

Clinical Supervision and Teacher Thought Processes

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This paper attempts to develop a conceptual link between recent research on teaching, particularly on teacher thought processes, and clinical supervision. The author's thesis is that knowledge derived from research on teaching constitutes the substantive base upon which the rigorous analysis of teaching espoused by the clinical approach can be established. Goldhammer's (1969) five-phase cycle is analyzed in light of recent "commitments to teaching" identified by Dunkin and Biddle (1974). More significantly, the paper analyzes the clinical approach in light of the growing research on teacher thought processes and exposes a potential gap in the clinical framework. The author argues that the link between clinical supervision and teacher thought processes warrants a modification of the cycle in the form of the "isotopex" — a brief exchange at the conclusion of the observation phase that provides for evaluation in terms of preactive *and* interactive objectives and strategies.

Cet article essaye de développer un lien conceptuel entre la recherche récente sur l'enseignement, en particulier sur le processus de la pensée du maître et l'observation clinique. La thèse de l'auteur est que la connaissance qui dérive de la recherche sur l'enseignement constitue la base essentielle sur laquelle l'analyse rigoureuse de l'enseignement adoptée par l'approche clinique peut être établie. Le cycle à cinq phases de Goldhammer (1969) est analysé à la lumière des "engagements récents sur l'enseignement" identifiés par Dunkin et Biddle (1974). D'une manière plus significative, l'article analyse l'attitude clinique à la lumière de la recherche croissante sur les processus des idées du maître et révèle une lacune possible dans le cadre clinique. L'auteur avance que le lien entre l'observation clinique et les processus de la pensée du maître justifie la modification sous forme d' "isotopex" — un bref échange à la fin de la phase d'observation qui permet l'évaluation des objectifs et des stratégies en termes préalables et réciproques.

Clinical supervision is a methodology designed to help teachers improve instruction. It is "supervision up close" (Goldhammer, 1969, p. 54) in the "clinic of the classroom" (Wilhelms in Cogan, 1973, p. ix), where teacher and clinical supervisor work together productively in "colleague-ship" bound by the common purpose of enhancing student learning through improving the teacher's instruction (Cogan, 1973, p. 68). It represents an approach to supervision that is "basically analytical and whose principal mode of analysis comprises highly detailed examination of teaching behaviour" (Goldhammer, p. 368). The emphasis in clinical supervision has tended away from summative evaluation towards the "analysis of teaching materials and practices" based on the view that "the analysis of teaching can be rigorous and systematic, that it should

be ongoing, that it requires specific analytical skills and that the professional teacher should be a careful critic of his own practice" (Mosher & Purpel, 1972, p. 79). The analysis of teaching therefore constitutes a significant component of the clinical conception (see Cogan, chapter 13; Goldhammer, chapter 4; Mosher & Purpel, chapter 5). Although supervision focussing "exclusively upon substantive and technical elements of instruction . . . cannot generate stable and significant behavioral changes" and consequently "it is the relationship that teaches" (Goldhammer, p. 365), the purpose of the relationship is to facilitate the critical appraisal of instructional effectiveness, and this analytical process has to be grounded in a substantive, technical knowledge of teaching. Such knowledge can be experiential in nature, it can emanate from personal and professional bias, or it can be derived from research. In attempting to analyze what constitutes effective teaching, the supervisor "must know which of his observations . . . on teaching have research support, which are drawn from experience or practice and which are assumptions, value judgments or prejudices about what and how children should be taught" (Mosher & Purpel, p. 35). The clinical supervisor who wishes to develop and improve the skills and knowledge essential for effective intervention will not, however, be satisfied by merely clarifying the source of his observations; rather, he will make a conscious effort to move from the less reliable experiential and value base to an understanding of current research on teaching.

Such efforts are only possible as supervisors are exposed to recent research findings. The leading writers on clinical supervision (Cogan, 1961, 1973, 1976; Goldhammer, 1969; Mosher & Purpel, 1972; Reavis, 1976; Krajewski, 1976; Sergiovanni, 1976, 1977) all posit the need for a rigorous analysis of teaching based on insights derived from funded knowledge, but only Cogan (1973) and Mosher and Purpel (1972) actually review research on teaching as it relates to instructional supervision. None of these writers, however, attempts to derive the implications that such research in teaching may hold for the procedures, activities, and strategies undertaken in the supervision process. Many updated reviews of research on teaching (Dunkin & Biddle, 1974; Rosenshine, 1976; Borich, 1977, 1979; Gage, 1978; Clark, 1979; Peterson & Walberg, 1979) have been published of late, indicative of the fact that "research on teacher training and effectiveness . . . has been active and intense only recently" (McDonald, 1977, p. 29); yet no one has attempted to relate these recent findings to instructional supervision, nor has anyone explored the connection between the substantive knowledge base they provide for supervisors and the clinical process itself. The intent of this paper is, therefore, to develop a conceptual link between recent research on teaching, particularly on teacher thought processes, and clinical supervision, and to discuss the ramifications of such a linkage.

