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# COUNCIL FOR INITIATIVES IN JEWISH EDUCATION

## Board of Directors

MAY 2, 1996

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**BOARD MEETING**  
**COUNCIL FOR INITIATIVES IN JEWISH EDUCATION**  
**November 1-2, 1995**  
**UJA/FEDERATION OF JEWISH PHILANTHROPIES OF NEW YORK**

Attendance

Board Members:	Daniel Bader, Mandell Berman, John Colman, Susan Crown, Alfred Gottschalk, Mark Lainer, Morton Mandel, Matthew Maryles, Charles Ratner, Esther Leah Ritz, Richard Scheuer, David Teutsch, Isadore Twersky
Guests:	Raymond Bloom, Chaim Botwinick, Steve Chervin, Sharon Feiman-Nemser, Allan Finkelstein, Joshua Fishman, Judith Ginsberg, Lee Hendler, Robert Hirt, Stephanie Levi, Richard Meyer, Dalia Pollack, Joseph Reimer, Aryeh Rubin, Louise Stein
Consultants and Staff:	Gail Dorph, Adam Gamoran, Ellen Goldring, Stephen Hoffman, Alan Hoffmann, Barry Holtz, Virginia Levi, Robin Mencher, Josie Mowlem, Debra Perrin, Nessa Rapoport, Richard Shatten, Jonathan Woocher

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**I. LEADERSHIP SEMINAR**

On Wednesday evening November 1, board members and guests attended a seminar at which Dr. Arthur Green, Phillip W. Lown Professor of Jewish Thought at Brandeis University discussed "In Quest of a Jewish Future: The Jewish Seeker in the North American Landscape."

**II. WELCOME AND INTRODUCTORY REMARKS**

The Chair opened the meeting on Thursday, November 2 by welcoming all in attendance and introducing the following first-time attendees: Susan Crown, CIJE board member and president of the Ari and Ida Crown Memorial; Sharon Feiman-Nemser, Professor of Education at Michigan State University; Judith Ginsberg, Executive Director of the Covenant Foundation; Lee Hendler, vice-chair of Baltimore's Center for the Advancement of Jewish Education; Josie Mowlem, newly appointed Assistant Executive Director of CIJE; Dalia Pollack, recently appointed staff to the CJF-CIJE-JESNA Committee on Jewish Continuity; Joseph Reimer, Professor of Education and Director of the Hornstein Program at Brandeis University; and Aryeh Rubin, businessman and philanthropist.

The Chair noted that the focus of the day would be on leadership in Jewish education. CIJE has verified the prediction of the Commission on Jewish Education in North America, that finding outstanding people for leadership positions in Jewish education is a difficult enterprise. The effort to bring the best and brightest into the field, known within CIJE as "building the profession," is one of our two primary emphases. (The other, also identified by the Commission, is the goal of building community support for the Jewish educational enterprise.)



### III. OVERVIEW OF THE DAY

The Chair introduced Alan Hoffmann, Executive Director of CIJE, to provide a context for the day's program.

Mr. Hoffmann noted that CIJE is about change and reform. We are committed to bringing lay leadership together to support these efforts and to building the profession of Jewish education. CIJE is beginning to discuss ways to elevate the discourse at both the communal and national levels regarding the ideas and purposes of Jewish education. Working through its laboratory communities, CIJE is involved in diagnostic work in forging leadership coalitions, and in engaging institutions and communities in discussions of vision for successful outcomes in Jewish education.

At an earlier meeting of this board, participants had heard about the CIJE Study of Educators and the resultant Policy Brief proposing interventions. The agenda of this board meeting was built around issues of professional leadership in Jewish education. We focus on leadership for a variety of reasons.

- A. The notion of leadership is embedded in our tradition.
- B. We know that leaders are the gateway to the rest of the profession and must be engaged to impact their staff.
- C. Leaders have the ability to transform.
- D. Educational leaders provide a bridge to lay leadership on one hand and content, program, and goals on the other.
- E. Leaders in Jewish education are generally full time and reasonably well compensated.
- F. The leadership cohort in Jewish education is small enough to have significant impact.

Mr. Hoffmann noted that the outline of the day was to look at three qualitative vignettes or case studies followed by a quantitative review of CIJE data on educational leadership. The final segment of the discussion on leadership would be a review of CIJE projects underway to develop leadership.

### IV. THE IMPACT OF LEADERSHIP ON ...

#### A. The Synagogue School

The Chair introduced Dr. Joseph Reimer, director of the Hornstein Program and Professor of Education at Brandeis University. He noted that Dr. Reimer was a staff member of the Commission on Jewish Education in North America and is the author of a forthcoming book entitled When Synagogues Educate. Dr. Reimer noted that his research for the forthcoming book began as an outgrowth of his work for the Commission. He was looking for factors that make certain synagogue schools stand out as effective, and discovered that the position of educational leader is critical. He found that successful leaders share a commitment to mission and vision as well as promoting focus on relationships within their institutions.



With respect to vision, he noted that each synagogue school he studied has its own character, irrespective of denominational label. To be educationally effective, a synagogue must know what is unique about the school and must have a vision for Jewish life that includes a dynamic role for the educator. Each of the successful educators in this study had created a vision in conjunction with the synagogue rabbi which they were able to communicate effectively to the synagogue community. The educational leader plays a central role in communication of this vision and, together with lay leadership, is responsible for translating the vision into identifiable goals.

Dr. Reimer noted a series of critical relationships for the effective educator as follows:

1. Educator and rabbi - The rabbi must be a partner with the educational leader. Both must buy into the vision in order to bring together "the Jewish" and "the education."
2. Rabbi, Educator, and Lay Leaders - The lay leadership of the synagogue school must be partners in relating the vision. In addition to providing governance, they must vouch for the integrity of the vision with the constituents of the school.
3. Leader (Principal) and Teachers - It is the principal's task to be certain the teachers are in touch with the school's vision. It is they who make the curriculum come alive in the classroom. The synagogue educator is the "trainer on the spot" and must help the strongest teachers to become Jewish educators.
4. Educator and Parents - The educational leader works with parents to provide a bridge between what is happening at school and at home.
5. Leader and Students - The educational leader provides a degree of continuity for students in the school, providing a grandparent figure.

Dr. Reimer noted that the articulation of vision and its translation through all these relationships are what identified successful educational leaders in his study. He noted that our challenge is to apply this understanding.

B. JCC's

The chair introduced Allan Finkelstein, Executive Vice-President of the JCC Association. He noted that Mr. Finkelstein has been a major force for Jewish education in the Center movement and is himself a role model of how a leader can impact an agency and system.

Mr. Finkelstein noted that the COMJEE report of 1983 was a watershed in focusing the role of the JCC executive on bringing Jewish education to JCCs. It has been shown that the Center executive gives leadership to this enterprise by setting a personal example. The key to the evolution of the JCC as a Jewish educating institution has been a new generation of Jewishly committed, learning executives.



This change has occurred as a result of a JCCA effort to provide Center executives with a systemic, high quality Jewish experience. The movement established the following principles:

1. Develop a generation of executives with Jewish literacy, personal Jewish commitment and passion, and an ability to transmit this to others.
2. To accomplish this end, it was essential to opt for the highest quality teachers and pair center executives with Jewish education mentors.
3. The movement needed to develop a systematic curriculum and developed a book entitled A Guide to Jewish Knowledge for the JCC Professional.
4. Israel and the Israel experience are critical to the Jewish education of JCC executives.
5. It was important to begin where each individual executive was, dealing with that person's particular needs.

JCCA established an executive education program which is undertaken every three years and includes a three week Israel component. A more intensive three month study program in Israel is available through an Executive Fellows program. Most recently, the Mandel Executive Education Program focused on a small cadre of middle level JCC staff who had been identified as potential executives for large city JCCs. At the same time, the Wexner Fellow Program has provided sixty JCC executives with executive education with one-on-one personal study with a Jewish education mentor. In fact, the commitment of JCCA is to all staff and since the inception of this undertaking, over 2,000 JCC staff members have been sent to Israel for study.

The outcomes have been dramatic. There is ongoing serious study occurring among JCC executives and staff. Higher levels of observance among JCC executives have been documented. There is a sense of a Jewish transformation within JCCs evidenced by JCC commitment to full time Jewish educators on the staff, which has increased from two in 1983 to 70 in 1995. In addition, Jewish education leadership has become a factor in the selection of JCC executives. The result of transforming the executives has yielded a transformation in the Centers.

- C. The Chair introduced Dr. Sharon Feiman-Nemser, professor of education at Michigan State University and a senior researcher for the National Center for Teaching and Learning. Dr. Feiman-Nemser, a specialist in teacher education, is a consultant to CAJE's Teacher Educator Institute.

Dr. Feiman-Nemser reported on an experiment in avocational teaching undertaken by her synagogue in East Lansing, Michigan with funding from the Covenant Foundation. The synagogue school had, for twenty years, relied on local Israelis and college students to provide Jewish education to their children. The result was frequent staff turnover and high dissatisfaction within the congregation. The synagogue developed a proposal to train a core team of parents from this university community for teaching in the synagogue school. Rabbi Amy Katz was



recruited to direct the school and work toward the success of this program of avocational teachers.

Rabbi Katz took the following steps:

1. She communicated that Jewish education is a serious enterprise.
2. She guided and encouraged these avocational teachers in their own personal Jewish education.
3. She helped to adapt curricular materials.
4. She personally developed and enriched the program.
5. She set standards which raised the quality of the teaching.
6. She linked the school and its avocational teachers to a wider network of Jewish educators.
7. She inspired new forms of participation by the teachers.
8. She transformed the congregation's concept of knowledgeable leadership, resulting in the synagogue's hiring its first rabbi.

Dr. Feiman-Nemser noted that the educational leader played a critical role in the success of this undertaking, demonstrating the power of knowledgeable leadership to transform a school.

#### V. THE CIJE STUDY OF EDUCATIONAL LEADERS

The Chair introduced Dr. Ellen Goldring, Professor of Education and Associate Dean at Peabody College, Vanderbilt University, and co-director of the CIJE Monitoring, Evaluation and Feedback project. Dr. Goldring was asked to provide an overview of the data on educational leaders that have emerged from the CIJE study of educators. Dr. Goldring noted that the preceding three presentations point to the importance of educational leadership in school settings. CIJE has been asking how we can build a profession of educational leadership, noting that we cannot rely on natural born leaders, but should determine if there is a body of knowledge we may wish to require of our educational leaders.

She noted that CIJE undertook a study of educational leaders in the laboratory communities. The study asked the following questions:

- A. What are the training and background experiences of educational leaders in Jewish schools and how do these compare to the standards for certification and licensure for educational leaders in public schools?
- B. What are the past experiences and career plans of the leaders in Jewish educating institutions in the three communities?
- C. What are the professional growth activities of these educational leaders?

