



RESEARCH ON MIDDLE SCHOOL RENEWAL

What Makes Interdisciplinary Teams Effective?

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Two of the biggest misconceptions surrounding the implementation of interdisciplinary teaming in the middle grades are that (a) the work is complete after teachers and students have been assigned to teams and the class schedule has been rearranged so that students on each team have all their classes together (i.e., the structures are in place) and (b) the implementation of teaming ensures that a school will positively impact teacher and student outcomes. However, the truth is that not only is the most challenging work tackled after teams have been formed, but, without the follow-up work, teaming alone is not likely to achieve sustained outcomes (Erb and Doda, 1989; Felner, Jackson, Kasak, Mulhall, Brand, & Flowers, 1997).

For many teachers who are assigned to a team for the first time, working on an interdisciplinary team represents a change from the security of their often isolated classrooms to a setting that requires collaboration, teamwork, and ongoing communication with other teachers. Since interdisciplinary teams are comprised of groups of teachers from different subject areas who work together to coordinate instruction, communication, and assessment for a common group of students, teachers must learn to work collaboratively, establish equitable responsibilities among team members, and set attainable goals for the team. Further, once teams have established professional and interactive relationships, they must learn how best to use their group efforts given the goals they have set for themselves. Since very few educators are trained or prepared to work on teams, these are challenging and often frustrating tasks for even the most dedicated and caring teachers.

However, when a team can crystallize its goals and tasks, its members can work together to influence curriculum and instruction, which in turn influences the learning process. In fact, schools engaged in interdisciplinary teaming have a more positive school climate, have more frequent contact with parents, have higher job satisfaction among teachers, and report higher student achievement scores than non-teaming schools (Flowers, Mertens, and Mulhall, 1999).

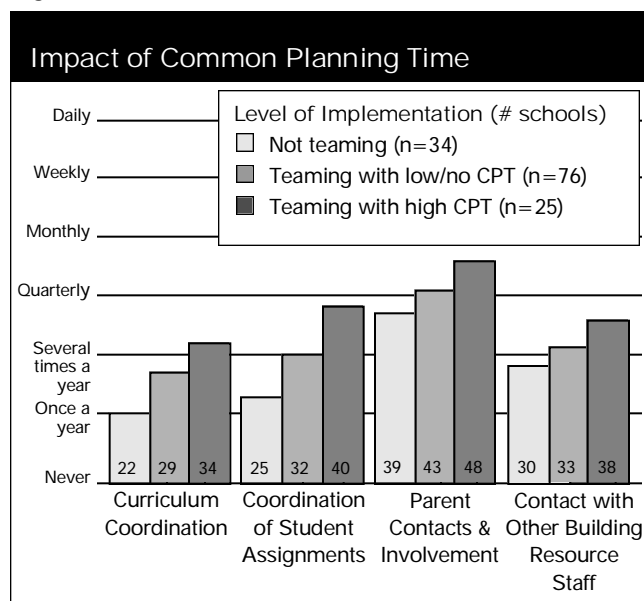
This article will identify and explain the types of practices and interactions that teams engage in, which in turn influence instruction and student learning. Data will also be presented to illustrate the impact that common planning time, the size of teams, and the length of time that a school has been engaged in teaming have on team activities and interactions. The data were collected from a group of 155 middle grades schools in Michigan that are part of the Middle Start Initiative funded by the W. K. Kellogg Foundation. These schools participated in the School Improvement Self-Study, a set of surveys completed by staff, students, and administrators, during 1994-95 and again in 1996-97 (Felner, Mertens, & Lipsitz, 1996; Mertens, Flowers, & Mulhall, 1998).

Impact of Teaming Practices

Ask fifty middle grades teachers what types of coordinated efforts they undertake with their fellow team members and you will likely receive many diverse explanations, but at the core of the responses will lie some startling similarities. The activities of most interdisciplinary teams fall into one of the following three cate-

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Figure 1



gories: (a) curricular and instructional issues; (b) student-centered issues, and (c) issues about communication.

The Center for Prevention, Research and Development's (CPRD) Self-Study measures the frequency with which teachers engage in these team activities through a series of survey questions. Based on factor and reliability analyses, the team activities measured include *curriculum coordination* (how often teams work together to coordinate learning activities), *coordination of student assignments, assessments, and feedback* (how often teams work together to coordinate the nature and timing of student assignments, the manner in which they are assessed, and the type of feedback provided), *parent contact and involvement* (activities that promote the involvement of parents in the education of their children), and *contact with other building resource staff* (communication with administrators, media center, special education). By measuring how often teams engage in these types of coordinated activities, we hope to begin to shed light on their impact in allowing teachers to effect change in the classroom.