RESEARCH ON TEACHING

In 1974 Dunkin and Biddle produced perhaps the most comprehensive review of research on teaching yet to be published. It was, in essence, an attempt on their part to provide a summary of the knowledge concerning teaching that research had generated, a discussion of methods and issues associated with the study of teaching, and a plea for the expansion of research in this vital field. This review, altogether praiseworthy for its thoroughness and clarity in organizing the field, has had a tremendous impact on subsequent research. In addition to the research review, the work contains a conceptualization of teaching as an area of study that was used as a basic framework for the breakthrough "Studies of Teaching and Learning" six-member research project (see Eggert et al., 1976) conducted under D. A. MacKay at the University of Alberta. It is not surprising, therefore, that MacKay and Osoba (1978) and Clark (1979) describe Dunkin and Biddle's work as a significant landmark in the study of teaching; it may be regarded as a harbinger of the burgeoning resurgence of research on teaching that has taken place during the last five years.

In their research review, Dunkin and Biddle cluster studies linking teacher behavior to student learning gains and student affective variables into seven different but not discrete "theories" or commitments to teaching. The first is the commitment to *Climate and Directiveness*. Essentially, this commitment argues that teacher indirectness and teacher warmth (i.e., teacher use of praise, acceptance of student ideas and feelings, and the absence of teacher criticism) produce a climate in which students achieve positive learning gains in terms of knowledge, skills, and attitudes.

The second cluster of studies reported by Dunkin and Biddle has a *Discipline and Group Management* commitment. Group management in a classroom setting is seen to be facilitated by teacher "withitness" — an awareness at all times of what is going on; by teacher "overlappingness" — the ability to keep one activity going while doing something else at the same time; by teacher "smoothness" and "momentum" — the absence of behaviors which slow down the pace of the lesson, causing student attention to wander off-task; and by other qualities that ensure that students are participating in productive activities and are not inactive, confused, or restless.

A third commitment is to *Behavior Modification*. This commitment, which has its origins in learning theory and animal research, stresses control of student behavior without concern for their inner states. It is mostly concerned with problem students and individual management or with small classes of students who have similar problems. Within the limitations imposed by the assumptions undergirding this commitment, behavior modification has proven highly effective in reducing student

deviancy and increasing work involvement; but there is little evidence as yet to demonstrate long-term student growth once the stimuli have been removed. Further, there are misgivings about its singular orientation towards individual students or small classes of students with similar problems, since teachers generally work in classrooms with large heterogeneous groups.

A further commitment is that of viewing the *Classroom as a Social System*. This commitment stems largely from the sociology of education where much research has investigated the classroom as a miniature social system. The lessons can therefore be analyzed in terms of the constraints placed on classroom instruction, e.g., curriculum, environment, community values, etc., and the system of roles undertaken by the participants, e.g., the teacher's role is to ask questions, the students' to answer and so on. Moreno's (1953) method of sociometry, which provides a convenient means of mapping the social groupings of the classroom, also falls under this commitment.

Three further commitments to teaching emerge from Dunkin and Biddle's (1974) review of research: Knowledge and Intellect, Logic and Linguistics, and Sequential Patterns of Classroom Behavior. The *Knowledge and Intellect* commitment emphasizes the cognitive aspects of classroom life and stems largely from the work of Bloom and his associates (1956) in their landmark *Taxonomy of Educational Objectives*. It is also influenced by Guilford's (1956) system for viewing intelligence and by the work of Taba (1966) on cognitive functioning. The *Logic and Linguistics* commitment follows in the Socratic tradition insisting that classroom teaching can be analyzed for its logical and coherent character. Essentially, linguistic expression and verbal development are viewed as the means of developing and deepening the thought processes; in other words, logical and coherent thought patterns are not free to develop when a person's linguistic capacity is stunted, since language is the vehicle through which thoughts are expressed (see Custance, 1975; Parsons, 1974). The *Sequential Patterns of Classroom Behavior* commitment views teaching as having a sequential character, i.e., one type of instructional act is likely to follow and be followed by other acts of specific types. Such a commitment, then, is not so much concerned about the frequency with which certain behaviors occur as it is about the sequential relationships of those behaviors. In other words, researchers following this particular orientation would not focus on how often teachers use praise, for example, as they would on the patterns of behavior in which praise is used. This kind of focus allows educators to assess the strategic significance of specific teaching behaviors and instructional acts—in the case of our example, it enables one to assess whether praise was used glibly or contingent upon good student performance—to the overall lesson.

