Homework problems among students with learning disabilities can be attributed to two primary causes: (a) students’ characteristics (e.g., poor motivation, problems in listening comprehension, lack of organizational skills), and (b) teachers’ deficits in making assignments (e.g., assigning work that is too difficult or time-consuming, failing to ensure that students record assignments properly or have necessary materials). The past decade has seen growing interest in homework intervention research, which has primarily addressed helping students develop homework completion skills. This article summarizes the results of these studies in general and special education classrooms and describes several strategies that appear to improve homework compliance—including reinforcements, graphing, cooperative study teams, homework planners, and parent involvement. Because there have been so few studies, suggestions are made for future research to fill in the large gaps in our knowledge base for effectively using homework to enhance students’ academic achievement.

Fifty-six percent of students with learning disabilities and 28% of students who have not been identified as having learning disabilities have problems completing homework assignments (Polloway, Epstein, & Foley, 1992). Many causes have been suggested to explain homework completion difficulties, ranging from lack of motivation and poor attitudes (Cooper, Lindsay, Nye, & Greathouse, 1998) to cultural differences in homework style (Hong, Milgram, & Perkins, 1995). For students with learning disabilities, homework problems have been attributed to personal deficits such as short attention span, memory deficits, poor receptive language, and/or lack of organizational skills. The reasoning is that listening and memory deficits may interfere with understanding or remembering what has been assigned. Organizational deficits may affect getting the assignment home, gathering the materials for working on the assignment, and bringing it back to school (Bryan, Nelson, & Mathur, 1995; Lenz, 1992; Polloway, Epstein, & Foley, 1992). Students with learning disabilities find the road to homework completion covered with potholes from start to finish, and their deficits become more problematic with age. As children mature, homework assignments become more difficult and students are expected to become more independent.

But students’ attributes are only part of the picture. Because only about 35% of school districts have
Homework

An established homework policy (Roderique, Pol-loyaw, Cumblad, Epstein, & Bursuck, 1994), homework practices tend to be based on individual teachers’ beliefs rather than on consensually agreed upon or research-based best practices. Teachers must assign appropriate homework at instructional levels that match students’ skills and provide positive consequences for homework completion (Rademacher, Deshler, Schumacher, & Lenz, 1998; Rosenberg, 1989). Yet, a survey of teachers of students with learning disabilities found that 80% of teachers regularly assigned homework, but few matched the tasks to students’ skills and provided feedback or positive consequences for homework performance (Salend & Schliff, 1989). To further exacerbate the problem, as students with learning disabilities increasingly are mainstreamed into general education classrooms, special education teachers find themselves spending most of their time monitoring homework completion rather than developing the skills that would help students become capable of doing the homework independently (Hughes, Ruhl, Schumaker, & Deshler, 2002).

Given the policy of including students with disabilities in general education classrooms, the Office of Special Education Programs, has supported research on effective homework practices. These intervention studies have explored various methods to improve students’ skills in doing homework. It is not clear whether teachers hold students with disabilities to the same standards as their higher achieving classmates or whether teachers make adaptations and give these students shorter or easier assignments (Schumm & Vaughn, 1991). Regardless, it is clear that many students, with and without learning disabilities, continue to have problems doing homework (Bryan, Nelson, & Mathur, 1995; Polloway, Epstein, & Foley, 1992).

This article presents a summary of homework intervention research. Specifically, it reviews studies that have employed a variety of techniques in primary through middle school general education and special education classrooms to improve homework completion. Some of the studies compared students with and without learning disabilities and students with and without homework problems, while others focused solely on students with disabilities in special education resource rooms. Most studies were conducted in one or two classrooms; few have been school-wide. There have been no studies of district-wide systemic efforts to coordinate teachers’ uses of homework or students’ responsiveness to homework as an educational strategy. The purpose of this article is to alert general education teachers, special education teachers, school administrators, and others who work with children to the scope of the problem, and to direct attention to evidence-based homework strategies. We tried to provide sufficient detail so that practitioners could adapt the results of this research into practice. The research has focused primarily on improving students’ skills for doing homework as opposed to improving teachers’ skills in preparing homework assignments, or providing specific strategies for teachers to use in constructing homework assignments.

