

# Lessons Learned from More Than a Decade of Middle Grades Research

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*Interdisciplinary teams with regular common planning time, staffed by teachers prepared to teach young adolescents, tend to engage in classroom practices that result in better student behavior and higher achievement.*

We are in a unique position as we write our research article this month because National Middle School Association (NMSA) is celebrating its 30th anniversary as an advocate and resource for middle level education. It is a time of reflection. Where have we been and where are we going? What evidence do we have of successful outcomes among middle schools that have implemented the tenants of middle grades education? From our perspective as researchers, we can personally reflect on our work over the past decade. During that time, we have focused our research and evaluation efforts on examining the schools that serve young adolescents. Our research agenda has been to analyze how middle schools improve, what impact the improvements have on teachers and students, and how successful outcomes can be replicated in other schools.

We believe that the foundation of research that supports the reform of middle level schools is deeper and stronger today than it was 10 years ago. During this month of reflection, we would like to summarize the lessons we have learned in our research. These lessons for principals, teachers, and schools about reform and improvement in the middle grades are practical and research based. We hope that they not only provide direction related to reform efforts but also the evidence that is often required to convince district leaders and state leaders to support such changes. However, we clearly recognize that despite our years of work and the increased understanding we have of middle grades reform, there remain substantial amounts to learn and refine. The lessons described below are based on findings from our research at the Center for Prevention Research and Development. In addition, each finding has been replicated in multiple data sets from a variety of projects over the past decade.

***Interdisciplinary team teachers must meet regularly for common team planning time.*** Our research has demonstrated that teachers need to meet for common team planning time at least four times each week for 30 minutes or more per meeting to achieve consistent positive outcomes.

Among schools that are fully engaged in teaming throughout the school with high levels of common planning time (i.e., four meetings per week lasting at least 30 minutes each), student self-reported outcomes improved, including less depression, fewer behavior problems, higher self-esteem, and greater academic efficacy (Mertens, Flowers, & Mulhall, 1998). In addition, schools with high levels of common planning time engage more often in effective team practices (e.g., curriculum integration and coordination, coordinating student assessments and assignments) (Flowers, Mertens, & Mulhall, 2000a), and integrated instruction in the classroom (Flowers, Mertens, & Mulhall 2000b). We further found that schools that are teaming with high levels of common planning time demonstrated gains in student achievement scores over time at a higher rate than





schools that are not teaming or those that are teaming with low levels of common planning time (Flowers, Mertens, & Mulhall, 1999; Mertens et al., 1998).

***Smaller interdisciplinary teams engage more often in team and classroom “best practices.”*** Teachers who are on interdisciplinary teams with fewer numbers of students report that they engage more frequently in best practices at the team level and in the classroom than teachers with larger numbers of students on their teams.

Teachers on teams with 90 students or less reported higher levels of team and classroom practices than teachers on teams with either 91 to 120 students, or those with 121 or more students (Mertens et al., 1998; University of Illinois, 1999a, 1999b). Clearly, the coordination of team activities and classroom instruction are more manageable and thus more likely to occur on teams with fewer students. There is also evidence to suggest that team size affects student emotional health and behavior. Students on smaller size teams (usually 60 students or less) reported higher levels of self-esteem and academic efficacy and lower levels of behavior problems (Mertens et al., 1998). This finding, in addition to the finding for teachers noted above, speaks strongly to the benefits of creating small, personalized learning communities.

***The positive impact of interdisciplinary teaming on team and classroom “best practices” increases as teams work together longer.*** Our data show that the length of time a school has been teaming, particularly schools with high levels of common planning time, has a positive impact on the implementation of effective team and classroom practices.

The implementation of team practices occurs relatively quickly (within the first two years of teaming), particularly for schools that have high levels of common planning time (Flowers et al., 2000a). As schools with high common planning time team together for longer periods of time (i.e., 3 to 4 years, 5 or more years), the frequency with which they engage in team practices increases. In other words, schools that meet regularly for common planning time increase their coordinated efforts as they work together for longer and longer periods of time. The implementation of classroom best practices takes longer to achieve than the implementation of team best practices. Schools that have been teaming for four or more years show more frequent classroom best practices than schools that have been teaming for three years or less (Flowers et al., 2000b). It takes longer to implement classroom practices and it appears that it is contingent upon the level and effectiveness of the team practices, as the next lesson will highlight.

***Team activities are strongly linked to classroom instruction.*** We repeatedly found in our research that the activities that teams engage in as part of common planning time are strongly connected to the instructional practices that occur in classrooms. In other words, the coordinated work of teams impacts classroom instruction.

The data show a positive association (i.e., correlation) between the practices occurring at the team level and those occurring in the classroom. As the frequency of one practice increases, the frequency of the other also increases. The strongest association we observe tends to be between the team-level activity of coordinating curriculum and classroom-level integration and interdisciplinary practices (Flowers et al., 2000b; Mertens et al., 1998; Mertens & Flowers, 2003a). This finding tells us that to



successfully engage in interdisciplinary practices in the classroom, the coordination of curriculum must occur at the team level, and vice-versa. In fact, the team practices of coordinating curriculum and coordinating student assignments and assessments are highly correlated with nearly all classroom practice dimensions measured in our research.

