# The Interplay of Knowledge and Practice in Dance Teaching: What we Can Learn From a Non-Traditional Dance Teacher.

# Sylvie Fortin and Daryl Siedentop

If we are serious about dance education within the school setting and the preparation of professional dance educators, current dance educators must engage in the difficult identification of the knowledge base required for competent teaching, and develop the materials and strategies to transfer this to students. (Brooks Schmitz 1990, 61)

As Brooks Schmitz recognized, the improvement of dance education will arise from a better understanding of the dance teacher's knowledge in relation to its pedagogical delivery. Although research on teacher knowledge has become a major focus of research in general education (Elbaz 1993; Leinhardt 1990; Schön 1983; Shulman 1986), such research is absent in dance.

### A Shift in Teacher Knowledge Research

During the 1970s, research that focused on what teachers knew in relation to the achievement of their students was conducted in core school subjects, but, according to Grossman (1990), this research did not lead to significant or conclusive results. That was puzzling since common sense suggests that teachers who know more about the content should be better able to teach their subject matter than teachers whose content knowledge is limited. One reason for such a counterintuitive finding was the quantitative approach to the assessment of teacher knowledge. Teacher knowledge encompasses more, and is more subtle, than the number of credits one has taken in a subject, or the amount of information one may recall in a multiple choice test. This kind of research failed to establish a clear relationship between teacher knowledge and student achievement because researchers failed to focus on the teacher's ability to present subject matter in ways that facilitate instruction. It is not enough to know about a topic. Teachers need to transform their knowledge of subject matter into teaching that fosters students' learning. For example, it is not enough to be technically skilled in order to teach dance technique; one needs to develop efficient instructional tasks to pass on those skills. For these reasons, contemporary researchers interested in teacher knowledge have approached this issue from a different perspective, trying to identify, through descriptive qualitative studies, the knowledge with which individual teachers operate. In the knowledge base paradigm, teacher competency is tied not so much to what the teacher knows per se, but to how the teacher uses this knowledge in class instruction.

The purpose of this study was to examine, through a single case study, not only the way a dance teacher thinks about the teaching of modern dance, but also that teacher's actual teaching practice. According to Patton (1990), the value of case study is unquestionable because it enhances the understanding of a phenomenon by providing a depth of knowledge not obtainable through other means. Obviously, having a single case increases the importance of selecting a person who will yield the most information. Because we were interested in the impact of the knowledge on dance teaching, a teacher was selected with a wide knowledge base which was atypical owing to the variety of experiences in her background. Thus, a limitation of this study is that the teacher was not chosen for her typicality.

## Martha's Case Study

Martha Eddy, a free-lance teacher who meets the previous criteria, was selected as the subject of this study. We deeply thank her for her generous participation and for allowing us to reveal her identity. The following major questions, each with three subquestions, framed the study:

- 1. What does Martha know about the teaching of modern dance?
  - What are the sources of her knowledge?
  - What are the central organizing principles of her content knowledge of modern dance teaching?
  - On what bases does she select content for her teaching?

Sylvie Fortin is Associate Professor in the Dance Department of the Université du Québec à Montréal, Canada. She holds a Ph.D. from the Ohio State University. Her research interests focus on research methodology, dance pedagogy and the study of somatic approaches to modern dance training.

Daryl Siedentop is Professor in the School of Health, Physical Education, and Recreation at the Ohio State University. His research interests focus on teacher/coach effectiveness, analysis of educational ecologies, and curriculum in sport education.

- 2. What are the teaching practices exhibited by Martha?
  - What is the instructional climate and how is it conveyed?
  - How is the content made manifest through instructional tasks?
  - How are the instructional tasks communicated?

The first research question focuses on knowledge that refers to "an individual's personal stock of information, skills, experiences, beliefs, and memories ... encompassing all that a person knows or believes to be true, whether or not it is verified as true in some sort of objective or external way" (Alexander, Schallert and Hare 1991, 317). The second research question focuses on Martha's knowledge as reflected in her teaching behaviors and, more specifically, in the instructional tasks she presented to her students.

That orientation differs from the process-product research conducted in dance in which teachers' and students' behaviors were described using instruments specifically designed for dance or adapted from academic or physical education classes (Gray 1984; Lord 1982; 1986; Piéron and Géoris 1983). Results from process-product studies have shown that modern dance teachers rely mainly on three main behaviors during technique class. In order of quantitative importance, they are: "to support or guide students' motor activities, to prepare for motor activities, and to provide feedback" (Lord and Petiot, 1985). This last behavior has been investigated more thoroughly in three studies (Brunelle and De Carufel 1982; Fortin 1988; Piéron and Delmelle 1983). Results of these studies have shown that dance teachers provide mainly verbal and prescriptive feedback.

In the present study, we chose to use an inductive system of analysis to understand the process of teaching by bringing together the teacher's thoughts and actions. Specific to this study is the bringing together of two ideas: Martha's knowledge of dance, and the concept of task as a central unit of observation that directs both thought and actions. "Skilled teachers," argued Hollingsworth (1989), "know how to merge knowledge of human learning, subjects, and pedagogy into specific tasks" (163). The concept of instructional tasks has been borrowed from the literature on classroom ecology research. Instructional tasks are therefore here defined as the answers students are required to produce and the routes that can be used to obtain those answers (Doyle 1979).

#### **Data Collection**

The qualitative methods used to collect data for answering the research questions were derived mainly from ethnographic techniques (Spradley 1979, 1980) and from techniques commonly used in research on teacher thinking (Clark and Peterson 1986; Borko and Niles 1987). More precisely, data for this study were collected from class observations, semi-structured interviews, and teacher's documents such as planning sheets, advertisement pamphlets, and students' course evaluation forms.

We observed the twenty-seven hours of classes that Martha taught to her students at the 1991 Bates Summer Dance Festival, the site of the case study. Each observation was conducted for a full class period and field notes were written on an observational sheet by one researcher. The production of narrative accounts of the tasks included descriptions and quotations from the teacher observed. To assure a verbatim record, all classes were recorded on an audiotape or videotape.

Five interviews of approximately one hour each were conducted. The interviews, all audiotaped, were based on a semistructured interview guide. Open-ended questions were used to minimize the imposition of predetermined responses and to reveal various unexpected aspects of Martha's knowledge about modern dance teaching. While some interviews allowed Martha to speak in generalities, others required her to be more specific to ensure that the various research questions were addressed.

#### **Analysis of Data**

Data analysis consisted of reducing and organizing the raw data to facilitate the development of an inductive categorical system of analysis to answer the research questions. We first grouped observational data into clusters according to their similarities. This process of looking for recurring themes was applied to each research question, permitting the development of an interim categorical system. The process of analysis at that stage may best be described as a flow back and forth between the observational data and the other data sources, while keeping in mind the temporary character of the categories developed. The search for a definitive system of analysis was pursued until there was evidence from all the data sources to substantiate the categories. The coherence between the different data sets confirmed that the category system was appropriate and complete. The last stage of the analysis consisted of coding the entire corpus of data according to the definitive categorical system. The same pieces of information were often multicoded because they related to more than one research auestion.

