will be operating within the expectations of the federal guidelines.

It is also important to recall that both sets of principals were quite concerned about their ability to provide sufficient time for teacher professional development and planning. Both highly successful schools and national sample schools have limited time for professional development, thus such programs must be specifically and efficiently designed to meet the unique needs of each school and its teachers. NCLB lends definitive support here, specifically requiring that professional development programs are not 1 day or short-term workshops, rather “high quality, sustained intensive and classroom focused, and have both a positive and a lasting effect on a teacher’s classroom performance” (Educational Research Service, 2003, p. 39). Breakout sessions, peer coaching, teacher study groups, and ongoing problem-based learning must all be considered as effective avenues for implementation of professional development plans as well as efficient uses of teacher time.

Some schools—specifically large schools, schools with high incidence of students in poverty, and those with large class sizes or increasing violence—will need to provide additional specialized training that addresses these needs. The fact that these schools are not representative of the majority of the schools in the study does not suggest that their needs are irrelevant. Leaders in these schools must provide additional training for their teachers, perhaps advocating

for additional time for staff member development due to the highly challenging nature of a school context that is characterized by poverty, violence, or large class sizes.

Develop Interdisciplinary Curriculum

As confirmed by the data showing that 79% of the national sample and 95% of the highly successful schools use the team concept, and 55% of the national sample and 81% of highly successful schools fully implement interdisciplinary instruction, the knowledge and skills necessary to teach in this context are critical to today's middle school teacher. It is important to acknowledge, however, that the establishment of an interdisciplinary *structure* does not, in itself, result in the delivery of an interdisciplinary *curriculum* (Beane, 1990, emphasis added). School leaders must closely analyze the degree to which curriculum and instruction are organized to "allow students to connect the materials and skills learned in one class to those presented in another" (NASSP, 1985, p. 6). Curriculum and instruction must be designed for young adolescents who prefer learning in the context of real life situations and may not show much interest in studying formal academic subjects (NMSA, 1995). The curriculum must also be evaluated as to whether it is "challenging, integrative, and exploratory" (NMSA, 2001, p. 69). School leaders would be wise to establish teacher study groups to address these standards, providing the opportunity for teachers to discuss their work, its results, and its effect on student achievement. Middle level leaders must accept and act on the conviction that "when teachers can actively study their own practice and its effect on students in their classroom, real change in teaching and learning strategies appear to occur" (NMSA, 2001 p. 76).

Demand Assurance of Mastery

Early adolescence is filled with erratic growth spurts, immense variation in cognitive development, unpredictable emotions, and dominating social needs. "All young adolescents should have the opportunity to succeed in every aspect of the middle grades program, regardless of previous achievement or the pace at which they learn" (CCAD, 1989, p. 49). NCLB legitimizes this recommendation, in its emphasis on the importance of reducing the "achievement gap" and the stipulation that one of the foci of professional development activities should be on instruction in methods of teaching students with special needs.

Whether or not a school implements ability grouping, every teacher must be able to differentiate instruction and assessment to the extent necessary for each student to have the opportunity to master the content. The ability to do so was noted as important to teachers, who, in another study, reported that their top priority for professional development was "strategies for teaching a broad range of ability levels in the same classroom" (Flowers et al., 2002, p. 60). Teachers must have the knowledge and skills to use various instructional procedures and modalities to assure content mastery, and such mastery must be the

for additional time for staff member development due to the highly challenging nature of a school context that is characterized by poverty, violence, or large class sizes.

