Professional Development of Teachers in Jewish Education

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This article explores the nature of effective professional development of teachers by addressing three questions: 1) What makes it challenging to create effective professional development for teachers in both general and Jewish education? 2) What are the critical principles of effective professional development? 3) What happens when these principles are implemented in Jewish educational settings? It then offers three cases that provide images of professional learning that can impact the capacity of teachers in Jewish schools. It concludes with practical recommendations for researchers, educators and lay leaders. Although most of the data emanates from research and experiences in American settings, international research supports the same ideas, principles, and approaches.

Introduction[1]

In the last decades, a consensus has emerged concerning both the importance and the critical features of high quality professional development for teachers.[2] Grounded in the idea that students' educational experience depends on the caliber of teachers' instructional skills, this article explores the following questions:

- What makes it challenging to create effective professional development for teachers in both general and Jewish education?
- What are the critical principles of effective professional development?
- What happens when these principles are implemented in Jewish educational settings—what do these principles look like in action, what seems to work, and what obstacles arise?

To provide images of the kind of professional learning experiences that can profoundly improve the capacity of our teachers, the paper concludes with examples of principle-based professional development in Jewish educational settings. These examples also

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[2] In particular, see three recent reports of large-scale studies: Barber and Mourshed (2007); Darling-Hammond et al. (2009); Porter et al. (2000).

suggest that more effort and research are needed to figure out how to make these kinds of experiences even more effective and more common.

Challenges to creating effective professional development for teachers

Four challenges face Jewish and general education as we aim to create effective professional development for teachers. The first two relate to teachers and teaching; the second two relate to professional development and professional developers.

1. Teachers Often Lack Solid Preparation in Their Subject Matters for Teaching

While many of the challenges of professional development arise both in general and Jewish education, the issue of teacher preparation appears in a unique form in Jewish educational contexts. In a study of Jewish education in three diverse American Jewish communities, researchers found that only 19% of teachers, across Jewish school settings—this includes day, pre and congregational schools—have professional preparation in both Jewish Studies and Education (Gamoran et al. 1998). The situation does not seem to have changed dramatically over the course of the last decade. When we look only at Jewish studies knowledge, the lack of subject matter knowledge is the most extreme in congregational and early childhood settings and least extreme in day school high schools, where generally teachers have subject matter knowledge. Additionally, teachers affiliated with the Orthodox movement have more Jewish studies background (Gamoran et al. 1998). In a more recent study of day and congregational schoolteachers (Ben-Avie and Kress 2008), a somewhat different set of questions was asked to learn about professional-level teacher education in supplementary and day school settings. On the Jewish studies dimension, findings indicate that in day schools 53% of teachers had

received some Jewish studies courses in college; 22% were Jewish studies majors; 8% were rabbis. Among congregational schoolteachers, 4% were rabbis; 19% were Jewish studies majors; 60% had taken Jewish studies courses in college. While the majority of teachers had degrees beyond a BA, 44% of day school teachers and 68% of congregational schoolteachers did not have teaching certificates.

This lack of subject-matter expertise poses real challenges for the curriculum of professional development in education in general and in Jewish education in particular. In general education, the claim is often made that teachers are unprepared to teach their subjects (Ma 1999; Stodolsky 1988); however, there is probably no one teaching a math class who has not studied math at least through high school. Yet, it is common for teachers of Hebrew in many Jewish schools to have weak knowledge of Hebrew[3] (Gamoran et al. 1998) and for teachers of Bible to have no experience studying the Bible either as children or as adults.

So, unlike other contexts, where one might rely on teachers' content knowledge (sometimes solid; sometimes not) and work on developing pedagogical content knowledge (Shulman 1986), professional development in Jewish schools needs centrally to attend to content knowledge. What would it take for teachers to "get up to speed" in Hebrew or Bible as they teach those subjects? In order for professional development to be effective in the sphere of Jewish education, it needs to grapple with the fact that teachers may be both novice instructors and also novice students of the subjects they are teaching.

2. Teachers Often Have a Mimetic View of Teaching and Learning

[3] When ascertaining the knowledge base of teachers in Jewish schools, researchers ask participants to rate their fluency in reading Hebrew, translating Hebrew, and speaking Hebrew.

The dominant instructional mode in both Jewish and general education over the past generation fits what Jackson (1986) refers to as the "mimetic tradition." In this tradition, instruction has been widely designed as though people learn through transmission—by listening carefully and then remembering or practicing what they have heard. Considerable research, however, has shown that learning involves not imitation and replication, but change and transformation (Jackson 1986; Kegan 1982; Bransford et al. 1999). Often referred to as transformative or constructivist, this paradigm suggests that learning is not additive, but requires internal change. Further, this research demonstrates that learning -- of skills and facts along with big ideas -- is more effective when it is experiential and interactive. This vision of teaching and learning emphasizes conceptual understanding and the social construction of knowledge. Following Dewey (1938), it claims that learning generally does not take place in isolation, but most often occurs in social situations where teachers and students (and students among themselves) discover and make meaning through their interactions with the subject and with each other. Since most teachers have learned within the "mimetic" paradigm, their years of experience as students are unlikely to support them in teaching in the constructivist/transformative paradigm that we currently understand as most effective. This suggests that effective professional development, rather than just adding to teachers' repertoire of skills, will also help teachers transform deeply engrained understandings about the nature of teaching and learning.

