



## Innovative Staff Development Approaches

Prepared by the NCBE Staff

### Introduction

The best way to ensure that the nation's language minority students are receiving top-quality instruction is to offer them top-quality teachers. This fact is reflected in the Bilingual Education Act's authorization of four types of training programs for educational personnel who are working with or preparing to work with limited-English-proficient students and for trainers of these personnel. In fiscal year 1987, the U.S. Department of Education's Office of Bilingual Education and Minority Languages Affairs (OBEMLA) awarded almost \$19 million to institutions of higher education to support educational personnel training. Three institutions were awarded \$175,000 to engage in reform, innovation, and improvement of graduate education programs. Twenty-three grants, totaling almost \$2 million, were made for short-term training programs; \$2.5 million went to support bilingual education fellowships in 25 programs spread across 16 States; and \$10 million was awarded to support the 16 Multifunctional Resource Centers that provide technical assistance and training. In addition, the vast majority of school districts which enroll limited-English-proficient students support their own inservice teacher training to build the base of knowledge, skills and attitudes teachers must draw on to meet the special challenges of language minority education.

What principles guide the development of teacher training programs in our field? The research literature is sparse. In a review of inservice staff development approaches which was commissioned by OBEMLA ([Arawak, 1986](#)), fewer than half a dozen pertinent studies were found: Guerrero and Mirabito ([1981](#)); Reisner ([1983](#)); Alaniz ([1979](#)); Cardenas ([1983](#)); Dominguez, Tunmer and Jackson ([1980](#)).

The studies, as well as the findings of the Arawak report itself, indicate that the following eight characteristics should be considered and developed in a training plan in order to facilitate successful outcomes of training:

- The governance structure of the program;
- Needs assessment prior to program planning;
- Analysis of local and other resources;
- Determination of training objectives;
- Attendance incentives for trainees;
- Variety in training options;
- Follow-up to training; and
- Evaluation of training program effectiveness.

Few programs designed for teachers of limited-English-proficient students have all the characteristics listed above. There is a discrepancy between what the research says should be happening and what really goes on in most training sessions.

For example, few programs in teacher development recognize, use or respond to differences in teachers' experience, insights, and expertise. Programs do not vary on the basis of the different content areas which teachers teach, nor are teachers involved in the decision-making regarding training goals, processes or content. Very few training activities go on beyond a few months time, and systematic feedback on post-training practice and implementation of training contact is rare.

Recent literature on general educational staff development, unlike that in our particular field, abounds with reports of innovative and effective training content and processes. Given the commitment of professionals in our field to top-quality instruction, it is time for us to reach outside our own circle and take steps to invigorate the teaching we offer through new approaches to staff development. This paper reviews some of the recent literature on effective strategies for staff development. It also cites three examples of recently developed programs that use these strategies to train teachers of language minority students. These programs and the principles they are built on are presented as models for anyone who shares a commitment to excellence in teacher training.

### **New Options for Staff Development Content**

*"We can now design staff development programs around teaching approaches with known potential for increasing student learning."* Bruce Joyce and Beverly Showers make this confident assertion on the basis of a synthesis of research on innovative and effective models of teaching recently published in *Student Achievement Through Staff Development* ([Joyce and Showers, 1987, p. 11](#)). Gone are the days when fads and ideologies dictated a narrow range of instructional approaches. Teacher training now focuses on reasoned selection of multiple options appropriate for a given group of learners and a particular learning environment. Joyce and Showers' ([1987](#)) review of the literature on effective models reveals four types of models: social models, information processing models, personal models, and behavioral systems models. By making these models the subject of staff development programs, language teachers can come to control state-of-the-art strategies to be used in appropriate classroom settings.

**Social Models** are generally grouped under the heading "cooperative learning" and are supported by three lines of research. Johnson and Johnson ([1975, 1981](#)) have popularized a peer-teaching-peers approach that depends on five basic elements:

- Positive interdependence;
- Verbal, face-to-face interaction;
- Individual accountability;
- Social skills; and
- Group processing.

Many readers will recognize the match between these elements and some of the preferred learning strategies that language minority children bring to school but have to abandon in traditional classrooms.

Slavin ([1983](#)) has shown that it can be beneficial for teachers to manipulate the complexity of social tasks that students are asked to engage in while in the classroom and to experiment with various types of grouping. Thelan ([1960](#)) and Sharan and Hertz-Lazarowitz ([1980](#)) write about "group investigation," a complex social model which allows students to be grouped for democratic problem solving and inquiry into academic and social problems.

