A number of research studies have shown that the factors important to academic achievement are time allocated to instruction, the amount of time students actively engage in learning, and the degree of success they experience while learning. To put this into practice, personnel with the Mid-continent Regional Educational Laboratory (McREL) have pulled together findings from a variety of studies and developed a workshop series to present the findings to local educators. The topics covered depend on the requirements of the schools involved. For example, one way to improve learning is to help teachers develop effective strategies for operating their classrooms during the first few days of school. The workshops begin by having teachers and administrators calculate the amount of time they devote to instructional activities during the typical school day, their students' engagement rates, and their success rates. Then they decide what areas to target for improvement. The McREL workshop series offers teachers and administrators a research-based foundation on which to build a total school improvement effort. It provides tools for assessing current practices as well as strategies for improving building and classroom management and student testing procedures.

(Author/MLF)
Everyone knows that student achievement is directly related to the amount of time teachers devote to instruction, right?

But, as most teachers realize, raising achievement isn't as simple as increasing the amount of time allocated to a subject. Recent research studies, in fact, have revealed a more complex relationship between instructional time and student learning. The most noteworthy is the Beginning Teacher Evaluation Study (BTES), described in the Fall 1979 issue of Educational R&D Report.

The study showed that besides the time allocated to instruction, two other factors are important to achievement:

1. The amount of time students actively engage in learning, and the degree of success they experience while learning.

To increase student achievement, the study suggested, teachers must:
- make good use of time allocated to instruction;
- increase the percentage of time that students engage in learning; and
- assure that students spend more than half their time working on tasks that provide high success.

Translating this "formula for success" into practice, unfortunately, isn't easy. But approximately 100 schools working with Mid-continent Regional Educational Laboratory (McREL) are dem-
Demonstrating that it can be done.

Studies point way to success

"After the RTES results came out, many educators in our laboratory's region asked us to help them translate the findings into practical steps for improving teaching and learning," says C. Larry Hutchins, deputy director of McREL. "We began this task by taking a look at what research has to say about increasing Academic Learning Time."

Academic Learning Time, or ALT, is the term researchers at Far West Laboratory coined to describe the amount of time students spend engaged in an academic task that they can perform with a high degree of success. The more time students spend actively engaged in such tasks, the more they learn.

"We found that many research studies on classroom conditions and student learning offer clues about how to increase at least one component of ALT," Hutchins continues. "Interestingly enough, most of these studies come from the regional laboratories and university-based R&D centers."

One example is research conducted by Carolyn Everston and colleagues at the R&D Center for Teacher Education at the University of Texas. These researchers spent thousands of hours observing differences between effective and ineffective teachers. A major finding was that teachers set the tone for the entire year during the first days of school.

"Teachers who immediately establish and teach classroom rules run classes in which more time is devoted to instruction throughout the year," Hutchins notes. "Obviously, then, one way to improve learning is to help teachers develop effective strategies for operating their classrooms during the first few days of school."

After searching for similar clues on how to increase ALT, Hutchins and his colleagues pulled together findings..."
from a variety of such studies and developed a workshop series in which to present them to local educators.

**Educators like it**

How the workshops are put together and just which topics are covered, though, depend on the requirements of the schools involved. That's one of the features that appeals to local educators.

"What I appreciate most is that a lot of good information is included, but we can pick what we're ready for," says Jim Meszaros, principal of Meadowbrook Elementary School in Rapid City, S.D. He and a team of teachers from his school participated in a workshop series that began early in 1981.

"The McREL staff assume that participants are professionals with skills," he continues. "No one is saying 'We've got the answers and here's what you have to do.' Instead, the attitude is 'Here's some information that you can apply to make your school better.'

"With this approach, we can pick and choose, and build on what we've already got."

One area that Meszaros and his team targeted for improvement was the way teachers manage their classes during the first days of school. Prior to the opening of the school year, the team arranged a day-long inservice for the entire school staff based on the research they had learned about earlier from McREL. The workshop incorporated specific strategies for teaching classroom rules to students and managing instruction and behavior during the first days of school.

Meszaros claims a clear success for his staff.

"During the first three weeks of school, every one of my 28 staff members commented on how smoothly their classes were going compared to previous years," he reports.

He also notes that during this time period only one student was referred to the office because of a discipline problem. "Now that's unusual in a school of 656 kids," he adds.