CLINICAL SUPERVISION AND RESEARCH ON TEACHING

Both Lortie (1975) and McGregor (1978) posit that teacher education programs can only be viewed as partial preparation for the rigorous demands of classroom instruction. Consequently, supervisors may well be held accountable during the 1980s for completing the professional preparation of teachers (Grimmett, 1980). If staff professional development becomes an important focus for supervisors, then the research of Joyce and Showers (1980) may provide a useful framework of outcomes and strategies. Reviewing over 200 studies which examined the ability of teachers to acquire teaching skills and strategies, Joyce and Showers derived the following hierarchy of outcomes:

- (a) Awareness . . .
- (b) Concepts and Organized Knowledge . . .
- (c) Principles and Skills . . .
- (d) Application and Problem Solving . . . (1980, p. 380).

They go on to suggest that only after this fourth level has been reached can any impact on the education of children be expected. Awareness in itself was found to be an insufficient condition. Organized knowledge that was not reinforced by the acquisition of principles and skills and the ability to use them was also found to have little effect. The major components of training in the studies looked at by the reviewers were:

- (a) Presentation of theory or description of skill or strategy;
- (b) Modelling or demonstration of skills or models of teaching;
- (c) Practice in simulated and classroom settings;
- (d) Structured and open-ended feedback (provision of information about performance);
- (e) Coaching for application (hands-on, in-classroom assistance with the transfer of skills and strategies to the classroom). (Joyce & Showers, p. 380)

They further posit that the most effective inservice training activities will be those that combine all five components with a particular emphasis placed on "coaching for application," which they view as "an extremely practical and powerful training method" (p. 385). If new teaching behaviors, skills, and competencies are to be passed on effectively to teachers, then it would appear that the on-the-job coaching and support provided by the clinical supervisor could help teachers who experiment with different instructional behaviors not to be pressed back into existing patterns of teaching. Cogan (1976) recognized this crucial aspect of clinical supervision. With an insight that reflects an uncanny similarity to Lortie's (1975, pp. 55-81) expository treatment of teacher socialization, he states:

We learn how to teach and how to value teaching and teachers from our earliest days and all our days thereafter. If we acknowledge the power and

pervasiveness of these social and cultural processes that mould us, then we must view the future teacher as someone who is already far along in his professional education. But the fly in the ointment is obvious: the models of teaching he has learned so well . . . must in large part be unlearned. . . . Strategies for the education of teachers must take into account the psychological problems of providing continuing support if the student is to change such firmly established behaviour. (Cogan, 1976, pp. 7-8)

Clinical supervision attempts to provide that support. The clinical supervisor realizes that, in innovation and new learnings, new behavior is often only partially successful — it can never work immediately as well as previously learned behavior. He therefore encourages the teacher to persevere with a new learning, ensuring that he has the security and support to tolerate some failure. But the clinical supervisor does not leave it there; he analyzes why the new teaching behavior may not have worked as well as it might and suggests alternative behaviors and improvements. Without this supportive relationship, most teachers will revert back to more familiar, “successful” patterns of teaching behavior.

Successful supervision could therefore be described as cultivating a “colleagueship” relationship, through use of the clinical cycle, where the teacher is free to attempt to improve instructional practice through innovation and the supervisor provides formative support and advice in assisting the innovation implementation. Such a process involves joint analysis by teacher and supervisor of the teaching patterns and critical incidents that form the fabric of the new instructional procedures. Conjointly, they devise and test alternative strategies with the view to finding the one most likely to make instruction more effective. Throughout the process, the supervisor and teacher attempt to develop shared perceptions to ensure that the innovation, and not the teacher, is tested. Any evaluation of

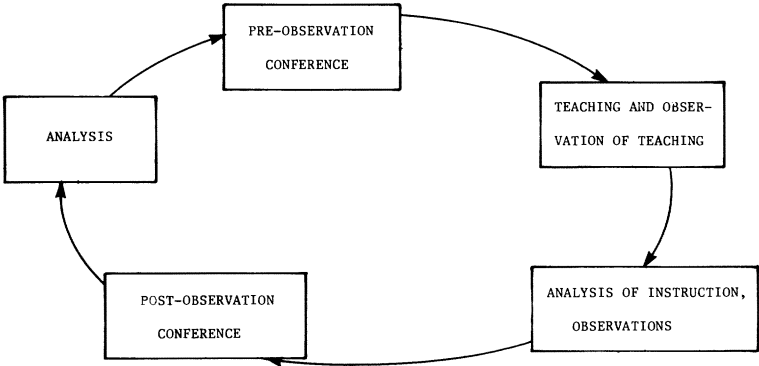


FIGURE 1
Clinical Supervision Cycle

teacher behavior is formative, i.e., it seeks to bring about developmental criticism that will contribute to the eventual improvement of instruction.