In considering background and training, it was noted that public school principals must first be certified as teachers, then must undertake graduate study in administration.



This study assumes that educational leaders in Jewish educational institutions should have preparation in:

1. Jewish Studies
2. Education and Pedagogy
3. Administration/Supervision

The study looked at educational leaders of day schools, supplementary schools, and preschools. It concluded that 76% of respondents are trained in general education and pedagogy. Forty-nine percent are trained in Jewish studies (but only 12% of preschool educational leaders have training in Jewish studies). With respect to training in educational administration, 41% of day school leaders and 19% of both supplementary school and preschool educational leaders have such training.

The study then looked at composite figures. It concluded that 35% of Jewish educational leaders are trained in both general education and Jewish studies, while 11% are trained in neither. When administration and supervision are added, the studies showed that 16% are trained in all three.

The study also looked at how many of the educational leaders are employed full time and what percent considered Jewish education a career. It concluded that a total of 78% of educational leaders are full time, broken down to 96% of day school leaders, 61% of supplementary school leaders, and 81% of preschool leaders. Virtually all consider Jewish education to be their career (100% of day school leaders, 91% of supplementary school leaders, and 93% of preschool leaders). The study also noted that 78% of educational leaders have been in the field of Jewish education for more than ten years and 31% have been educational leaders for more than ten years. Seventy-eight percent plan to remain in the field of Jewish education.

The final segment of the study looked at professional growth activities in which Jewish educational leaders now participate. To put this in context it was noted that in Georgia public school principals are required to renew their credentials, including completion of 100 hours of additional course work every five years. In contrast, Jewish education principals attend approximately five workshops every two years and 77% engage in informal study of Hebrew or Judaica. Sixty-eight percent believe their opportunities for professional growth are adequate.

Dr. Goldring concluded that this study suggests that Jewish educational leaders have a relatively solid background in education, but inadequate training in Jewish content and in administration and leadership. She noted that the challenge facing Jewish education is to increase involvement in both pre-service and in-service education for leaders. In light of an inadequate number of training programs for educational leaders, there is a need to develop such opportunities.

The following questions were presented for further consideration:

1. What does it mean to build a profession of Jewish educational leadership?
2. What are the standards necessary for leaders and how can they be implemented?



3. At what stage should we approach these issues systematically, the pre-service or in-service level?

#### VI. DISCUSSION

The Chair asked Dr. Gail Dorph, CIJE senior educational officer, to lead a discussion on the presentations that had been made and the policy issues which they raised for Jewish educational leadership.

What can we learn about the implications of the vignettes regarding professional leadership? It was suggested that systems can only go so far, after which institutional change depends on people. Change cannot occur without the buy-in of the leader. The vision of the educational leader can have a significant impact on the quality of learning opportunities for teachers as well as their students.

It was reported that a new program has been developed in Detroit for the education of Jewish families through their synagogues. It has been evident that in order for this program to succeed, it requires buy-in from the rabbi, commitment of the Jewish educational leader, and validation by the lay leadership.

There was discussion about the qualities which make an effective leader and whether these differ from the qualities of an effective manager. It was suggested that we should not settle for less than leaders who are also managers.

It was suggested that private school leadership might provide a better basis for comparison in the study of educational leaders than public school leadership.

In considering the conclusion that educational leaders are satisfied with the training available to them, it was suggested that people are frequently content with that which they do not expect to change. Professional leaders do not get support (either financial or moral) for additional training and are seldom offered the time to undertake it. It was suggested that we may wish to consider encouraging small steps toward change in this regard.

With regard to the presentation on JCC executives, it was noted that there remain many turf issues between JCCs and synagogues and that much of the federation movement has not accepted the transformation of centers to Jewish educating institutions. It was noted, further, that strengthening Jewish education requires multiple cuts into the problem, suggesting that synagogues and JCCs should be able to work cooperatively.

It was noted that people seem to move up within the field of teaching, eventually become educational leaders, and then leave the field. Perhaps we should look for ways to make it more comfortable to survive in leadership positions.

It was noted that the culture of an institution often has to change before an effective partnership can be created among the Rabbi, the lay leadership, and an educational leader.

It was also noted that the training of lay leadership is an issue which needs to be addressed. There has to be a new understanding of the role of the educational leader. An enlightened professional needs the right lay leadership group in order to be able to function effectively.



With regard to the Lansing Project, it was suggested that an avocational teaching program requires ongoing training of the volunteer teachers. Did the original grant include the centrality of the role of the professional in this regard? In response it was noted that the original concept did include a professional consultant and that, once that individual was in place, it became apparent how critical access to a knowledgeable leader is. There is a clear need for ongoing learning among people who are the teachers, which is applicable to volunteer or paid teachers.

Finally, Dr. Dorph asked what implications this might suggest for CIJE. It was noted that CIJE had decided early on to take various approaches (research, building the profession, and community mobilization) and that this multi-pronged approach has resulted in CIJE's ability to move forward more effectively than might otherwise be the case.

It was noted that for Milwaukee, involvement with CIJE has resulted in the establishment of partnerships and empowerment which have provided the Jewish education system in the city with tremendous opportunities for growth. This partnership has helped to pull many pieces together while it has raised expectations for Jewish education in the community. Milwaukee expressed its gratitude to CIJE for serving as a partner and catalyst to the process.

## VII. CIJE IN ACTION

The chair noted that, having spent the morning discussing Jewish educational leadership, the next segment of the day would be devoted to looking at ways in which CIJE is engaging in building the top tiers of personnel for the field.

### A. Two Strategies for Leadership Training

Gail Dorph described two programs which CIJE has undertaken as a result of its work with the laboratory communities and the issues which have been identified through that work.

#### 1. Harvard Principals Program

Gail noted that even before the conclusion of the Educational Leaders Survey, CIJE began to develop professional growth and renewal opportunities for educational leaders in the three laboratory communities. They were invited to work together on issues of leadership while also studying Jewish content through the Principals' Institute at Harvard University.

A second seminar is scheduled for early 1996 to consider the importance of vision and partnerships. It is entitled Jewish Education with Vision: Building Learning Communities. Participants will work with outside experts on the process of establishing a vision for an educating institution.

The first seminar showed the value of working across settings, denominations, and communities. It included educational leaders from day schools, supplementary schools, and early childhood programs. It was evident that these people had more in common than might have originally been expected, and they have continued to work together since the first seminar, primarily within their own communities. Participants are finding it



useful to experiment with what was discussed at the seminar, come together to discuss experiences, and to get feedback from others. A community of colleagues has helped to create and support change.

In the future, seminars may include lay leaders as well as professionals, brought together to work toward institutional change.

## 2. Teacher Educator Institute

It is clear from our research that much work is necessary to provide quality, ongoing in-service education for teachers in our Jewish educating institutions. Most of what is currently offered is very general and often consists of one-shot programs. In order to change this approach, CIJE had concluded that it is necessary to increase the capacity for sustained, ongoing in-service education both locally and nationally. With this in mind, CIJE has designed a series of seminars for teams of people who are in central agencies, or are principals and lead teachers and who can eventually become the trainers of teachers within their communities. In order to work toward this goal, the CIJE Teacher Educator Institute is engaging participants in a two-year experiential program of professional development which can become a model for use in their communities.

### B. Creating a Network: Professors of Education for Jewish Education

Sharon Feiman-Nemser reported that she has been trying for many years to combine her interests in education with her interests in Jewish education. The Lansing project described earlier in the meeting mobilized colleagues at Michigan State University, who found that they enjoyed their involvement with Jewish education.

In the course of our work, it has become evident that there is a very rich pool of very senior outstanding academics in general education who are Jewish and who are interested in bringing their expertise to bear on Jewish education. This represents a way in which the Jewish community can radically expand our capacity for thinking and action at the highest level.

An idea has been developed to gather a group of such people for an intensive seminar in Israel to include both Judaic study and issues in Jewish education. These experts would then each be linked to CIJE projects. In exchange for their participation in the seminar, they will become consultants to CIJE and resources for Jewish education in the entire North American community.

### C. The Ripple Effect of the Study of Educators

Adam Gamoran noted that CIJE has benefited from its affiliation with the lead communities, just as it was noted earlier that the lead communities have benefited from CIJE's work with them. The Study of Educators in the communities resulted in reports to the communities which led to community action. Reports to the communities also led to a national report (the Policy Brief) which, in turn, led to national action in the form of the establishment of the Teacher Educator Institute. This national report also led to an expression of interest from other communities which has since resulted in the development by



CIJE of a manual for use with the survey instrument and its analysis. This interest from other communities also has now led to the development of an Evaluation Institute as a means to provide communities with more hands-on expertise and evaluation.

The Evaluation Institute is being developed in partnership with JESNA. CIJE itself does not have the capacity to provide evaluation expertise to every community with an interest in including an evaluation component in its work. It is anticipated that an interested community will identify someone with serious knowledge and experience in research and evaluation to serve as a local consultant. The Evaluation Institute will train these local experts in Jewish education evaluation. There will also be opportunities to involve lay and professional leaders in an effort to build greater community support for evaluation.

D. Discussion

The Chair noted that the foregoing are examples of the way in which CIJE is designing and institutionalizing approaches as it progresses. This is part of the attempt to work toward a complete, integrated system.

In discussing how much of a project's cost should be devoted to evaluation, it was suggested that the cost is higher for new and innovative programs than for those which are more established. Figures of 5 - 10% were suggested. It was noted further that the more difficult issue is to get communities to act on the outcome of the evaluations undertaken.

The timing of evaluation was also discussed. It was suggested that after a baseline study is undertaken, it is useful to reassess in three to five years. It was noted that where baseline data have not been developed at the beginning, it may be possible for a community to compare its progress to CIJE's baseline data from the study of educators. Cleveland has decided to follow this approach and will proceed on the basis of comparisons.

VIII. BUSINESS SESSION

The Chair noted that CIJE has been incorporated as a 501(c)(3) organization and that, from time to time, this board will be asked to act on business matters. The matter currently before the board was the consideration of a retirement plan for CIJE staff. Following discussion, the following resolution was moved, seconded, and adopted:

WHEREAS, the Board of Directors of the Council for Initiatives in Jewish Education (CIJE) has determined that it is in the best interests of CIJE to adopt a retirement plan for full time employees of CIJE,

BE IT RESOLVED THAT the Executive Committee of CIJE is authorized to take all steps necessary to review and adopt such an appropriate retirement plan for full time employees of CIJE.