"We don't have statistical proof that improving the way we've run classes during these first weeks has resulted in an immediate increase in our student's A/LT," he continues. "But we believe it will. There's simply more time for..."
instruction. We're now a month into the school year. And our judgment is that we're three weeks ahead of where we were at this time last year.

Schools undertake improvements

The McREL workshops thus help teachers and administrators increase. Before they can begin, though, school staff members need to know just where they now stand.

"We begin by giving participants a means of looking at themselves and their students," explains Hutchins. "Participants calculate the amount of time they devote to instructional activities during the typical school day. They learn how to observe one another's classrooms to determine the percentage of time students are engaged in learning. And they analyze student success rates on different types of assignments for each subject matter area.

These written assessments are actual modifications of some of the questionnaires and observation procedures developed, tested and refined by the BTE researchers. McREL staff analyze the results and return the "scores" to individual teachers or formulate a composite score for the school as a whole.

Once teachers and administrators have a fix on the time they devote to instruction, their students' engagement rates and their success rates, they can decide what areas to target for improvement. The rest of the workshop presents strategies in three areas — classroom management, building management and student testing — that can contribute to increased ALT.

Covering all these areas might seem like too big a job for a workshop. Actually, though, the McREL workshop series is really a school improvement process that typically involves four one-day sessions spread over a period of several months. Between each session, participants carry out "homework" assignments in their schools.

The workshop series is generally conducted for a school district or group of schools within a district. Each participating school sends to the workshop a team of the principal and two or three teachers; a central office staff member is also involved.

"Teachers, of course, play the primary role in increasing students' ALT," says Hutchins. "But research on school improvement shows that central office support and principal leadership are also essential."

Principals are particularly important. They are responsible for ensuring that their team carries out the improvement effort for their building. This means developing a way of sharing knowledge gained at the workshop session with the rest of the school staff.

Equally important, some improvement strategies, such as ways to decrease student disruptions, must be initiated building-wide to be successful.

"Dealing with behavior problems" refers to teachers of valuable instructional time and is responsible for low ALT in many classrooms," says Hutchins. "Yet discipline is not just a classroom concern. Principals, and even parents, often become involved in the disciplinary process. To ensure that unacceptable behavior is handled consistently and effectively, it is critical to implement a school-wide policy. Everyone should know what the rules are and how they're enforced."

Climate for learning key

Hutchins goes on to point out that discipline is just one aspect of a school's climate that may affect ALT.

"A recent study from England proves that what school a student goes to and what goes on at that school does matter," he says. The study is called 15,000 Hours because that's approximately the amount of time a student spends in Britain's schools.

According to Hutchins, the study is important because it rejected the usual measures of a school's success, such as the amount of money spent, the number of books in the library and the academic degrees the teachers hold. Instead, the researchers looked at such factors as:

- the amount of emphasis placed on academics;
- the consistency with which common goals were shared by teachers and communicated to students;
- teachers' engagement in student learning;
- appropriate use of rewards; and
- the degree to which students participate and share responsibility.

"Schools that did well on all these dimensions of schooling produced students with much higher academic achievement, fewer discipline problems and better attendance," says Hutchins.

Based on the study, McREL staff have constructed an "Academic Indicators Survey" that helps educators focus on those characteristics and conditions that the study says have the greatest impact on student achievement. The survey is completed by all the staff of schools that participate in the McREL workshop series.

Each of the 28 items in the survey allows staff to rate the degree to which a particular characteristic is true for their school. And for each item a list of "evidence" provides a concrete basis for making judgments. A sample characteristic is "Disruptions of classroom instructional time are minimized." One of five pieces of evidence is: "Noise level in the hall is low. Staff members not only rate the characteristic but check the pieces of evidence they consider most important. Space is provided for adding other indicators.

"The survey results give schools a valid basis for deciding which areas to tackle first," says Hutchins. "If a high percentage of staff says student disruptions are a big problem, for instance, well, that's hard to ignore."

Class management affects ALT

Although the McREL workshop series aims at school-wide improvement, many of the activities focus on the classroom because that's where most learning actually occurs.

"The way classrooms are organized and managed," says Hutchins, "determines not only the amount of time available for instruction but whether kids successfully engage in learning. Several research and development projects offer strategies for streamlining and improving classroom organization and increasing student motivation."

"A good example of the latter," he continues, "is Student Team Learning, a program developed and tested by the Center for Social Organization of Schools at Johns Hopkins University. This program encourages kids to tutor one another, increases their involvement in learning, and raises achievement levels."