The purpose behind the clinical cycle is to cultivate the formative emphasis in supervisory evaluation and to safeguard the relationship within which the critical analysis of teaching takes place. The five-phase cycle proposed by Goldhammer (1969) would appear to be more popular among practitioners and is therefore preferred in this paper to the somewhat complex eight-stage cycle proposed by Cogan (1973). The Goldhammer cycle is represented in Figure 1.

If supervision of teaching is to have an impact on instructional performance then it would seem appropriate for users of the clinical model to adopt and utilize some of the more recent research-derived insights into the teaching process. Figure 2 represents an attempt to diagrammatize the convergence of clinical supervision with research on teaching. The various commitments or “theories” of teaching influence supervisory intervention primarily during the preconference and observation of teaching phases. As with other ways of organizing knowledge, the Dunkin and Biddle (1974) “commitment” categories are not mutually exclusive. Teachers often develop instructional styles which are a blend of two or more but, in general, a particular emphasis tends to emerge. During the preconference, once the emphasized commitment to teaching espoused by the supervisee has been ascertained, the supervisor will make every effort to ensure that his contribution to the discussion will not emanate from a divergent perspective. Further, he will analyze the relationship

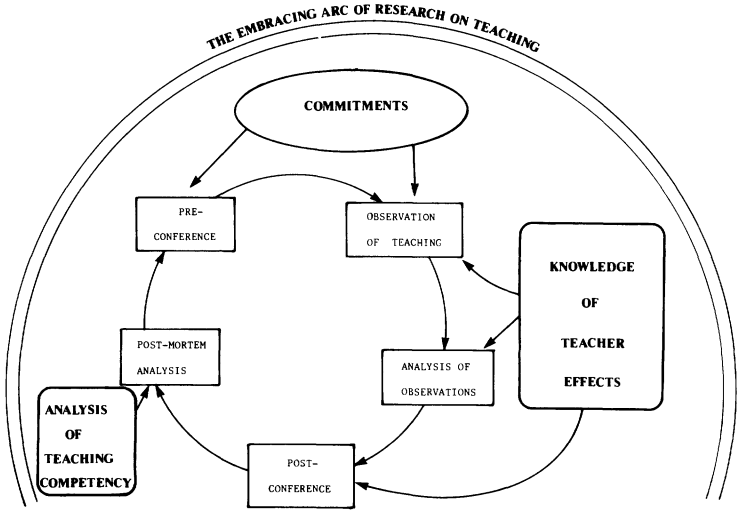


FIGURE 2

Clinical Supervision and Research on Teaching

between the teacher's commitment or way of teaching and the proposed lesson objectives and between the objectives and the instructional strategies to be employed to work towards them. If, for example, a teacher purports to be committed to the "knowledge and intellect" school of thought, yet proposes objectives more closely associated with establishing a less directive classroom climate, the supervisor should question thoroughly to find out whether this represents an attempt at innovation on the teacher's part or is merely an instance of unclear thinking and planning. On the other hand, if the same teacher proposes objectives that are consonant with the "knowledge and intellect" commitment, yet, when disclosing the specifics of the lesson structure, plans to use an instructional strategy which is quite nondirective, the supervisor would do well to sow seeds of critical doubt. Not to do so during the preconference would be tantamount to allowing the teacher to head towards a potential disaster, the effects of which could be quite devastating on teacher and students alike; for the supervisor not to intervene at such a time in a situation similar to the one described would indicate clearly the absence of the notion of dual accountability.

During the observation of teaching phase, the supervisor will attempt to ensure that the underlying commitment of the instrument used to gather data on the teaching-learning situation, whether research-based or conjointly designed during the preconference, is consistent with the commitment to teaching espoused by the teacher during the lesson under observation. Without this consonance, the data cannot even purport to be an accurate representation of what actually took place in the classroom.