Systematic Efforts to Address Homework

Some parents complain that teachers give too little homework, while others complain that teachers give too much. Teachers in different classrooms in the same grade at the same school often treat homework differently. Parents have suggested that teachers “should talk to each other so kids don’t get ‘homework shock’ from one grade to another” (Baumgartener, Bryan, Donahue, & Nelson, 1993). Problems like these can be resolved only at school- or district-wide levels. Unfortunately there is little research that assessed teacher compliance with school district policy, systematic efforts to test methods to implement policy, or the effects of policy on students and families.

One school district evaluated the effectiveness of two policies but limited the assessment to two sixth-grade classrooms (Hartensteiner & Marek-Schoer, 1992). The two policies varied the consequences for failure to submit homework assignments on time. In one school, students were given 2 days after the homework assignment’s due date to turn in the assignment before they were given a grade of zero. In the second school, students were not given any extra time to turn in assignments; they received a zero if homework was not handed in when it was due. The results showed that the policy with severe consequences was more effective in improving students’ homework completion rates.
Teachers Evaluate the Effects of Their Practices

A major issue in homework is getting teachers to develop assignments that are developmentally appropriate in terms of their difficulty and length of time to complete. Bryan and Sullivan-Burstein (1997) conducted two informal studies in first- through sixth-grade classrooms concerning accuracy in estimating time required to complete assignments and the difficulty of the assignments. When making the assignment, teachers jotted down how long they believed it would take. After completing the assignment, students indicated how long it took them. An analysis of the discrepancy between teachers’ estimates and students’ reports indicated that several students spent much longer than teachers had anticipated, yet did a poor job. Teachers followed up to find that these students had not understood the assignments, had attention problems, or had distractions at home.

In another activity, teachers estimated the difficulty of their assignments by placing smiling, frowning, and neutral faces on the corner of assignments. When students completed the assignment, they circled the face that matched their feelings about the assignment. Teachers used students’ ratings as a springboard for discussing and changing assignments.

Student Learning Style Preferences

Three studies examined the relationship of students’ learning styles to homework completion. This research was based on the belief that contradictory results on the effectiveness of homework reflect a failure to distinguish between individual preferences of time, place, and conditions on the process of learning outside of school (Hong, Milgram, & Perkins, 1995). Perkins and Milgram (1996) designed an instrument to tap individual preferences for out-of-school learning. They found different patterns of homework style between high and low homework achievers and between children with positive and negative attitudes toward homework.

Hong and Milgram (2000) took another approach based on the notion that personal dispositions should be matched to conditions for completing homework—that setting the stage for homework should capitalize on personal learning styles. In an informal study that assessed this idea, Bryan and Burstein engaged middle school students in an evaluation of homework completion time and accuracy while watching television, listening to the radio, and working in quiet surroundings. Students reported that their personal preferences influenced the amount of time it took them to complete assignments, but they did not mind spending more time on homework when they could listen to their favorite programs. They were surprised to learn that their classmates felt differently about doing homework than they did. Including students in self-monitoring and collecting data related to their performance is a promising avenue for homework intervention research.

Classroom Techniques to Improve Homework Completion

What type of homework adaptations or strategies are teachers willing to use? Teachers are willing to try methods or materials they consider feasible, cost-effective, and valuable, but reject any that are time-consuming or inconsistent with the organizational structure of the classroom or curriculum (Johnson & Pugach, 1990).