IX. D'VAR TORAH

The Chair introduced Dr. Raymond Bloom, director of the Jim Joseph Foundation, who concluded the meeting with an inspirational D'var Torah.



# Teacher Learning and the Mathematics Reforms

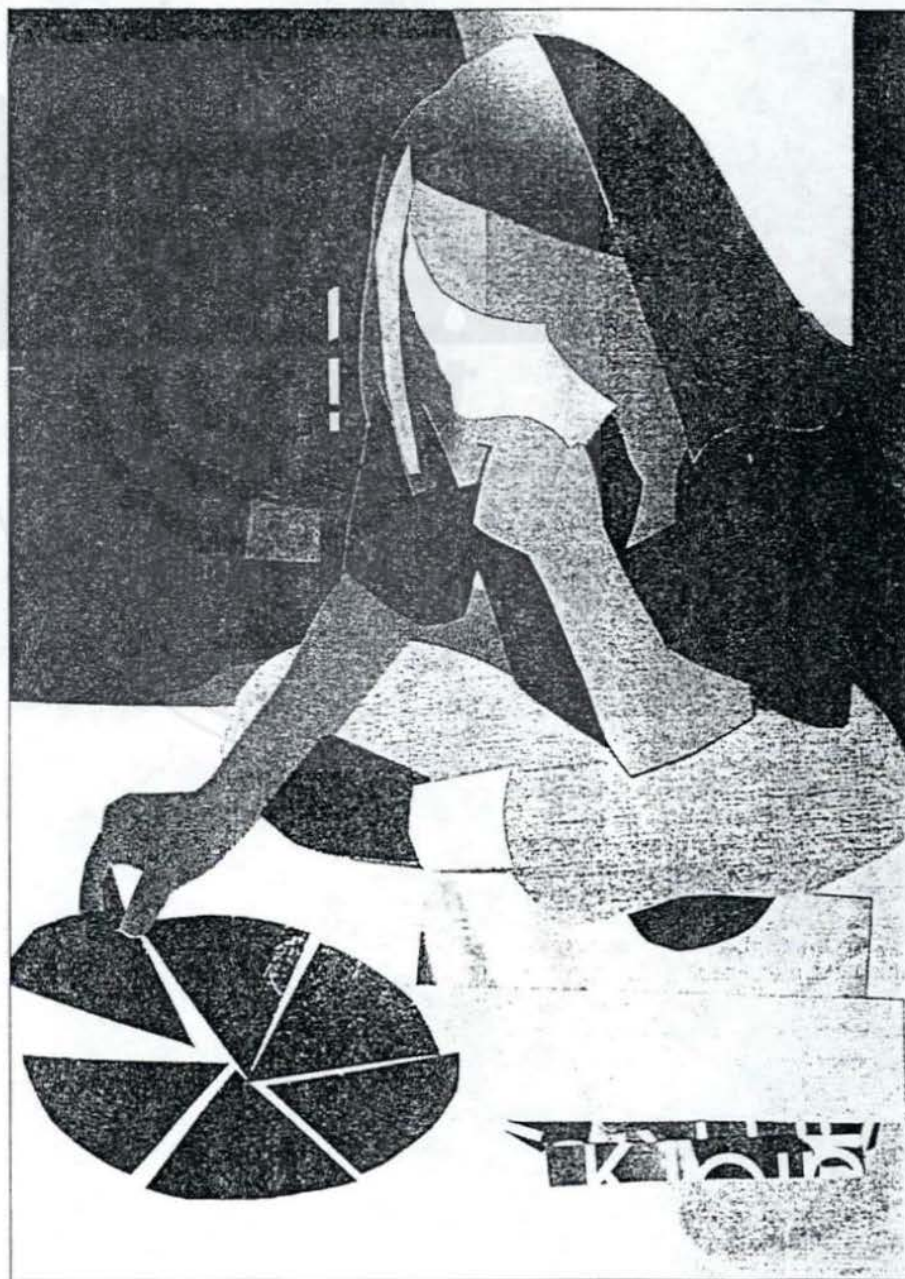
## WHAT WE THINK WE KNOW AND WHAT WE NEED TO LEARN

BY DEBORAH LOEWENBERG BALL

*The work of professional development is as uncertain as practice itself, Ms. Ball points out. Our challenge is to experiment, study, reflect on, and reformulate our hypotheses. All of these are necessary if we are to successfully engage a wider community — to “scale up” reform by sowing ideas.*

THESE ARE times of ambitious efforts to reform curriculum and instruction in mathematics. Reformers have invested time and energy in the creation of new mathematics standards and state curriculum frameworks.<sup>1</sup> A host of innovative curriculum projects are under development, and many states are in the midst of changing their state assessments.<sup>2</sup> Now there is increasing talk of “scaling up” the reform effort, of developing ways to reach more teachers.<sup>3</sup> As

DEBORAH LOEWENBERG BALL is an associate professor in the Department of Teacher Education at Michigan State University, East Lansing. She wishes to thank Angie Eshelman for her assistance and Suzanne Wilson, David Cohen, Magdalene Lampert, Robert Floden, Penelope Peterson, Kara Suzuka, and Charles Thompson for their helpful comments and ideas. An earlier draft of this article prepared for a National Science Foundation conference in November 1994 on Teacher Enhancement in Mathematics K-6.





one who has been engaged in mathematics reform at several levels — as an elementary teacher, as a district-based resource teacher, as a teacher educator, as a researcher, and as a contributor to the *Professional Standards for Teaching Mathematics*, published by the National Council of Teachers of Mathematics (NCTM) — I suggest that we take a closer, more skeptical look at what we think we know about teacher learning and about the teaching envisioned by the reforms and that we consider what “scaling up” might mean.

A central tenet of my argument is this: because the mathematics reforms challenge culturally embedded views of mathematics, of who can — or who needs to — learn math, and of what is entailed in teaching and learning it, we will find that realizing the reform visions will require profound and extensive societal and individual learning — and unlearning — not just by teachers, but also by players across the system.<sup>4</sup> What might such ambitious learning entail? In this article I focus on the learning of teachers. I examine four questions: 1) What do we think we currently know about how teachers learn? 2) What do we know about the thing to be learned — this new approach to the teaching of mathematics? 3) What do we know about teachers and what they bring to learning about such teaching? 4) What *don't* we know about teaching and teacher learning that might matter in trying to “scale up” the mathematics reform effort, and how could we go about learning more?

### What Do We Think We Know About Teacher Learning?

Over the past decade, research and practice have yielded a mass of working ideas about teacher learning.<sup>5</sup> Some of these ideas have been investigated in studies of teacher learning and teacher education. Some have emerged from the practice of experienced teacher educators. Others are part of the current ideology.

I use words like “ideas” and “beliefs” deliberately here. To call these tenets “knowledge” seems problematic, for they are unevenly inspected and warranted. For example, the proof of some of these ideas about teacher learning is circular. That is, professional development projects are designed with these ideas in mind; then, when the project is judged “successful” by some stan-

dard, this result is taken as validation of the ideas. Other ideas about teacher learning are not supported with evidence at all but are advanced as moral positions. They are seen as an inherent good. This does not automatically reduce their potential value, but it should shape our understanding of what they represent. I am not saying that any of the ideas we currently have are wrong. But I am urging that we be more skeptical of what we *think* we know. Some of the ideas in the following list are so vague as to need considerably more development, while others may be true only in certain ways or in some situations.

Despite their varied genesis, a small number of ideas about teacher learning show up repeatedly — in discussions, in professional development projects, and in the literature. They concern teachers, what teachers need to know, and the conditions and arrangements that support teacher learning.

- *Prior beliefs and experience.* What teachers bring to the process of learning to teach affects what they learn. Increasingly, teachers' own personal and professional histories are thought to play an important role in determining what they learn from professional development experiences.

- *Subject-matter knowledge.* Such knowledge is thought to matter in learning to teach for understanding. Selecting a generative problem or task for students requires being able to “see” the mathematics latent in its scope. And trying to use tasks and problems in ways that exploit their potential and support student learning depends on the teacher's own mathematical understandings. To guide a class discussion of a mathematical conjecture can be treacherous when the teacher is unsure of the terrain being explored. The teacher's own mathematical knowledge is also an important resource in interpreting students' unexpected statements and solutions.

- *Knowing the students.* Knowledge of students is viewed as essential to teaching for understanding. Learning more about students and about listening to them can be crucial. How to *hear* what students say involves more than acuity, for it requires experiencing the world through another's perspective — not at all an easy task, especially when students' perspectives are so diverse.

- *Importance of contexts.* The contexts in which teachers work are believed to affect what they can do. (Students, parents,

administrators, tests, and district- and state-level objectives and curricular guidelines are all parts of the context of teaching.) Most often discussed are the ways in which aspects of the context constrain and inhibit teachers' efforts. Students unfamiliar with teaching for understanding tend to resist it; parents protest departures from customary practice; administrators are intolerant of less-orderly classrooms and sometimes fail to provide teachers with materials or time to develop their practice. External curricular guidelines mandate pacing and coverage and impede teachers who want to teach for understanding. Less is understood, however, about the *promise* of extant resources as levers for reform: some claim that the community can be a significant positive resource in making reform happen; others place hope in new curricula and assessments. In any case, we need to understand a great deal more about context as a resource for reforming practice.

- *Time.* Learning to create the kinds of teaching envisioned by the mathematics reformers is thought to be hard and to take a long time. Changes do not happen overnight or simply as a result of deciding to teach differently. There is as much to unlearn as there is to learn, and what there is to learn is complex and underdeveloped. In ways not well understood, the odyssey probably entails (at some level) revising deeply held notions about learning and knowledge and reconsidering one's assumptions about students and images of oneself as a mathematical thinker, as a cultural and political being, and as a teacher.<sup>6</sup> At the same time, of course, a teacher must develop new ways of teaching, reflecting, and assessing his or her own work.

- *Reflection.* Reflection is seen as central to learning to teach. For the most part, prescriptions for reflection focus on structure and context, emphasizing that teachers need time, space, and encouragement to reflect on teaching in ways that facilitate their learning — by talking with others, by keeping a journal, by engaging in action research. Less attention is paid to what the specific objects and the nature of that reflection might be, leaving somewhat up in the air the variety of learnings that reflection might support.

- *Follow-up.* The most effective professional development model is thought to involve follow-up activities, usually in the form of long-term support, coaching in teachers' classrooms, or ongoing interac-



tion with colleagues. What such follow-up might include is less clear: what are the features of follow-up that really matter? What sounds principally structural may in fact be substantive.

- *Modeling.* Some believe that teacher educators and staff developers should model the approaches that they are promoting. Though often heard, this advice is quite vague and is variously interpreted.