3. Most Professional Development is Aligned with the Mimetic Model of Teaching and Learning

Unfortunately, most professional development experiences reflect the mimetic or "delivery" tradition. Think of the models we most often see –the one-shot workshop that

focuses on generic teaching skills, the "make and take" workshop that focuses, for example, on teaching a Jewish holiday, in the one-size-fits-all community learning day. Typically, all of these are more aligned with the mimetic model of learning. They tend to focus on generic pedagogical skills, rather than on specific pedagogical approaches that align to the uniqueness of the various subject matters. Typically, these experiences do not build images of transformative teaching and learning and do not help teachers reconsider their modes of teaching, so the possibility of their having lasting value on improving practice is limited.

There is a double challenge, then, in supporting teachers to adopt a transformative model of teaching: teachers have had an "apprenticeship" of learning throughout their youth that suggests to them that learning is about transmission. Further, teachers' experiences of professional development reinforce this point of view. It makes sense that the modes of professional development be aligned with the modes of teaching that we are trying to promote; therefore, we need professional development to be not just informative, but transformative. Both the curriculum and pedagogy of professional development for teachers need to be redesigned in order to meet this double challenge.

4. Most Professional Developers Have Not Been Prepared to Create Learning Experiences that Reflect this New Model of Teaching and Learning

The first three challenges suggest the fourth challenge: how to support the "new" professional developer (Ball and Cohen 1999; Stein et al. 1999). They too "suffer" from the same maladies, i.e., they were educated in a mimetic fashion and they have experienced mimetically inspired professional development. Our current understanding about teaching and learning demands that professional developers create and implement transformative professional development for teachers. The challenge we (in Jewish and

general education) face is formidable. We need to simultaneously change the nature of learning experiences for children, for teachers, and for professional developers.

Professional Development—Curriculum and Principles

In the last decades, a consensus has emerged about the critical principles of effective professional development for teachers that takes into account this transformative vision of teaching and learning (Darling-Hammond et al. 2009; Little 1993; Knapp 2003; Porter et al. 2000; Sparks 1990). These principles suggest designing learning opportunities that change teachers' *thinking* about teaching and learning and also affect their teaching *practices*. Not surprisingly, these principles are aligned with more general constructivist vision of teaching and learning.

Curriculum of Effective Professional Development

In the teaching and learning model proposed here, there are three elements that are always present: teacher, student, and subject matter. Additionally, there is a fourth factor referred to as the "environment," that includes such things as a classroom, a family, a synagogue, or professional development setting. Figure 1 depicts what we might think of as the default situation, where a teacher teaches students in a classroom. The arrows in between the vertices depict the interactive nature of teaching and learning. Let us consider this triangle:[4]

[4] This graphic appears in Cohen et al. (2003) with an additional circle around it to depict the environment.

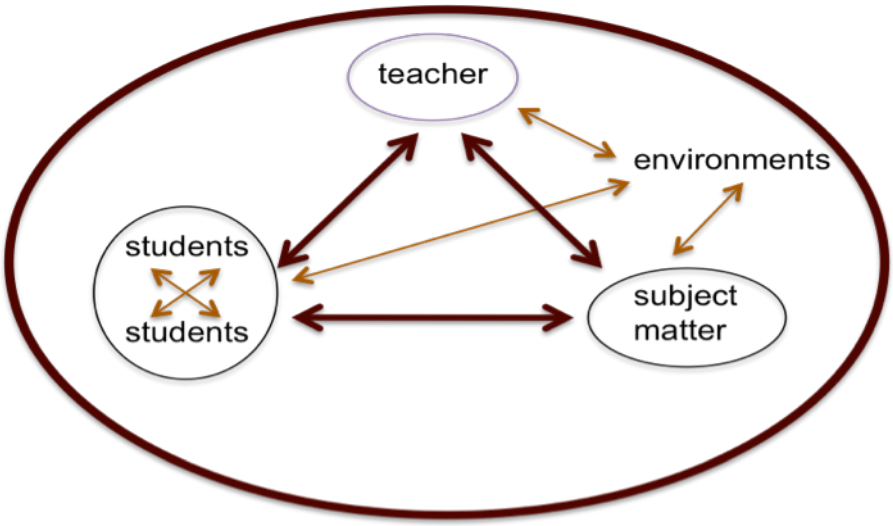

Figure 1: Student Instructional Learning Triangle

This interactive triangle (Cohen et al. 2003; Hawkins 1967; McDonald 1992; Sizer 1984/92) is an attempt to describe enacted teaching. It indicates that opportunities for student learning reside in interactions of students with each other, with their teachers and with the subject(s) they are studying.

> Nearly all formal learning in schools involves the interactions of three actors: the student, the teacher, and the subject of their mutual attention. The character of this triangle is subject to change, varying from pupil to pupil, teacher to teacher, subject to subject, day to day, even minute to minute (Sizer 1984/1992, p. 151-2).

Figure 2 includes the same three elements: teacher, learner, and subject matter and the same conception of the dynamics of the relationships. But, in Figure 2, the professional developer is in the teacher's role. The professional developer's students are the teachers who participate in professional development sessions, and the "subject matter" is "teaching and learning" itself, that is, the entire student instructional triangle. It is worth noting the parallel processes between student and teacher learning.