Whereas it is common to address the issues of validity and reliability of results in quantitative design, in qualitative research these criteria are replaced by the concept of trustworthiness. In this study, trustworthiness was established through the three means of member check, peer debriefing and triangulation (Guba 1981). Results and discussion are presented here by answering the research questions. Before turning to them, Martha's biographical profile and the description of her teaching environment are presented to provide a context for the data analysis.

#### Martha's Atypical Journey

Martha, a Caucasian woman in her thirties, grew up in Spanish Harlem in New York. Whereas it is common in North America to start dancing at an early age in technical classes based on ballet and its derivative forms, Martha had, from the age of eight, been exposed not only to technique but also to improvisation and choreography at the 92nd Street YMHA (Young Men's Hebrew Association). There, until she was sixteen years old, she studied with various teachers, all leaders in their respective areas. For example, she studied Afro-American dance with Rod Rodgers, international folk dance with Fred Burk, and modern dance with Bonnie Bird, who later became influential in the dissemination of Laban's work. From age eleven to sixteen Martha also belonged to the Performing Workshop at the Y; this was a children's dance company performing works by guest choreographers and children in schools, retirement homes, libraries, and parks. During this time, Martha also attended classes at the Graham studio, studied Limón technique at the Clark Center, and worked with Laura Foreman in dance composition. Martha chose to pursue a B.A. degree at Hampshire College, which had an individualized program that offered her the possibility of combining her interests in dance and the humanities. In the humanities, Martha immersed herself in socialism and feminism, which became increasingly important in her life and led to her progressive disengagement from dance. Although she studied contact improvisation, Aikido, Laban Movement Analysis, some ballet, and modern dance techniques, as well as performing with the college company, Martha knew by the last year of her program that she did not want to be a performer. She returned to New York to work in a women's health clinic and to study at the Laban/Bartenieff Institute for Movement Studies, where she became a Certified Movement Analyst in 1981.

Depicting Martha's journey as a linear path is misleading, since she always pursued different projects simultaneously. One project which had been important since she began college, and which shaped her professional career, was her study at the School for Body-Mind Centering in Amherst, Massachusetts. In 1984 she became one of the first students to receive the status of Certified Teacher and Practitioner of Body-Mind Centering. Although her study at the Laban Institute and at the School for Body-Mind Centering equipped her to be a movement specialist, Martha soon felt the need for a "title and more of a profession" (Eddy interview 1991). Indeed, these two private teaching institutions have not yet fully gained recognition in the conventional society or in traditional academic circles outside dance and healing communities and, to a certain extent, lack credibility in mainstream society.

In 1982 Martha enrolled at Columbia University in New York and later completed a master's degree in exercise physiology. During that period Martha studied herbology and holistic health as well as working as a teaching assistant at the Laban Institute. She also did an internship as a movement specialist with Dr. Richard Kavner, a behavioral optometrist. From then on, Martha's professional life consisted mainly of teaching different aspects of Laban/Bartenieff theory and Body-Mind Centering in a variety of settings throughout the United States, Canada, and Europe. Since 1987 Martha has also taught at a number of dance festivals, including the Bates Dance Festival.

The data for this study were collected during the 1991 summer Festival on the campus of Bates College in Lewiston, Maine. The Festival lasted three weeks and offered a variety of daily dance classes by a faculty of outstanding dance teachers and internationally acclaimed professional artists. The two hundred students who attended the festival were at least seventeen years old, and at an intermediate level in dance. Fulltime students took four classes of one hour and forty-five minutes per day, Monday through Friday, for the three weeks of the Festival. Upon completion of the courses, they could apply for academic credit.

Within the Bates Dance Festival, Martha taught the modern technique class called Body-Mind Dancing/Modern 3. This class was described as follows in the advertisement for the Bates Dance Festival:

Body-Mind Dancing/Modern 3 is designed to experientially teach principles of anatomy, kinesiology, human development, and movement fundamentals in relation to emotional/ artistic expression. The aim is to coordinate inner body focus with the outward projection needed in performance. Emphasis is on befriending unfamiliar, unknown, or taboo parts of the body and psyche, learning to include them in the creative process.

The class level "3" refers to its intermediate level. The average number of students in the class was fourteen, with daily attendance varying from nine to eighteen. Two subgroups of students were distinguishable within the group: young students in their early twenties and dance teachers in their late thirties. Although the class was designated as intermediate, the skills of the students varied. On the one hand Martha appreciated the heterogeneity, because the different levels could be used as a teaching tool. On the other hand, having a heterogeneous group presented her with the challenge of giving equal attention to the different levels in the class.

#### Martha's Atypical Journey: Discussion

As explained, in addition to having traditional training in modern dance, Martha had background in dance science and prolonged experience in somatic practices. With this background, Martha was not representative of typical modern dance teachers. She had never performed in an outstanding professional dance company, one of the strongest credentials commonly accepted among the members of the dance community. This attitude towards the prerequisite knowledge to teach dance can be related to the epistemological antecedents of dance teaching.

The earlier history of dance teaching was primarily focused on the performers' practical knowledge of dancing. The best dancers of a community were often assigned the role of conveying dance. As Gray (1989, 3) pointed out: "These people have handed down pedagogical strategies and acted as dance teachers ever since leading and following became forms of teaching and learning. Dance teachers traditionally have taught as they themselves were taught." Critics agree that dance teaching relies heavily on tradition (Clarkson 1988; Lord 1984). Myers (1989, 1), addressing the instructional conformity of dance teachers, goes so far as to speculate that, when asked the reasons for their instructional choices, most dance teachers would answer "the tradition, the way things are." According to Eichelberger (1989), knowledge may come from tradition, systematic research and personal experience. Martha belongs to those scholars whose intent is to change the dance teaching tradition by introducing conceptual knowledge based on more than tradition. "Increasing numbers of dance artists and educators," claimed Dunn (1990, 25), "are concerned with integrating scientific concepts of human movement into more traditional dance teaching methods." Dance science and somatic practices are recent developments in the dance community. A growing number of dance programs in academic settings, as well as in recreational and professional settings, are including somatic practices in their programs (Wilson 1990; Dunn 1990). According to Myers (1991), this tendency should continue in the future, influencing dance teaching.

Martha is a free-lance teacher internationally known for her teaching of somatic approaches. In the dance field, however, her fame is not as widespread. Although she recently returned to public performance, including a performance within the Faculty Concert of the Bates Festival, she lacks the many years of professional dance technique training and professional performance experiences that usually inform a dance teacher. It is interesting to note that in the dance community dance teaching has considerably less status than performance and choreography and is seen as offering less gratification. Even within the teaching profession a hierarchy is created. This hierarchy is dependent upon the closeness of the ties of a teacher with professional practice. Stinson, Blumfeld-Jones, and Van Dyke (1990) argued that at the top of the hierarchy are the "real teachers," that is, the individuals who have been professional performers or choreographers. The hierarchy functions as a series of levels, access to which is not necessarily primarily based on the effectiveness of an individual's teaching. At the bottom of the hierarchy, continued these authors, are the teachers who could not make it at a professional level and consequently are relegated to teaching in less prestigious environments.