Develop Interdisciplinary Curriculum

As confirmed by the data showing that 79% of the national sample and 95% of the highly successful schools use the team concept, and 55% of the national sample and 81% of highly successful schools fully implement interdisciplinary instruction, the knowledge and skills necessary to teach in this context are critical to today's middle school teacher. It is important to acknowledge, however, that the establishment of an interdisciplinary *structure* does not, in itself, result in the delivery of an interdisciplinary *curriculum* (Beane, 1990, emphasis added). School leaders must closely analyze the degree to which curriculum and instruction are organized to "allow students to connect the materials and skills learned in one class to those presented in another" (NASSP, 1985, p. 6). Curriculum and instruction must be designed for young adolescents who prefer learning in the context of real life situations and may not show much interest in studying formal academic subjects (NMSA, 1995). The curriculum must also be evaluated as to whether it is "challenging, integrative, and exploratory" (NMSA, 2001, p. 69). School leaders would be wise to establish teacher study groups to address these standards, providing the opportunity for teachers to discuss their work, its results, and its effect on student achievement. Middle level leaders must accept and act on the conviction that "when teachers can actively study their own practice and its effect on students in their classroom, real change in teaching and learning strategies appear to occur" (NMSA, 2001 p. 76).

Demand Assurance of Mastery

Early adolescence is filled with erratic growth spurts, immense variation in cognitive development, unpredictable emotions, and dominating social needs. "All young adolescents should have the opportunity to succeed in every aspect of the middle grades program, regardless of previous achievement or the pace at which they learn" (CCAD, 1989, p. 49). NCLB legitimizes this recommendation, in its emphasis on the importance of reducing the "achievement gap" and the stipulation that one of the foci of professional development activities should be on instruction in methods of teaching students with special needs.

Whether or not a school implements ability grouping, every teacher must be able to differentiate instruction and assessment to the extent necessary for each student to have the opportunity to master the content. The ability to do so was noted as important to teachers, who, in another study, reported that their top priority for professional development was "strategies for teaching a broad range of ability levels in the same classroom" (Flowers et al., 2002, p. 60). Teachers must have the knowledge and skills to use various instructional procedures and modalities to assure content mastery, and such mastery must be the

expectation of every teacher in each middle school. Although the effect on professional development as well as accountability may be enormous, there is no alternative in a school in which the mission is for all students to succeed.

Develop Collaboration Skills for All Teachers

NCLB requires that all staff member development opportunities focus on student learning and be proven effective through research-based examination. This does not, however, require the middle level principal to exclude leadership skills for teachers from professional development priorities. *Turning Points 2000* calls for middle level schools to be governed democratically, by the adults who know the students best. Research studies have shown that collaborative decision making is supported by teachers and administrators, can improve the school working environment, and can lead to instructional improvement and higher student achievement scores (Clark & Clark, 2002). NMSA contends that “one of the unique elements of middle level schools for teachers is the heavy emphasis on collaboration.... By collaborating with internal and external audiences, teachers are not operating in isolation. This permits insights and understandings about students to be shared with others and therefore maximized” (NMSA, 2002, p. 7).

This study confirmed that it is commonly expected that middle level teachers exercise collaborative leadership, decision making, and planning. It follows that the relevant skills of the faculty members, the commitment of the principal, the level of trust, and the time allotted for collaborative decision making need to be assessed (Clark & Clark, 2002). The school staff members, as a whole, may need to engage in team-building exercises and be helped to understand effective group process and the difficulties inherent in group decision making. Conflict management and negotiation skills may need to be practiced. The school leader’s efforts in the development of teacher teams can do a great deal to produce powerful results, effective performance, and high achievement (Chance & Chance, 2002, p. 141).

Develop Teachers as Leaders

The involvement of teachers in the decision-making process is critical to schools of the 21st century. Recent research states that “schools where teachers are given a greater voice in making decisions that affect their jobs have significantly less turnover” (Ingersoll, 2002, p. 27). The results of this study show that middle level teachers are significantly involved in the leadership of their schools. They serve on leadership teams, act as team leaders, assist in the selection of their teammates, are involved in multiple and complex decisions, and participate in the school improvement process. Teachers in highly successful schools are involved to a slightly greater degree and across a broader range of issues than are their national sample schools counterparts. It is clear that most middle level schools are implementing the fifth recommendation of

Turning Points 2000: that schools be governed by the adults who know the students best (Jackson & Davis, 2000). Consequently, it is critical that assessment occur as to whether or not teacher leaders have the skills essential to be effective decisionmakers and leaders, or if additional training and leadership development are required.