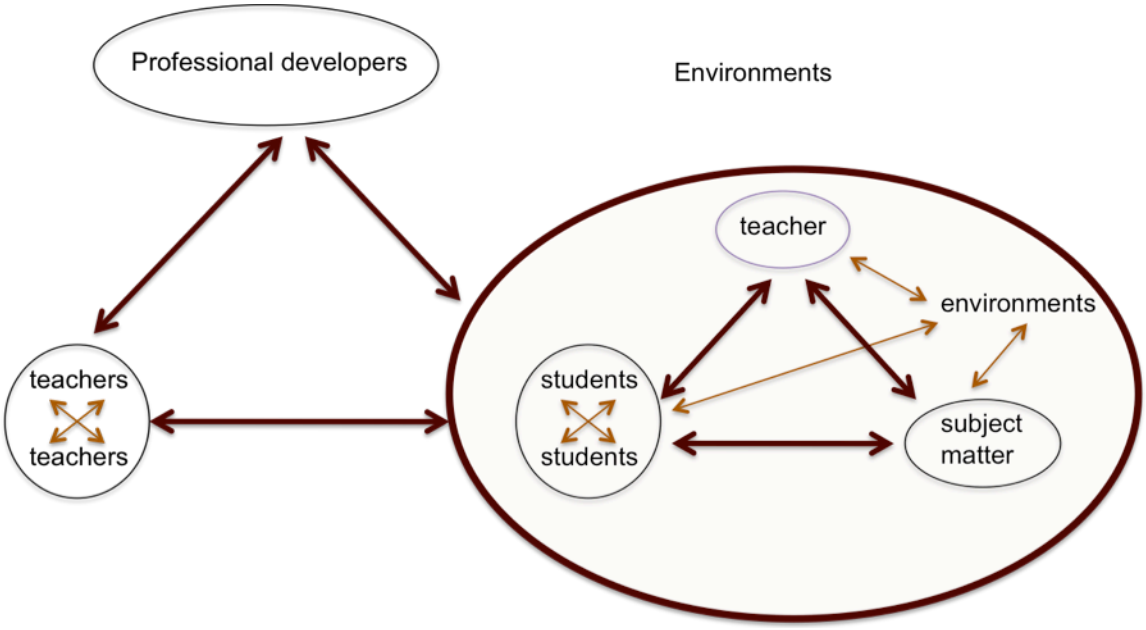

Figure 2: Teacher Instructional Learning Triangle[5]

In studying this triangle, we see that opportunities for teachers' professional learning reside in the interaction among professionals, the subject matter of professional development, and the professional developers. These opportunities for learning can take place outside of the practice of teaching, in workshops, courses, and in study groups designing curriculum or examining student work; or within practice itself, through mentoring and peer coaching (Ball and Cohen 1999; Feiman-Nemser 1998 and 2001; Knapp 2003).

Most importantly, the triangle illuminates the "content" of the subject matter of professional development. The curriculum of professional development for teachers is not adult study of the subject matter (no matter how rich that may be). It is, rather, learning Humash, Siddur, Talmud, and other topics *for the purposes of* teaching them to

[5] Deborah Ball introduced this graphic into the design and curriculum work of MTEI in 1996.

specific learners in specific contexts—what Shulman (1986) called pedagogic content knowledge. As Dewey (1902/1964) said, teachers must be able "to psychologize" the subject matter (p. 352). This means that a teacher must be able to "view the subject matter through the eyes of the learner, as well as interpret[ing] the learner's comments, questions, and activities through the lenses of the subject matter" (McDiarmid et al. 1989, p. 194). Integrating the study of subject matter with issues of teaching and learning provides a path towards addressing the first challenge raised in this paper—that teachers in Jewish education may be novices at the subject matter and novice teachers. (See Appendix 1 for the extension of this approach to thinking about the curriculum for the professional developer.) Focusing on pedagogical content knowledge supports teachers in gaining expertise in both subject matter and teaching at once.

Principles of Effective Professional Development (PD)

Educational researchers[6] argue that to affect teachers' thinking and practice, professional development programs should:

1. Take place within teachers' regular work day or work week
2. Continue over time with sessions building on each other
3. Model active learning
4. Foster a collegial, collaborative environment
5. Focus on building teachers' pedagogical content knowledge
6. Include learning in and from practice

The first two principles speak to the structural characteristics of these initiatives; the next two involve the norms, social contexts and processes of learning; and the last two relate to elements of the content of the curriculum itself. As I unpack these key

[6] There are different versions of this list (Bolam and McMahon 2004; Knapp 2003; Stein et al. 1999; Little 1993). On most lists, "align with new standards" is a key feature. As Jewish education does not have a standards movement to which these PD interventions could align, I have omitted this feature.

features, I will situate them in the contexts of Jewish education in order to help illustrate implications for professional development in these settings.