***Middle grades certified teachers in highly implemented schools engage more frequently in team and classroom best practices.*** Teachers with a middle grades certification and who were members of an interdisciplinary team with high levels of common planning time reported the absolute highest levels of best team and classroom practices.

In a comparison of team and classroom practices, we first found that regardless of certification type, teachers in schools that were teaming with high common planning time reported higher levels of both team and classroom practices. We further found that teachers with either a middle grades certification or an elementary certification engage more often than secondary certified teachers in best team and classroom practices. When teachers are given the critical resource of interdisciplinary teaming and high levels of common planning time, however, teachers with middle grades certification reported the highest levels of practices (Mertens, Flowers, & Mulhall, 2002). The combination of training and resources yielded the most positive outcomes. Our other research has demonstrated the positive impact that teaming with common planning time can have on team and classroom practices. In addition, we have demonstrated that higher levels of practices are related to higher levels of student achievement. Therefore, teachers who are better prepared to teach in the middle grade levels and are placed in schools that are teaming with high amounts of common planning time are more likely to positively impact student achievement.

***Sustained engagement in high levels of middle school practices positively impacts student achievement.*** Evidence of the effectiveness of middle grades practices can be found among schools that implemented teaming, common planning time, and adolescent-appropriate classroom instruction. These schools demonstrated higher student achievement and improvements in student achievement scores over time.

The effectiveness of teaming with common planning time is clear when student achievement data is analyzed. Schools that have implemented interdisciplinary teaming have higher student achievement scores than non-teaming schools. Further, schools that are teaming with high levels of common planning time have the greatest two-year gains in student achievement scores (Flowers et al., 1999).

A link between middle grades oriented classroom practices and higher student achievement is also clearly illustrated in the achievement data analyses. Correlations between student achievement gain scores and classroom practices yielded positive relationships in all cases. The strongest associations occur between student achievement gains in reading and practices related to building critical thinking skills, reading skills, and math skills (Flowers et al., 2000b). In other words, as the frequency of these classroom practices increased, the gains in reading achievement scores increased.



An analysis of Michigan Middle Start schools that are implementing whole school reform further strengthens the argument that student achievement scores can improve. Michigan Middle Start grant schools (i.e., schools that received grants, technical assistance, and networking to implement the model) demonstrated improved student achievement compared to a similar group of Michigan schools. Through the implementation of interdisciplinary teaming structures combined with higher levels of team and classroom practices, these Michigan Middle Start grant schools positively impacted student achievement. And most promising of all, some of these grant schools continued to demonstrate gains in student achievement beyond their grant period (Mertens & Flowers, 2003b).

A final piece of evidence to highlight the impact of middle grades reform on student achievement is observed in an analysis of the results of implementing multiple team and classroom practices. This analysis found that the *combined* effect of teaming with common planning time, length of time teaming, and high levels of classroom practices had a collective impact on student achievement in high poverty schools. Specifically, schools that have been teaming for at least three years with no decrease in their level of common planning time and that have high levels of classroom instructional practices also have higher student achievement scores compared to schools with lower levels of classroom practices (Mertens & Flowers, 2003b).

***In summarizing the lessons learned from our decade of research with middle grades schools, the evidence to support the benefits and outcomes of best practices in middle grades education is clear.*** The success and impact of interdisciplinary teaming with high levels of common planning time include a higher implementation of best practices and a positive impact on student outcomes, including emotional health and behavior and student achievement. The factors that increase the success of interdisciplinary teams include organizing teams that contain a smaller number of students per team and allowing teams to work together for longer periods of time. We can also be certain of the interrelatedness of the work of interdisciplinary teams and the implementation of best practices in the classroom. They each support one another and the practices at the team level increase the success of the classroom instructional practices. Finally, it is clear that the combination of teachers that are both prepared to teach young adolescents (i.e., have earned middle grades certification) and are provided with the resources (i.e., interdisciplinary teaming with high common planning time) to implement best practices produces the most favorable outcomes.

In this article, we have reflected only on our research from CPRD to present and discuss the lessons learned. There are numerous additional studies in the literature by other researchers in the field of middle grades education and reform that contain further evidence of the success of middle grades education. The evidence in our research corroborates the work of many of these additional researchers. For information on the wide array of middle grades research, we recommend the book recently published by National Middle School Association (Anfara, 2003) titled *Research & Resources in Support of This We Believe*. This book provides a summary of middle level research and is designed to assist practitioners and policy makers in understanding what evidence is currently available to support middle level practices. It was developed as a companion volume to *This We Believe: Successful Schools for Young Adolescents* (National Middle School Association, 2003).



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