"Breaking into groups" is not new to language classrooms, but peer-teaching has been the rare exception to the rule of teacher-student interaction. Community Language Learning ([Curran, 1976](#)) puts group dynamics to use for low-level learners, but the teacher often maintains a pivotal role throughout the learning activities,

as provider of appropriate target-language forms. Molinsky and Bliss (1980) promoted one-on-one peer interaction ("dyads") through their widely distributed English-as-a-second-language text, *Side By Side*. Unfortunately, many teachers use the text without generalizing its social approach into an overall teaching model in their classes.

**Information processing models** are designed to increase learners' ability to process new information for learning. Two models that are good candidates to be the focus of staff development programs for language teachers are *advance organizers* (Ausubel, 1963) and *mnemonics* (Pressley, Levin, and Delaney, 1982). When teachers provide *advance organizers*--concepts that prime students for upcoming oral or written presentations-- comprehension is increased. Rolheiser-Bennett (1986) reviewed 18 studies of advance organizers and found that the average student studying with the help of organizers learns about as much as a 90th percentile student studying the same material without organizers. For language teachers, already used to presenting key vocabulary that students are about to encounter, using advance conceptual organizers is a logical next step, especially when students are going to face cultural assumptions different from their normal pattern of assumptions. Advance organizers in such cases might take the form of brief explanations of customs or procedures unfamiliar to the students because of their cultural backgrounds.

*Mnemonics* are devices, such as "link-words" (Atkinson, 1975), that trigger memory. Pressley and his colleagues (Pressley, 1977; Pressley, Levin, and Miller, 1981) have used both link-words and pictures to help students learn and remember foreign language vocabulary. They found that mnemonic methods improved vocabulary learning for strong and weak learners, when compared to rote-rehearsal methods alone. The development of higher-order skills, including analytical reasoning, is also responsive to information processing models of teaching (Voss, 1982; Elefant, 1981). Teachers working with language minority children unaccustomed to the patterns of analytical thinking that are expected, tested, and rewarded in American schools may be especially interested in staff development programs that will help them to teach thinking strategies more effectively.

**Personal models** are student-centered. Gordon and Poze (1971) have researched a strategy called *synectics* that is designed to enhance personal flexibility and creativity. Students are taught to solve problems by generating alternative solutions. There is no "right" answer. As students learn to develop multidimensional perspectives, their recall and retention of written material improve. Working with another personal model--*nondirective teaching*--Roebuck, Buhler, and Aspy (1976) have shown that for students with learning difficulties, efforts to improve self-concept, intergroup attitudes, and interaction patterns can yield higher achievement scores in reading and mathematics and better attendance records as well. If teaching students to think divergently and keeping student self-concept in mind produce positive results in academic achievement, the language teachers who work with language minority children in the crucial first stages of schooling may be drawn toward personal models as a focus of staff development programs.

As a potential subject for teacher training, behavioral models are the fourth category of teaching models singled out by Joyce, Showers, and Rolheiser-Bennett (1987) because of their research-supported effectiveness. Language educators who have struggled to overcome indoctrination by behavioral theorists may shy away from behavioral models, but some of them can show results. The DISTAR program of reading instruction, for example, highly structured and replete with teacher correction of student responses, has been shown effective for special education populations (White, 1986). DISTAR has also been associated with increased aptitude to learn, measured by standard 10 assessment instruments (Joyce, Showers, and Rolheiser-Bennett, 1987).

### New Options for Staff Development Processes

The selection of an appropriate focus for staff development, such as one of the teaching strategies mentioned

above, leads to another set of options: processes and formats for staff development. As the Arawak (1986) study revealed, staff development for bilingual education teachers often assumes traditional forms, such as a workshop led by a consultant. These are often one-shot experiences with little follow-up to determine how much teachers have really learned and how effectively they are implementing newly acquired teaching strategies in their classrooms.