- *Teacher control.* Teacher development is considered especially productive when teachers are in charge of the agenda and determine the focus and nature of the programming offered. In the name of professional autonomy, many argue that teachers should determine the shape and course of their own development. However, little discussion emerges about the dilemma this presents for those working toward reform. Setting off into a terrain beyond one's current horizons is difficult, if not impossible. Yet, if the agenda is set by others, it might not be sensitive to teachers' needs and concerns. Determining how to design provocative experiences for teacher learning and for engagement with what is hard about the reforms, while still honoring teachers as professionals, is a more complex matter than many recognize.

These ideas about teacher learning address crucial aspects of what teachers know and believe, bring up important considerations for the structuring of teacher education, and suggest what contributes to teacher learning. However, these ideas are, for the most part, generalizations that are not linked to any particular "kind" of teaching. An analysis of what we think we know about teacher learning cannot be complete without a closer examination of the specific reform-oriented teaching practices that teachers are to learn.

What is "standards-based teaching"? And what is the substance of the mathematics reform? The standards developed by the NCTM have been widely praised for the vision they have articulated, and they offer perhaps the most detailed images of the mathematics teaching promoted by reformers. With vignettes, examples, and conceptual tools, the various publications on standards—454 pages' worth—are one main resource for reformers.

Despite the concrete illustrations from classrooms, however, these documents are from programs for practice. They do not provide guidance on the specifics of day-to-day, minute-to-minute practice. For

example, one of the teaching standards states that teachers have to decide "when to provide information, when to clarify an issue, when to model, when to lead, and when to let a student struggle with a difficulty."<sup>7</sup> True enough. But the challenge is to judge when to do which and on what basis. When is a disagreement among students something worth continuing? When should the teacher step in and clear up a controversy? When is a particular student's statement best left alone? When is it good to probe?<sup>8</sup>

The standards also speak of "worthwhile mathematical tasks" and specify some elements of such situations and problems. With a particular group of students, though, what makes a task productive of learning is not a simple and straightforward matter. Sometimes good tasks fizzle to nothing or run into unanticipated difficulties. How does one exploit the potential of a good task during the interactive work of teaching? Although the math standards paint images and articulate principles, we are still a long way from agreeing on a single "it" that constitutes a unitary practice of "standards-based teaching."

Some might argue that specific questions cannot be answered yet, because the reforms are too new and thus underspecified. The air is filled with slogans and buzz words about which there has been little discussion—problem solving, understanding, meaningfulness, autonomy, authenticity, inquiry. Some assume that, with time, we will define these better, and the specifics will be developed. Knowing more, some believe, we will be able to develop more explicit and helpful guidance for teachers. Explicating the vision more fully is certainly an important challenge of the reforms. And developing more and better-specified articulations of the ideas and their interpretations would be useful.

Still, the more the ideas are concretely articulated, the more disagreements are likely to emerge. The apparent companionable consensus is likely to fade as the discourse becomes less abstract. For example, I have seen much more disagreement among people who are watching a videotape of actual teaching than in any discussion of reform rhetoric. And no matter how much more specific the vision becomes, it will never become a prescription for practice. Lee Shulman has argued that initiatives for change can at best be "a shell within which the kernel of profes-

sional judgment and decision making can function comfortably." He argues that such initiatives *cannot* determine teachers' actions or decisions directly, and he concludes that, at best, they can "profess a prevailing view, orienting individuals and institutions toward collectively valued goals, without necessarily mandating specific sets of procedures to which teachers must be accountable."<sup>10</sup>

Shulman's point about policy underscores the fact that some uncertainties of practice are not a result of the underdeveloped state of standards-based practice; some are inherent in practice itself.<sup>11</sup> Teaching of any kind is filled with uncertainties. However, in pursuing the new goals of "understanding," teachers must ply their trade in an even more uncertain landscape.

Uncertainty is not a comfortable condition for anyone and is certainly not a happy prospect for ambitious reformers seeking to convince an often unenthusiastic public of the merit of their ideas. Three sources of uncertainty stand out as endemic to this kind of teaching: the inherently incomplete nature of knowledge, the multiple commitments with which teachers work, and the aim of being responsive to students.

*Challenges of incomplete knowledge.* Human understanding is far from a simple, visible phenomenon. To illustrate, I use an example from my own teaching of third grade.<sup>12</sup>

One day in early June, near the end of several weeks of work on fractions, a girl named Mei announced that she had noticed something about fractions.<sup>13</sup> She had noticed that the larger the "number on top" of a fraction, "the bigger the piece you'll end up with after you shade it in." She demonstrated her conjecture with an example (Figure 1).

Figure 1.

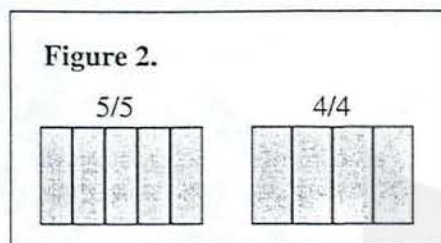


She explained that, with  $4/4$ , a bigger piece was shaded in than with  $3/4$ . Pointing to  $4/4$  she said, "This one's a big numerator, and you get this whole thing, and that is bigger than this one" (pointing to  $3/4$ ).

After some discussion of her conjecture, I asked the class if they thought it



seemed true and if it would always be true. "I think it probably would be," nodded Sheena. "We could try her conjecture with a whole bunch of numbers." I asked if anyone wanted to suggest some numbers to try. Jeannie suggested trying  $\frac{5}{4}$  and  $\frac{3}{4}$ , because  $\frac{5}{4}$  had a bigger numerator than  $\frac{3}{4}$ . At the moment it seemed a perfect counterexample since 5 was "bigger than" 4, but the "piece shaded in" would not be bigger. Feeling pleased that we had a collective direction, I asked the students to draw pictures of  $\frac{5}{4}$  and  $\frac{3}{4}$  in their notebooks. Each picture looked like Figure 2.



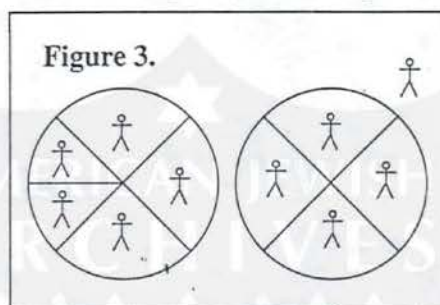
Had I stopped there, I might have concluded that all my students understood that  $\frac{3}{4}$  was equivalent to  $\frac{5}{4}$  (even if they would not have used the term "equivalent"). However, when I asked which fraction was more, about half the students thought that  $\frac{3}{4}$  was more. Some thought they were the same, of course, and one child thought that  $\frac{3}{4}$  was more than  $\frac{5}{4}$ . But why? How could they look at these pictures and think that? As we pursued the discussion, I discovered that some students thought that, since  $\frac{5}{4}$  has "more pieces," it was actually more. Even when they gave the "correct" answer, it was not clear what the students who said the two quantities were "the same" were thinking.

No matter what kind of research we do in the future — exploring students' knowledge and preconceptions, examining what they know and how — teachers will continue to confront such uncertainty on a daily basis. Can a teacher become more skillful at probing and making sense of students' ideas? Yes. But what teachers know about their students can never be certain or complete.

*Challenges of competing commitments.* Not only is our understanding of students inherently incomplete, but the practice of teaching itself is also uncertain. Teachers work in the midst of many competing commitments. For example, at the core of the reform visions is the commitment to teach worthwhile content with intellectual integrity, but equally central is the commit-

ment to honor the ideas of students. When a child presents a novel approach to a problem that is imaginative — and completely nonstandard — what is the right thing for the teacher to do?

This is seldom an easy question to answer. In the episode described above, Sheena argued articulately that  $\frac{3}{4}$  had to be more than  $\frac{5}{4}$ . She went to the board and presented her original (and quite persuasive) explanation, rooted cleverly in assumptions about sharing cookies. She drew two circular cookies, dividing one into four parts and the other into five to show that with  $\frac{3}{4}$  there is enough to pass out one piece to each of your five friends, but with  $\frac{5}{4}$  one friend will not get any cookie (Figure 3).



It was important to me that Sheena, who was a student of color and a quiet girl, display enough confidence in herself and her ideas to defend them in the face of her classmates' objections. And she was also right, given the question she had framed: "Which way of cutting the cookie — into fourths or fifths — will serve more friends?" Her drawing presented another source of uncertainty. Most adults to whom I have shown this picture immediately assume that Sheena does not know that fractions represent pieces of equal size. But this is not so clear. Dividing circles into fifths is technically complicated (try it!), and we had not done this in class. I knew that with other pictures the children had sometimes said, "I know my picture isn't quite right, but just assume that the pieces are the same size." Although Sheena did not say that here, I am not so quick to conclude what she knew — or did not know — about equal parts.

As I listened to Sheena, however, I knew that next year's teacher might not be charmed by Sheena's way of thinking about this. She might see Sheena as lacking mathematical skills. Was she? Sheena could complete standard fraction items correctly on a worksheet (e.g., "shade  $\frac{3}{4}$  of a rectangle"), and she got the fraction items

right on the end-of-year standardized test. Yet this nonstandard part of Sheena's thinking made me wonder. And I was aware that my dual commitments to teach mathematics with integrity and to honor her ideas and ways of thinking were in tension in this case. Sheena was being creative, and some aspects of her answer were "right." But her nonstandard approach had actually changed the question, and her response to the original question was "wrong." What is the "right" answer for me here, with my commitment to opening up the mathematical discourse of the class to novel ideas and conjectures and my equally strong commitment to helping each of my students learn mathematics?

Every day teachers must make similar judgments, design next steps, evaluate students' learning — and all on the basis of incomplete and indefinitely interpretable evidence. The slogans "teaching for understanding" and "mathematics for all" are a lot more complex when seen up close. Wrestling with these in context, on an ongoing basis, is a second source of uncertainty in teaching.

*Challenges of anticipating, interpreting, and responding to students.* A third source of uncertainty grows from the commitment to be responsive to what students say and do. Teachers often have to adapt and improvise in the face of what happens as lessons unfold. When my students drew the pictures of  $\frac{3}{4}$  and  $\frac{5}{4}$  correctly but still believed that these were not "the same amount," I had to remap where we were and where we might go. I realized that the phrase "the same amount" was fragile, and I searched for new phrasing. I noticed the ambiguity of the idea of "more," and I began to consider another way to confront the problem that would allow us to explore equivalence without burying the students' alternative interpretations.<sup>14</sup>

In this instance, I felt very pressed, for there were only two days left before the end of the school year. I had believed that we had reached some reasonable understandings of equivalent fractions, but now I was concerned. Different students continued to speak, trying to convince others of their interpretations. I found myself questioning those who argued that  $\frac{3}{4}$  was more and repeating the comments of those who said that the two fractions were the same amount. The disagreement swung back and forth.