Take place within teachers' regular work day or work week

It is clear that increasing the number of hours that teachers learn together will not in and of itself improve the quality of learning for their students, but without such time set aside for learning, no change can be expected. Teachers' work in Jewish educational settings needs to be redefined. We can no longer assume that the teaching role includes only preparing and teaching one's class, coming in fifteen minutes before, leaving directly afterwards, and attending an occasional teachers' meeting. Making time for teacher learning requires thinking creatively about how to build this into teachers' ongoing work. How might the work of teachers be designed so that they have time to think, talk, and learn together? Depending on the setting, it might mean paying teachers for an extra evening or Sunday afternoon a month; it might mean figuring out a system of release time, which may involve paying a substitute or organizing times for teachers to work together during electives; it may involve changing the nature of teachers' meetings and taking care of logistical issues through written communication.

Continue over time with sessions building on each other

Recent research has shown that it takes (at least) between 30 and 50 hours or more for professional learning experiences to begin to effect changes in teachers' thinking and practice; it likely takes even more to support enough change in practice to effect student outcomes (Darling-Hammond et al. 2009; Knapp 2003; Wayne et al. 2008). In Jewish education, a study done in five communities (Holtz et al. 2000), reported that 37% of programs met for only one session, and another 49% met for between two and

five sessions. Just 12% of programs met for six or more sessions: even those programs included only eighteen or fewer hours of learning time. Thus, none of the programs were sustained enough to have a reliable impact on teachers' thinking or practice.[7]

Model active learning

If teachers are to create "transformational" learning environments where students learn to challenge each other, question ideas, and build new knowledge, it makes sense that professional development for teachers model these features (Lieberman 1996). Active learning is often mistakenly conflated with interactive techniques, like using manipulatives in mathematics or learning centers when studying Israel. Creating active learning environments is not the opposite of learning from frontal teaching. Aiming for understanding and using one's knowledge is the hallmark of this kind of learning.

What might it look like to apply the principles of active learning to professional development settings? This paradigm suggests that we think about teachers as learners who would benefit from learning opportunities that encourage curiosity, inquiry, analysis, and reflection. Professional development that models active learning supports teachers by creating opportunities for them to work with their colleagues on real problems, to share their own work and give and receive feedback and build new professional knowledge.

Locate professional learning in a collegial, collaborative environment

In an intensive study of the norms of ten Jewish schools in one community, Stodolsky and her colleagues (2006) found that teachers report a congenial atmosphere in

[7] A recent JESNA (Jewish Educational Services of North America) study (2008) suggests that professional development opportunities attended by teachers in day school and after school programs, still are mostly in programs of one day. Only 13% of teachers in complementary (after school) schools and 16% of teachers in day schools have participated in programs of 4 – 6 sessions.

which they were generally helpful to one another and could count on one another. Yet there was little indication that this congeniality translated into meaningful professional discourse among teachers. Only a few schools (3 of 10) reported regular collaboration among teachers on instructional matters, such as coordinating curriculum.

Despite congenial relationships, the work of teaching is overwhelmingly solitary (Lortie 1975). Teacher-writers Troen and Bowles (2003) reflect on the way the isolated nature of teaching practice affects teachers' learning:

> …isolation means that each teacher must learn things by trial and error…Teachers have few opportunities and little encouragement to work together and learn from one another…and collaboration and teamwork are not the cultural norm (p. 69-70).

Teacher isolation prevents teachers learning from one another and building professional learning communities. Professional school cultures that support teacher learning (Little 1987), on the contrary, feature sustained interaction among teachers about teaching and learning.

However, just creating opportunities for teachers to talk together will not create such communities, for the social norms of conversation do not necessarily lead to meaningful learning. It might be fair to say that most adults do not know how to engage in constructive yet critical conversations with their peers, to function as "critical colleagues" (Achinstein and Meyer 1997; Lord 1994). In their conversations with each other, teachers tend to practice the conventions of politeness that are common in the wider culture. In most circumstances, teachers refrain from asking probing questions about a colleague's practice, even when they have the opportunity to talk about professional issues because they do not want to "rock the boat," to appear critical, or to create tension with their colleagues (Grossman et al. 2001). As Lord suggests, teachers

must be willing "to serve as commentators and critics of their own and other teachers' practices" (p. 185). This challenge suggests a question. How can we create professional development opportunities in which the unfamiliar norms of crucial colleagueship are valued, and explicit experience, practice and support for engaging in these kinds of behaviors are provided?

Focus on pedagogic content knowledge

In research on programs of professional development in five American Jewish communities, only 13% focused on Jewish content per se, and another 18% focused on methods for teaching a particular Jewish content. The remaining programs (69%) centered on issues of pedagogy, leadership, or other topics without articulating a concrete connection to Jewish subject matter (Holtz et al. 2000). Given most teachers' lack of Jewish subject matter knowledge, creating professional development opportunities that deal both with Jewish subject matter and also with issues of teaching and learning those subjects is of critical importance.

The goals, challenges, pedagogic strategies of subject matters are different one from another (Stodolsky 1988). Teaching Hebrew is different from teaching Bible, Values, Rabbinics, or Jewish Customs and Practices. Articulating this point, Shulman described pedagogic content knowledge as follows:

> [Pedagogical content knowledge consists of knowing]…for the most regularly taught topics in one's subject area, the most useful forms of representation of those ideas, the most powerful analogies, illustrations, examples, explanations, and demonstrations—in a word, the ways of representing and formulating the subject that make it comprehensible to others….[also,] an understanding of what makes the learning of specific topics easy or difficult; the conceptions and preconceptions that students of different ages and

> backgrounds bring with them to the learning of those most frequently taught topics (Shulman, 1986, p. 9).