For teachers to master and practice new teaching strategies, combinations of four components seem to be necessary in their learning process: theory, demonstration, practice, and feedback (Showers, Joyce, and Bennett, 1987). *Theory* answers the "why" questions. Teachers, as learners, need to know why new approaches are being proposed and advocated. Without that theoretical base, they cannot judge when it is appropriate to apply a new approach and when it is not. *Demonstration* of a strategy or technique allows teachers to *see* a new strategy applied, not just imagine it. It appears, however, that even a combination of theory and demonstration is not sufficient for teachers to transfer a newly learned strategy to the classroom unless they are also given *practice* in the training setting. Several studies (Brown, 1967; Joyce, Weil, and Wald, 1973; Reid, 1975; and Showers, 1984) indicate that it is the full combination of theory, demonstration, practice and *feedback* by observers of their practice that enable virtually all teachers to learn complex models of teaching sufficiently to sustain practice in the classroom.

Once a teacher has acquired a new strategy through training, at least 25 trials of that strategy in the classroom are required to ensure that new skills will not be lost (Showers, Joyce, and Bennett, 1987). Even this substantial amount of practice, however, is still not sufficient to guarantee successful transfer of training. "Rather," conclude Showers, Joyce, and Bennett (1987, p. 86), "nearly all teachers need social support as they labor through the transfer process."

The realization that feedback through social support is needed to successfully transfer training has breathed new life into staff development and offers new options to language teachers and their trainers.

Cooperative professional development is the rubric under which several approaches fall, each making use of teacher teams for feedback through social support. Glatthorn's (1987) discussion of five of these cooperative approaches--professional dialogue, curriculum development, peer supervision, peer coaching, and action research--is summarized below to indicate a nontraditional range of process options available to promote the professional development of language teachers.

*Professional dialogue* among a small group of teachers meeting regularly can help them become more thoughtful decision makers. Aimed at cognitive rather than skill mastery, professional dialogue attempts to raise the level of three aspects of thinking that relate to classroom performance: the teacher's planning, before and after instruction; the teacher's thoughts and decisions while teaching; and the teacher's theories and beliefs (Glatthorn, 1987). In an adaptation of Buchmann's (1985) "conversation about teaching," Glatthorn recommends that a group of teachers interested in professional dialogue first decide when, where, and how often they will meet; what topics they will discuss; and who will lead each discussion. Then at each session a three-stage format can be followed:

- The group leader summarizes the views of experts on the topic under discussion and gives evidence from empirical research. Members then analyze this external knowledge to see what agreement and conflict exist among experts and in research evidence;
- Group members discuss their personal experiential knowledge and the extent to which it supports or challenges the external knowledge; and
- Members look for implications of the discussion to their future teaching. They reflect on how new knowledge might influence their planning and decision making and on whether their beliefs and theories have begun to change as a result of their dialogue.

*Curriculum development* can be a cooperative effort for teachers to modify their curriculum through teacher-

generated materials. Glatthorn ([1987](#)) cites three areas where collaboration is possible:

- When teachers initially implement their district's curriculum, they can work together to turn the objectives and recommended methods into detailed teaching plans, adding their own touches and including supplementary materials;
- Teachers can collaborate on the adaptation of district guidelines for special student populations, recommending remediation activities for slower achievers and additional activities to challenge more capable learners; and
- Enrichment units can be jointly developed, drawing on teachers' special knowledge and interests.

*Peer supervision* adapts the components of clinical supervision for use by a small group of teachers.

Goldsberry ([1986](#)) proposes a model of collaborative supervision that has nine characteristics:

- Colleagues observe each other;
- An observer records full information about an observed class;
- Both the observing and observed teachers identify patterns of teacher and learner behavior;
- Intended and unintended learning outcomes are listed;
- A collaborative assessment is reached; based on the teacher's learning goals and principles;
- A cycle of observations and conferences is followed;
- The process is confidential;
- The goal of the consultation is future benefits; and
- The observed teacher gives the observing teacher feedback to help improve his or her consulting skills.

Peer coaching is similar to peer supervision in its inclusion of peer observations and conferences, but different in its linkage to a specific staff development program. It follows the cycle of theory, demonstration, practice, and feedback that constitute formal training. Showers ([1984](#)) has developed a training manual for peer coaches that identifies five major functions of peer coaching:

- **Companionship:** Teachers talk about their successes and failures with a new model of teaching, reducing their sense of isolation;
- **Feedback:** Teachers give each other objective, non-evaluative feedback about the way they are executing skills required by a new model;
- **Analysis:** Teachers help each other extend their control over a new approach until it is internalized, spontaneous, and flexible;
- **Adaptation:** Teachers work together to fit a teaching model to the special needs of students in the class; and
- **Support:** The coach provides whatever support is needed as the peer teacher begins to apply a new strategy.