The knowledge of teacher effects generated by recent research contributes greatly to the framework in which supervisors and teachers think about and analyze "effective teaching." As such, the criteria of teaching effectiveness and competency statements that can be derived from such research tend to influence supervisor and teacher thinking implicitly during the observation phase and more explicitly during the analysis of instruction and the subsequent postconference. The tacit influence exercised by knowledge of teaching effects during the observation phase may give rise to three potential pitfalls: First, the teacher could become so aware of certain criteria that it causes him to evaluate the instructional process as it is unfolding in such a way as to disrupt the flow of the lesson or to undermine his confidence as the instructional leader; second, the supervisor could become so caught up with what constitutes "good" teaching that he begins to look for behaviors that did not form part of the preconference agreement, and thus runs the risk of alienating teacher trust and openness; third, both supervisor and teacher, but particularly the supervisor, may be completely oblivious to the subtle influence of teaching effectiveness research on their thinking during the observation of teaching phase and this, in itself, could represent a real danger, leading

to an imbroglio between supervisor and teacher. On the positive side, knowledge of teacher effects on student learning, provided it has been thoroughly internalized, could assist a teacher in displaying cognitive flexibility as he is called upon to "think on his feet," as it were, and make decisions during the course of the lesson. The possession of such knowledge by the supervisor provides him with a framework in which to appreciate and analyze what the teacher does during the course of instruction. In the analysis phase, the influence of knowledge derived from teaching effectiveness research becomes more explicit. In other words, where the awareness level of teacher and supervisor during the actual lesson could be best described as "partial," because the focus of their attention is the behaviors agreed upon during the preconference, their awareness level now increases because their attention is focussed on those aspects of the observed instruction that led to student growth and learning. As a consequence, knowledge of teacher effects tends to have a more direct bearing on the analysis and interpretation of the classroom data and on the subsequent discussion of the lesson during the postconference.

When the cycle reaches phase five, the "post-mortem" analysis, the influence of research on teaching comes by way of contributing substantively to the context in which supervisor and teacher appraise how productive and useful intervention from an analysis of teaching perspective has been in terms of improving the instructional process and aiding the teacher's professional growth and development.

Research on teaching may therefore be described as enveloping the clinical supervision approach; it is as if it forms an arc embracing every phase of the process, making the participants profoundly influenced by and unequivocally dependent upon the empirical knowledge derived from its enterprise.

Research on teaching has indeed yielded many important findings and results that ultimately affect a process of supervision committed to the analysis of teaching; but, as Clark (1979) posits, research on teacher thinking along cognitive information processing lines appears to hold the most potential for increasing understanding of the teaching process and the eventual improvement of instruction. As such, it warrants close examination, since its impact on clinical supervision may, in the final analysis, be more critical than that of process-product studies.

RESEARCH ON TEACHER THOUGHT PROCESSES

The assumption undergirding the cognitive information processing approach to teaching research is that what teachers do is affected in some way by what they think. As such, this approach is concerned with teacher planning, judgment, and decision-making; the study of teacher thought processes — how they gather, organize, interpret, and evaluate

information — seeks to bring about understanding of those processes unique to humans that guide and determine teacher behavior.

Clark and Yinger (1979), in what is the most comprehensive review of research on teacher thinking to date, suggest that the process-product approach has contributed greatly to knowledge of what teachers and students do in classrooms and to how this behavior relates to student learning and attitudes, but posit:

If the results of such research are to be applied by individual teachers in their classrooms, adaptations will have to be made. Each class consists of a unique combination of personalities, constraints, and opportunities. Teacher behavior that is sensible and effective in one setting may be inappropriate in a second setting, and it is the individual teacher who makes decisions about appropriateness and defines the teaching situation. So, if research is to be put into practice — if the general case is to be applied in particular situations — then we must know more about how teachers exercise judgement, make decisions, define appropriateness and express their thoughts in their actions. (Clark and Yinger, 1979, pp. 231, 232)

A most significant piece of research undertaken along cognitive information processing lines is Marland's (1977) study of the conscious thoughts and feelings of six teachers-in-action in Alberta. Two broad dimensions of teacher thought processes can be derived from the findings: Teacher Interactive Decision-Making and Teachers' Implicit Commitments or Principles of Teaching.

Teacher Interactive Decision-Making: Interactive decision-making refers to those decisions a teacher makes "thinking on his feet," as it were, during the act of teaching. The teacher is viewed as a person who is constantly processing information about the teaching-learning situation, making decisions about what to do next, acting on the basis of such decisions, and then observing and appraising the effects of these actions on students. Research on teacher interactive decision-making is basically concerned about the reflective as distinct from the reactive nature of teaching.