If Shulman is right, we need to think about how to provide forums to help teachers in the varied settings of Jewish education develop appropriate pedagogic content knowledge.

Jewish education calls for yet another kind of knowledge related to content. It is the knowledge related to the theological and ideological issues inherent in the subjects we teach as well as the demands of each particular setting. For example, we know that students are troubled with such issues as: Who wrote the Bible? Does God answer prayer? How can one believe in God after the Holocaust? How can I support Israel when I don't support its policies toward the Palestinian people? Professional development for teachers would certainly need to include opportunities to encounter multiple authentic Jewish approaches to these ideas, and opportunities for them to develop ways to articulate their own beliefs. What would professional development look like that would give teachers the inner and external resources they need to deal with thorny issues related to foundational beliefs and ideas raised in the questions above?

Learn in and from practice

Teachers often claim that they learn the most about teaching from experience, but teaching experience alone does not create good teachers. Experience is a great teacher when one has the opportunities, practices, and support to learn from experience. Teacher educators have designed a variety of approaches to help teachers learn in and from practice (Ball and Cohen 1999). Strategies for supporting teacher learning include investigating records of practice—like student work, videos of classrooms, curriculum (Ball and Cohen 1999; Grossman 2005; Lampert and Ball 1998)—and creating opportunities to "rehearse and develop discrete components of complex practice in

settings of reduced complexity… approximations of practice" (Grossman and McDonald 2008). Examples of the latter include planning lessons or units, role-playing explanations or responding to questions, simulating various lesson openings. All of these practices have the potential to provide the support necessary for teachers to learn from their experience of teaching.

How do these characteristics take shape in the context of real professional development in Jewish educational settings?

Given the varied contexts and realities of Jewish schools, can these principles become hallmarks of professional development in these settings? To explore this question, I offer a set of case studies, drawn from the work of the graduates of the Mandel Foundation's Mandel Teacher Educators' Institute (MTEI). Founded in 1995, MTEI prepares senior Jewish educators to design and implement professional development for teachers that embodies the principles and practices outlined in this paper, while addressing the challenges of Jewish education. (Appendix 1) MTEI has four main goals:

1. To promote a vision of Jewish education that:
   - Takes subject matter seriously
   - Emphasizes text study
   - Values children's thinking
   - Fosters children's collaborative learning
   - Sees teachers' learning as central to teaching
2. To support participants in creating a collaborative culture for teacher learning in their schools.
3. To help participants develop deeper and useable Jewish content knowledge.
4. To help participants develop a repertoire of professional development principles and practices that engage teachers in the study and improvement of their teaching.

Multiple evaluations of the MTEI program and its graduates over the last decade have shown that the graduates of the program have enacted professional development

initiatives that are consonant with the principles discussed above (Dorph et al. 2002; Stodolsky et al. 2004; Stodolsky et al. 2006; Stodolsky et al. 2008; Stodolsky 2009).

The programs described below are examples of three such programs not designed by academics or educational researchers; rather, they are initiatives constructed by practicing educators in the field. They can be thought of as "existence proofs"—that is, they present solid evidence that the model of professional development described, though challenging, can be learned and enacted in Jewish educational settings. I have selected these three cases as examples because each takes place in a different setting, has different goals and uses different professional development strategies. Yet they all feature rigorous, cumulative, collaborative learning opportunities that engage teachers in challenging their ideas and each other while thinking carefully about issues of teaching and learning. Although these examples emanate from American settings, international studies of education support these very same principles and practices—and I am confident that with attention to context could be applied in other Jewish communities across the globe (Barber and Mourshed 2007; Bolam and McMahon 2004; Day and Sachs 2004; Darling-Hammond et al. 2009).

Case 1: Day High School --Creating professional learning in a collegial, collaborative environment

Tamar[8] and Aaron, faculty members in a large Orthodox day high school, designed this initiative. Tamar was the head of the language department; Aaron was a teacher in the rabbinics department. Together, they instituted an optional teacher study group, open to all faculty members. Given the typical divide between teachers of Jewish

[8] All the names used in this paper are pseudonyms.

and general studies in Jewish day schools and the disciplinary divide among departments in most high schools, this was a bold move in and of itself. Between sixteen and twenty-two teachers, out of a possible thirty-six, participated regularly. They met once a month during a forty-two minute lunch-break for an entire school year. None of the teachers were compensated for their time, although Aaron and Tamar did receive very modest remuneration for playing a coordinating role.

Tamar and Aaron had two goals:

- To get teachers talking about their practice in a way that opened up a sense of curiosity about teaching strategies and teaching decisions
- To create a professional learning environment for teachers

There were two aspects to their program: 1) a study group in which teachers studied videos of classes in order to practice observing and discussing teaching and learning in a safe context, and 2) classroom observations in which group members would visit each other's classes and then discuss teaching and learning in their "real lives."

