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Are grades in school effective and fair?

If a child starts bringing home low grades, it is not unusual for many parents to blame the child and "encourage" them to work harder. However, if you learn that half the students in the class are doing poorly, you might suspect the teacher is not doing a good job and if all the students are doing poorly, you might be inspired to talk with the principal. Intuitively, most people recognize that depending on the extent of the outcome, e.g. most of the students having problems instead of just one child, there could be more to the story.

Grades hold students accountable for outcomes that are the result of many causes or factors that they have very little control over and can have many destructive side-effects. Control can be categorized into three levels: direct, some or little. Some of the factors that effect grades and the degree of control from the child's perspective, include the following:

Causes - factors that impact grades - "the rest of the story"	Degree of control from the child's perspective
Textbook used - some may be better than others	Little
Time -- amount of time spent on the material being tested	Little
Expectations of the teacher, school, community and parents on the importance of education and the child's ability to learn	Little
Homework -- number of homework assignments given	Little
Teacher -- skills, knowledge, and abilities	Little
Questions. The number of questions and the point value assigned to each question that will be used to determine the grade	Little
Parental Involvement -- Do parent (s) take an interest in their child's performance? Do they attend parent/teacher conferences?	Little

Money -- Amount of tax dollars spent per child	Little
Homework -- Complete assignments on time; ask questions, seek additional help	Direct

Given the examples listed above, is assigning a grade to a child who has little control over most of the factors that contribute to determining the grade, effective and fair? In addition to the child, should grades also be assigned to the parents, teachers, school and the government?

Some Destructive Effects of Grades

In the late 1980's, I had the opportunity to attend a four-day seminar conducted by quality expert Dr. W. Edwards Deming. Deming talked about the destructive effects that grades in school (and employee performance appraisals in the workforce) can have on individuals and organizations. His point was that the majority of problems in any system or process are due to factors beyond one individual's control. Consequently, it was more important for everyone to work together to continually improve the system. The issue of eliminating grades in school took me the longest to comprehend and it helps to understand the difference between common and special causes of variation.

I occasionally teach at the college level and when I am *required* to assign grades, I assign either "A's", "F's" or "I's" for incompletes. My process requires students to show-up and do the work until they get it right. It's rare that a student has to re-do the work more than twice. The "F's" are assigned to students that either don't show up and/or refuse to do the work. Incompletes are given to students that could not complete assignments due to factors such as illness, job-related travel or family emergencies.

Hypothetically, if 100 different teachers taught the same class to the same groups of students, grades for each individual could vary from A's to F's. Some students who received an F could have learned more from that respective teacher than from the teacher that gave them an A. This variation in grades is one reason why colleges rely on standardized tests in admissions. In effect, grades are like a lottery -- students having little control over the factors that determine the final outcome.

Below is an excerpt from my book [Success Through Quality, Support Guide for the Journey to Continuous Improvement](#) (chapter 4, page 54) which illustrates one of my first applications of the quality technology as it related to education.

When he was in elementary school, my older son started bringing home math tests and quizzes with poor grades (D's and F's). D's and F's indicate that he missed many questions. I asked him if he thought the problem was due to a common cause or a special cause. In other words, I wanted to know if all the other kids were having problems, i.e., common causes resulting from a stable process, or it was just him. He concluded that, since all of the other kids also did poorly on the

tests and quizzes for that class, the results were common. I then analyzed where he was having difficulty and was able to help him to change his process, which eliminated the problem. I also talked with the teacher, who confirmed that the problem was common.

Mistake 1 would be blaming my son for the missed questions (to include assigning grades) when the fault was actually due to a process that he did not have the knowledge, power, or responsibility to change.

Mistake 2 would be assuming that all of the children were having problems if, in reality, it was just my son. A special cause in my son's case might have indicated a different type of problem such as some type of learning disability.

Dr. W. Edwards Deming and Dr. Joseph Juran, estimated that the majority of problems in any process are due to common causes. Reducing common causes of variation is the responsibility of the process owner (s).

In my son's case, the destructive consequences of the "grade paradigm" in elementary school occurred when he received low grades and concluded that "he was not good at math." The school and teachers concluded that "ability groups" would be used for the students "that were not good at math." Whatever name is used for these "ability groups," the kids know them as consisting of the smart kids and the not-so smart kids. This labeling creates both high and low expectations that are adopted by the students as well as the teachers. When my son scored well in math on a high school placement test, his elementary teacher still recommended that he be placed in one of the lower ability groups -- advice that was soundly rejected. He went on to graduate with honors from both high school and college that included receiving "A's" and "B's" in math courses that consisted of calculus, geometry and trigonometry.

In one of the courses that my son took in college, a tenured professor on the first day of the class told the students that more than 50% of them would flunk the course. The professor was able to meet this expectation. Students as well as college advisors refer to these types of courses as "weed-out" courses which are not considered unusual. From the quality perspective, this situation indicates a stable system that the process owners (college/professor) consider acceptable. This example is also the equivalent of an employee of an organization telling their customers in advance that half of them will be dissatisfied with the service and would not be getting their money back. Who should be receiving the "failing grades" in these examples? I did write a letter to the university who acknowledged my letter but not the issue of the "weed-out" courses.

A grade is more a reflection on the overall process than on the student. The focus should be on continually improving the process! I have worked with elementary school teachers that have applied the quality technology to improve the teaching of math within their classrooms. Their efforts have been so successful (students mastering the material, helping each other to improve their processes, and increasing test scores), that the teachers in the school voted to apply the process

school-wide. Most impressive to me were the success stories of students that went from "F's" to "A's" and then established new goals to improve their speed in solving problems. This from students who truly believed that "they were just not good at math."

Given the current grade paradigm, the immediate application of the quality technology as it relates to education, is to de-emphasize grades, set high expectations, focus on and continually improve the process and support students to ask questions and seek additional help if they do not understand the material being presented -- factors that parents and students can control.