

work with individual children, and to attend staff meetings.

The second factor increasing the time available to Japanese and Chinese teachers at school is that they spend more hours at school each day than do American teachers. In our study, for example, teachers in Sendai and Taipei spent an average of 9.5 and 9.1 hours per day, respectively, compared to only 7.3 hours for the American teachers. Asian teachers arrive at school early and stay late, which gives them time to meet together and to work with children who need extra help. Most American teachers, in contrast, arrive at school shortly before classes begin and leave not long after they end. This does not mean a shorter work week for American teachers. What it does mean is that they must devote their evenings to working alone on the next day's lessons, further increasing their sense of isolation.

### LEARNING FROM EACH OTHER

The second reason Asian classes are so well crafted is that there is a very systematic effort to pass on the accumulated wisdom of teaching practice to each new generation of teachers and to keep perfecting that practice by providing teachers the opportunities to continually learn from each other.

Americans often act as if good teachers are born, not made. We hear this from both teachers and parents. They seem to believe that good teaching happens if the teacher has a knack with children, gets along well with them, and keeps them reasonably attentive and enthusiastic about learning. It is a commonly accepted truism in many colleges of education that teaching is an art and that students cannot be taught how to teach.

Perhaps because of this belief, students emerge from American colleges of education with little training in how to design and teach effective lessons. It is assumed that teachers will discover this for themselves. Courses in teaching methods are designed to serve a different purpose. On the one hand, they present theories of learning and cognitive development. Although the students are able to quote the major tenets of the theorists currently in vogue, the theories remain as broad generalizations that are difficult to apply to the everyday tasks that they will face as classroom teachers. At the opposite extreme, these methods courses provide education students with lists of specific suggestions for activities and materials that are easy to use and that children should enjoy (for example, pieces of breakfast cereal make handy counters for teaching basic number facts). Teachers are faced, therefore, with information that is either too general to be applied readily or so specific that it has only limited usefulness. Because of this, Ameri-

can teachers complain that most of what they know had to be learned by themselves, alone, on the job.

In Asia, graduates of teacher training programs are still considered to be novices who need the guidance and support of their experienced colleagues. In the United States, training comes to a near halt after the teachers acquire their teaching certificates. American teachers may take additional coursework in the evenings or during summer vacations, or they may attend district or citywide workshops from time to time. But these opportunities are not considered to be an essential part of the American system of teacher training.

In Japan, the system of teacher training is much like an apprenticeship under the guidance of experienced colleagues. The teacher's first year of employment marks the beginning of a lengthy and elaborate training process. By Japanese law, beginning teachers must receive a minimum of twenty days of inservice training during their first year on the job.<sup>5</sup> Supervising the inservice training are master teachers, selected for their teaching ability and their willingness to assist their young colleagues. During one-year leaves of absence from their own classrooms, they observe the beginner in the classroom and offer suggestions for improvement.

In addition to this early tutelage in teaching techniques, Japanese teachers, beginners as well as seasoned teachers, are required to continually perfect their teaching skills through interaction with other teachers. One mechanism is through meetings organized by the vice principal and head teachers of their own school. These experienced professionals assume responsibility for advising and guiding their young colleagues. The head teachers organize meetings to discuss teaching techniques and to devise lesson plans and handouts. These meetings are supplemented by informal districtwide study groups and courses at municipal or prefectural education centers.<sup>6</sup>

A glimpse at what takes place in these study groups is provided in a conversation we recently had with a Japanese teacher. She and her colleagues spend a good deal of their time together working on lesson plans. After they finish a plan, one teacher from the group teaches the lesson to her students while the other teachers look on. Afterward, the group meets again to criticize the teacher's performance and to make suggestions for how the lesson could be improved. In her school, there is an annual "teaching fair." Teachers from other schools are invited to visit the school and observe the lessons being taught. The visitors rate the lessons, and the teacher with the best lesson is declared the winner.

In addition, national television in Japan presents programs that show how master teachers handle particular lessons or concepts. In Taiwan, such demon-