Where is Martha located on this scale? Her biographical profile revealed that she taught in a variety of prestigious settings. The bottom of the scale is therefore excluded, as is the top of the scale. Although she performed within the Bates Festival Faculty Concert, her renown as a professional artist is not what motivated the Bates Dance Festival to invite her to teach. Martha was knowledgeable about somatics and it is mainly on this basis that she was invited to teach at the Bates Dance Festival. As the knowledge base for dance teaching develops, thanks to the recent contribution of dance science and somatic practices among other things, a new category of dance teachers is perhaps emerging. These teachers' credentials derive not only from the physical and artistic mastery of dancing, but even more from the understanding of a substantive conceptual content of dancing. As Martha Myers said, "it is time to teach dance principles rather than dance steps" (personal communication, 11 July 1992).

A new profile of the dance teacher is beginning to emerge within the dance community, one that can be summarized by Shulman's (1986, 14) aphorism: "Those who understand teach." The point here is not to diminish the importance of the professional background of dance teachers. Teaching is bound to content and in dance the physical involvement, the experiential knowledge, is a primary aspect of content. The point is rather to highlight the importance of expanding the conception of relevant knowledge in dance teaching.

# What Does Martha Know about the Teaching of Modern Dance?

To answer this first research question dealing with Martha's knowledge of the teaching of modern dance, the source of her knowledge will be examined, then her central organizing principles, and finally, the bases on which she selected the instructional tasks will be discussed.

#### Source of Martha's Knowledge

Martha's teaching drew from Body-Mind Centering, which is "an experiential study based on anatomical, physiological, psychological and developmental movement principles, leading to an understanding of how the thoughts and feelings of the mind are expressed through the body in movement" (Eddy 1992a, 1). The developmental movement organization and the body's physiological systems, which are the two aspects of Body-Mind Centering that particularly influenced Martha's teaching, are extensively described in the writings of Bainbridge Cohen (1993). Martha's teaching was also informed by Laban Movement Analysis or Labananalysis, which is a conceptual framework for the study of movement developed by Rudolph Laban in the first half of the twentieth century. Labananalysis can be approached through the complementary study of the Effort elements, Space components, and Bartenieff Fundamentals, which were developed by Irmgard Bartenieff, one of Laban's students. For information about Laban Movement Analysis, readers may refer to the work of Bartenieff and Lewis (1980). In regard to Martha's dance background, we have already described how her dance training encompassed not only a wide range of dance styles but also a rich exposure to improvisation. Thus, the focus here is on her conception of dance teaching.

For Martha, dance should be expressive, whatever the context. Even the simplest movement in a teaching situation should convey something about the internal feelings and thoughts of the mover. The dancers' instruments, their sensitive bodies, should be developed to express and communicate their internal motivations.

> To dance is to communicate. This communication, with or without the intent to perform, may potentially describe the full gamut of human experience. However, this experience must be conveyed outwardly through the dancer's own body; what lives within must be given enough intensity so that it may be perceived by observers. Ideally, dance classes are where the understanding of this kind of communication is emphasized, along with the sheer pleasure of movement. Instructors may teach such skills by focusing on the feeling of movement rather than simply on its outward appearance. The student may then be able to perform so that the embodiment of a truly integrated statement is expressed. (Eddy 1992b, 20)

With this conception of dance, it is not surprising that Martha rejected the compartmentalization of dance classes into dance technique, composition, and improvisation. Actually, for Martha, strict dance technique classes are based on the mimicry of the teacher's idiosyncratic movement and for this reason have value only in a particular context:

If you're about to perform in somebody's

repertory and you're going to really embody it, it's helpful preparation [to take strict technical dance classes] but if your goal is to discover yourself or to work on your own choreography then for a dance training class to do that, maybe it's better if it's open ended and less about ritualizing someone else's movement. (Eddy interview, 1991)

Although her teaching did not reflect any particular modern dance style, Martha recognized that no one teaches without an idiosyncratic movement style. However, Labananalysis and Body-Mind Centering provided her with the tools to develop a more generic dance technique, a form of body training that reduces reliance on personal style. For Martha, these frameworks prevent her teaching from relying too much on her personal movement idiosyncrasies, which she sees as a barrier to the individual expression of the students.

#### Central Organizing Principles of Martha's Knowledge

Central organizing principles are defined in this study as the personal key concepts of content knowledge upon which other concepts are grafted, which guide her actions and which explain the reasons for those actions. Examination of the observational data revealed three central organizing principles: variation of space and dynamism, developmental body part relationships, and moving from inside out.

To Martha it is of prime importance to help dancers "to access different kinds of expression" (Eddy interview, 1991). Since expression is related to the optimal use of the dancer's instrument, Martha's class aimed to increase the students' spatial skills and widen their movement dynamics. To do so, Martha relied strongly on the body's component system of Body-Mind Centering and the effort and space framework of Labananalysis:

> Using Laban Movement Analysis [I] can encourage students ... to expand their movement range dynamically and spatially. Laban Movement Analysis gives [me] a language for describing what [I] see in a person's movement style (for instance their characteristic use of space, time, weight, flow, dimensions, planes, levels, pathways, body parts). [I] can then refer back to Body Mind Centering to discover what physiological systems are active or passive in that moment. (Eddy interview, 1991)

Developmental work is also a driving force in Martha's teaching as she believes that sensori-motor conflicts that prevent optimal physical and psychological functioning at adulthood are rooted in inefficient patterns in the initial movement organization of our lives, that is from fetal life up to voluntary mobility within relation to the earth's gravitational field. Martha's schooling provided her with two different developmental systems of movement: the perceptual-motor development theory as taught at the Body-Mind Centering School and the Bartenieff Fundamentals taught in the Laban Certification Program. These two systems have mutually influenced one another. Martha explained how the two systems, which aim at increasing efficiency of movement patterns, share commonalties. Both systems acknowledge breathing as fundamental to the study of movement. After breathing, the two systems divide movement organization into six progressive levels, though they use different terminology. Core-distal, head-tail, upperlower, body halves, and diagonals are the terms used in Labananalysis. The equivalent concepts in Body-Mind Centering are referred to as naval radiation, spinal, homologous, homolateral, and contralateral stages. The understanding of these relationships provided Martha with an analytical tool to look at efficiency of movement and good alignment.

The central organizing principle, moving expressively from inside out, was also borrowed from Body-Mind Centering and Labananalysis but more at a philosophical level. It does not refer only to motor material per se. Moving from inside out refers to the students' development of their inner and outer worlds. This principle encompasses psychological and social dimensions as well. It is included as a central organizing principle because observations of the class revealed that Martha's priority of connecting the self with others influenced the tasks presented in class.

#### Bases for the Selection of Instructional Tasks

From interview and observational data it became clear that the conceptual frameworks of Body-Mind Centering and Labananalysis, and Martha's past experience both as a student and as a teacher, were the main factors that influenced Martha's selection of instructional tasks. Other influences were her own movement preferences and those of the students in her class.