The group began by examining a video of a teacher who did not teach in their high school, before moving on to study videos of Tamar and Aaron and one other faculty volunteer. In order to make these videos both practical and engaging, Tamar and Aaron edited a forty-two minute class length video into fifteen-minute clips, carefully selecting some moments they thought represented their best teaching and some representing "problematic" moments. During each of the sessions, the group discussed what they had noticed, working as partners (hevruta-style)[9] to talk about particular topics raised in the

[9] Hevruta study is a traditional method of Jewish learning, which involves two people studying a text together helping each other ascertain its meaning.

discussion of the video-clip.

Although it had been rare at this school for veteran teachers to observe each other unless someone was having trouble and needed advice, teachers in the group made time to visit each other's classrooms, and reported that the opportunity was "intellectually stimulating" and "fun" and that the spirit of these conversations was open and trusting. Teachers wanted to continue discussing issues that emerged in their study group, and so they self-organized four additional study sessions. One such issue involved the question of when and if it is appropriate for teachers to share personal stories or information in class. Another session involved teachers exploring the role of reinforcement in learning and the nature of reinforcement that is appropriate during the high school years.

Aaron and Tamar measured their success by (1) the large proportion of teachers who attended all the sessions, (2) the fact that teachers made the time to observe each other, (3) the comments teachers made, and (4) the additional sessions that teachers set up for themselves. In their evaluations, teachers reported loving the intellectual inquiry in which they were engaged. Although Tamar and Aaron did not have data to show how much teachers actually changed their teaching practice, they did witness changes in the dimension of colleagueship and in how the teachers talked about their teaching.

Case 2: Congregational School--Building a collaborative environment for part time teachers to focus on student learning

The principal of a congregational school for over a decade, Lucy had always offered professional development to her teachers. (There are 9 teachers on Lucy's faculty; the average length of employment in her school is 11.5 years.) These sessions were usually facilitated by outside experts and were "stand alones," not tied to each other

in any substantive way. Although not paid for the time, teachers were contractually obligated to annually attend about eighteen hours of professional development. The 18 hours often included the orientation at the beginning of the year, a community professional learning day, and several discrete sessions during the year.

After participating in a yearlong professional development program led by an MTEI graduate, Lucy began to facilitate her faculty's professional development and work with her teachers in a more sustained fashion. Her goals were similar to those of Aaron and Tamar; she wanted to support teachers talking about their practice in ways that opened up a sense of curiosity about teaching and learning and to create a professional learning environment for teachers. There was one big difference—Lucy's starting point. Lucy was concerned that when she spoke with her teachers after observing them teach, they did not seem to focus on what children were learning. This focus was of critical importance to her. In order to work on all these goals, she decided to study videos from the MTEI video-bank[10] with her teachers.

After two years, Lucy decided she wanted to move teachers' attention to student learning in the "real life" of their congregational school, and she introduced a methodology called Japanese "Lesson Study" (Lewis and Tsuchida, 1998). This strategy involves several deliberate steps: teachers design a single lesson collaboratively; one member of the group teaches the lesson, while others, including the co-planners, observe it; the lesson is filmed and is analyzed by the group which has watched it; and then the

[10] The MTEI videobank (2000): Reading the classroom as text: a videobank and resource guide for investigations of teaching and learning, is a project of the Mandel Foundation. It includes tapes and transcripts of lessons in congregational schools, textual and student curriculum materials relevant to each lesson, examples of student work, and suggested activities that professional developers can use in conjunction with these records of practice.

lesson is revised and re-taught by others. Lucy modified the process in order to "make it work" in her setting and time frame.

The first time she tried it, Lucy and her faculty planned a session on Psalms that was part of the curriculum of the sixth grade. They used printed curriculum materials as their jumping off point. The lesson they created added an opening exercise that framed the lesson and other exercises to help their students find the content more meaningful. These activities included having students look at greeting cards as ways of expressing gratitude and other emotions, reading Psalms, and finally writing their own Psalms. Lucy and the teachers were delighted with the student engagement in the lesson and felt that the opening exercise did help the students "get into" the notion of expressing gratitude via the written word.

The following year, Lucy and her faculty once again engaged in lesson study. This time, they planned a session about Hanukkah. Lucy added an additional dimension to the design: she taught the lesson twice –once to each of two different fifth grade classes. The lesson included students studying in groups, presenting their learning to the class, and collaborating on the development of skits. Teachers also created a "pop quiz" to assess students' learning. Between the first and second teaching of the lesson, the teachers assessed the students' learning and redesigned aspects of the lesson. Between classes, teachers suggested that Lucy work more actively with the students' small groups, listening as they worked and asking probing questions to encourage their thoughts. The second class did better on the pop quiz than the first class.

Lucy felt that the seminars succeeded in establishing a collective collegial forum for teachers to share their ideas and learn from each other. In particular, Lucy felt that

teachers were becoming more reflective and were focusing on teaching in ways that would enhance student learning. In an interview study done after the first two years of the program, teachers' comments support Lucy's assessment. The following comments give some sense of their experience and their learning midway through the experience just described:

> [I am] trying to have a big idea when I am teaching… critically looking at myself.… Okay these were my goals, did I get there? If I didn't get there, where did we go? How can I start this again next week? (Lisa)
>
> When we have a chance to meet professionally like this, this is a whole different story. It is so wonderful to be able share ideas and share thoughts and share methods with colleagues in this way that wasn't really afforded to us before, when it was like meeting style or you know, somebody else coming here. (Rivka)
>
> I think it put teachers on the same wave length…Where are we as a group of teachers? My kids are going on to other teachers. We are all teaching the same kids. If we have different ideas, having a team philosophy. We do it differently, but have the same goals. (Mimi) (Stodolsky et al. 2008)

Case 3: Central Agency Sponsored Initiative –Increasing pedagogical content knowledge

This central agency sponsored program was a year long professional learning experience, including a trip to Israel, focused on teaching about Israel. In contradistinction to the two other programs, this one was highly subsidized. Participants paid only $750 for the 10 day Israel trip that was core to their learning experience. In addition, among the thirty educators who participated, there were both novices and veterans. The participants delivered services to children and youth from fifth grade

through high school in both formal and informal settings. The group met monthly during the academic year.