Information about such strategies is presented in the workshops. Topics
include ability grouping of students, whole-class instruction vs. independent work, motivational techniques, reward systems, strategies for dealing with discipline problems, and the relationship between achievement and teachers' expectations of students.

Research conducted by McREL's staff shows, for instance, that students get off task during independent learning easier than during whole-class instruction.

"But independent learning shouldn't be abandoned just because it can result in kids goofing off," states Hutchins. "In fact, teachers can use independent learning activities to meet individual needs and improve the amount of success students experience, provided they help kids stay on task."

Materials developed at Far West Laboratory, he explains, spell out ways to help students of different ages remain on task while working alone. Suggestions include explaining to students what independent learning means: defining rules for working alone; clarifying what's to be learned; identifying and discussing problems that might arise; setting up routines for when students are finished with their tasks; developing in students the expectation of a delayed teacher-response to their work; and evaluating with students their success at independent learning.

"In other words, teachers need to recognize that children must be taught to work alone," says Hutchins. "And teachers must treat independent learning as serious business. If they do, their students will, too."

Testing procedures questioned

Besides covering both building-level and classroom management strategies for increasing students' ALT, the workshop incorporates information on testing.

"Schools are traditionally judged through students' performance on tests - usually nationally normed, standardized tests," says Hutchins. "But a lot of evidence suggests that standardized-test results are a poor indicator of school success."

Hutchins explains that a recent analysis by the Institute for Research on Teaching at Michigan State University has shown that 30 to 40 percent of the items on leading tests are not covered by major commercial textbooks at the same grade level. Yet teachers are guided primarily by the textbooks they use.

"If schools intend to improve student achievement by increasing ALT, they need to take a second look at the way students are evaluated," he says. "It's not possible to have a clear picture of a school's effectiveness unless tests cover what's taught."

Of course, teachers and building-level administrators generally find it impossible to develop alternative evaluation systems. Such changes usually require district-wide action, which can take several years.

"Instead of developing a new testing procedure," Hutchins notes, "school staff must often make the best of what they have and increase its validity for measuring what they're teaching. So our workshop participants learn how to assess the content of tests, how to make sure that what they're teaching conforms to what they're testing, and how to improve their students' test-taking skills."

Junior high principal comments

The McREL workshop series thus offers teachers and administrators a solid, research-based foundation on which to build a total school improvement effort. It provides tools for assessing current practices as well as strategies for improving building management, classroom management and student testing procedures.

Although this approach to improvement is most applicable to elementary schools, some secondary schools have participated as well.

"Not all the research knowledge presented is applicable to all the subject areas taught in junior high," says Vince Henderson, principal of South Junior High in Rapid City, S.D. "But it's extremely valuable for subjects like English, social studies, reading and math."

"Some of our teachers have changed their entire teaching format based on what they've learned," he continues. "And even those who haven't found the research particularly applicable to their subject - industrial arts teachers, for instance - have reported that they've applied certain techniques to their situation."

Henderson comments on the McREL improvement strategy. "Often such workshops offer a lot of theory. Not so with McREL staff. They spell out good, practical applications."

According to Hutchins, these comments are consistent with what other participants say. "Evaluations of the workshops show that educators believe they're an effective approach to school improvement. We hope to further prove the process works through a formal field test within the Mapleton School District north of Denver," he adds. This year, McREL staff are conducting a research project with six schools in the Mapleton area to determine how the workshop series affects teacher behavior and student achievement.

You can participate

The Mapleton and Rapid City teams are among more than 100 that will have started or completed the workshop series by the end of the 1981-82 school year. The teams come from schools in the region served by McREL. With offices in Kansas City and Denver, McREL is a regional laboratory that works primarily with schools in: seven states, Colorado, Kansas, Missouri, Nebraska, North Dakota, South Dakota and Wyoming. However, McREL staff are willing to conduct the school improvement workshops for schools in other states on a cost-recovery basis.

Typically, this would first involve discussions that might lead to a half-day awareness workshop for a group of schools or an entire district. After the awareness session, school and district staff would decide whether or not to proceed. The workshop can be packaged to meet different local requirements.

Much of the research covered in the workshop has been reported in the Summer 1981 issue of Noteworthy, a magazine produced by McREL for distribution in its region. Single copies are available for $1.

To order a copy of Noteworthy or to find out more about the workshop series, contact Hutchins, deputy director of the Mid-continent Regional Educational Laboratory, 1800 Pontiac Ave., Denver, CO 80220; 303/399-1287.