Showers ([1984](#)) reports a carefully designed study that shows the positive effects of a brief period of training in peer coaching: coaches provided follow-up training to other teachers; transfer of learning was increased; and students of coached teachers outperformed students of uncoached teachers on a test of learning related to the model. Showers' conclusion is that peer coaching works. (See the NCBE newsletter FORUM, March/April, 1988, for further discussion of peer coaching.)

*Action research* brings together a team of teachers to identify a problem and propose a solution. This cooperative development process was first recommended by Corey ([1953](#)) and refined by Tikunoff, Ward, and Griffin (1979) and Lieberman ([1986](#)). By collaborating to identify a problem, formulate a research question, execute the research design in light of classroom complexities, and design an appropriate teaching intervention indicated by the results of their research, teachers can unite to expand their roles as problem solvers and solidify their understanding of professional concerns.

These five innovative processes--professional dialogue, curriculum development, peer supervision, peer coaching, and action research--give teachers new choices for staff development designs that produce results through collaboration. For teachers as well as for students, Slavin's (1987, p. 1) proclamation rings true: "The Age of Cooperation is approaching." However, not all teachers are working in settings that are optimal for the seeds of cooperative professional development to take root. Cooperative professional development is more likely to succeed under the conditions summarized below.

1. There is strong leadership at the district level: a district administrator or supervisor coordinates and monitors the school-based programs.
2. There is strong leadership at the school level: the principal takes leadership in fostering norms of collegiality, in modeling collaboration and cooperation, and by rewarding teacher cooperation.
3. There is a general climate of openness and trust between administrators and teachers.
4. The cooperative programs are completely separate from the evaluation process; all data generated in the cooperative programs remain confidential with the participants.
5. The cooperative programs have a distinct focus and make use of a shared language about teaching.
6. The district provides the resources needed to initiate and sustain the cooperative programs.

The school makes structural changes needed to support collaboration: the use of physical space facilitates cooperation; the school schedule makes it possible for teachers to work together; staff assignment procedures foster cooperation (Glatthorn, 1987).

These conditions, of course, comprise an ideal setting in which no teacher works. It is not intended that all of these conditions should be achieved before cooperative staff development is attempted. Rather, efforts toward their attainment can pull teachers and administrators together for a common purpose.

### Examples of Effective Innovations in Staff Development

Specialists in education for language minority students sometimes hear the criticism that they have isolated themselves from the mainstream of educational research and development. If this criticism is accurate, breakthroughs appear to be coming, at least in the area of staff development. Some examples of innovative staff development programs will illustrate the extent to which educators of limited-English-proficient students are reaching for and grasping new options for teacher training content and processes, right in step with their colleagues in other disciplines.

Perhaps the most visible example of the new trends is the **Multidistrict Trainer of Trainers Institute** (MTTI--Information sources on each of the training program examples given here are listed after the reference section at the end of this paper), a model developed in 1980 by Margarita Calderon of the State University of California, working with Bruce Joyce, whose research and writing have sparked much of the interest in collaborative staff development approaches such as peer coaching. The MTTI model, based on the literature on effective staff development, was developed to provide training to teachers in ESL and bilingual education programs. MTTI is now being applied in over 135 school districts in California and in at least 70 other school districts in New York, Texas, Hawaii, Guam and elsewhere (Calderon, 1987; Lancelot, 1987; Macias, 1986).

The purpose of the MTTI model is to train teachers in areas of instruction which address the needs of limited-English-proficient children. MTTI also prepares participants to become trainers in their local school districts. MTTI is a one- to three-year program that requires intensive summer sessions with six follow-up sessions throughout the year. The total days of training range between 12 and 15 a year. The training is sequenced into day-long sessions conducted by nationally-recognized experts, and this is followed by a day of application to particular student needs, teaching techniques, and curriculum and staff development designs. Between

sessions, participants observe each other's practice of new strategies and provide peer coaching.