Marland's study found that teachers rarely departed from preactively devised lesson plans but stretched them to cope with unanticipated events as they occurred in instruction. The teachers studied by Marland reported thinking about topics and events of the present, past, and future. Present-oriented thinking revolved around student behavior, teacher interpretation of that behavior, and the teachers' own inner feelings. Teachers reported thinking retrospectively when they analyzed what had already taken place in the lesson and when they attempted to bring to memory factual information deemed relevant to helping the lesson flow smoothly such as personal information about students, curriculum content, principles of teaching, and beliefs concerning students. Future-oriented thinking included reflection on what tactics to use next and prediction or hypothesis generation and testing related to the kinds of experiences and expectations towards which the teacher considered directing the lesson.

The teachers in Marland's sample tended to put their interactive thoughts to four different uses: (a) to adapt the lesson plan when instruction was going awry, (b) to cope with those aspects of instruction that proved unpredictable, e.g., what to do with a student who has difficulty grasping a concept, (c) to check their own behavior by reference to certain principles of teaching, and (d) to take the learning needs of individual students into account. The teachers rarely thought about their own particular teaching behaviors and their impact on student learning. If they did consider tactical moves, it was done generally on the basis of largely untested, intuitive impressions of student attitude and achievement, rather than along more rational, problem-solving lines which would inevitably have involved them in choosing from among a collection of generated alternatives. In the final analysis, the data yielded no evidence of teacher self-monitoring or of checking the accuracy of their interpretations of student behavior, causing MacKay and Marland (1978) to comment:

The absence of critical appraisal by the teachers of their own interpretations . . . appears to be symptomatic of a general lack of a reflective stance towards their own teaching. . . . The concept of the self-monitoring teacher has been endorsed by those who see the teacher as the essential agent in his own professional development. (p. 14)

Teachers' Implicit Commitments: Marland's (1977) study revealed five principles of teaching that were held by or seen to influence at least a third of his sample. These principles are reported in some detail by MacKay and Marland (1978, pp. 17-22): the principle of compensation, the principle of strategic leniency, the principle of power sharing, the principle of progressive checking, and the principle of suppressing emotions. The principle of compensation, most frequently used by the Grade 1 teachers, was an attempt to discriminate in favor of the shy, the introverted, the low ability group, and the culturally impoverished. The principle of strategic leniency, a variation on the compensation theme, involved teachers applying classroom rules less rigorously on students regarded as needing special attention. The principle of power sharing was an attempt on the part of the teacher to use the informal peer power structure to influence students. In other words, the teacher would selectively reinforce the acceptable behavior of those students perceived as informal leaders in order to co-opt their influence on their peers for purposes of classroom organization. The principle of progressive checking involved periodically interrupting the seatwork of the low ability group to check progress, to identify work problems and to provide encouragement. This was also viewed as a means of introducing variability to students whose attention span was considered low. The principle of suppressing emotions was based on a view of teachers as emotional catalysts. If they expressed their true feelings, it might cause the class to become

highly excitable, causing a classroom management problem. Teachers employed periods of silence and nonverbal gestures to encourage this principle in the behavior of students. Teachers also endorsed this principle as a means of protecting the self-concepts of their students. They were most reluctant to express highly unfavorable feelings or judgments about students for fear of harming their self-esteem and participation in the lesson. This principle appears to be in keeping with Symond's (1949) thesis that the teacher is more than a mere psychotherapist; for where the teacher would often feel obliged to act and cover up his true emotions, the therapist's intent is to be real and not deny his feelings.

Research on teacher thought processes has generated knowledge that casts light on the relationship between the cognitive functioning of teachers and the demands of their task environments in a way which may close the gap between educational concepts and practice and yield the first practical theory of instruction (Clark & Yinger, 1979, p. 259). It provides, therefore, a knowledge base that the clinical supervisor can ill afford to ignore, one which at the same time requires integrating with the theoretical concepts of the clinical approach.

THE INTERFACE OF CLINICAL SUPERVISION AND RESEARCH ON TEACHER THINKING

Research on teacher thought processes provides supervisors with fresh insights into and understandings of the world of the classroom teacher. On the one hand, it reinforces the need for supervisory intervention to enable teachers to see themselves clearly; on the other, it generates the kind of knowledge that pertains most appositively to the clinical process.