Each week of the festival Martha focused on a different theme. During the first week she focused on components of the body, such as connecting the core of the body, breath, skeletal use for leverage, head and tail relationships, and bodyhalf relationships. During the second week elements of space such as dimensions, planes, and floor patterns received more attention. During the last week she added the component of dynamics, the qualities produced by different uses of movement energy. This systematic organization around the themes of body, space, and dynamics derived directly from Laban's conceptual framework:

> I made the choice to work more from concepts than from my own personal expression. ... Rather than just doing a movement that I like I'm usually doing a movement that I feel will teach them something, a body connection, a use of dynamics and space. I think every teacher who is teaching their own idiosyncratic movement is teaching some gestalt, some crystallization of body use in space with dynamics. (Eddy interview, 1991)

Other influences on Martha when selecting instructional tasks were her own experiences as a student and as a teacher. She reported that her long teaching experience enabled her to spend only ten to thirty minutes each morning visualizing her class:

> I have a lot of things in my back pocket. Because of my mixed interest and the fact that I

have had many experiences teaching I don't need to spend a lot of time planning.... In the morning I'm checking. Is the concept getting covered? Is there enough variety? Is this appropriate to this stage? Should I wait until another day? How will the timing work with that? Have we done something to free up the flow? Do I feel prepared for this? Does it feel appropriate? (Eddy interview, 1991)

Sometimes Martha's planning consisted of selecting tasks that she herself had experienced in the past in other teachers' classes. Most of the time, however, she adapted the borrowed material for her own teaching purpose. Martha fashioned her tasks through her own central organizing principles. The final decisions in presenting the instructional tasks to the students were based mainly on her personal preferences, taking into account her physical and emotional needs. For example, one day in class she told the students that she would have liked to introduce more tasks involving balance, extension, and leg gesture because her body needed these. Asked to comment on this in an interview, she said that she tried to find a balance between covering a rational framework of movement concepts and taking into account her own body needs. Martha related this to her belief that taking care of oneself as a teacher provides a role model for students to be self-caring and to recognize the teacher as a vulnerable human being. Ideally, she believes this eventually fosters healthy autonomy in her students.

Finally, another factor that influenced Martha's selection of instructional tasks was the students—their skill levels, unexpected states, feedback, enjoyment, and interest. Objectives related to individuals, however, were not planned decisions. The objectives set prior to teaching were more focused on the group. Individual objectives emerged in the interactive phase of teaching.

> I didn't set really specific objectives for each student. It's my objective each day to pay attention to each student at some point and to set some kind of objectives within an activity at any given moment.... With Monik [note that all students' names are fictitious] I do have the objective of attempting to get her more connected between her upper and lower. With Mary and also Diane I have the objective for them to feel more peripheral tension. But I've never really systematically gone through and thought about each student. That all just happens spontaneously. (Eddy interview, 1991)

Being a heuristic device, individual objectives shaped and altered the flow of instructions. She discovered what she wanted to accomplish with specific individuals after having taught them. Martha worked intuitively rather than analytically to provide individual attention to the students. This is consistent with Elbaz's findings (1993) that a large part of the practical knowledge of teachers arises from the direct interaction between the teachers and the classroom events.

#### Martha's Knowledge: Discussion

Body-Mind Centering and Labananalysis claim to avoid the rigid idiosyncrasies of technical style. With these conceptual frameworks, practitioners seek to be complete and to avoid what is seen as the limitation of tradition or personal idiosyncrasies. In *Modern Educational Dance*, Laban (1948) defined free dance technique as having no preconceived, prescribed style. Perfected technique, he argued, is based on the full mastery of space, time, weight, and flow. In a similar way, in the article *The dancers' warm up through Body-Mind Centering*, Bainbridge Cohen (1988) argued for a technique that is not based on aesthetic style:

The support and articulation of the major body systems and our early developmental patterning are the basic foundations of all our movement, ranging from everyday activities to the more skilled and complex movements of the dancer and athlete. (Bainbridge Cohen, 28)

The impact of Martha's knowledge base is clearly seen in her belief that refined techniques based on idiosyncratic styles sometimes obliterate the instinctive ability of people to move expressively. She believes that the restrictions of traditional dance styles can be escaped by using a form of body education as a basic technique. This is in reaction to what can be called "hard" technique, in which there is an emphasis on control, tension, upright position, and replication of a given model. Martha is looking for a "softer" technique, in which exploration of the "neutral" movement framework enlarges individual mobility and expression, from which emerges genuine personal style. Martha's three central organizing principles, variation of space and dynamism, developmental body part relationships and moving from inside out, stress individuality and variety of expression. This contrasts with the prevailing approach in dance teaching that is "based upon principles of standardization, specialization, uniformity, and conformity" (Gray 1990). Martha's three central organizing principles echoe Johnson's (1983) view of personal bodily authority. He showed how people have been systematically alienated from their personal authority and made dependent on experts. Johnson said that "the fundamental shift from alienation to authenticity is deceptively simple: It requires diverting our awareness from the opinions of those outside us toward our own perceptions and feelings" (Johnson, 154). Authenticity means returning to individual perceptions and feelings. Martha was dedicated to finding her own bodily authority as well as to helping her students recover theirs. She presented movements to copy but saw them as ways of tapping into otherwise unknown depths of the students' bodies, rather than outer forms into which the students force their bodies. Forms were used as clues, not norms. In a way this represents a rejection of aesthetic authority. One of the important features of adopting a theory of dance as expression is the acceptance of a wide range of movement qualities.

Since childhood, Martha had accumulated a wide range of experiences in modern dance. What Body-Mind Centering and Labananalysis seem to have given Martha is the knowledge base for the development of a set of organizing principles which provide direction for her prior knowledge of dance. Authors in the literature often point out that the apprenticeship of observation supports the conservatism of teaching, as teachers replicate what they experienced as students (Lortie 1975). In Martha's case the situation is different. Martha had a deep understanding of Labananalysis and Body-Mind Centering that allowed her to borrow tasks from her past experiences and to organize them in a conceptually coherent way. Her teaching did not result in a collage of borrowed steps for their own sake. She engaged in a reflective process to connect the means of instruction with the ends.

#### What Are the Teaching Practices Exhibited by Martha?

We now turn to Martha's ability to pedagogically represent her knowledge in instructional tasks for the students. We will describe first the instructional climate of Martha's class. Then we will address how the content was manifested through learning tasks. Finally, we will examine the ways in which the instructional tasks were communicated.

#### Instructional Climate

At the first meeting between the students and the faculty of the Bates Dance Festival, Martha expressed her wish to create a joyful learning environment. In class, several verbal expressions indeed contributed to bringing attention to the sheer pleasure of dancing: "Stay there as long as you enjoy it," "last minute playful," "feel the pleasure from that movement to that movement," "it's the last time we do that so enjoy it." Martha enjoyed dancing and teaching and communicated this to her students. One day, despite the formal closure of the class, most of the students kept improvising with Martha to the music of Paul, the musician, who had become an integral member of the group. Whatever the situation, Martha always maintained a positive attitude towards the students. At the end of the first class she said, "I'm very open to hear your ideas and input so please talk to me." She was always available at the end of the class to help the students with their problems whatever they might be. There was no doubt that Martha succeeded in the creation of a joyful and nurturing climate.