Common planning time increases team activities

There is no magic formula for determining how often teams should engage in coordinated team activities. However, we propose that the more a team works on these activities (i.e., weekly or daily), the more likely they are to regularly influence classroom instruction. Another seemingly obvious conclusion is that teams that have the benefit of common planning time are more likely to have opportunities to engage in team activities than teams that do not meet during a common preparation period (Warren & Muth, 1995).

Among the 155 Michigan Middle Start schools, CPRD has identified 25 with high levels of common planning time (i.e., at least 4 meetings per week with each meeting lasting at least 30 minutes), 76 with low (i.e., some common planning time, but less than the highest level) or no common planning time, and 34 that are not teaming. Twenty schools were not classified because they were special education/alternative schools or only had pilot teams. The schools that were teaming with high levels of common planning time have significantly higher team activities than schools in the other two categories (see Figure 1). It is not surprising that the team activities among non-teaming schools were very low. Of particular interest, however, are the statistically significant differences between the team-practices average scores of the teaming with high common planning time schools and the teaming with low or no common planning time schools. The more highly implemented schools consistently engaged in more frequent team-related, middle-grades practices, thus the impact of high levels of common planning time is clearly evident.

Smaller teams engage in more team activities

Many schools struggle with determining the optimal number of students that should be assigned to each team. Should each team consist of 130 students, or would they function better with fewer students? Undeniably, the size of a team influences the frequency and success with which team activities can occur. Teams who are coordinating instruction for 100 versus 200 students have a much more manageable task to contend with. In order to examine the effects of team size on team activities, CPRD selected only those Michigan Middle Start teachers who taught core academic subjects (i.e., reading, language arts, math, science, social studies), were members of a team, and taught in a school that had implemented teaming in some or all of its middle grades. For analysis purposes, teams were grouped into three size categories: 90 students or less (340 teachers); 91-120 students (338 teachers), and 121 or more students (295 teachers). As expected, teachers who are part of teams with fewer students (90 or less) engage more frequently in team activities, particularly *curriculum coordination* and *coordination of student assignments* (see Figure 2). Clearly, coordination activities are more manageable and thus more likely to occur in teams with fewer students.

Schools teaming longer engage in more team activities

Another critical question for consideration is whether team activities occur more frequently in schools that have been teaming for a longer period of time. In addition, does the level of common planning time in place combined with how long the school has been teaming have an added impact on team activities? In an effort

to answer these questions, Michigan Middle Start schools were categorized by the length of time they have been teaming: 1-2 years (19 schools), 3-4 years (39 schools), and 5 or more years (42 schools). Two important findings emerge from this data (see Figure 3):

- Schools with lower levels of common planning time show little to no difference in the frequency of team activities by the number of years they have been teaming. Schools with high levels of common planning time show increased frequencies of most team activities the longer they have been teaming.
- Schools with high levels of common planning time consistently engage in more frequent team activities than schools with lower levels of common planning time, regardless of the number of years they have been teaming.

Clearly the length of time a school has been teaming has some impact on the frequency that teams engage in team activities; however, this impact is also influenced by the level of common planning time in place. The impact of continuity is enhanced by high levels of common planning time.

Teacher interactions on teams

While the frequency that teams engage in various team-related practices is important to the success of interdisciplinary teaming, the types and quality of interactions among team members are equally important. Interactions like how well team members work together and the level of support of each other's work that is present also influence a team's success. To measure these interactions, CPRD constructed several scales or dimensions based on analyses of team interactions questions on the Self-Study. Team interactions are measured by how much teachers agree that their teams have a positive climate, are effective in their work, and relate well with students, parents, and other individuals at the school.

High quality team interactions among members is associated with higher levels of positive team practices. In other words, teams that meet together more frequently (i.e., high levels of common planning time), are more positive in the assessment of their own group interactions than teams with low levels of common planning time. This may be the simple fact that teams that are able to meet more often have the opportunity to work out differences of opinion and arrive at common ground more readily than teams that do not meet as frequently. In addition, team interactions are also more positive among teams with smaller team sizes (i.e., 90 or fewer students), as well as among teams that have been engaged in teaming for a longer period of time. Lastly, in schools engaged in some level of teaming, the frequency of team practices corre-

