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**ABSTRACT**

Researchers at the Institute for Research on Teaching (IRT) at Michigan State University studied how teacher behavior influences what youngsters learn and how teaching can be improved. IRT found that how teachers teach is as important to student learning as what they teach. IRT found that many teachers believe they do a good job and don't see the need to invest time and energy to improve the way they teach. However, most teachers are willing to change when given suggestions on improving teaching skills. IRT identified five key elements of effective teaching; these elements, briefly discussed in this document, are: (1) Set Goals; (2) Communicate Expectations; (3) Understand Content; (4) Closely Follow Instructional Materials; (5) Accept Responsibility. (JD)

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# Research in Brief

ED 294 863



Chester E. Finn, Jr., Assistant Secretary

## Five Tips to Improve Teaching

Many teachers believe they do a good job and don't see the need to invest time and energy to improve the way they teach. However, most teachers are willing to change when given suggestions on improving teaching skills.

These are conclusions reached by researchers at the Institute for Research on Teaching (IRT) at Michigan State University, who study how teacher behavior influences what youngsters learn and how teaching can be improved. IRT found that how teachers teach is as important to student learning as what they teach.

Established in 1976, IRT was funded by the Department of Education's Office of Educational Research and Improvement (formerly the National Institute of Education) and is now supported by a combination of university, State, and Federal sources.

The institute's studies can be applied to teaching in all types of public and private schools. IRT found five key elements of effective teaching. Good teachers do the following:

**1. Set Goals.** Finding time and energy to accomplish everything that needs to be done is a challenge all teachers face. Many cope successfully with this problem by setting goals, which keeps instruction on track. Teachers without focused goals are more apt to add topics to their lesson plans. So, their students learn about many topics, but master few.

IRT found that some teachers set questionable goals. For example, a few aim to keep students busy by assigning mindless, repetitive seatwork that does little to help students learn. IRT researchers also found that high school teachers and students often strike tacit "bargains" with each other to make school easier. For instance, students with after-school jobs don't have much time for homework, and some teachers respond by assigning less homework. Unfor-

tunately, such bargains may result in a comfortable but academically compromised environment for students.

Many teachers, confronted with too many goals, will concentrate on just one, or substitute one goal for another. Good teachers can accomplish two or more goals simultaneously. For example, some elementary school teachers help students develop language skills while learning science, and good mathematics instructors teach concepts while helping students master computational skills. Differences in instructional goals help to explain differences in teachers' effectiveness.

### 2. Communicate Expectations.

Good teachers influence student behavior and learning by carefully communicating what is expected and why. Some youngsters view school as a requirement rather than a place to learn. Good teachers explain what students will be studying and how it can be useful. Teachers connect new lessons to past lessons and illustrate how lessons relate to everyday experiences. For example, mathematics teachers explain that knowing how to calculate percentages will help students figure out how much to tip in a restaurant, or how to determine the price of sale items. Good teachers monitor students' work to make sure students understand assignments and can complete the work.

IRT found that good instructors teach students strategies for learning in and out of school. These teachers encourage students to practice these strategies frequently, and to work without constant teacher supervision. Good teachers balance this latitude because they know that too much freedom fosters chaos and too little limits what students can accomplish.

**3. Understand Content.** Good instructors thoroughly understand the subjects they teach. However, research

indicates that many prospective elementary school teachers have limited knowledge of their subject area. Teacher education courses focus on teaching skills rather than subject matter. According to IRT studies, many elementary school teachers are uncomfortable teaching science, and many writing teachers are unprepared and uncertain about teaching writing.

Good teachers know also the misunderstandings students bring to class. For example, science students studying light and vision may believe that they can see an object because light from the sun brightens it. If a teacher does not discuss this misconception during the lesson, it will remain. The teacher must communicate that light from the sun is reflected to the retina, and that students see this reflected light when they "see" the object.

### 4. Closely Follow Instructional Materials.

Many teachers believe that good teachers don't follow textbooks. On the contrary, IRT found that teachers who closely follow instructional materials improve, rather than impede, the quality of their teaching. Most teachers are not trained to develop their own materials, nor do they have the time to do so.

Although published materials may have faults, good teachers carefully select materials to fit the curriculum and characteristics of their students. Doing so frees them to spend more time with students.

### 5. Accept Responsibility.

Teachers who believe they are responsible for student achievement are more effective than those who believe students alone are responsible for what is learned and how students behave. IRT found that teachers who successfully deal with problem students think they must help solve students' problems. When a student has trouble learning, both teacher and student must

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assess the situation and make necessary adjustments.

In one study, IRT researchers found that low-aptitude science students do much better when their teacher accepts responsibility for getting all students to learn science. Many science teachers, however, attribute student success or failure solely to students. Teachers who assume that their students are low achievers do little to encourage those students to learn. Teachers differ in how much responsibility they are willing to accept, but most will take on more if supervisors advise them how best to do so.

Teachers, like almost everyone else, are creatures of habit, often reluctant to change. Nonetheless, IRT found that teachers are receptive to changes based on

research results, such as these five tips. However, the changes must make sense to the teachers, and they must be given the opportunity to reflect on their practices.

Even then many revert to old teaching habits despite seeing positive results with their students. Researchers cite several reasons for this:

- Teachers often work alone, away from the view and comments of their peers.
- Busy classroom schedules leave teachers little time to reflect on ways to improve.
- Teacher education courses often give new teachers the impression that the only way to figure out what works best for them is through trial-and-error. While struggling to develop their own style, they sometimes forget about

professional standards or teaching strategies that have proven successful for other instructors.

- Researchers and reformers often overload teachers by recommending new practices to use without recommending which practices, if any, to eliminate.

Good teaching is difficult. It involves hard work, tough choices, objective evaluations, and a great deal of energy. But classroom teachers must accept responsibility for improving their performance, for no educators exert a greater influence on how much and how well children learn.

For more information on these studies, contact Andrew Porter, Institute for Research on Teaching, Michigan State University, 318 Erickson Hall, East Lansing, Michigan 48824-1034.

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