Finally, I took action. "We need to stop



for a moment." I announced. "This isn't putting us anywhere. People are just kind of holding their own ideas and not really thinking about something else we've already talked about." I decided to try to show the class that the issue, mathematically speaking, was not the number of pieces (something I thought we had already spent time investigating and discussing). What mattered was the whole. I pulled out two large white envelopes and, with the children's help in interpreting what  $\frac{1}{4}$  and  $\frac{1}{5}$  meant, cut one into four pieces and the other into five pieces. We talked about these two "cookies," as the children called them. We taped the pieces back together to see that they could be pieced back to make the original "cookie." I demonstrated how  $\frac{1}{4}$  and  $\frac{1}{5}$  were each still the whole cookie and explained that these two cookies were the same size. Still, the confusion continued as we tried to talk about this example. Students' comments included the following:

*Lucy:* I think they both have the same. Because you are using an envelope, and it's just a cookie or an envelope, and it's the same size, and you're cutting it — and it doesn't matter if — 'cause one has less papers, they're both the same size.

*Daniel:* I disagree because that one [ $\frac{1}{4}$ ] has lots less . . . 'Cause it gets four, and it gets five.

*Riba:* I agree because that one [ $\frac{1}{4}$ ] has more pieces than that one [ $\frac{1}{5}$ ].

At a loss, I pressed insistently. "I didn't ask which one had more pieces. I asked which one had more *cookie*." Class was nearly over, and I asked the students to use the remaining time to write in their notebooks what they thought about the comparison of  $\frac{1}{4}$  and  $\frac{1}{5}$ . That evening, as I studied what they had written and drawn, I could not be sure what they understood. I had a lot of clues, but interpreting them was not easy.

This story from my classroom is intended to illustrate a central issue too often bypassed. While readers can doubtless suggest to me any number of things that I should have done — with the class or with Sheena — there exists no single "it" to which the reforms aim, no specific set of steps that teachers must enact. Rooted in the theories and commitments sketched above, the NCTM books — as well as other reform documents — are long on prom- and images. However, considerable work lies ahead if the reform ideas are to

permeate daily practice in schools. Such work will involve developing ways to talk about the moves that a teacher might make to act on particular commitments in particular situations, the issues a teacher might take into account, the alternatives he or she might consider. This would entail complicating the rhetoric, on the one hand, and demystifying the magic of the teacher's role, on the other.

### What Do Teachers Bring to Learning "It"?

There is a growing recognition that teachers, like their students, bring with them experiences and prior understandings that profoundly shape their learning.<sup>15</sup> These previous experiences sometimes do not help them as they struggle to enact these new reforms. Indeed, past experiences can often act as obstacles. For example, elementary teachers, most of whom experienced school knowledge as a given — and who acquired facts and memorized rules — are being asked to invent a kind of teaching that engages students in complex reasoning in authentic contexts. Despite the fact that they have never seen or experienced such teaching, they are faced with trying to find ways to connect students with mathematics and mathematical reasoning and to engage students in genuine experiments. Although schools have never taught all students equally well — and so offer no images of what it means to do so — teachers are to find ways to help all their students.

And so a paradox emerges. Elementary teachers are themselves the products of the very system they are now trying to reform. An overwhelming proportion of them are women, and the majority did not pursue mathematics coursework beyond what was minimally required. Many report their own feelings of inadequacy and incompetence with regard to mathematics, and some can even recall experiences that became turning points that caused them to stop taking mathematics. Rather than look critically at the way we handle mathematics in school, they often assume that their negative experiences reflect their own mathematical inadequacies or stem from the inherently useless content of mathematics.

Those same experiences have equipped them with ideas about the teacher's role, about who can learn mathematics, and about

what it takes to learn and know mathematics. Moreover, what teachers bring with them is not purely cognitive, for they also bring commitments about how to act with different students, a sense of themselves as helpful and effective, and feelings about certain kinds of classroom environments. These, too, influence their interpretation of and disposition toward the mathematics reforms.

The mix of things that teachers bring becomes evident in concrete contexts — such as in viewing a videotape or discussing a case. It becomes clear that, given what people's own past experiences are, the reform visions are simultaneously appealing and unsettling, attractive and unfamiliar.

When people view and discuss videotapes of alternative approaches to mathematics teaching, they tend to have mixed reactions. On the one hand, they may be impressed with the children's confidence and civility. They may be attracted by the students' flexible use of drawings and analogies, as well as by their articulateness. On the other hand, viewers may find it deeply disturbing to hear the array of student interpretations. Evidence that students may not understand is not always intriguing; sometimes it can make one quite uncomfortable. Of course, students can also display exquisite understandings of complex ideas. Glimpsing these is breathtaking. But students also hold robust ideas that conflict with currently accepted knowledge. One major source of teachers' feelings of efficacy and satisfaction is the sense that they can help students learn.<sup>16</sup> When we ask students to voice their ideas, we run the risk of discovering what they do and do not know.

In asking students to talk and otherwise represent their thinking publicly, the distance between their thinking and ours becomes visible. And the instinct to explain away the apparent misunderstandings is strong: "Did the teacher use manipulatives to show this?" "Had the students been told that the unit has to be the same?" The impulse to help and clarify, to show and tell, is deeply rooted in teachers. It is a good and worthy instinct. Teachers are, after all, responsible for helping their students learn.

When one starts listening more closely to students, old complacencies about understanding are called into question. My third-graders who drew rectangles repre-



sending  $\frac{1}{2}$  and  $\frac{1}{2}$  as the same amount seemed to understand equivalence until I began asking more questions. Their earlier correct worksheets notwithstanding, I began to see a glimpse of understandings less robust than I had hoped for. Moving in the direction of the mathematics reforms means confronting up close the uncertainties, ambiguities, and complexities of what "understanding" and "learning" might really mean and entail.

But things are more complicated still. If student understanding becomes more problematic, one's own understandings are soon more uncertain as well. And this is at least as unsettling. After all, teachers are "supposed to" know what they are teaching. Confronting one's own uncertainties in understanding can make a teacher feel inadequate and ashamed.<sup>17</sup> That the mathematics reforms are aimed at helping students understand content in usable and powerful ways is part of the appeal for teachers whose own mathematical histories did not offer them such opportunities. Still, in pursuing such goals, deep anxieties about one's effectiveness and one's knowledge are likely to surface.

Encounters with the reform visions can be extremely troubling. Despite the obvious fascination of children's nonstandard thinking, if the goal is to help students master content, close views of students' alternative interpretations can threaten established practices. Teachers who do the things they have always assumed were helpful and then discover that the students are really not understanding the concepts face even more anxiety. Richard Prawat tells of a teacher he studied who, as she embarked on changing her teaching, began to doubt that she had ever helped her students "really" understand. As a dedicated veteran with 20 years' experience, she was profoundly distressed.

The mathematics reforms are attractive and inspiring in many ways. Yet there are also powerful *disincentives* to engage with this agenda, and some of these are deeply personal and at the heart of the identity one tries to create as a good teacher. Often teachers must defend to parents and administrators things they are trying even before they themselves are convinced or confident about them. A risky prospect at best, being in this position is understandably unappealing.

Being an agent for change can be hard. It takes courage and involves risk. One must

be adventurous and willing to experiment and try new things in a context that has not typically rewarded or encouraged innovation.

### What Don't We Know About Teacher Learning?

To learn to teach mathematics as we were taught is hard enough. To learn to teach in the ways envisioned in the new math standards is harder still. For teacher educators, what we think we know about teacher learning is challenged by the underdetermined nature of the teaching to be learned. That underdeterminedness creates needs and points to things that we *don't* know about teacher learning. For example, while we may believe that teachers must understand subject matter in deeper ways in order to be flexible when they listen to students, we still don't know enough about how to help teachers develop such understandings. We may realize that this kind of teaching requires teachers to ask good questions, but we do not know enough about what makes one question better than another or about how to develop the capacity to come up with and pose such questions. We may appreciate the uncertainties of this kind of teaching and still not know enough about what helps teachers learn to manage dilemmas wisely, with a combination of confidence and humility.

Learning this kind of teaching requires more than knowledge and skill. A host of personal qualities also matter: patience, curiosity, generosity in listening to and caring about other human beings, confidence, trust, and imagination.<sup>18</sup> Other important qualities are interest in seeing the world from another's perspective, enjoyment of humor, empathy with confusion, and concern for the frustration and shame of others. The personal resources that teaching demands are not often discussed and even less often nurtured. Is the kind of patience that teaching requires something that can be learned? Can empathy grow? If these kinds of resources and qualities are central to teaching, then we need ways of thinking about how to cultivate and nurture their development.<sup>19</sup>

Traditionally, professional development (e.g., inservice workshops) and professional forums (e.g., journals and state meetings) assume a *stance* toward practice that concentrates on answers: conveying information, providing ideas, training in skills.<sup>20</sup>

With enthusiasm and clever quips, leaders distribute ideas, tips, and guidance. Participants collect handouts and reproducible worksheets and eagerly file them. In some sessions, participants may "share" ideas, but with confidence that certainty exists within a range of discourse about answers. Such an approach offers participants an enormous assortment of resources, but their potential is restricted by the lack of critical discussion. Seeking to make participants comfortable, staff development leaders rarely challenge teachers' assumptions or intentionally provoke disequilibrium or conflict.

Because discussions of teaching sometimes resemble "style shows" more than they do professional interaction, teachers' development of their practice is often a highly individual and idiosyncratic matter. The common view that "each teacher has to find his or her own style" is a direct result of working within a discourse of practice that maintains the individualism and isolation of teaching.<sup>21</sup> This individualism not only makes it difficult to develop any sense of common standards but also makes it difficult to *disagree*. Masking disagreements hides individual struggles to practice wisely and so removes a good opportunity for learning. Politely refraining from critique and challenge, teachers have no forum for debating and improving their understandings. To the extent that teaching remains a smorgasbord of alternatives with no real sense of community, there is no basis for comparing or choosing alternative practices, no basis for real and helpful debate. This lack impedes the capacity to grow.

With goals that are uncertain and underdetermined, a stance of certainty is unlikely to press deeply into the work of reform. We would do well to consider and experiment with fostering a stance of critique and inquiry — a stance of asking and debating, a discourse of conjecture and deliberation.

What might characterize a stance of critique and inquiry toward practice? One aspect of it might be the nature of encounters with new ideas — an important part of learning. Such a stance would strive to *make a new idea viable*, to get it on the table for examination, trial, and debate. It would involve convincing others that an idea is worth considering, but without "selling" it.