In California, where most MTTI programs are located, training consists of a four-strand program. Each of the four strands addresses the needs of a specific group: teachers, trainers of trainers, administrators, or parents. Each strand incorporates research-based staff development elements that are necessary to ensure maximum transfer of training: theory, demonstration, practice, feedback, program development, forecasting, goal setting, team building, and coaching. In addition, MTTI can focus on the content a particular school district needs. A few suggested content areas include first and second language acquisition; methods such as total physical response, the natural approach, the language experience approach, and directed reading; thinking activities; cooperative learning models; sheltered instruction; concept attainment; the whole language approach; and inquiry model of teaching.

In western New York State, in 1987, an MTTI replicated Dr. Calderon's model by training bilingual and ESL teachers in cooperative learning strategies so that they could, in turn, train and assist classroom teachers in the implementation of these strategies with limited-English-proficient students in regular classrooms. After-school workshops on selection and use of computer software, the whole language approach, and the natural approach were also provided.

Results of MTTI evaluations have indicated success. Ninety percent of former institute participants have had some impact on curriculum development or program implementation at the school or district level ([Macias, 1986](#)).

A second example of innovative staff development is the **Bilingual Education Training Institute (BETI)**, developed by the Division of Compensatory/Bilingual Education of the New Jersey State Department of Education and implemented in September, 1985. It provides staff development to increase the effectiveness of bilingual and English-as-a-second-language (ESL) programs in New Jersey schools.

To assess needs and determine the scope of the training institute, an analysis was conducted of content areas covered by the high school proficiency test. In addition, in three pilot districts, a review was carried out of the needs described in Title VII bilingual education program applications. Finally, a questionnaire was sent out to school districts to identify what they saw as needs in their schools.

Training offered during 1985-86 focused on instructional strategies for preparing 6th through 8th-grade students for the high school proficiency test. This test covers math, reading, and writing in English.

The New Jersey BETI has three broad goals:

1. To improve the quality of instruction for limited-English-proficient students;
2. To improve instructional supervision and leadership in bilingual classrooms as defined in effective schools research; and
3. To improve the administration of bilingual programs based on successful bilingual program models.

The BETI has been organized into three strands. In the first strand, three pilot districts were selected to participate over a three-year period. Teachers and administrators formed teams at each school to plan and guide the program improvement process. In the second strand, two teams from other school districts participated with the pilot districts and in turn provided training to teachers in their own districts. The third strand consisted of providing training sessions on a regional basis to districts having bilingual/ESL programs.

Training sessions in all three strands of the BETI addressed the following topics:

- Development of oral proficiency in the second language;
- Developmental reading instruction in the second language;
- Teaching content subjects in the second language; and

- Developing reading proficiency in the content areas.

Regional training sessions were also provided with a workshop on how to use evaluation data to improve their instructional programs.

BETI sessions were led by consultants who presented instructional methods based on current research in bilingual education and made practical applications of this research for the classroom. Participants were asked to report back on strategies they applied in their classrooms after the training. Teachers' responses became part of the formative evaluation process. Peer observations were conducted in the classes of participating teachers.

The 1986-87 BETI involved three strands--pilot, regional, and administrator. The pilot and regional strands continued to offer instructional training to leadership teams as before. The administrative strand was open to bilingual, ESL, and migrant education administrators statewide.

Each of the three strands of the BETI has been evaluated in a different manner. The three pilot schools in the first strand identified bilingual, ESL, regular, and basic skills teachers to attend the training. In addition to these teachers completing a form indicating strategies they believe they had used in the classroom after each session, colleagues also completed a classroom observation checklist to indicate to what degree new strategies had been observed in participants' classrooms. Participating teachers completed a workshop evaluation form rating the training sessions they had attended.

The BETI has been positively received by participating teachers. It has also produced more cooperation and exchange between school administrators and teachers. A newsletter and various booklets on effective teaching strategies and successful parental involvement have been produced.

The **Language Development Specialist Academy**, formed by the Bilingual Education Multifunctional Resource Center operated by Hunter College in New York City, serves as a third example of innovative teacher development that is participatory and collaborative. The goals of the Academy are summarized by Ward (1987) as follows:

- To identify teachers who teach limited-English-proficient students effectively;
- To increase the expertise of these teachers through sharing of the instructional strategies each considers to be most linked to successful instruction of limited-English-proficient students and through provision of external resource persons who bring new knowledge and skills to the teachers; and
- To increase the expertise of other teachers by making the knowledge and skills of the Academy teachers available to them (p. 275).