Bryan and Sullivan-Burstein (1997) engaged a team of elementary school teachers in Participatory Action Research (PAR) for 2 years to study the effectiveness of teacher-selected homework strategies on students with and without learning disabilities and with and without homework problems. After studying the extant database, the team selected and systematically assessed the effects of four techniques on students’ homework completion rates and weekly performance on math and spelling quizzes. Following a baseline period, teachers introduced reinforcements for homework completion, such as extra recess time or special treats when they completed all assignments for the week. A second strategy was graphing homework completion. Students colored their graphs green when homework was handed in on time, yellow if a day late, and red if not turned in. Students showed their graphs to their parents during student-led parent-teacher conferences. The third technique tested was “real-life” assignments. These assignments were designed to help students connect class work
to daily home routines and events and activities in the home or community. For example, primary students learned to tell time by marking a clock with the times that favorite television shows began and ended; they made vocabulary card games they could play with the family. Elementary students learned probabilities by estimating the amount of paint they would need to cover their bedroom walls by measuring the walls, and then calling local paint stores to determine the cost of paint. For social studies, students interviewed family and neighbors about their experiences during major events, such as earthquakes, or about significant community issues, such as solutions to water shortages. The fourth intervention was homework planners that students designed using their own art work and tips for doing homework. Teachers instructed students on how to use the planner to record assignments, set aside time for doing them, and keep track of other events. Teachers informed parents about the planners and invited them to use the planners to comment on assignments or other relevant issues.

The results showed that the teacher-selected intervention strategies significantly increased homework completion and performance on weekly math and spelling tests, although the effects were stronger for math than for spelling. For example, teachers reported that when students had to explain a “sea of red” on the homework graphs, parents became vigilant in seeing that homework was handed in on time. Students with learning disabilities and average-achieving students with homework problems benefited more from the interventions than achieving students with no homework problems. The teachers reported the results to their school’s faculty and obtained administrator and colleague support for school-wide adoption of the homework planners. The team wrote a proposal to a local philanthropic organization to obtain funds to pay for school-wide implementation. A follow-up survey conducted 2 years later indicated that two of the interventions, homework planners and graphing, were still being used.

The effectiveness of graphing and self-monitoring for increasing the number of daily homework assignments completed by students with learning disabilities in grades 7-10 was tested by Trammel, Schloss, and Alper (1994). Students used a sheet to chart homework completed for each assignment. On average, six teachers made four assignments each day. Modeling and guided practice were used to teach students to complete the sheet. In the next phase of the study, students were taught to graph their homework completion data and to set goals. Finally, as a test of maintenance, the graph and assignment sheet were no longer required and students were responsible for completing assignments with no visual reminders. The results showed that self-monitoring resulted in an increase of assignment completion; the increased rate was maintained during the self-graphing and goal-setting phase, as well as in maintenance and follow-up phases.

O’Malia and Rosenberg (1994) developed a cooperative homework model for students with learning disabilities and behavior disorders involving mathematics instruction in sixth- to eighth-grade special education classrooms. Based on an assessment of students’ specific skills deficiencies, lessons and homework assignments were planned and students were assigned to 3- or 4-member cooperative homework teams. During a 10-minute daily meeting, teams submitted assignments to one team member assigned to be the checker (a position that rotated each day), who in turn reported the grades for the papers to the teacher. Papers were returned for review and corrections. Team members were encouraged to help each other with corrections. Team scores were calculated each week based on homework completion and the percentage of items that were correct on the assignments. In a control condition, students did not have the opportunity to work together or earn individual or team points. The results revealed that compared to students in the control condition, students on the cooperative homework teams showed significantly higher rates of homework completion and correct responses on assignments, but no significant differences on a global measure of math achievement.

Because many students with disabilities have problems completing homework assignments independently, Hughes, Ruhl, Schumaker, and Deshler (2002) developed a comprehensive strategy involving nine middle school students in general education classrooms who had learning disabilities and homework problems. Participants were taught skills for doing homework independently. These skills
included listening for and correctly recording an assignment, planning how much time to schedule to compete assignments, identifying what materials were needed and taking them home, recruiting help when needed, monitoring progress in competing the assignment, and self-rewarding for task completion.

Students received instruction for 30 minutes, 4 times per week for 4 weeks. The instructor described and modeled the strategy, then students verbally rehearsed it and engaged in controlled practice. After achieving mastery in the simulated practice, students reviewed the strategy and discussed how to use it in their classes. A multiple probe across students design was used to evaluate the effects of the strategy on homework completion rates and the quality of products completed. The analysis indicated that the majority of participants learned the strategy for independently completing their homework. It should be noted, however, that students reported instances when they did not know how to do the work. Thus, students can learn strategies for doing homework, but strategies become immaterial when the assignments are beyond students’ academic levels.

