The impact of homework in K-12 schools

Questions for the ARPS School Committee
Agenda and format for this presentation:

1. center ARPS’ questions relating to the homework issue
2. draw on relevant educational research to offer preliminary responses
Q1: What is the appropriate amount of homework at the appropriate grade levels in the district?
Recommendations from Cooper (2001)

1. **elementary school**: students gradually receive an increase in their homework (not to exceed 1 hour)

2. **middle school**: 1-2 hours a night

3. **high school**: more is better (to a limit)

Generally, students should receive a baseline of 10 minutes per night, multiplied by their grade level
How much is too much?

Galloway et al. (2013) found that in privileged, high performing school districts, high school students spent an average of 3.11 hours per night on homework. However, the majority of these students in these districts (72%) reported being either often or always stressed over homework assignments.

Sallee and Rigler (2008) found that some high school English teachers assigned homework in order for students to learn and teach themselves material that could not be covered during class time.

Teachers in affluent communities can feel pressure from parents to over assign homework; this led one district in Piscataway, NJ to cap the homework high school students receive to 2 hours nightly, and less in the earlier grades (Vail, 2001).
Q2: What qualities and types of homework should be given?
Some qualities of meaningful homework:

Doable/ manageable, (Darling-Hammond & Ifill-Lynch, 2006; Bang, 2012; Sallee & Riger, 2008), and given in small doses (Holliday, 2001)

authentic (i.e. project-based or inquiry-based work)

immediately useful in class the next day

draws on ideas that are important and relevant to students (Darling-Hammond & Ifill-Lynch, 2006)

started during the school day (Darling-Hammond & Ifill-Lynch, 2006; Wilson & Rhodes, 2010; Saam & Jeong, 2013; Holliday, 2001)

its meaningfulness/ usefulness is explained by teacher (Wilson & Rhodes, 2010)
Individualizing and providing homework choices

Results of Patall, Cooper and Wynn’s (2010) study showed that high school students reported higher intrinsic motivation, completed more of their homework, and performed better on a unit test, when they received a choice in their homework assignment as compared to when they did not receive a choice.

Minotti’s (2005) experimental study indicated that middle school students who were given individualized homework assignments based on their learning style showed larger gains than those who were not across subject areas.
Q3: What are the best practices related to offering feedback/grading homework?
Taskin Ekici (2014) found that nearly all students (87.1%) said that teacher correction of science homework makes a contribution to their learning by promoting dialogue between the teacher and students.

Mendicino et al. (2009) found that the immediate feedback students received from computer-supported mathematics homework assignments increased further increased learning as compared to paper assignments.
Q4: Are other structured after-school activities—particularly at the elementary level—worth investing more time into than homework?
Research on a few alternative afterschool program models for elementary students:

Goal setting (see Hallenbeck & Fleming, 2011)

Mathematics (see McVarish & Birkmeier, 2004)

Reading, science, arts, and technology (see Huang et al., 2010; Lundh et al., 2013)

Multicultural citizenship education (Park, 2016)

Healthy eating and physical activity (Afterschool Alliance, 2015)
Research on afterschool homework programming

For students having difficulty completing homework, Merriman et al. (2016) found that both group coaching and homework centers were effective interventions for decreasing homework problems. However, they also found a tendency for students with disabilities to produce better outcomes in the homework center, where students without disabilities appeared to do better with group coaching.
Q5: How can a diverse district manage the many social justice issues related to the assigning and grading of homework, knowing that students have vastly different levels of supports in their homes for help if needed?
Differing home supports

homework can amplify existing inequalities in schools because homework draws on differing home inputs (Rønning, 2011)

Achievement gaps in mathematics have been found to decrease as homework resources increase (i.e. having books and a quiet place to study) (Kitsantas et al., 2011)
Working with parents

provision of structure is the most common method of parental involvement in mathematic homework as compared to other methods, such as direct assistance, and significantly impacts students’ mathematic grades.

Schools can help parents with lower self-efficacy realize that they can help their children succeed by providing structure (O’Sullivan et al., 2014).

Parents can provide homework structure in the home by creating a good place in the home for student to do homework with adequate lighting and by talking with children about how to get started with homework and what tasks they will prioritize (Gilliland, 2002).
Q6: How can homework be differentiated for our diverse student body?
Homework differentiation through the use of learning-style assessments

One strategy offered for homework differentiation involves teaching students about their learning-style through the use of a computer-based diagnostic learning-style assessment. Such an assessment generates individualized homework prescriptions and study strategies to students based on their learning-styles (Minotti, 2005; Lauria, 2010; Dunn, 2009).
Homework choices and teacher coordination

Choices in homework assignments were associated with higher levels of intrinsic motivation, homework completion, and test scores for high school students (Patall et al., 2010)

Teachers can overcome the challenges of designing multiple homework assignments by developing school systems for sharing homework assignments among their colleagues (Patall et al., 2010)