University professors and Academy participants function as partners to identify the foci for training activities. Participating teachers' skills are assessed, and their strengths and weaknesses guide the selection of research to be discussed and new models of teaching to be presented.

Hunter College professors visited the participants' schools to observe and coach teachers as they practice strategies learned in Academy sessions. These professors also take along teacher-trainers from university pre-service programs to observe and discuss classes taught by Academy teachers.

These three training programs were developed because there is much work to be done to develop and maintain a sufficient number of effective teachers for limited-English-proficient students. That work is beginning to take the form of innovative, collaborative programs to train teachers in research-supported models of teaching.

## Conclusion

Excitement has struck the field of teacher training. New approaches that focus on research-supported training content and that utilize cooperative training processes are being tried in school districts across the country. Educators of limited-English-proficient students are beginning to take advantage of these new approaches to build systemic, state-of-the-art staff development programs. Through attention to research findings on effective models of teaching and by means of collaborative teacher training processes, teachers of our nation's language minority students can seize these new opportunities to enhance the quality of their teaching and the level of learning their students achieve.

## References

- Arawak Consulting Corporation (1986). *A study of alternative inservice staff development approaches for local education agencies serving minority language limited-English-proficient students. Final synthesis report*. New York: The Arawak Consulting Corporation.  
([NCBE Abstract](#))
- Alaniz, R.G. (1979). "Effects of an inservice model construct on teacher competency achievement in a bilingual-bicultural field-based setting." Ph.D. dissertation, Texas A & I University.  
([NCBE Abstract](#))
- Atkinson, R. (1975). Nemotechnics in second language learning. *American Psychologist* 30, 821-28.
- Ausubel, D. (1963). *The psychology of meaningful verbal learning*. New York: Grune and Stratton, Inc.
- Brown, C. (1967). "A multivariate study of the teaching style of student teachers." Ph.D. Dissertation, Teachers College, Columbia University.
- Buchmann, M. (1985). Improving education by talking: Argument or conversation? *Teacher's College Record* (86), 441-453.  
([ERIC Abstract](#))
- Calderon, M. (1987). "The art of training and coaching multicultural teacher training institute/case studies project." Paper presented at the Eastern Conference on Improving the Educational Achievement of Limited-English-Proficient Students, State Educational Agencies of the Council of Chief State & School Officers. Baltimore, MD.
- Corey, S. (1953). *Action research to improve school practices*. New York: Teachers College Press, Columbia University.
- Cardenas, R. (1983). *A descriptive study of the classroom instruction component of the ESEA Title VII bilingual education program*. Arlington, VA: Development Associates, Inc.  
([ERIC Abstract](#)) or ([NCBE Abstract](#))
- Curran, C. (1976). *Counselling--learning in a second language*. Apple River, IL: Apple River Press.
- Dominguez, D., Tunmer, W.E., and Jackson, S.L (1980, April). "Measuring degree of implementation of bilingual education programs: Implications for staff development and program evaluation." Paper presented at the National Association for Bilingual Education meeting, Anaheim, CA.  
([NCBE Abstract](#))

Elefant, E. (1981). Deaf children in an inquiry training program. *The Volta Review* 82, 271-279.

Glatthorn, A. (1987). Cooperative professional development: Peer centered options for teacher growth. *Educational Leadership* (45)3, 31-35.

[\(ERIC Abstract\)](#)

Goldsberry, L (1986). "Colleague consultation: Another case of fools rush in." Paper presented at the annual meeting of the American Educational Research Association, San Francisco.

Gordon, W. and Poze, T. (1971). *The metaphorical way of learning and knowing*. Cambridge: Porpoise Books.

Guerrero, F. and Mirabito, M. (1981). *Final report of the study of inservice training needs assessment activities and procedures in Title VII basic bilingual education programs Vol I-III*. New York: Asawak Consulting Corporation.

Johnson, D. and Johnson, R. (1975). *Learning together and alone*. Englewood Cliffs, NJ: Prentice Hall, Inc.

[\(ERIC Abstract\)](#)

Johnson, D. and Johnson, R. (1981). Effects of cooperative and individualistic learning experiences on interethnic interaction. *Journal of Educational Psychology* (73) 3, 444-449.

Joyce, B., Showers, B., and Rolheiser-Bennett, C. (1987). Staff development and student learning: A synthesis of research on models of teaching. *Educational Leadership* (45) 2, 11-23.