Two central agency consultants, Susie and Sarah, directed this initiative, which had two distinct goals: (1) increasing participating educators' knowledge and connection to Israel, and (2) engaging these educators in a collaborative and interactive learning experience that they could use as a model for creating active learning for their students. Susie and Sarah designed an intervention using the principles of problem based learning (PBL), which is a strategy that challenges students to find and use appropriate resources and work cooperatively in groups to better understand and seek solutions to real world problems.

Sarah and Susie wanted to connect participants to Israel via interests and passions that they trusted would be shared by their participants and which could connect them to Israel's land and people. They chose to focus on environmental issues in Israel and asked group members to choose among six different aspects of Israel and the environment. Participants formed teams to investigate issues, such as water, sustainable communities, air, animals, plants, and land.

Susie and Sarah framed problems on which team members did research over the course of the months prior to the ten-day Israel trip. For the group studying sustainable communities, Susie and Sarah framed their problem as follows:

> Israel has not developed a strong carbon free energy strategy. As Israel's energy demand grows, Israel continues to invest in natural gas, a carbon-based energy source that is imported from Africa, rather than develop solar energy that is local and more sustainable….
>
> What does Israel need to do to develop more carbon-free/solar alternative energy for use inside Israel? What

> barriers exist and how can Israel get past them? What Jewish sources can inform our thinking about sustainable environments and the importance of using alternative energy*?* (Written communication from Susie and Sarah)

In Israel, the group visited Kibbutz Lotan, a sustainable community in action, where members are dedicated to making their kibbutz totally self-sufficient in terms of energy. They saw solar panels and ovens, and multiple creative ways in which this kibbutz reuses and recycles products and materials that others would relegate to garbage or waste. Participants had a chance to ask experts and regular kibbutz members about their thinking about alternative energy sources and to probe the obstacles to spreading these strategies more widely. Participants crawled in and out of igloo-like solar huts, shaped bricks from mud and straw and baked them in the sun, and baked brownies in the solar ovens. They developed an experiential understanding of what it means to be energy independent—off the national grid.

When the participants returned from Israel, members of all the groups organized a fair for each other (and invited guests) to share what they had learned about the problem they had been studying and created problem-based learning experiences for their students. One example of team members' engagement with their own students serves as an illustration of this work. Students did a project on improving the school environment by using found materials in the waste bins of the synagogue and creating lightshades and artistic sculptures. Students shared their learning, displaying pictures of different stages of the PBL learning process along with a variety of artifacts that illustrated their work, e.g., the identified problem, the worksheets that they created indicating what information they needed to gather to learn more about the issues, evidence of group work and evaluation.

Given the relatively short time line and the ambitious goals of the project, Sarah and Susie were able to see that educators were indeed working with their students on PBL learning experiences. They wished that funding for the program had been longer than twelve or thirteen months so that they could monitor and assist participants in the program develop PBL learning experiences related to Israel and other curriculum-based projects, but worried that inviting participants to join an eighteen-month initiative would have put them off.

Analysis of Cases

When we examine these three cases, we see the enactment of the principles of effective professional development (see Table 1). Each case was embedded in a different context, each was at least a year in length and involved multiple sessions that were linked and each involved serious, collaborative work on the part of participants. Facilitators carefully chose goals for teachers' learning and provided learning opportunities, which encouraged teachers to engage in inquiry into the practices of teaching and learning. The facilitators created active learning environments through developing records of practice (videos in the case of Aaron and Tamar; problem based learning challenges in the case of the Susie and Sarah consultants) and also "approximations of practice" (co-planning, evaluating and re-planning a lesson in the case of Lucy; the learning fair in the case of Sarah and Susie).

Principles of Effective PD	Day High School	Congregational School	Central Agency
Cumulative and ongoing	X	X	X
Job embedded	--	X	--
Active learning	X	X	X
Collegial, collaborative environment	X	X	X
Pedagogical content knowledge	--	X	X

Learn in and from practice	X	X	X

Table 1—A Comparison of the Three PD Cases

These cases give us a sense of what is possible, even within the significant constraints of the real world of Jewish education. Yet each of these cases seems a bit precarious, for each relied upon energetic leadership and groups of teachers that were willing to go beyond the call of duty and beyond their paid hours to work together on improving their teaching craft. The third also relied on a generous grant to support educators' trips to Israel. For these kinds of programs to be sustainable over the long term, they would need to be built into the system more fully. This kind of ongoing learning would need to become part of a teacher's job description, part of the regular school day and school year, and part of the educational budget. In the meantime, the cases are inspiring stories of what is possible when teachers find ways to learn together, investigating their practice, in a context of curiosity and trust.