If there is, as MacKay and Marland (1978) point out, an absence of self-monitoring by teachers, it would seem that the clinical supervisor could play a crucial role in stimulating critical appraisal and reflective thinking in the thought processes of teachers. Because the classroom scene presents such a rapidly changing kaleidoscope of events, the teacher is unable to see his instructional strategies and behaviors with any reasonable degree of clarity. These finds clearly indicate the needed role of a supportive supervisor to provide constructive feedback and use techniques such as video-taping and stimulated recall that facilitate teacher self-evaluation.

But knowledge of teacher thought processes may issue more than the mere association of supervisory effectiveness with classroom intervention; in the final analysis, this knowledge may affect our understanding of the nature of such intervention. Clinical supervision makes the critical assumption that instruction can best be improved by direct feedback to teachers on aspects of their teaching that are of concern to them. During the pre-conference, supervisors can elicit such concerns and focus their observation of instruction accordingly. Marland (1977) found, however, that

teacher professional concerns may change during the interactive phase of instruction. To describe this phenomenon, MacKay and Marland (1978, pp. 22-24) develop the notion of the preactively devised lesson plan as a "topological workspace." The lesson plan served as a "workspace" because it defined the area of content, resources, and strategies in which they and the students would be working; it was "topological" because, in recognizing that they were planning for an event that was to some extent unpredictable, teachers allowed for this uncertainty by devising loosely structured frameworks that were somewhat similar in design to the "rubber-sheet geometry" approach used in the study of surfaces. When lessons went awry, teachers stretched plans in topology-like fashion to cope with unanticipated considerations.

In the course of the clinical cycle, teaching is always analyzed within the context and framework established at the preconference agreement. Teaching is therefore deemed to be effective if instruction attains to the objectives set out in the lesson plan. Just as the preconference focus is futuristic, on what will happen during instruction, so the analysis phase adopts, by necessity, a retrospective orientation examining what took place in light of what was agreed would take place. Figure 3 diagrammatizes the current orientation of the preconference and analysis phases of the clinical cycle.

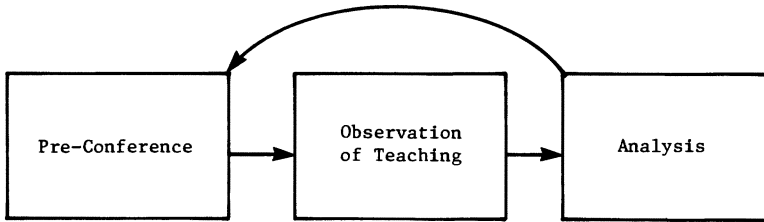


FIGURE 3

The point at issue here is that recent research-generated knowledge on teacher thought processes (Marland, 1977) tends to undermine the static conception underlying the analysis of teaching by clinical supervisors. Indeed, I would argue that the work of MacKay and Marland (1978) exposes a potential gap in the clinical model because the supervisor currently observes and analyzes instruction in terms of teacher preactive plans and concerns. He evaluates the teaching strategy used in terms of preactively set objectives rather than in terms of complex, interactively negotiated modifications of objectives and consequent methods. Supervisory feedback may therefore be misplaced and teaching effectiveness evaluation inappropriately based. At worst, perhaps, supervisor commitment to focussing primarily on the analysis of teaching may be rendered ineffectual by the absence within the clinical model of a framework that

enables them to consider and allow for the dynamic complexities, ambiguities, and uncertainties present in the interactive phase of teaching. What is required is a balancing of the orientations at work in the pre-conference and analysis phases of the clinical cycle. Figure 4 represents such an adjustment.

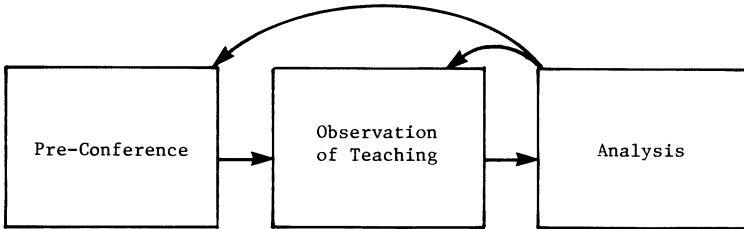


FIGURE 4

The focus of the preconference remains unchanged, but the all-important focus of the analysis phase becomes twofold: Supervisor and teacher analyze instruction not only in light of the prior agreement but also in terms of what took place during instruction that may have caused the teacher to reinterpret or modify the “topological work space” that was initially shared during the preconference. This adjusting of the orientation at work in the analysis phase would appear to warrant a modification of the clinical cycle.

