



Tips and Techniques

The Answers to Cumulative Ignorance

Scripture Verse: *"The word of the Lord was unto them precept upon precept, precept upon precept; line upon line, line upon line; here a little, and there a little; that they might go, and fall backward, and be broken, and snared, and taken" (Isaiah 28:13, KJV).*

Grades: 1-12

Overview: Grades are the evidence of a student's good works." It is important for the school to maintain a uniform grading system with a consistent strategy for weighing various components of the grade. This consistency must be present among the various grades as well as from year to year. All grades should be based on objective evidence and directly related to the content of the course.

This consistency allows parents to compare performance of their child and they progress through the grades. What is considered an A's worth of information in 9th grade should be the same as an A's worth in 12th grade. In most schools an A's worth of learning relates to have mastered at least 90% of the curriculum. In order for a student to be successful at the next grade level, they need to master the material taught at the previous grade level. If they do not master the content in courses that depend on subsequent learning, such as mathematics, science, English and foreign language, the student may end up being two to three years behind the norm. This is especially true of students known to have learning challenges.

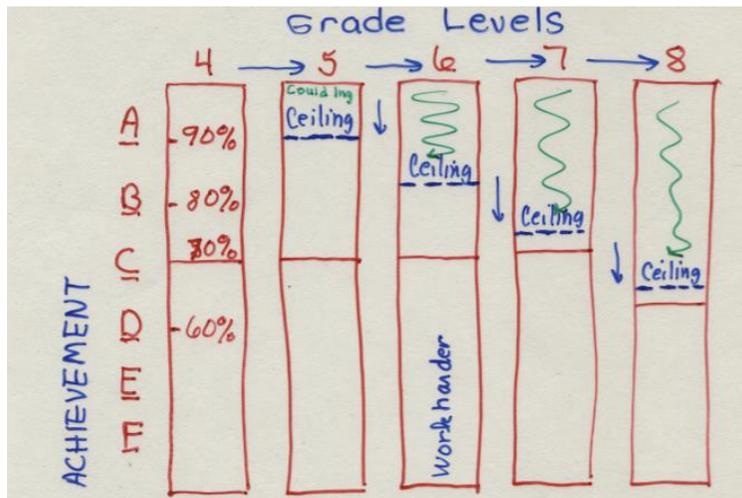
The goal of the school should be to provide parents with an accurate report of their child's progress as it relates to the content of each course. All assignments given must move students toward accomplishing the course objectives. The same is true of weekly tests, quizzes, etc.

When a teacher records a grade of 80% at the end of a grading period, this grade should reflect 80% of the course objectives for this period of time being mastered. Teachers should be able to indicate those objectives passed and those not passed.

Cumulative Ignorance

This deficit is referred to as the result of "cumulative ignorance. Don Steward in his book, Educational Malpractice says, "cumulative ignorance is the cumulative effect of non-learning which affects subsequent learning, and is created in a situation where a learner is permitted to leave a unit of a course without achieving the critical objectives which are necessary in order for the student to have success on subsequent units of courses."

What happens in cumulative ignorance is illustrated in this diagram. The columns represent all of the objectives in fourth, fifth, sixth, seventh and eighth-grade mathematics. If a student achieves all of the course goals, he would be at the top of the column. To demonstrate cumulative ignorance, let's take a student who received a "C" in fourth grade and was passed on to fifth grade.



Stewart explains it this way. "It should be reasonable to expect that the objectives which the student did not learn in fourth grade will lower the ceiling of what the student could learn in fifth grade (the ceiling for what the student could learn is represented by the broken line near the top of the fifth grade column). If in the fifth grade, this student is again a "C" student and is passed on to sixth grade, the cumulative effect of what he did not learn in fourth and fifth grade