However, the general positive climate sometimes weakened within a class. This was evident from behaviors and attitudes such as the students' lack of enthusiasm, the number of questions asked to clarify a task, and their disengagement from the tasks. Although the observational data suggests several possible interpretations for the deterioration of the climate, such as a lack of clarity about rhythm, we will focus here on the lack of clarity in the instructional tasks. During the first class Martha invited the students to feel free to adapt the different tasks as they wished:

> I'm going to give you more of a set of combinations but I would like you to know that in my class, basically it's an invitation to improvise on themes that I give to you, so you make it feel good for your body.

Sometimes the message to adapt the demonstrated tasks was explicit:

Don't worry about all these numbers. Just sort

of move, improvise. We'll do it again so you can get it perfect another day.

Other times, despite the general invitation for individual adaptation, the tasks were explained in such detail that they conveyed the implicit message to reproduce the form of the task as accurately as possible. The students sometimes did not know Martha's expectations in regard to the types of tasks varying on a continuum from "copy me" to "do what you want." On one occasion a student expressed with an unquestionable tone of frustration that it was not clear to him if the sequence had to be performed in unison respecting the given form of the demonstration or at personal rhythm allowing room for individual interpretation. Martha recognized those few instances of a "heavy" climate (her own term) and demonstrated the capacity to reestablish a warm and supportive climate as, for example, in the following description of a specific incident.

The second day of the third week, the class started with the students around the piano singing a song used later for one combination. The climate was emotional, joyful, and warm. After singing for about four minutes, the class continued with an improvisation and the usual warm-up, except that Martha included in the warm-up many tasks involving leg extension. Martha had taken a jazz class just before the class and felt warmed up for such movement. She thought that the students were ready too since they were all coming from other technique classes. Then the class unfolded as usual except that at one point Martha presented the longest level change task that the students had done. The students spent about twenty minutes on that task, which was obviously difficult for their level of skill. After a short rest the students engaged in another long standing-up task resulting from the combination of three exercises done in the previous weeks. The pace of the class was fast. A student complained that the starting cue for the combination was not clear. Two students went to sit. One student got hurt by someone moving too close. Martha then presented an improvisational task as follows: "Just take the emotion you're in right now and see if you can use it, whether it's exhaustion, whether it's confusion, whether it's frustration, whether it's pain. See if you can use it. So use whatever your feelings are." The improvisation finished, Martha asked the students to gather and to sit in the center of the room. Then she talked briefly to them. Here is how she described the gathering and her motives to do that:

> I was sensing frustration, confusion because Emile couldn't get the combination, Cathy was still feeling pain from having been hit on the nose, two people were sitting, the music wasn't quite right, I think they had enough material to dance with.... What I wanted was just an acknowledgment that the energy was falling down and very dispersed. The main point was to bring the whole group together for a moment. How are you feeling? Let's check in. If somebody was really having a hard time I hope they would have said something at that moment. There was an opportunity. I just said, "How are you feeling?" and one person said, "let's keep mov

ing." I said, "Is that true for everybody?" Except for one, everybody else was ready to be travelling. (Eddy interview, 1991)

The locomotor task following this gathering consisted of four steps and four runs travelling across the floor with the arms moving from low back to high front. The students, grouped in partners, were invited to give tactile feedback to each other when opening the arms. After this task the atmosphere of the class completely changed. The students were smiling again, looking at each other, and attentive to Martha. The characteristics of the task per se probably contributed to reestablishing a positive climate. Physically, the task was easy. Mentally, in terms of memorization, it was not demanding. Psychologically, the run had a liberating and envigorating quality, whereas the opening of the arms had an expressive quality of offering and acceptance. In this example, Martha counterbalanced the previous negative emotional tone of the class with a closed-ended task inducing a positive tone or, in Laban's term, an indulging quality. She demonstrated the same capacity to adjust the atmosphere on other occasions using open tasks such as short improvisations.

The above example demonstrates how Martha sometimes deliberately selected tasks based on her knowledge of the emotional character that the tasks conveyed. The Effort work of Labananalysis and the body systems work of Body-Mind Centering provided Martha with knowledge about how emotions and thoughts are embodied in different qualities of movements. To her, any movement in any part of the body reveals some feature of the person's inner life. Weight, space, flow, and time, as well as skeletal, muscular, fluid, organic, endocrine, and nervous systems, are components of all movements that she manipulates, intuitively or systematically, to alter the climate of the class. Martha believes that movements reveal a state of mind; thus manipulating characteristics of movement will affect that state of mind.

#### Content Knowledge and Instructional Tasks

Martha presented her content through different types of tasks varying from open to closed-ended. More precisely, four categories of tasks emerged inductively from the data; routine copy tasks, theme and variation improvisations, guided improvisations, and free improvisations. Routine copy tasks refer to the most common kind of tasks observed in dance classes, e.g., copy the model. The routine copy tasks were set and often repeated the same way from one class to another. The movements were exactly prescribed and repeated according to Martha's demonstration. Tasks were classified as theme and improvised variations when Martha initiated the movement and invited the students to vary one or many qualities of the demonstrated movement. A movement theme was offered and the students explored different movement possibilities. These tasks occurred frequently and typically followed routine copy tasks. In other words, the theme and variations task was often linked to a technical task and its purpose was to vary the execution just performed. In the third type of task, the guided improvisation, students initiated the movements under the verbal instructions of Martha. These tasks were often used to introduce the focal concept of the class, though it was not always explicitly stated. They had explorative purposes, were sometimes done with a partner, and occurred at the beginning of almost all classes. In the free improvisation tasks, the last type of task to emerge from the data, the students initiated the movements and received very little guidance from Martha. To initiate free improvisations, she gave short verbal instructions such as, "Do what your body needs to do." Free improvisations occurred every day. Their purpose was partially to recuperate after the first twenty to thirty minutes of the class and often to provide students with a transition from the floor level to standing level. Some free improvisations were also presented at unexpected moments, when the climate deteriorated, when "the energy was falling down" in Martha's terms. In those situations, Martha invited the students to improvise with instructions such as, "Take two minutes to move as you want to move. How do you feel? How do you want to feel?"

These different kinds of tasks reflected Martha's central organizing principles: moving from inside out, variation of space and dynamism, and developmental relations of body parts. "Moving from inside out," for example, was manifest both in routine copy tasks and improvisational tasks. In the routine copy tasks, connecting the self and others was induced by frequent short verbal expressions such as: "bring your attention out," "make a decision as to where you're looking at any moment." Sometimes the students were asked to perform the tasks in clusters so that they could look at each other. Reaching out to the environment from an internal world was also encouraged in a variety of ways such as by numerous changes of spatial orientation throughout the class and by verbal instructions to make eye contact during improvisational tasks. The different improvisations were often developed from a solo to a duet to the whole group. The frequent work with a partner was a way of moving from an internal concentration and attention to a more external focus.