The “isotopex”: Currently, teacher and supervisor evaluate the effectiveness of a teaching strategy in terms of preactively stated objectives. Since, however, classroom instruction is enormously complex, dynamic, and ambiguous, the data base for subsequent analysis of teaching is prone to be superficial because of the static conception underlying the data-gathering observation phase. The proposed modification is the addition of the “isotopex,” which would follow observation of teaching as immediately as is feasible.

The isotopex is a brief but critical exchange between teacher and supervisor designed to isolate the isomorphic configuration and topological features of the lesson just observed, i.e., *isolate topological exchange*: hence “isotopex.” During this exchange, the teacher is the initiator, the supervisor merely the catalyst. The role of catalyst is adequately fulfilled by posing the straightforward question — “Did everything proceed according to plan?” and then listening actively to the teacher’s account of interactive modifications of lesson content, strategies, and objectives. The purpose of the isotopex is to allow the teacher to debrief those parts of the lesson which went according to plan and to explain whatever unanticipated events and considerations occurred that necessitated adjustments and adaptations during the course of the lesson. The isotopex is, by definition, a brief exchange in order to safeguard the discreteness of the

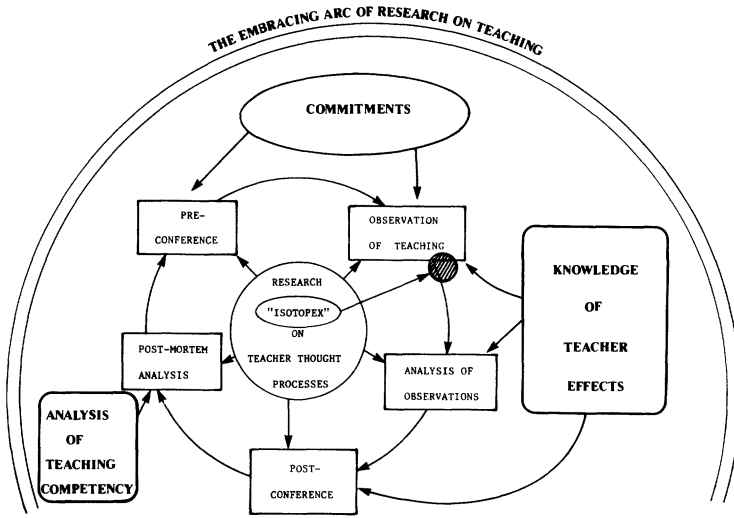


FIGURE 5

Clinical Supervision and Teacher Thought Process

observation and analysis phases in the cycle. Where the analysis phase is essentially appraisive, the observation phase and, accordingly, the isotopex are definitively descriptive. Without brevity, the isotopex debriefing could elongate into actual analysis, thereby impairing the necessary distance between observation and analysis; it could also become the cornerstone for teachers who wish to rationalize away an ineffectual lesson, thereby manipulatively influencing the subsequent analysis phase. It must be emphasized, therefore, that the isotopex is merely a brief, essentially descriptive, relating on the part of the teacher of those classroom events which precipitated interactive adjustments to the lesson plan. The purpose behind this addition is not to make the clinical cycle even more time-consuming and unwieldy — hence the emphasis on brief exchanges; rather, the addition of the isotopex would make for more efficient use of time during the analysis and postconference phases because of its propensity for establishing a clear basis for subsequent appraisal of teaching. The purpose of the isotopex is therefore twofold: (1) to broaden the data base for the subsequent appraisal of teaching, and (2) to focus the analysis phase on those aspects of the lesson that are of concern to the teacher and of critical import to the evaluation of instructional effectiveness. With the understanding acquired through the isotopex, supervisor feedback is likely to become more apposite to teacher concerns; further, this addition helps provide a broader data base on which to evaluate the effectiveness of teaching behaviors, since evaluation would be conjointly carried out in terms of preactive and interactive objectives and strategies.

CONCLUSION

In this paper I have attempted to develop a conceptual link between recent research on teaching, particularly on teacher thought processes, and clinical supervision. My thesis is that knowledge derived from research on teaching and teacher thought processes constitutes the substantive base upon which the rigorous and systematic analysis of teaching espoused by the clinical approach can be established. I have argued that the link between clinical supervision and teacher thought processes warrants a modification of the cycle in the form of the isotopex. This brief exchange at the conclusion of the observation phase serves to broaden the data base for the appraisal of teaching and to focus the analysis phase. As such, it could prove highly instrumental in maintaining the "colleagueship" relationship established in clinical supervision since it communicates a desire on the part of the supervisor to understand the complex dynamics of the teacher's interactive world in a way that facilitates the subsequent selection of research-derived insights into the teaching process conjointly deemed appropriate to the lesson observed.

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