will lower even further the ceiling of what the student could learn in sixth grade. If again the student achieves "C" worth of the course and is passed on to seventh grade, the cumulative effect of what he did not learn in fourth, fifth, and sixth grades now may lower the ceiling of what the student could learn almost equal to "C" achievement. At this point, the student is well aware of the fact that he is working harder for his "C" grade than he was before. This is because the student is actually learning a greater percentage of what he could learn with his degree of cumulative ignorance. Now, if this student goes on into eighth grade, the cumulative effect of what he did not learn in fourth, fifth, sixth, and seventh grades may very well lower the ceiling of what he could learn to below that of "C" achievement. Depending on the number of courses in the sequence, this process of "cumulative ignorance" may continue until either the student drops out of the course sequence because he feels uncomfortable in a situation where he does not understand what is being presented, or the student is forced out of the sequence because of failing grades, e.g., very few "C," "D," and "F" students in ninth grade algebra complete four years of high school mathematics. . . . If cumulative ignorance can develop when students receive a grade of "C," consider how quickly the cumulative ignorance can develop when students are only achieving "D" or "F" worth of a unit or course."

Base Grading on Measureable Objectives

It is important for teachers to be able to specify exactly what constitutes 60%, 70%, 80% or 90% of the content being taught. The best way to do this is to base the grade on specific objectives and to assess performance on mastery of these objectives. Thus, if a student by the end of the course masters 85% of the objectives, the teacher should be able to give the student a list of the 15% that were not mastered and indicate which ones are important for the next grade level. This provides an opportunity for the student to continue to master the missed 15% - summer school, tutoring, or continued practice; knowing that learning these missed objectives will enhance his success at the next grade level.

The Teacher is the Key to Eliminating Cumulative Ignorance

Why students don't master the objectives over the course of nine months is attributed to a number of factors. This may include lack of ability, genetics, home environment, motivation,

etc. rather than the result of ineffective teaching strategies or learning situations that make it impossible for the students to learn; for example, a chaotic classroom as a result of lack of classroom management, and other factors within the control of the teacher and school.

The single most important factor to eliminate cumulative ignorance is the teacher. There is the professional factor and for Christian educators a spiritual factor. Professionally, teachers need to know their subject and be able to teach it well: a person cannot teach what he does not know (II Tim. 2:2).

Experience is an important ingredient. Generally, more experienced teachers will have fewer behavioral challenges in the classroom, display more confidence, be more productive, better organized, more familiar with the curriculum and teaching methods, know what works and what does not.

Above these professional ingredients to effective teaching, the Christian teacher needs to become a channel through whom the power of God flows. It is the active work of the Holy Spirit in the life of the teacher that becomes a transforming force in the very life of the school. When the Holy Spirit in the teacher is given full release, He will quicken their understanding (I Cor. 2:9-15), facilitate teaching and make learning happen (I John 2:20, 27). It is the Holy Spirit that works through the teacher to transfer the wisdom of God (I Cor. 1:30). When a teacher acknowledges the Holy Spirit as their team teacher, it is amazing the new instructional strategies that the teacher will come up with (John 14:26).

God wants His power to flow out of the teacher to students. When a teacher touches his students with the power of God, students who are being held captive educationally, emotionally, socially, psychologically and spiritually, will be set free. The active presence of the Holy Spirit in the life of a teacher causes creativity to flow so lesson planning becomes an easy task. The teacher that allows the Holy Spirit to work in his life can expect to walk in the ability of God, "...Not by might, nor by power, but by my Spirit, saith the Lord of Hosts" (Zechariah 4:6). "Verily, verily, I say unto you, He that believeth on me, the works that I do shall he do also, and greater works than these shall he do; because I go unto my Father" (John 14:12).

The indwelling presence of the Holy Spirit enhances classroom management by convicting tendencies to let things go, do less than expected, go the minimum mile, or not to care about the conduct of students. The Holy Spirit will not allow a teacher to accept sloppiness that is nothing more than laziness, the kind of laziness that prompts the teacher to overlook students who are in hallways when they should be in classrooms, or those who throw paper and pen parts on the floor. When the Holy Spirit is released in the life of teacher, the teacher will be infused with a deep sense of responsibility; and, they will be better able to bring academic, spiritual and behavioral stability in the classroom. (For more information on this topic, see Spirit-Directed Education by the authors.)