#### Communication of the Instructional Tasks

To convey her central organizing principles, Martha relied on verbal, visual, and tactile forms of communication. An important characteristic of her verbal communication was her use of vocalization. Sometimes, Martha explicitly asked the students to make sounds while moving. At other times, she simply induced vocalization by vocalizing herself. The improvisations, for example, were always done with off and on vocalizations. The following quote shows how vocalization is linked to her knowledge of somatic principles:

> The basic premise of vocalization is very much a part of the Bartenieff and the Body-Mind Centering work, which is that through vocalization we attune with our breath more. Many of us, myself included, hold our breath when we are learning and yet we all know that the body best coordinates its movement when there's the internal movement of the diaphragm and the muscles of respiration. So by coordinating with that breath rhythm we also make our movement more efficient.... By being able to be clear vocally we know that we're getting into particular breath

rhythms.... The idea is if the students can get voice changes that are dynamic it will help their movement be more dynamic. The other way the voice work can be used is as a way to just connect the group more. (Eddy interview, 1991)

Martha did not like spending too much time verbalizing instructions. Although she had a thorough knowledge of the concepts underlying the different tasks, she did not analyze them through long verbal explanations. Rather, she emphasized direct physical engagement in the tasks. She pointed out the importance of finding balance between the different kinds of tasks because this affected the time devoted to physical engagement:

> That's where my own battle with how much to keep improvisational and how much to go to the ritual is very strong because when I don't set things then I have to keep talking. When we set things hopefully I can stop talking and we can go through the phrases in a beautiful way like people in Graham class. (Eddy interview, 1991)

Martha went on to explain how the routine copy tasks and the free improvisations relied on minimal verbal instruction. Although they were at each extreme on a continuum of open and closed tasks, they both contributed to a situation in which the students could enjoy the execution of the tasks without being disturbed by her voice.

Martha did not stress the analytical descriptions of the tasks because she was concerned with class pace. She was aware, however, that some of the concepts presented in the class were unconventional and that the limited explanations of them were a possible source of confusion. For example, saying to the students that the cerebro-spinal fluid is the nourishment of their brain probably did not convey a literal meaning for most of them. Asked to comment, she explained:

> It's just a metaphor but I figure if it goes in, it goes in, and if it doesn't, it doesn't....Often the true metaphor, if they find it, has some kind of meaning on a physical or even an emotional level, a response to the language like poetry that then it may stimulate enough of a curiosity so that they come to question it on a physiological medical holistic level. Especially if it becomes a problem it will then be a resource for the body. It is in their memory somewhere. (Eddy interview, 1991)

The students never asked Martha to explain what she meant by the metaphors she used. In class their questions were related only to the strict configurations of the tasks in time and space. That the students did not ask her to clarify her metaphors or some more or less esoteric principles did not surprise Martha. For her this was related to a certain docile attitude among dancers:

I think basically dancers are trained to re-

spond in a particular way. To be so good. Do this and do it.... Dance classes are really about following the hierarchy of the model of the teacher. The only question to ask is a question that's going to help you to get the movement better. I think people really follow that code. (Eddy interview, 1991)

Martha's verbal communication was typically accompanied by visual demonstration. Among the motivations for doing the tasks herself, she said:

> There are certain choices that I haven't totally decided on in advance, places for openness for different kinds of transitions. It gives me the bodily sense of what should come next so that's one reason. The other is I just enjoy it. It's also because sometimes I want them to not feel watched so if I'm participating they're experiencing my energy as part of the group rather than an observing eye. I don't really mind what shape or exactly where a leg is and what count they're on. (Eddy interview, 1991)

Additional interpretations may be provided to understand why Martha valued the "following along" mode of communication. The observation of the students' difficulty in executing the tasks in addition to the numerous requests for clarification may support the claim that the students needed her support not only verbally but also physically.

Beside visually guiding the unfolding of the tasks as the students executed them, Martha also provided demonstrations that the students had to watch and then perform on their own. For this she wanted to provide as clear a demonstration as possible. However, sometimes her own technical insecurity prevented her from fully demonstrating the tasks in front of the group. While on the one hand, Martha did not like to show her technical weaknesses, on the other hand, she sometimes deliberately showed her technical limitations in order to convey the message to the students that learning is a process shared by everybody:

> I have mixed feelings about my own vulnerability, about my instability and demonstrating those kinds of things. Some days I will do something smaller and not take the risk and attempt to do it really precisely. Other days I think oh it doesn't matter if they see me falling off balance. They know it just means I struggle the same way they do. So depending on my own level of confidence, I'll have an emotional reaction to my own balance and my own functioning, demonstrating to them my own feelings about how I too think I should be doing it perfectly. (Eddy interview, 1991)

A final characteristic of Martha's communication processes is her use of tactile information. Besides providing tactile feedback to individual students on several occasions now and again throughout the class, Martha created specific situations for it. She often allowed a few minutes for people to work alone or with a partner on specific aspects of a task and she used this time to provide longer tactile feedback to individuals. Martha's teaching included extensive teacher-paced practice with verbal and visual cueing as well as self-paced practice (students working on their own or in groups of two) with the teacher's tactile feedback, which is uncommon in many dance classes. This procedure reflects another influence of Martha's training in somatic practices in which verbal and tactile forms of communication are often favored over visual.

#### **Martha's Teaching Practice: Discussion**

Over the years, as a result of her experience in many settings with many students, Martha has developed a large repertoire of instructional tasks. This however, does not automatically ensure that the instructional tasks fit the context-specificity of the teaching situation. When not accompanied with reflective thinking to suit the particularities of the new teaching situation, the transfer of the tasks from one setting to another may actually create problems. The data from interviews revealed that Martha did engage in the reflective process. Martha's atypical history allowed her to build a highly personal knowledge base. Her integration of a variety of experiences has resulted in an idiosyncratic approach to the teaching of dance. Martha organized this integration around three central organizing principles, and developed the pedagogical skills that communicated to the students what she felt was important in the resulting amalgam. Martha showed a well-organized body of knowledge, and claimed that her course, resulting from the blending of dance and different subject matters peripheral to the discipline of dance, was her own invention. She was not taught to organize her content knowledge the way she did. Although Martha relied partially on her apprenticeship of observation for specific aspects of her teaching, her class was nevertheless an original product of her personal work to integrate different subject matters. The role of content knowledge is critical in Martha's teaching. The data showed that her knowledge base was both deep and broad. Research in other disciplines shows that a broad knowledge base has an effect on the way one teaches (Hashweh 1987).

However, a quest to understand Martha's teaching is made complex by the interaction and integration between all of her knowledge bases and the particular students in a given context. A factor influencing the dynamic of the teaching/learning situation was the students' expectations for a technical class. Some students were confused about the focus of the class as revealed in the course evaluation forms distributed by the Bates Dance Festival: "At first, I had trouble understanding exactly what the class was about, but I definitely reached an understanding and I was more than satisfied with the course" wrote a student. Another student wrote: "It sounded like a good way to relax and get technique at the same time. I think a lot of people were not aware that this would be a true technique class." However, Martha did not teach a typical dance technique class. Her use of improvisation, touch, voice, unfamiliar task content, including a strong emphasis on level change and dynamic shifts, were all elements that may have been confusing for the students, as this next quote suggests: "I think Martha could have spent a lot more time working on technical work, traditional skills, turnout, alignment. I also feel we did a lot of movement in an inarticulate manner." A further source of confusion was in Martha's attempt to develop and refine a personal approach to teaching, when unclear instructions sometimes intruded into the generally effective management and the positive climate. Room for personal interpretation of the stated tasks reflected her central organizing principles, mainly the moving from the inside out. However, the degree of openness of the tasks became confused with the degree of clarity of the stated tasks. Studies in the teaching of movement classes have shown the importance of establishing congruence between the stated task-the one described by the teacher, and the actual task—the student behavior in response to the stated task (Tousignant & Siedentop 1983). The stated task, whether it is a routine copy task or any kind of improvisational task must be stated with clarity. The lack of clarity in Martha's stated tasks does not appear to be related to her central organizing principles, but rather reflected her self-absorption and vulnerability with respect to the material taught. Martha was generous and passionate about her teaching. She often provided demonstrations which detracted from clarity, since she spontaneously included variations without giving previous notice to the students. Those variations sometimes reflected her level of technical and musical skills. On occasion Martha just followed her own pleasure as a mover.