Figure 2

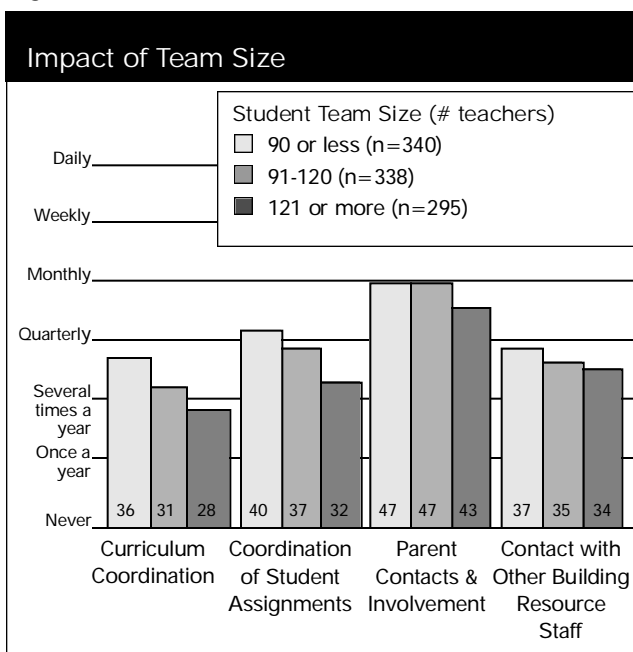
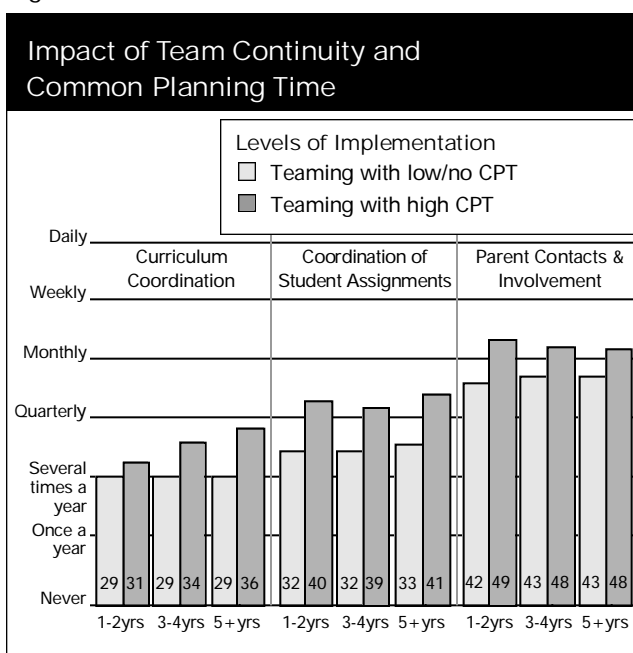


Figure 3



lates very highly with the quality of team interactions (see Figure 4). This indicates a strong, positive relationship between how often teachers engage in teaming activities and their attitudes about the quality of team interactions.

These findings may seem predictable, especially for teachers and schools that are already immersed in teaming. But for those that have not yet implemented teaming in their schools, these

Figure 4

School-Level¹ Correlation Matrix Showing Relationships Between Quality of Team Interactions and Team Practices

Quality of Team-Interaction Dimensions	Team Practices Dimensions			
	Curriculum coordination	Coordination of student assignments	Parent contact & involvement	Contact with other building resource staff
Have a student-centered focus	.64 ²	.72	.58	.56
Group cohesion/harmony	.41	.56	.45	.35
Readiness for teaming	.49	.67	.57	.49
Student assessments	.59	.69	.55	.51
Quality of interdisciplinary linkages	.73	.76	.64	.64
Team decision making	.37	.49	.50	.58
High expectations for all students	.35	.42	.30	.26

¹ Excludes 54 schools identified as not teaming or schools with pilot teams or special education/alternative schools.

² All correlation coefficients are significant at $p < 0.01$ (2-tailed).

data-based findings can illuminate the potential impact teaming can have on a middle grades school.

Summary

Clearly the implementing of and the functioning of teams is a very complex process. The Self-Study data, however, illustrate several critical issues for schools to consider on the path to teaming. The first is that after teams have been formed, teachers must focus on learning to work together as well as what types of activities they will undertake as a group. These activities and relationships are what will eventually influence classroom teaching and learning. Second is that common planning time is a critical component of a team's success. Teams with high levels of common planning time report both engaging in team activities more frequently as well as feelings of a more positive team climate. Third, teams with fewer students engage more frequently in team activities and have more positive interactions among team members. And finally, teams that have been working together for a longer period of time have benefited from the longevity of their team relationship as evidenced by more coordination activities as well as greater feelings of success in their work.

Although many of the findings regarding team activities seem intuitive, having data to substantiate the impact of teaming strengthens the argument that school administrators and school boards should allocate more resources for the implementation of teaming in middle grades schools. The next logical question is, how do the activities of teams translate into practices at the class-

room level, thus directly having an impact on students? The answer to this question will be the topic of a future column.

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