A second aspect might center on *con-*



considering how other resources and knowledge might be useful in connection with particular agendas. Examining research inquisitively and skeptically, teachers would seek insights from scholarship but not accord undue weight to its conclusions. This stance would accommodate "the possibility that the available research knowledge is incomplete and there is room for discovery. [It would] neither romanticize teachers' knowledge nor unduly privilege researchers' claims."<sup>22</sup>

A third aspect of a critical stance might entail shifting the emphasis from "implementation" of programs to *adaptation and generation of new knowledge*. Given the uncertainties and underdeterminedness of the reform visions, local interpretation and invention are both inevitable and desirable. A critical stance would acknowledge this fact and embrace it, using the broadly outlined reforms as a resource for developing inspired but locally tailored innovations.<sup>23</sup>

These three aspects of a stance of critique and inquiry all deal in one way or another with relationships with new ideas — how one might engage them, where one might seek them, and how one might develop them. In taking such a stance it is important also to maintain an openness to the insights and images of others and an awareness of the role of adaptation.

The extent to which this stance of inquiry is both an individual matter and a matter of professional community is important here. Successful teacher development projects often count among their essential elements the construction of a sense of community within the project.<sup>24</sup> With norms and patterns for discussing alternatives, for arguing about relative merits, for adaptation and evaluation, more opportunities take on the possibility of being educative. What are ways to foster communities of practice, both direct and virtual? Connections with others can extend local resources and generate new ones. Moreover, such connections are an antidote for the risks of parochialism in the current enthusiasm for school-based restructuring. What might be ways to create both local community and connections with a broader community? To foster access to — and opportunities to distribute — new knowledge, new ways of knowing, norms for critique and challenge, and new fruitful hypotheses for practice?

Those of us who are teacher educators

need to develop and experiment with such stances within both traditional and non-traditional structures for professional development — in the articles we write, in the presentations we give, in the work we do with teachers in schools. Moreover, this kind of teaching is new to most of us as well, and we are continually working to develop our own practice in the spirit of the reforms. What do we know — and *not* know — that can inspire and support experiments with alternative stances within the material, content, and discourse of professional education?

In the final section I propose two means for experimenting with ways to foster a stance of inquiry and critique: curriculum materials and videotapes of teaching. The first is conventional; the second, new. But both are vehicles that offer promise and might be worth attention, care, and experimentation. And both are responsive to the current clamor for "scaling up," for both have the potential to reach many teachers. Each offers to extend the resources of the individual through connections with others. Each also offers ideas for teaching and an opportunity to examine knowing in teaching. Each contains the possibility for supporting the generation of new knowledge for teaching, and each holds the possibility for encouraging and supporting a stance of inquiry and experimentation, of critique and deliberation.

### Using Curriculum Materials To Develop a Stance of Inquiry

Influenced by a big backlash against the teacher-proof curriculum movement, contemporary educators often disparage textbooks, and many reform-oriented teachers repudiate them, announcing disdainfully that they do not use textbooks. Yet carefully designed curriculum materials can offer teachers access to mathematical ideas and ways to represent them. Curriculum materials can serve as a rich site for ongoing teacher learning. They can offer maps of the mathematical territory and help teachers to reconceive the terrain around "big ideas."<sup>25</sup> They can provide alternative tasks and discuss their relative advantages and pitfalls. They can offer teachers forecasts of students' likely thinking. If they adopt a stance of contribut-

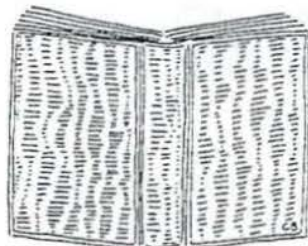
ing to an ongoing effort to teach, text materials would seem to hold untapped potential.<sup>26</sup>

Curriculum could be written with teacher learning as a goal. Most curriculum developers have an eye on students rather than on teachers, and they attempt to guide teachers without engaging them in pedagogical conversation. To what extent do textbook authors aim to help teachers learn mathematics through the materials they write? And what would it take for teachers to use such texts in innovative ways rather than convert them to their traditional position as external authoritative guides?

As teachers build their own understandings and relationships with mathematics, they chart new mathematical courses with their students. And conversely, as they move on new paths with students, their own mathematical understandings change. Given the expanse of mathematics to be learned and the multiple ways in which it can be explored, it would seem worthwhile to investigate whether and how materials designed to support both teachers' and students' learning can function as resources for teacher learning. Furthermore, several contemporary professional development projects already use curricula as the stimuli for conversations among teachers about teaching.<sup>27</sup> Using the texts in their own classrooms, reporting on what happened, reflecting on the strengths and weaknesses of different ideas and activities, the teachers in these projects learn about teaching and learning and about mathematics and reform.

These projects raise a crucial pedagogical issue. While curricula could be designed with teacher learning in mind, what teachers learn from such materials will also depend on the ways in which they are engaged with them — that is, on the norms and expectations surrounding their use. What might be the time frame within which a teacher develops a relationship with the curriculum material? How might the third year of use differ from the first? In what ways could experiences be shaped around

these materials in order to enhance their educative potential? Perhaps texts might be deliberately designed to be "outgrown." We have much to learn about the pedagogy of using such materials to support and facilitate teacher learning.





These are issues worth working on. Textbooks continue to be a mainstay of the elementary classroom in most schools. Designing ways to use them more directly in the service of teacher development would pay big dividends.

### Using Videotapes To Foster Reform

The need for "images of reform" is widely invoked. Teachers who have never seen children discussing mathematics or actively engaged with a mathematics problem need to see what this looks like. Videotapes of such classrooms serve, in part, as proof that such practice can happen in schools. (Of course, the practice can backfire, and teachers can dismiss what they see.)

Despite the widespread enthusiasm for the medium, we know little about what people attend to and learn while watching tapes.<sup>28</sup> Do these tapes infuse new images alongside the deeply ingrained ones from more conventional classrooms? If so, what aspects of these images are salient — the kind of mathematics, the nature of the discourse, the capabilities of students, the teacher's role? All of these? Perhaps some viewers study teacher moves, voice, stance — things usually inaccessible. They may deliberately or unconsciously "try on" unfamiliar ways of being with students.

I have seen teachers experiment with asking questions like a teacher on a tape and then note the interesting differences in how their students respond. Such imitation is something we know little about. Perhaps there are things having to do with ways of being with students, ways of being in oneself, that can be supported through the viewing of tape and imitating of the behaviors depicted. Perhaps there are subtle aspects of interaction and manner that are not available for examination in written accounts of teaching, in curriculum materials, or in other kinds of professional development opportunities. What can be learned from videotapes, under what kinds of circumstances, is worth investigating much more closely.

An associated question involves the kinds of tapes and teaching used.<sup>29</sup> What is offered by polished professional-quality tapes? When is watching a novice teacher preferable and why? When are the struggles of experienced teachers crucial to see? What do rough, problematic cases afford?

Annotations layered onto the videotape can shape the viewing, but we know little about how they affect viewers' opportunities. What features of the teacher's identity affect viewers' reactions?

A videotape is of necessity but one slice of classroom life, and we know little about which might be the most helpful slices. Should tapes focus on children and their talk? Should tapes highlight the teacher and her moves? Are some aspects of the curriculum more important to document in such tapes than others? Perhaps any old tape will do, but I doubt it. What is afforded by the availability of additional material, such as copies of children's work, teacher reflections, assessment items? Considering the different aspects or features of tapes that might be significant and exploring the range of their impacts is an important part of learning how these tapes might be helpful.

Another important question involves the "pedagogy" of using videotapes. As is the case with any materials, what people learn from the tapes is influenced both by what they bring to the experience and by how they are engaged while viewing the tape. What kinds of discussions are most fruitful? Are there alternative organizational structures in which to use tapes (e.g., small-group versus large-group settings)? Are there ways to direct — or widen — participants' attention so as to take the most advantage of the viewed tape? And perhaps thorniest of all is the challenge of developing a stance that is less simply evaluative and more analytical.

Much discussion of case studies has focused on what constitutes a good case; other discussion has focused on the ways to teach a case.<sup>30</sup> The latter issue is equally significant with regard to the viewing of videotapes. How does one structure the experience of viewing in ways that generate learning? When, for example, might it make sense to use a tape to exemplify a kind of teaching and learning? Under what circumstances might it make sense to use a videotape as a springboard for investigation of the particulars of the tape or of more general issues of teaching, learning, mathematics, and the purposes of school?

The work of professional development is as uncertain as practice itself.<sup>31</sup> Perhaps more so. The teaching we are trying to help teachers learn is underdetermined, not

reducible to simple programs of practice. Likewise, our understanding of professional development that can support teacher learning is a mix of fairly solid ideas, beliefs, myths, and conjecture. Currently, we understand a great deal about what helps teachers learn. For example, we understand — but need to uncover more about — the resources that matter in trying to teach all students well. We need to understand better the differences (and the similarities) between learning to teach in a reform-minded way as a beginning teacher and changing or developing one's teaching as an experienced teacher.

As teacher educators, teachers, and policy makers, we ourselves will need to make new conjectures based on what we think we know and what we think we still have to learn. Our challenge is to experiment, study, reflect on, and reformulate our hypotheses. All of these are necessary if we are to successfully engage a wider community in the work of mathematics reform — to "scale up" by sowing ideas.

1. See *Curriculum and Evaluation Standards for School Mathematics* (Reston, Va.: National Council of Teachers of Mathematics, 1989); *Professional Standards for Teaching Mathematics* (Reston, Va.: National Council of Teachers of Mathematics, 1991); National Research Council, *Everybody Counts: A Report to the Nation on the Future of Mathematics Education* (Washington, D.C.: National Academy Press, 1991); idem, *Measuring Up: Prototypes for Mathematics Assessment* (Washington, D.C.: National Academy Press, 1993); and idem, *Measuring What Counts: A Conceptual Guide for Mathematics Assessment* (Washington, D.C.: National Academy Press, 1993). Readers should also see the mathematics frameworks of such states as California and South Carolina.

2. Glenda Lappan et al., *Connected Mathematics Project* (Palo Alto, Calif.: Dale Seymour Publications, forthcoming); and Susan Jo Russell et al., "Learning Mathematics by Teaching," paper presented at the annual meeting of the North American Chapter of the Psychology of Mathematics Education, Baton Rouge, La., November 1994.

3. In 1993 the U.S. Senate Appropriations Committee mandated that the Department of Education and the National Science Foundation "increase teacher training activities" between 1993 and 1998 to provide "intensive pedagogical and disciplinary training" in mathematics and science to 600,000 elementary teachers. The agencies were also to ensure that the professional development provided was systematic, of high quality, based on research, and consistent with reforms. This article initially grew out of my skeptical (though sympathetic) reaction to this Senate action.