**Parent Involvement**

Parent involvement in children’s education has been correlated with higher academic achievement, improved school attendance, increased cooperative behavior, and lower dropout rates (Ekstrom, Goertz, Pollack, & Rock, 1986; Epstein, 1992; Greenwood & Hickman, 1991). The National Education Longitudinal Study of 1988, based on a survey of about 22,000 eighth graders and their parents, indicated that parent involvement in homework has a substantial, but indirect, effect on achievement test scores. Parent involvement in homework led to higher homework completion, which in turn produced higher achievement (Keith, 1992). However, a survey of fifth-grade parents indicated that most had problems establishing homework routines with their children and that family schedules often interfered with consistent homework monitoring (Reetz, 1991).

An intervention research study involving parents was conducted by Sah and Borland (1989). Parents of gifted students who had been identified as having learning disabilities were trained to use family home planners to record homework completion timetables (e.g., homework to be completed between 4:45 and 5:50 p.m.) and noncoercive behavioral discipline techniques. Students showed improved grades and behavior from baseline to study end, but they did not increase the number of completed homework assignments.

Balli, Demo, and Wedman (1998) investigated the effects of family involvement with homework on sixth-grade students’ performance on a mathematics posttest under three conditions: (a) when no prompts were used to involve family members, (b) when students were prompted to involve family members, and (c) when both students and family members were prompted to involve family members in homework. After completing 20 assignments, students were surveyed to determine how frequently their families had helped them. The results found that families in the two prompt conditions were more frequently involved with mathematics homework than the no prompt group. Reports of family involvement, however, were not related to students’ performance on a mathematics test. Parents reported that they had problems helping with homework because of busy schedules, but they also indicated they had problems understanding the math concepts.

**Conclusion**

This article draw attention to strategies that research has shown to be effective in improving student homework completion and task performance. These include the use of (a) reinforcements, (b) graphing, (c) cooperative study teams, (d) homework planners, (e) real-life assignments, and (f) family involvement. Most of these strategies are well-known and fall within accepted educational practices.

Teachers may find developing real-life assignments and the comprehensive approach for teaching students how to do each homework step to be less feasible than the other strategies. These approaches require more time and effort. Yet the benefits of these and the other methods may provide teachers with highly effective ways to improve the use of homework in instruction.

Nonetheless, the database consists of just a handful of studies and few replications. Potential
topics for future homework research might focus on how students’ motivation and interests and the value they place on the school curriculum impact homework effectiveness. Nicholls, McKenzie, and Shufro (1994) illustrated how student motivation and values affected academic performance. Research that fosters motivation and investment in school work, and that tests ways to more effectively promote students’ valuing school knowledge is critical to improving students’ willingness to cooperate in and benefit from homework.

Teachers’ beliefs, values, and practices are yet another avenue for research. Homework assignments are based on the preferences of individual teachers, who may or may not set developmentally appropriate standards within and across grade levels. Yet the amount and type of homework is influenced by community standards and teachers’ perceptions of community expectations. The impact of teachers’ beliefs about their students’ abilities and about community standards and expectations may be reflected in the wide disparity of teachers’ use of homework.

Yet another area for research would be the impact of structured pre-service and in-service training to increase teacher knowledge and strategies for using homework. Teachers could systematically self-assess their practices, or explore teacher-student collaboration within and across grades. They could determine how asking students how much time it took to complete assignments or rating how difficult the assignments were impacts homework completion rates and adjust homework assignments accordingly.

A major issue confronting educators is how to get teachers to adopt the strategies that research has demonstrated to be effective, to critically self-examine their own practices, to make changes based on these practices, and to establish school-wide teams to create developmentally appropriate homework assignments and methods for systematically evaluating the effect of homework assignments on students. School-wide interventions have been rare; yet the school effectiveness literature indicates that teachers are likely to adopt these effective practices with administrative support and encouragement, opportunities to collaborate with other teachers, and a voice in setting policy. Intervention research that involves all the stakeholders is long overdue. Homework interventions are unlikely to take root until educators have clear ideas about how classrooms can be organized to use homework in effective ways that motivate all to invest their time and energy in building shared values regarding school work.

References


