How do we decide which instructional practices to focus on in obtaining higher student achievement? We already know that our instruction needs to be aligned to those learnings for which students will be held accountable. Are there any instructional practices we should incorporate into teaching that are going to be more powerful than others? According to the recent work published by Robert Marzano of the Mid-Continental Regional Education Laboratory, the answer is ‘Yes.’ The McREL study looked for trends in the research and used a meta-analysis approach to identify the top 10 strategies. Here they are:

1. Use comparing, contrasting, classifying, analogies and metaphors in teaching. Comparing is when we have students identify similarities and differences among things or ideas. Classifying has students group things that are alike into categories based on characteristics. Creating metaphors has students identify a general or basic pattern in a specific topic and then find another topic that appears to be very different but has the same general pattern. Creating analogies is looking at the relationships between pairs of concepts. *(45% gain)*

2. Have students learn how to summarize and take notes. Such skills allow students to organize a lot of information and then figure out the most important information to use. Synthesizing information is an essential skill for high student achievement. *(34% gain)*

3. Reinforce effort and give praise. This strategy is one that most teachers know about. Teaching about effort and keeping track of effort and achievement are important. There is both effective and ineffective use of praise. Some effective uses include congruence, specific recognition of attainment of performance criteria and focusing on task-relevant behavior. *(29% gain)*

4. Provide homework and practice. Relevant and aligned practice moves a student to mastery of learning. Homework is one way to extend the practice. A key to retention of the learning is practice. *(28% gain)*

5. Employ nonlinguistic representations. Providing mental pictures along with language is very effective. Representations can also include graphic organizers, pictures and pictographs and concrete representations. *(27% gain)*

6. Use cooperative learning approaches. There are many types of cooperative learning practices. Cooperative learning is more than students working in groups. Approaches need to ensure that each student is contributing and held accountable for the learning. *(27% gain)*

7. Set goals for students and provide feedback. Goal-setting for students establishes direction and purpose. Help students set goals by establishing contracts with them. Providing ongoing feedback to students as to the status of their learning is essential. The more specific the better, and the more criterion-referenced the better. *(23% gain)*

8. Have students generate and test hypotheses. This is a highly complex form of thinking that involves the application of knowledge. Both inductive and deductive approaches can be used to carry this out. *(23% gain)*

9. Use cues, questions and advance organizers. Cues and questions help students ascertain what they know and do not know. Cues are ways to bring forward prior knowledge or experience. Questions can elicit inferences about information. Advance organizers let students know what they are about to learn or experience. It helps the student focus on the learning. *(22% gain)*

10. Use certain strategies for specific types of knowledge. While the first nine strategies work with almost all types of subject-matter knowledge, there are practices that are more related to a specific type of knowledge. Vocabulary terms and phrases, details and organizing ideas need to be taught, for instance. Further, there are several suggestions in the research that show the differences needed in teaching skills, concepts and processes.

*Gains are the result of research taken from Classroom Instruction That Works: Research Based Strategies For Increasing Student Achievement by Robert J. Marzano, Debra J. Pickering, and Jane E. Pollock*