4. See Suzanne M. Wilson et al., "Learning by All," p. 468, this *Kappan*; and David K. Cohen and Carol A. Barnes, "Pedagogy and Policy: A New Pedagogy for Policy," in David K. Cohen, Milbrey W. McLaughlin, and Joan E. Talbert, eds., *Teaching for*



*Understanding: Challenges for Policy and Practice* (San Francisco: Jossey-Bass, 1993), pp. 207-76. The notion that policy making and reform are central to teaching and learning has been at the heart of our work on the Education Policy and Practice Study at Michigan State University and the University of Michigan.

5. In this article I make no attempt to cite all the studies and programs that have contributed to the body of ideas on teacher learning. I have drawn heavily on articles in the field; on my experience reviewing proposals for the NCTM, the National Science Foundation, and the American Educational Research Association; and on the 1994 NCTM Yearbook on *Professional Development for Teachers of Mathematics*. I have also listened to fellow teacher educators.

6. See, for example, Lauren Pfeiffer, "Safety, Trust, and Care in Learning from Experience" (Doctoral dissertation, Michigan State University, 1996); Nora Toney, "Facing Racism in Mathematics Education," in Deborah Schifter, ed., *What's Happening in Math Class? Volume 2: Reconstructing Professional Identities* (New York: Teachers College Press, 1996), pp. 26-35; and Julian Weisglass, "Changing Mathematics Teaching Means Changing Ourselves: Implications for Professional Development," in D. B. Aichele, ed., *Professional Development for Teachers of Mathematics: 57th Yearbook of the National Council of Teachers of Mathematics* (Reston, Va.: NCTM, 1994), pp. 67-78.

7. David Hawkins, "I, Thou, and It," in idem, ed., *The Informed Vision: Essays on Learning and Human Nature* (1967; reprint New York: Agathon, 1974), pp. 48-62. Hawkins argues that in any teaching situation there is a teacher, a learner, and the "it" around which they interact. Here it is crucial to remember that analysis of reform-oriented teaching is the "it" of professional development and must be part of our consideration of teacher learning.

8. *Professional Standards*, p. 35.

9. Daniel Chazan and Deborah Ball, *Beyond Exhortations Not to Tell: The Teacher's Role in Discussion-Intensive Pedagogy* (East Lansing: National Center for Research on Teacher Learning, Michigan State University, Research Report 95-2); and Patrick Thompson and Alba G. Thompson, "Teaching About Rates Conceptually, Part II: Mathematical Knowledge for Teaching," *Journal for Research in Mathematics Education*, vol. 27, 1996, pp. 2-24.

10. Lee S. Shulman, "Autonomy and Obligation: The Remote Control of Teaching," in Lee S. Shulman and Gary Sykes, eds., *Handbook of Teaching and Policy* (New York: Longman, 1983), pp. 484-504.

11. Magdalene Lampert, "How Do Teachers Manage to Teach? Perspectives on Dilemmas in Practice," *Harvard Educational Review*, vol. 55, 1985, pp. 178-94.

12. As part of my research, I teach elementary school mathematics on a daily basis. The episode I relate here occurred in my third-grade class during the 1989-90 school year. The data on which I am drawing were gathered as part of an NSF project that involved documenting the mathematics teaching and learning across the entire school year in my class and in the fifth-grade class of my colleague, Magdalene Lampert. The teacher in whose classroom I was working was Sylvia Rundquist. (For a description and examination of our four-year collaboration, see Deborah Loewenberg Ball and Sylvia Rundquist, "Collaboration as a Context for Joining Teach-

er Learning with Learning About Teaching," in Cohen, McLaughlin, and Talbert, pp. 13-42.

13. This example is discussed in more detail in Deborah Loewenberg Ball and Suzanne M. Wilson, "Integrity in Teaching: How Do the Knowledge and Moral Dimensions Interact?," *American Educational Research Journal*, in press.

14. I discuss this issue in more detail in Deborah Loewenberg Ball, "Magical Hopes: Manipulatives and the Reform of Mathematics Education," *American Educator*, Summer 1992, pp. 14-18, 46-47.

15. See, for example, Deborah Loewenberg Ball, "Unlearning to Teach Mathematics," *For the Learning of Mathematics*, vol. 8, 1988, pp. 40-48; Hilda M. Borko et al., "Learning to Teach Hard Mathematics: Do Novice Teachers and Their Instructors Give Up Too Easily?," *Journal for Research in Mathematics Education*, vol. 2, 1992, pp. 141-78; Catherine A. Brown and Hilda Borko, "Becoming a Mathematics Teacher," in Douglas A. Grouws, ed., *Handbook of Research on Mathematics Teaching and Learning* (New York: Macmillan, 1992), pp. 205-39; Deborah Schifter, *Reconstructing Mathematics Education: Stories of Teachers Meeting the Challenge of Reform* (New York: Teachers College Press, 1993); and Martin A. Simon, "Prospective Elementary Teachers' Knowledge of Division," *Journal of Research in Mathematics Education*, vol. 24, 1993, pp. 233-54.

16. John P. Smith, "Efficacy and Teaching Mathematics by Telling: A Challenge for Reform," *Journal for Research in Mathematics Education*, in press; and Dan C. Lortie, *Schoolteacher: A Sociological Study* (Chicago: University of Chicago Press, 1975).

17. Several poignant and profound examples exist in the literature. See Ruth M. Heaton, "Creating and Studying a Practice of Teaching Elementary Mathematics for Understanding" (Doctoral dissertation, Michigan State University, 1994). Heaton writes of her own struggles to delve into what she had previously considered simple mathematical ideas. Sylvia Rundquist also describes how vulnerable she felt in confronting her own confusions and how personally risky it was to write about the experience; see Ball and Rundquist, op. cit. Other examples can be found in Deborah Schifter, *Constructing New Practices/Reconstructing Professional Identities* (New York: Teachers College Press, 1995); and idem, *Voicing the New Pedagogy* (New York: Teachers College Press, 1995).

18. See Magdalene Lampert and Angie S. Eshelman, "Using Technology to Support Effective and Responsible Teacher Education: The Case of Interactive Multimedia in Mathematics Methods Courses," paper presented at the annual meeting of the American Educational Research Association, San Francisco, April 1995.

19. Gary D Fenstermacher, "The Concepts of Method and Manner in Teaching," in Fritz Oser, Andreas Dick, and Jean-Luc Patry, eds., *Effective and Responsible Teaching: The New Synthesis* (San Francisco: Jossey-Bass, 1992), pp. 95-108.

20. Judith Warren Little, "Teachers' Professional Development in a Climate of Educational Reform," *Educational Evaluation and Policy Analysis*, vol. 15, 1993, pp. 129-51; Brian Lord, "Teachers' Professional Development: Critical Collegiality and the Role of Professional Communities," in Nina Cobb, ed., *The Future of Education: Perspectives on National Standards in America* (New York: College Entrance Examination Board, 1994), pp. 175-204; and Dennis Sparks and Susan Loucks-Horsley, "Mod-

els of Staff Development," in W. Robert Houston, ed., *Handbook of Research on Teacher Education* (New York: Macmillan, 1990), pp. 234-50.

21. I would like to acknowledge Daniel Chazan for helping me see this underside of the individualistic culture of teaching.

22. Little, p. 143.

23. David Tyack and William Tobin, "The 'Grammar' of Schooling: Why Has It Been So Hard to Change?," *American Educational Research Journal*, vol. 31, 1994, pp. 453-79.

24. Ann L. Brown, "The Advancement of Learning," *Educational Researcher*, November 1994, pp. 4-12; Helen Featherstone, Lauren Pfeiffer, and Stephen P. Smith, *Learning in Good Company: Report on a Pilot Study* (East Lansing: National Center for Research on Teacher Learning, Michigan State University, Research Report 93-2, 1993); Helen Featherstone et al., "Could You Say More About That? A Conversation About the Development of a Group's Investigation of Mathematics Teaching," paper presented at the annual meeting of the American Educational Research Association, Atlanta, April 1993; and M. A. Simon and Deborah Schifter, "Towards a Constructivist Perspective: An Intervention Study of Mathematics Teacher Development," *Educational Studies in Mathematics*, vol. 22, 1991, pp. 309-31.

25. Lappan et al., op. cit.; Susan Jo Russell and Andee Rubin, *Investigations in Number, Data, and Space* (Palo Alto, Calif.: Dale Seymour Publications, 1994); and Joan Ferrini-Mundy, "Reform Efforts in Mathematics Education: Reckoning with the Realities," paper presented at the NSF conference on Teacher Enhancement in Mathematics K-6, Arlington, Va., November 1994.

26. Janine Remillard, "Changing Texts, Teachers, and Teaching: The Role of Curriculum Materials in Mathematics Education Reform" (Doctoral dissertation, Michigan State University, 1996).

27. See, for example, the Renaissance Project in California, discussed by Kris Acquarelli and Judith Mumme in "A Renaissance in Mathematics Education Reform," page 478, this *Kappan*.

28. I draw here on my work with Magdalene Lampert, Kara Suzuka, Ruth Heaton, Angie Eshelman, and Mark Rosenberg, in which we have been investigating the use in teacher education of primary source materials from Lampert's and my elementary classrooms. See Magdalene Lampert and Deborah Loewenberg Ball, *Using Hypermedia Technology to Support a New Pedagogy of Teacher Education* (East Lansing: National Center for Research on Teacher Learning, Michigan State University, Issue Paper 90-5, 1990); and Deborah Loewenberg Ball, Magdalene Lampert, and Mark Rosenberg, "Using Hypermedia to Investigate and Construct Knowledge About Mathematics Teaching and Learning," paper presented at the annual meeting of the American Educational Research Association, Chicago, April 1991.

29. Ferrini-Mundy, op. cit.

30. Gary Sykes and Tom Bird, "Teacher Education and the Case Idea," in Gerald Grant, ed., *Review of Research in Education*, vol. 18 (Washington, D.C.: American Educational Research Association, 1992), pp. 457-521; and Judy Shulman, *Case Methods in Teacher Education* (New York: Teachers College Press, 1992).

