RESEARCH RELATED TO DISCUSSION

PEDAGOGY

The following short excerpts from educational research highlight some important findings and/or conclusions:

The “wrong” answer. “…Knowing why the wrong answer is wrong in academic discourse can be just as important as knowing why the right answer is right.” Presenting science as an unquestionable body of knowledge turns students off as they lose motivation and instead passively accept answers, and often covers up prior misconceptions. Critique and challenging ideas is central to science, and it should be just as central in science education. Classrooms rarely provide students with the opportunity to not just understand the right idea, but also to understand why the right idea is right and why the wrong ideas are wrong.

From:

Discussion increases cognitive abilities. Early evidence indicates that opportunities to discuss ideas in one discipline can have positive impacts on student achievement in other disciplines as well. In essence, discussion “grows the mind.”

From:

Peer-to-Peer discussion. Research shows that peer-to-peer discussion is a critical component of the learning process. Students who have the chance to reason and talk together often came up with more accurate ideas, that they can as individuals In fact, studies show that scientifically accurate ideas tend to come out of peer discussions, even if each individual originally had inaccurate conceptions. Peer talk between pairs or groups of children is less hindered by adult–child interaction. The more equal participant structure of peer groups seems to support both divergent thinking and the development of new ideas. While the perceived superiority of adults might intimidate children from freely expressing their ideas, other children can provide more opportunity for discussion and reciprocal exchanges, thus promoting the types of social interaction that support construction of understanding.

From:
**MANAGEMENT**

**Wait Time.** The concept of “wait-time” as an instructional variable was originated by Mary Budd Rowe (1972). The “wait-time” periods she found—periods of silence that followed teacher questions and students’ completed responses—rarely lasted more than 1.5 seconds in typical classrooms. She discovered, however, that when these periods of silence lasted at least 3 seconds, many positive things happened to students’ and teachers’ behaviors and attitudes. To attain these benefits, teachers were urged to “wait” in silence for 3 or more seconds after their questions, and after students completed their responses (Rowe 1972; Stahl 1990; Tobin, 1987). With this undisturbed “wait-time,” there are positive outcomes: the length and correctness of their responses increase; the number of their “I don’t know” and no answer responses decreases; the number of volunteered, appropriate answers by larger numbers of students greatly increases; and the scores of students on academic achievement tests tend to increase. When teachers wait patiently in silence for 3 or more seconds at appropriate places, there are also positive changes in their own behaviors: their questioning strategies tend to be more varied and flexible; they decrease the quantity and increase the quality and variety of their questions; they ask additional questions that require more complex information processing and higher-level thinking.

From:


**Girls and Boys.** Research confirms that teachers call on boys more often than girls, accept more called-out responses from boys than girls, give boys more wait-time to respond, and give boys more praise and remediation than girls (Sadker & Sadker, 1994; Biklen & Pollard, 1993). Teachers usually are not aware that they favor the boys in their classroom over girls and are genuinely surprised when they learn of these inequities when they confer with trained observers or watch videotapes of their teaching (Wellhousen & Yin, 1997).

From:


**Students who Dominate.** As reported in “The One or Two Who Talk Too Much” (1988), researchers Karp and Yoels found that in classes with fewer than 40 students, four or five students accounted for 75 percent of the total interactions per session. In classes with more than 40 students, two or three students accounted for 51 percent of the exchanges.

From: