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MICRO-SIMULATION TO PREPARE READING TEACHERS

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What can pre-service teachers do to prepare themselves for classroom teaching? Micro-simulations!

What is Micro-Simulation?

A micro-simulation involves a 5-10 minute segment of a reading lesson. In the micro-simulation a teacher chooses and demonstrates a preferred approach to teaching reading. Other members of the group role-play public school students during the micro-simulation. The ten minute simulation allows the teacher a variety of moves and may include a major shift in activity. For the teacher, it provides a teaching situation with a live constituency. Student participants in the micro-simulation respond and react to the simulation teacher as group leader, much as they would in any classroom situation. The ten minute lesson presentation allows the participants to experience the trend of the lesson and to react to the simulation teacher as teacher. The lessons are effective in themselves as lesson presentations. They are satisfying for both the micro-simulation teacher and his or her students.

Simulations build in the cooperative aspect of real-life teaching situations. They allow the teacher to set up his or her own clearly defined teaching situation and to carry it through (Raser, 1969). When a teacher decides on a plan for a reading lesson, he or she is also making decisions that affect the tone of the lesson, the cognitive processes the students will engage in, the degree of active participation and involvement of the students, and in general, the manner in which he or she will teach the lesson. The teacher knowingly chooses a way or a combination of ways of teaching a lesson (Hyman, 1970). Similarly, the simulation teacher has a variety of methods and approaches from which to choose in presenting a micro-simulation. Since the micro-simulation teacher presents but a short 5-10 minute segment of a lesson, he or she must even more carefully choose certain aspects of the entire reading lesson to present in the simulation. Thus, the micro-simulation teacher must be highly selective in arriving at the final form of the teaching simulation.

Immediately following a micro-simulation, the leader replays the lesson on video tape. This video tape replay gives both the simulation teacher and the role-playing students the chance to view the lesson as observers. After the replay, the group discusses and critiques the lesson. The leader provides individual guidance and comments to the micro-simulation teacher immediately after the group session. The post-simulation discussion centers on

a particular set of teaching activities. The referents in the discussion are specific, shared teaching experiences which are clearly within the capabilities of the members of the group to understand. Teachers develop their own conclusions about teaching style and in future lessons build on, expand, and vary the patterns presented.

Such simulation activity is a valuable teaching experience for the simulation teacher. In addition, it provides the other pre-service or in-service teachers in the group the opportunity to critique the teaching they have experienced in the student role. By giving teachers the opportunity to discuss their first-hand experiences as teachers and students, the group leader builds an awareness of the concomitants of a variety of teaching patterns. Experience, awareness, and book knowledge are linked together in the teaching program based on micro-simulation, video observation, and guided critique.

Micro-Simulation in the Pre-Service Program

The appeal of simulations lies in their combination of reality and make-believe (Gordon, 1970). Participants enjoy exercising power and making decisions in spheres where their real world influence is very slight. Micro-simulation capitalizes on the pre-service teacher's desire to explore the teaching situation. It gives these new teachers a situation of short duration when new approaches can be tried out. Since the pre-service teacher creates the scenario, it is his or her own model of teaching that defines the interplay of the micro-simulation. The role-playing students react to the model of teaching the leader creates and projects. In this way the teaching simulation provides a unique opportunity to deal with the complex problems of teaching in very concrete ways.

It has been said that the knowledgeable teacher varies his or her ways of teaching to provide pupils with many ways of learning. If this is the case, micro-simulation provides the inexperienced teacher with the opportunity of experiencing many ways of teaching and learning. Pre-service teachers create lessons which show ways of helping pupils develop their reading vocabularies, ways that pupils can demonstrate general comprehension and interpretation skills, ways that help pupils develop specific comprehension skills, ways that allow pupils to use other cognitive processes—stating and justifying opinions, and divergent thinking, for example—ways of teaching reading through games, and ways to make use of a variety of questioning strategies (Ruddell, 1974). As the simulation program proceeds the pre-service teacher defines and expands his or her view of teaching and applies this new knowledge in the simulations.

Structuring Video Replays for In-Service Teachers

In-service teachers can and do use simulations to begin an in-service program in reading. After participating in simulations the teachers are ready to view and critique video tapes of actual classroom lessons. They follow up the in-service workshop by volunteering their own classroom tapes for viewing and critique by their colleagues. As with a pre-service program,

the core of the in-service program is the guided post-simulation critique. During this critique in-service teachers pool their knowledge of teaching in making realistic and constructive comment about a colleague's lesson.

In addition to the above benefits of micro-simulation, in-service teachers can make use of two other sources of critique. First, in-service teachers using video tape can ask honest comments about a lesson taught to his or her peers. This offsets the usual lack of comment an in-service teacher receives because students too often fear retaliation for negative remarks. Second, in-service teachers have the opportunity as a group or individually of viewing volunteered video tapes of their actual classroom lessons. They can then comment on real, on-going classroom lessons of their colleagues. The teacher who teaches the simulation lesson or volunteers the actual classroom tape makes use of his or her own reactions and colleague's reactions to close the gap between the performance given and what he or she sees as desirable teaching.

The administrator who institutes a program of micro-simulations among his or her teachers, or who has teachers observe and tape actual classroom reading lessons for group viewing and critique, fosters the self-development of teachers. By instituting an in-service program for teachers organized around classroom tapes or micro-simulations, an administrator allows his or her teachers to share a core of knowledge and awareness about the teaching of reading in a non-threatening way.

How To Organize the Simulation, Video Observation, and Critique

The use of video presentations in in-service work is relatively new. Its use in combination with lessons presented by members of the group is even less frequently observed. It is well then in setting up the group sessions to organize procedures that will take full advantage of both the lesson presentation and the video replay.

Some steps that help are:

1. A teacher is asked to prepare a 5-10 minute segment of a reading lesson. The group leader makes himself or herself available for help in planning if the teacher wants help. The simulation teacher is aware that he or she cannot present a complete lesson in the time allotted.
2. The simulation teacher presents the lesson as he or she would to grade school students. The simulation teacher does not describe what he or she would like to do. He or she actually does the teaching, giving the directions and asking the questions that would make up the lesson. The students in the simulation role-play grade school youngsters. The simulation teacher may specify the age of the students in the simulation.
3. The micro-simulation continues for 5-10 minutes. If the lesson goes beyond 10 minutes, the leader stops the simulation.
4. The leader replays the videotape.

5. The leader asks the simulation teacher to comment.
6. The leader asks the group to comment. The instructor guides the post-simulation critique.
7. Immediately following the group critique the leader meets with the simulation teacher to hear personal comments, to comment on the group critique, and offer his or her own comments and guidance.
8. Often it is necessary to replay only a portion of the videotape.

The Post-Simulation Critique: Feedback to the Micro-Simulation Teacher and the Group

Through the process of micro-simulation and critique, the simulation teacher receives feedback on five levels. The first kind of feedback occurs during the simulation itself. It takes the form of verbal and non-verbal clues from the role-playing students. The micro-simulation teacher who is receptive to these clues may be able to adjust the on-going lesson in response to the clues students give during the simulation. Even when on-the-spot adjustment does not take place, the simulation teacher becomes aware of the need for changes and can make provisions for flexibility in later lessons. The second level of feedback comes when the teacher views his or her own lesson on videotape.

The third level of feedback comes from the comments of the simulation teacher's peers. After viewing the video replay, the other members of the group function as observers of the lesson. The group's comments, therefore, reflect both their experiences as participants and their observations as outsiders viewing the lesson. The fourth level of feedback comes from the leader's comments during the critique. The fifth kind of feedback takes the form of an individual conference between the simulation teacher and the group leader immediately following the session. During this conference, the leader listens to the teacher's comments, comments on the critique session, and makes one or two suggestions about techniques which might improve the lesson. Together the leader and the simulation teacher may explore alternatives which will lead to the outcomes the teacher sees as desirable.

While a great deal of comment during the post-simulation critique is directed toward the particular lesson at hand, teacher remarks offer the leader an excellent opportunity to encourage discussion of elements of teaching in relation to a broader perspective. The leader makes use of the comments during the critique session to suggest alternative presentation techniques, to identify elements of teaching style, and to bring out teacher preferences in regard to teaching style.

Background for a Program of Micro-Simulation

The teachers apply and build on their knowledge of teaching in the micro-simulations. In acting out, observing, and critiquing reading lessons teachers work with four dimensions of teaching style. These four dimensions are classroom climate, or tone; cognitive processes which teachers and pupils perform; pupil participation and involvement; and general methods of teaching reading lessons. Based on their experiences and understandings

of these four dimensions of style, teachers are in a position to draw tentative conclusions about a variety of factors that affect reading lessons.

As teachers experience different ways of teaching reading lessons, they are in a position to consciously undertake development of their own personal teaching style. Their knowledge and basis for doing so comes from four separate sources. First, it develops from the first-hand experiences of the micro-simulations. Second, these first-hand felt experiences are verified through objective observation of the tapes. Third, the observations are shared and generalized in the group critique. Fourth, the leader and the group apply and use constructs developed by researchers in education.

The micro-simulation accompanied by video replay and guided critique represents a very strong element in the teaching program. While presenting specific and valuable information to the simulation teacher, it allows the group as a whole to react to a demonstration of teaching from the student perspective, to look at this same demonstration as outside observers, and to react verbally to what they have seen. It provides a concrete situation upon which the group leader can build an awareness of how the elements of teaching style intermesh to define the teaching act. The in-service or pre-service program, then, is based on experience, observation, guided critique, and knowledge from researchers in education.

Results and Significance

The use of micro-simulation gets instruction in teacher training off the level of abstract verbalization and puts it on the level of a case-in-point experience. The pre-service or in-service teacher becomes aware of himself or herself in the role of teacher. The video replay allows the simulation teacher to observe himself or herself in the act of teaching. It gives the teacher the opportunity to become aware of the things he or she is asking pupils to do. Micro-simulation and video replay make a very powerful combination. Once the teacher is aware of his own proclivities and a range of alternative ways of teaching, he or she is in a position to purposefully make changes and develop techniques he or she sees as desirable.

Teachers often have been implored to look to themselves for clues to improvement, *without specific advice as to what to look at*. By using the elements of style that have been identified in research in teaching, teachers now have specific categories and points of view from which they can observe their own teaching and that of their colleagues. By identifying a range of styles and modes of teaching, teachers can develop their own point of view from which to observe teaching. With the advent of the videotape, teaching is no longer an ephemeral performance which passes with the moment. The videotape lets us as teachers replay and scrutinize our own performances. It lets us become aware of the antecedents and consequences of the techniques we use—the tone we develop, the kinds of cognitive processes we ask students to perform, how much we allow our students to participate in a lesson, and the degree to which we employ a variety of ways of teaching.

For the pre-service teacher and the in-service teacher, the video replay allows self-observation. The teacher can see how closely he or she ap-

proaches what he or she believes is good teaching. By making use of specific elements of style to observe in teaching, the teacher sets up categories of concrete acts to which he can refer. As the teacher develops a framework upon which to build, he or she becomes aware of a range of teaching alternatives. If there is a difference between what the teacher desires in a reading lesson and what he or she sees in self-observation, the teacher with a framework for viewing teaching has very specific information about the kinds of changes he or she can make. The technique of micro-simulation and video replay is a potent means of bringing home realities of the teaching situation to pre-service and in-service teachers.

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