[\(ERIC Abstract\)](#)

Joyce, B., Weil, M., and Wald, R. (1973). The teacher innovator: Models of teaching as the core of teacher education. *Interchange* (4)2/3, 47-60.

Krashen, S., and Terrell, T. (1983). *The natural approach: Language acquisition in the classroom*. Hayward, CA: Atemany Press.

[\(ERIC Abstract\)](#) or [\(NCBE Abstract\)](#)

Lancelot, P. (1987). The Bilingual/ESL Technical Assistance Center, Spencerport, N.Y.. Personal communication, December 4, 1987.

Lieberman, A. (1986). Collaborative research: Working with, not working on.... *Educational Leadership* (43) 5, 28-32.

Macias, R. (1986). "Teacher preparation for bilingual education." Compendium of papers on the topic of bilingual education of the Committee on Education and labor, House of Representatives, 99th Congress, 2nd Session. Washington, DC: U.S. Government Printing Office.

Molinsky, S., and Bliss, B. (1980). *Side by side, book one*. Englewood Cliffs, NJ: Prentice-Hall, Inc.

[\(NCBE Abstract\)](#)

Pierce, L.V. (1988). Peer coaching: An innovative approach to staff development. *FORUM* (11) 3, March-April 1988, 1, 3.

Pressley, M. (1977). Children's use of the keyword method to learn simple Spanish vocabulary words. *Journal of Educational Psychology* (69)5, 465-472.

Pressley, M., Levin, J., and Delaney, H. (1982) The mnemonic keyword method. *Review of Educational*

*Research* (52)1, 61-91.

[\(ERIC Abstract\)](#)

Pressley, M., Levin, J. and Miller, G. (1981). The keyword method and children's learning of foreign vocabulary with abstract meanings. *Canadian Psychology* (35) 3, 283-287.

Reid, R. (1975). "Accessibility characteristics in individualizing teacher education: Acquisition of basic teaching skills." Ph.D. dissertation, University of Toronto.

Reisner, E.R: (1983). *Building capacity and commitment: A practical guide for teachers*. Washington, DC: U.S. Department of Education.

Roebuck, F., Buhler, J., and Aspy, D. (1976). *A comparison of high and low levels of human teaching/learning: Conditions on the subsequent achievement of students identified as having learning difficulties*. Final report: Order #PLD6816-76, The National Institute of Mental Health. Denton, TX: Texas Women's University Press.

Rolheiser-Bennett, C. (1986). "Four models of teaching: A metaanalysis of student outcomes." Ph.D. dissertation, University of Oregon.

Sharan, S., and Hertz-Lazarowitz, R. (1980). A group investigation method of cooperative learning in the classroom. In S. Sharan, P. Hare, C. Webb, and R. Hertz-Lazarowitz (Eds.), *Cooperation in Education*. Provo, UT: Brigham Young University Press.

Showers, B. (1984). *Peer coaching: A strategy for facilitating transfer of training*. Eugene, OR: Center for Educational Policy and Management.

[\(ERIC Abstract\)](#)

Showers, B., Joyce, B. and Bennett, B. (1987). Synthesis of research on staff development: A framework for future study and a state-of-the-art analysis. *Educational Leadership* (45) 3, 77-87.

Slavin, R: (1983). *Cooperative learning*. New York: Longman, Inc.

Slavin, R: (1987). Cooperative learning and the cooperative school. *Educational Leadership* (45) 3, 7-13.

[\(ERIC Abstract\)](#)

Thelan, H. (1960). *Education and the human quest*. New York: Harper and Row.

Tikunoff, W., Ward, B., and Griffin, G. (1979). *Interactive research and development on teaching: Final report*. San Francisco: Far West Laboratory for Educational Research and Development.

Voss, B. (1982). *Summary of research in science education*. Columbus, OH: ERIC Clearinghouse for Science, Mathematics, and Environmental Education.

[\(ERIC Abstract\)](#)

Ward, B. (1987). Using a clinical approach to teacher development. In S. Fradd and W. Tikunoff, *Bilingual education and special education: A guide for administrators*. Boston: Little, Brown and Company.

White, W. (1986). "The effect of direct instruction in special education." Ph.D. dissertation, University of Oregon.

**Information Sources on  
Exemplary Programs for Staff Development**  
( NOTE: Information correct as of publication date)

**California MTTI**

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