The collaboration skills mentioned previously are certainly necessary for teacher leaders, but they are not sufficient. Empowerment of teachers also requires enhanced communication skills and knowledge of group dynamics. Teacher leaders must understand issues of power, authority, and influence. They must understand and be able to apply effective models of decision making. They must be cognizant of their own leadership styles and strengths as well as those of the team with which they work. The effective school leader will design opportunities for teacher leaders to develop high levels of competency in these areas as well as in adolescent development and curriculum and instruction.

Conclusion

Middle school teachers in the 21st century teach and work in complex environments in which the demands are exceedingly challenging. For many educators, their preparation is not adequate to meet those demands. Although teachers in highly successful schools appear to have more middle level knowledge and skills than those in the national sample, there are still many teachers who have not had training specific to pedagogy with early adolescents. Many are teaching in interdisciplinary environments and most engage in some sort of collaboration or leadership for which they may have no background. Yet accountability increases while a teacher shortage threatens the future. The NSLMLS demonstrates that increased professional development and support for current middle level teachers is imperative, and it must be done now. The study advocates for school environments with ongoing professional development that focuses on developmentally appropriate curriculum and instruction as well as leadership and collaboration skills. New and veteran teachers must be involved in various elements of a comprehensive professional development plan that can be individualized and includes accountability. To do any less would be to compromise the future success of young adolescents. ✍

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Appendix

A Summary of Comparison Data—Percentage of Highly Successful School Compared to National Sample Schools^a

Category	Highly successful schools	National sample schools
School characteristics		
School configuration		
6-7-8	54	59
7-8	21	17
7-8-9	8	6
5-6-7-8	8	10
School size		
Fewer than 400 students	15	27
400-599	15	24
600-799	21	22
800-999	25	14
1,000-1,399	24	11
More than 1,400	0	2
Student attendance		
90% or higher	97	94
96% or higher	51	42
Per pupil expenditure		
Less than \$4,000	11	24
\$4,000-6,999	67	64
More than \$7,000	22	12
Class size		
Most common class size ratio	21-25 students	21-25 students
Class sizes over 25	39	32
Effect of standardized testing		
Positive or very positive impact on student motivation	67	56
Positive or very positive effect on achievement	59	54
Violence		
Violence toward adults had decreased in the past 10 years	45	35
Violence toward students had decreased in the past 10 years	58	45
Violence toward adults had increased in the past 10 years	3	16
Violence toward students had increased in the past 10 years	8	17
Disciplinary consequences strengthened or made more consistent	57	74
Disciplinary regulations toughened	28	51

(continues)

(continued)

Category	Highly successful schools	National sample schools
Teacher characteristics		
Teacher certification		
Elementary	29	30
Middle	25	28
Secondary	46	52
Faculties more than 50% female	96	89
Principal perceptions of roadblocks		
“Lack of knowledge among staff regarding programs for middle level students”	30	60
“Variations in the ability of staff members”	57	73
“Inability to provide time needed for teacher planning and professional development”	62	75
Quality of teachers		
Good	10	29
Excellent	90	67
Middle level best practices		
Implementation of teaming		
None	5	24
Partial	14	21
Full	81	25
Interdisciplinary (blocked) schedule	62	42
Common planning time		
2–4 hours per week	50	50
More than 4 hours per week	36	22
Advisory programs	47	32
Ability grouping		
No form of grouping by academic ability	17	15
Students grouped into specific classes by academic ability (e.g., reading or math)	61	72
Students not grouped into specific classes by academic ability but teachers group within classes	23	13
Teacher involvement in school leadership		
Teachers on leadership teams	94	52
Teachers as team leaders	88	44
Team leaders on leadership teams	86	83
Entire faculty involved in study of best practices as part of school improvement planning	71	61

Note. Categories are listed in the order presented in the article.

^a All figures are percentages except where noted.