Martha's presentation of different instructional tasks was related to her conception of dance and dance technique, which actually brought together two often dichotomized poles. One dichotomy is the opposition of sheer physical skills to freedom of expression and individuality. The history of dance education shows wide swings between alternatives, and encourages teachers to use an either/or mentality between these two emphases. On the one hand, dance teachers who embrace a "free expressionist" philosophy tend to reject the systematic development of movement skills arguing that it inhibits or distorts freedom of creativity and self-expression (Arnold 1986). On the other hand, while it is likely that the teachers who advocate a movement efficiency approach will not deny the important aspect of expressiveness and individuality, their teaching of technical skills can often remain at the level of the biomechanical (Berardi 1991). The data from this study revealed that Martha tried to embrace both the expressive and the efficiency components in her classes. For Martha, a technical dance class was a place to develop not only technical skill proficiency, but also a place where the individual life of the students could be enriched by exploring movement as a source of meaning to be expressed and communicated. That conception of dance technique had a direct influence on her teaching practices. In this respect, Martha's approach is consistent with that of Hayes (1980) in that they both consider the fundamental role of movement a preparation for dancing. The development of movement efficiency, whatever the conceptual framework adopted, should be a "means to an end and that end is dancing" (Hayes 17).

Martha's will to offer a styleless technical class, or at least her attempt in her teaching to reduce conformity to a conventionalized style deserves more attention. Interestingly, the rejection of external control of the body and a set movement aesthetic are tenets that have contributed to the coming of modern dance. These tenets continue to shape the development of new dance. A similar stance has never really found its counterpart in the realm of dance teaching. Dance teaching has remained faithful to a tradition characterized by the expert authority of the teachers on the body and movement aesthetic of the students (Gray 1989). In this line of thought, one of the subtexts of this case study, in our view, has to do with the notion of empowerment as described in the literature on critical pedagogy (Ellsworth 1989). Martha's teaching was counterhegemonic. She did not want to be confined by dance tradition. She wanted her students to pursue their own paths free of external aesthetic constraint. Her desire for modification in the way dance technique is taught, however, was partially constrained by pressures within the dance community. She mentioned explicitly that she felt external pressure to conform to what is expected from a traditional technical class.

Martha was engaged in a process of empowerment in terms of personal bodily authority through self-education, and in a process of gaining knowledge about her own body which she validates through heuristic experimentation and personal study of functional anatomy. With several types of tasks, she invited the students to do likewise. Martha believed that dance learning is best accomplished when students are active participants in learning. Critics of dance education increasingly call into question whether dance students are being helped to become dancers who can take responsibility for their own bodies and deal with the changing demands of their profession (Gray 1990; Lapointe-Crump 1990; Hanstein 1990). Martha invited the students to perform the movements their own way, acknowledging the emotional component of the dance experience. Martha wanted her students to become active learners in the class, which sometimes produced discomfort for the students. That intent is indeed in opposition to the goals of the traditional dance class. Stinson, Blumenfeld-Jones and Van Dyke (1990) showed that young women dancers perceived the dance community as composed of a hierarchy created and controlled by others. They argued that students interact with the authoritative figures of the teachers according to a model of mother and daughter at the prepubescent stage of development; that is, the students obediently do what they are told, and fit into the structures created by authoritarian figures without questioning them. Martha did not encourage students to perceive her as an authoritarian figure. She created a learning environment that allowed for freedom of thinking. Students were invited to explore ideas which she was available to discuss with them. However, despite that, students did not ask for clarification of material, nor engage in discussion that could have raised different points of view about the material. Although it is likely that the students needed clarification for some aspects of the content, they did not initiate a dialogue on that level. Since student understanding is one motivation for the teacher to transform content knowledge into instructional tasks, investigating how the students comprehend the instructional representations of their teachers is a question for further research.

#### Conclusion

This study examined Martha's knowledge of teaching. Examining the validity of her content knowledge itself goes beyond the scope of this study. There is little critical literature about the somatic practices from which Martha got the inspiration for several of the instructional tasks she presented, but it is likely that some aspects of her content knowledge drawn from the Body-Mind Centering, for example, would engender concerns of validity from fields such as neurophysiology, kinesiology, and human development. Our concern in this study was, however, to look at the transformation of Martha's content knowledge in which she showed skill. We do not deny that the value of one's teaching is related to the validity of content knowledge. McDiarmid, Ball, and Anderson (1989) suggested that "teachers need to develop an appropriate repertoire of representations for the subjects they teach; they also need to develop standards by which they can evaluate the appropriateness of subject matter representation" (McDiarmid, Ball, and Anderson, 198). Even though the appropriateness of the instructional tasks has not been addressed in this case study, it seems reasonable to suggest that the development of a deep and broad content knowledge positively influenced Martha's teaching. It is to be hoped that the issue of validity of content knowledge will attract the interest of researchers and will lead to critical literature that will stimulate the development of a deeper understanding of dance teaching.

Martha Eddy's case revealed that teaching can be understood and enacted from different orientations, which derive from a proficient knowledge base and from accumulated wisdom of practice, wisdom that has emerged during experience with many students in many settings. Martha was not a "typical" teacher, nor was she teaching "typical" technique classes. None of the findings of this case study are to be generalized. As Shulman (1983, 495) suggested, case studies can contribute to "images of the possible." Martha's case study provides an image of the possible, a specific instance in which a knowledge base composed not only of practical content knowledge but also of conceptual content knowledge made a difference in challenging the status quo of dance teaching.

### REFERENCES

Alexander, P. A., Schallert, D. L., and Hare, V. C. 1991. Coming to terms: How researchers in learning and literacy talk about knowledge. *Review of Educational Research* 61(3): 315-343.

Arnold, P. J. 1986. The human factor in dance. In Dance: The study of dance and the place of dance in society—Proceedings of the VIII Commonwealth and International Conference of

Sport, Physical Education, Dance, Recreation and Health. London: E. & F. N. Spon.

Bainbridge Cohen, B. 1988. The dancer's warm-up through body-mind. *Contact Quarterly* 13 (3): 28-33.

Bainbridge Cohen, B. 1993. Sensing, feeling, and action-The

*experiential anatomy of Body-Mind Centering*. Northampton, MA: Contact Editions.

Bartenieff, I., and Lewis, D. 1980. Body movement: Coping with the environment. New York: Gordon & Breach.

Berardi, G. 1991. *Finding balance: Fitness and training for a lifetime in dance*. Pennington, NJ: Dance Horizons/ Princeton Book Company.