31. I am grateful to Suzanne Wilson for pointing out this notable parallel, as well as for sharing much other wisdom about teacher learning — her own, mine, and others'. K



# Transforming Jewish Education

## Transforming Jewish Teaching: A Necessary Condition for Transforming Jewish Schools

Gail Zaiman Dorph

**I**n 1993, the Council for Initiatives in Jewish Education (CIJE)<sup>1</sup> conducted a study of educators in pre-schools, congregational schools and day schools in the communities of Atlanta, Baltimore and Milwaukee. This study showed that although the teaching force is underprepared in both Judaica and pedagogy, it is more stable and more committed than we might have imagined. Although only 32% of the teaching force is full-time, about 60% considers Jewish education to be a career. Only 6% of teachers plan to seek positions outside of Jewish education in the near future.<sup>2</sup>

Conventional wisdom has stressed the futility of investing in our teachers, since most of them are part-time and not professionals by training. CIJE's findings suggest that investing in the present teaching and leadership workforce could have real benefits for the Jewish community. These data have led us at CIJE to rethink the area of professional development. Over the last few months, CIJE has been working both in communities and nationally to create strategies for developing serious approaches to professional development opportunities for teachers

and educational leaders. This article describes an emergent approach to professional development grounded in a particular view of teaching and learning. The thinking upon which it is based is guiding CIJE's current work in professional development.

In both Jewish and general education, the dominant approach to in-service education for teachers has taken the form of one-shot workshops, or, at best, short-term passive activities, with limited follow-up. The content of in-service education has emphasized a "one size fits all approach," assuming that generic strategies are applicable to all regardless of educational setting, age of the learner, or subject matter to be taught and learned. Such strategies assume that each teacher would "learn" the latest new techniques and creative activities and bring them back to her/his own classroom, making whatever "adjustments" might be necessary.

This approach to professional development grew out of a particular view of teaching. In this view, teaching is considered to be straightforward and non-problematic; it emphasizes teachers transmitting information and children listening and remembering. It does not seriously address either the needs of children as learners or the subject matters to be taught. Our approach to professional development has been influenced by a different view of teaching and learning, one that emphasizes respect for both learner and subject matter. Such teaching has often been characterized as "teaching for understanding" (Cohen, McLaughlin, and Talbert, 1993). This view of teaching moves us away from a



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more traditional image of teaching as "telling and learning as listening" to a vision of practice referred to by Deborah Meier (quoted in Little, 1993) as "learning as telling, teaching as listening."

This conception of teaching requires that we think differently about what teachers need to know and be able to do, and therefore requires that we think differently about the contexts and content of professional development. If we are to take seriously issues of learners and subject matter, "one size" can no longer fit all; generic techniques appropriate to all ages and subjects will be inadequate to the task. We will need to create a variety of new strategies and supports to enhance and deepen teachers' learning and guide them through experimentation and the real struggles that accompany change. Professional development must itself reflect, promote and support the kind of teaching and learning that we hope to foster.

Researchers concerned with the latest efforts in educational reform have found that teachers have been able to make significant changes in their teaching practices in the context of learning communities. In such communities, the emphasis switches

from experts transmitting skills to teachers studying the teaching and learning processes (Darling-Hammond, 1993; Little, 1993; Lord, 1994; McLaughlin, Talbert, 1993). Teachers have opportunities to voice and share successes and exemplars, doubts and frustrations. They learn to raise concerns and critical questions about their own teaching and about their colleagues' teaching.

As Judith Warren Little (1993) has suggested, changing teaching will require not only changing our image of teachers' work but also developing a culture compatible with the image of teacher as "intellectual" rather than teacher as "technician." Professional development as an essential and indispensable process will need to be integrated into the life of educational institutions, woven into the very fabric of teachers' work, not seen as a "frill" that can be cut in difficult financial times or because of overprogrammed schedules.

A variety of conditions (McDiarmid, 1994) have been singled out as critical for supporting this new approach to professional development. These conditions suggest a need for creating opportunities and structural regularities that do not

presently exist in most Jewish or general educational settings.

I would like to present three of these conditions because of their implications for Jewish education:

1. Teachers need opportunities to work with colleagues, both in their school building and beyond it. They need to be part of larger learning communities that provide support and access to new ideas and knowledge.
2. Teachers need time to become involved in the sometimes protracted process of changing roles and practice. To attain time and mental space, professional development must be redefined as a central part of teaching. It can no longer be an "add-on," tacked on to the school day, week or year. It must be woven into teachers' daily work.
3. Teachers need the support and advice of an educational leader who understands issues of teaching and learning and what it takes to change teachers' roles and practice in their classrooms and in the school.

Let me address these three conditions and the challenges they pose to us.



# Transforming Jewish Education

## 1. Critical Collegueship

Making changes is hard work. Change does not always go smoothly. It often includes frustration, backsliding and failure. Making changes in one's teaching practice is no exception. When stressing the challenges of changing one's teaching practice, Deborah Meier has suggested the analogy of "changing a tire on a moving vehicle," an analogy that speaks to the difficulty one encounters as one continues "to move" while engaged in repair work. After all, professional development is not a pre-service activity. It takes place in the same time frame in which one is engaged in "doing the work."

Educational research (Lord, 1994; McLaughlin, Talbert, 1993) indicates that teachers who have made effective changes in their practice belong to active professional communities that not only support and encourage new practice but also enable teachers to engage in constructive criticism. A logical place to develop such collegueship is within the context of the school in which one is teaching. Here, teachers can develop ways of working and talking together. But we also need ways to create community for teachers beyond their own schools so that teachers of the same subject matters and teach-

ers of the same age children can learn together.

Transforming schools into learning communities for faculty as well as for students sounds like a reasonable suggestion—and yet, it is a formidable challenge. Critical collegueship among teachers could indeed be the first step. Two clear prerequisites to meaningful collegial collaboration are time and the involvement and support of the educational leadership of the institution.

## 2. Time

When the rhetoric of changing teaching practice meets the reality of life in schools, it immediately collides with the problem of time. If this is true in general education, how much more so is it true in Jewish education, where the majority of our institutions and our personnel function part-time. It is hard to imagine how time can be found in the current work configuration. Even finding time for staff meetings when all players can be present is difficult; it is all the more challenging to find real time to learn, discuss and reflect.

In general education, schools with serious commitment to professional development for their teachers have experimented with

a number of different strategies for finding regular time including a weekly extended lunch time of two hours; pre-school meetings; and starting "regular classes" at noon once a week.

What would it take to find regular time in our Jewish schools? Day schools and pre-schools might experiment with strategies such as those suggested above. In supplementary schools, where there is no flexibility in manipulating face-to-face contact hours of teachers with students, it might mean paying teachers for an extra afternoon of time each week or for an additional two hours on Sunday.

## 3. Leadership

It is clear that reorganizing the schedule of a school to accommodate this kind of professional development requires the support of the leader of an educational enterprise. This support cannot be present only in the form of lip service and superficial restructuring moves. Only in settings where principals are involved in professional development does teaching practice really change (Little, 1989). At the most straightforward level, educational leaders need to value this enterprise; initiate, plan, develop and evaluate initiatives in their own institutions; work with their teachers to develop appropriate individual professional development plans; and work to advocate for particular programs that might best be offered at the communal level, such as those that extend and deepen teachers' subject matter knowledge.

## Community Mobilization

An additional necessary condition for serious professional



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development for Jewish educators falls under the rubric of community mobilization. If one thinks about the three conditions necessary for creating a serious climate for professional development, one is struck by the implications not only for the people—teachers and principals—but also for their roles and their institutions. Building professional development into schools requires rethinking school schedules and allocation of teachers' time and salaries. None of this can be accomplished without the support of school board members, rabbis and other stakeholders in the process. Thus, taking professional development seriously challenges us to address three much more basic issues:

Do we believe that Jewish education can make a difference?

Do we believe that Jewish educators are critical to making that difference?

Are we willing to create the conditions and supports that reflect our beliefs in a serious way?

Gail Zaiman Dorph is senior education officer for CIJE and former director of the University of Judaism's Fingerhut School of Education.

## Notes

- 1 Created in 1990 by the Commission on Jewish Education in North America, CIJE is an independent, non-profit organization dedicated to the revitalization of Jewish education. CIJE's mission, its projects and research, is to be a catalyst for systemic educational reform by working in partnership with Jewish communities and institutions to build the profession of Jewish education and mobilize community support for Jewish education.
2. For more information about the Study of Educators, please contact the CIJE office, 15 E. 26th Street, New York, NY 10010; 212-532-2360; fax number 212-532-2646.

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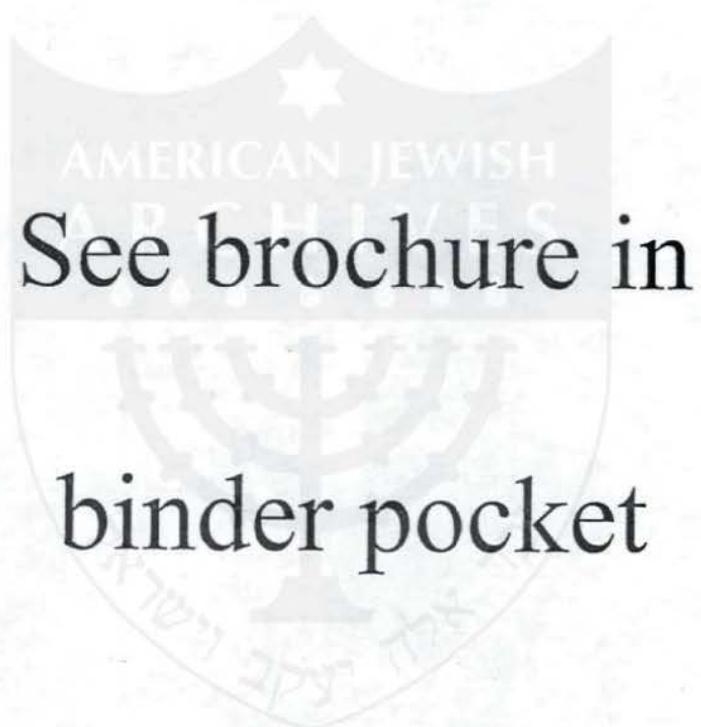
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**COUNCIL FOR INITIATIVES IN JEWISH EDUCATION**  
**BOARD OF DIRECTORS**  
**AGENDA**  
**Thursday, May 2, 1996**  
**New York**

- |      |  |                            |
|------|--|----------------------------|
| I.   | Welcome and Introductions                    | Morton Mandel              |
| II.  | Overview of the Day                          | Alan Hoffmann              |
| III. | The Revolution in Teaching and Learning      |                            |
|      | A. In the American Classroom: Math Education | Deborah Ball               |
|      | B. Implications for Jewish Education         | Barry Holtz                |
| IV.  | Discussion                                   |                            |
| V.   | CIJE in Action                               | Gail Dorph                 |
|      | A. TEI                                       | Joanne Barrington Lipshutz |
|      | B. Harvard Principals Seminar                | Samuel Levine              |
|      | C. Best Practices in the JCCs                | Esther Leah Ritz           |
| VI.  | D'var Torah                                  | Alfred Gottschalk          |