Borko, H., and Niles, J. A. 1987. Descriptions of teacher planning: Ideas for teachers and researchers. In *Educator's handbook: A research perspective*, ed. V. Richardson-Koehler. New York: Longman.

Brooks Schmitz, N. 1990. Key education issues: Critical to dance education. *Journal of Physical Education, Recreation and Dance* 61(5): 59-61.

Brunelle, J., and De Carufel, F. 1982. Analyse des feedback émis par des maîtres de l'enseignement de la danse moderne. *La revue québécoise de l'activité physique* 2(1): 3-9.

Clark, C. M., and Peterson, P. 1986. Teachers' thought processes. In *Handbook of research on teaching*, ed. M. C. Wittrock. 3rd ed. New York: Macmillan.

Clarkson, P. 1988. Science in dance. In Science of dance training, ed. P. Clarkson and M. Skrinar. Champaign, IL: Human Kinetics.

Doyle, W. 1979. Classroom tasks and students' abilities. In *Research on teaching: Concepts, findings, and implications*, ed. P. L. Peterson and H. J. Walberg. Berkeley, CA: McCutchan.

Dunn, J. 1990. Dance science. *Journal of Physical Education, Recreation and Dance* 61(9): 25.

Eddy, M. 1991. Interviews with authors. Lewiston, Maine, 29 July, 1 August, 6 August, 15 August.

Eddy, M. 1992a. Body-Mind Dancing. In *The body-mind connection in human movement analysis*, ed. S. Loman and R. Brandt. Keene, NH: Antioch School.

Eddy, M. 1992b. An overview of the science and somatics of dance. *Kinesiology and Medicine for Dance*14 (1): 20-28.

Elbaz, F. 1993. La recherche sur le savoir des enseignants: L'enseignante experte et l'enseignante "ordinaire." In *Le savoir des enseigants-Que savent-ils?* ed. C. Gauthier, M. M'hammed & M. Tardif. Montréal: Les Editions Logiques.

Ellsworth, E. 1989. Why doesn't this feel empowering? Working through the repressive myths of critical pedagogy. *Harvard Educational Review* 59: 297-325.

Eichelberger, R. T. 1989. Disciplined inquiry: Understanding and doing social research. New York: Longman.

Fortin, S. 1988. Feedback as perceived by experienced students in modern dance. In *Proceedings of the Congress on Research in Dance International Conference*, ed. S. Fraleigh. Toronto, Canada: York University.

Fortin, S. 1992. The teaching of modern dance: What two experienced teachers know, value and do. Unpublished doctoral dissertation. The Ohio State University, Columbus, Ohio.

Gray, J. 1984. A computerized technique for recording and analyzing teacher mobility. *Journal of Educational Studies* 10(2): 23-30.

Gray, J. 1989. Dance instruction-Science applied to the art of movement. Champaign, IL: Human Kinetics.

Gray, J. 1990. Dance education in the future: Trends and predictions. *Journal of Physical Education, Recreation and Dance* 61(5): 50-51.

Grossman, P. L. 1990. *The making of a teacher: Teacher knowledge and teacher education*. Teachers College, Columbia University.

Guba, E. G. 1981. Criteria for assessing the trustworthiness of naturalistic inquiries. *Educational Communication and Technology Journal* 29: 75-81.

Hanstein, P. 1990. Educating for the future: A post-modern paradigm for dance education. *Journal of Physical Education, Recreation and Dance* 61(5): 56-58.

Hashweh, M. Z. 1987. Effects of subject matter knowledge in teaching biology and physics. *Teaching and Teacher Education: An International Journal of Research and Studies* 3(2): 109-120.

Hayes, E. 1980. An introduction to the teaching of dance. 3rd ed. New York: Robert Krieger.

Hollingsworth, S. 1989. Prior beliefs and cognitive change in learning to teach. *American Educational Research Journal* 26(2): 56-58.

Johnson, D. 1983. Body. Boston, MA: Beacon Press.

Laban, R. 1948. *Modern educational dance*. London: Macdonald & Evans.

Lapointe-Crump, J. D. 1990. The future is now: An imperative for dance education. *Journal of Physical Education, Recreation and Dance* 61(5), 51-53.

Leinhardt, G. 1990. Capturing craft knowledge in teaching. *Educational Researcher* 19(5): 18-25.

Lord, M. 1982. A characterization of dance teacher behavior in choreography and technique classes. *Dance Research Journal* 14(1): 15-24. Lord, M. 1984. Enseigner avec souplesse ou l'art de s'adapter à sa classe. *Magazine Danse au Canada* 39: 26-27.

Lord, M. and Petiot, B. 1985, August. A characterization of recreational dance classes. Paper presented at the World Conference of the Association Internationale des Ecoles Superieures d'Education Physique, Adelphi University, Garden City, New York.

Lord, M. and Petiot, B. 1986. Analyse de l'organisation temporelle des comportements d'enseignants en classes de danse. *Revue Canadienne de l'Activité Physique* 11(4): 473-486.

Lortie, D. C. 1975. *School teacher: A sociological study.* Chicago: University of Chicago Press.

McDiarmid, G. W., Ball, D. L., and Anderson, C. W. 1989. Why staying one chapter ahead doesn't really work: Subjectspecific pedagogy. In *Knowledge base for the beginning teacher*, ed. M.C. Reynolds. New York: Pergamon.

Myers, M. 1989, Spring. Dance science and somatic education in dance training. Keynote address for the Australian Association of Dance Education biennial meeting, Sydney, Australia.

Myers, M. 1991. Dance science and somatics: A perspective. *Kinesiology and Medicine for Dance* 14(1): 3-19.

Patton, M. Q. 1990. *Qualitative evaluation and research meth*ods. 2nd ed. Beverly Hills: Sage.

Piéron, M. and Delmelle, V. 1983. Les réactions à la prestation de l'élève: Étude dans l'enseignement de la danse moderne. *Revue de l'éducation physique* 23(4): 35-41.

Piéron, M. and Géoris, M. 1983. Comportements d'enseignants et interactions avec leurs élèves, observation dans l'enseignement de la "Modern Dance". *Revue de l'éducation physique* 23(4): 42-46.

Schön, D. A. 1983. *The reflective practitioner: How professionals think in action*. New York: Basic Books.

Shulman, L. 1983. Autonomy and obligation: The remote control of teaching. In *Handbook of teaching and policy*, ed. L. Shulman & G. Sykes. New York: Longman.

Shulman, L. 1986. Those who understand: Knowledge growth in teaching. *Educational Researcher* 15: 4-14.

Spradley, J. P. 1979. *The ethnographic interview*. New York: Holt, Rinehart & Winston.

Spradley, J. P. 1980. *Participant observation*. New York: Holt, Rinehart & Winston.

Stinson, S. W., Blumenfeld-Jones, D., and Van Dyke, J. 1990. Voices of Young Women Dance Students: An Interpretive Study of Meaning in Dance. *Dance Research Journal* 22(2): 13-22.

Tousignant, M., and Siedentop, D. 1983. A qualitative analysis of task structures in required secondary physical education classes. *Journal of Teaching in Physical Education* 3(1): 47-57.

Wilson, D. C. 1990. The utilization of mind-body practices by modern dancers in Canada. Unpublished doctoral dissertation. York University, Ontario, Canada.