Conclusion

From the perspective of scholarship and developing a more extensive knowledge base, this paper suggests a variety of avenues for future research related to teachers' knowledge and practice. While we know that it is possible to produce professional developers who can design and implement quality programs infused with the principles of effective PD, we do not know much about the impact of these initiatives on participating teachers' ideas about teaching and learning and their classroom practice.

In terms of pedagogic practices, we need to study what and how teachers modify their teaching practices based on their PD learning experiences and whether any of the

changes "make them" more effective pedagogues. Do any of the PD practices change the nature of communication in the classroom; help teachers become more powerful designers of active learning experiences; encourage the development of powerful pedagogic content knowledge?

With regard to student outcomes, the gold standard for assessing effective PD in general education is the connection between professional development for the teacher and students' achievement. Although there is insufficient research[11] on this relationship in general education, there is even less in Jewish education.[12] Moreover, in Jewish education outcomes for student learning are underspecified even when goals are stated. In order to track the impact of PD on student learning, we would have to take the arena of learning in Jewish subject areas more seriously and be willing to invest in substantive work on developing clear and worthwhile outcomes for Jewish learning in the variety of settings in which it takes place.[13] Assessments of student learning that can produce data about changes in students' knowledge and understanding will also need to be developed.

Other avenues of inquiry relate to professional developers and their education and practice. We can ask questions about professional developers that are similar to those asked about teachers and students. Starting with the notion of outcomes, if the gold standard of evaluating the effectiveness of teacher professional development is change in student outcomes, does it not make sense that the gold standard for professional

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[11] Porter et al. 2000; Darling-Hammond et al. 2009; Wayne et al. 2008.

[12] The Jewish Educational Services of North America (JESNA) evaluation (2006) of the Nurturing Excellence in Synagogue Schools (NESS) project used student attitude toward education and continuing beyond Bar Mitzvah as measures of outcomes. Although they are both very important, neither is the kind of subject matter outcome being measured by current educational research.

[13] See the Benchmarks and Standards Project for an example of such work in the area of Bible teaching and learning in day schools, a project of the Melton Research Center of the Jewish Theological Seminary.

developers is "teacher outcomes?" Does the PD offered using the new paradigm suggested in this paper help teachers develop more effective teaching practices? We have little research in general or Jewish education that provides a window on this question (Wayne et. al 2008; Stodolsky et. al 2008). Based on research in general education (Ball and Cohen 1999; Knapp 2003), this paper has suggested that there is an isometric relationship between the education of students, teachers, and professional developers. Because there are few programs designed to develop professional developers, there is little to no research that examines this premise in an empirical way. As we try to make more robust PD an ongoing feature of teacher work, we could benefit from more research that investigates these questions.

Policy Implications

Because we are addressing a practical problem here, that is, the improvement of teachers' practice in the service of improved student learning, there are other implications as well. If we believe that students' learning is connected to teachers' learning, and we want to improve students' learning, we know what to do:

- Make on-going learning part of what it means to be a teacher
- Set aside time, money, and human resources at each school and central agency to design and facilitate professional development that follows the principles outlined in this paper
- Develop programs for the "trainers of trainers"

What can be done to help make this a reality? Because of the complexity of the issues, action needs to come from all the stakeholders who care about the supporting the

work of teachers and improving the learning experiences of students. For academicians and professional developers, the implications are obvious:

> Professional Developers: provide principle-based PD; develop rich cases of principle-based professional development to augment those offered in this paper; develop records of practice that could be used in the learning opportunities for teachers and professional developers.
>
> Academicians and Educational Researchers: prepare personnel to lead PD efforts; evaluate PD programs[14] and their impact; investigate the impact of PD on teachers' ideas and practices; study the impact of PD on teachers' practice and student achievement.

Other stakeholders also need to step up to the plate in order to create the necessary climate and infrastructure supports for the implementation of professional development as a leverage strategy to improve the field of Jewish education. For example:

> Parents: let the principal know that you value both professional development for teachers and those who are skilled in providing it; use parent education committees to help finance and structure in the time for this work.
>
> Teachers: demand that ongoing professional learning opportunities be built into your contracts.
>
> School Leaders: support ongoing professional development for your teachers by building in time and opportunities for PD; create formal positions (part-time or full-time depending on size and complexity of your institution) for professional developers; support the ongoing professionalization of those who will plan and lead these initiatives in your institutions.
>
> Central Agency Personnel: develop personnel and programs that offer PD and/or consult and support school based personnel in planning and facilitating principle-based PD.
>
> Foundation Supporters and Personnel: encourage the development of and support for grants (and the development of grants) for PD that embody these principles.

[14] Sales et al. (2007) and JESNA updates include listings of PD offerings, but one cannot ascertain which, if any, are grounded in the principles of effective PD.

This call to many stakeholders draws attention to an issue that goes beyond the educational challenges that this article addressed. It is clear from the cases presented in this paper that even very experienced, knowledgeable teachers value substantive, collaborative professional learning opportunities. It is also clear that leaders can be prepared and supported to head up such ambitious initiatives. What remains unclear is the extent of Jewish communal commitment. How committed are we to student learning and, by extension, to teacher learning?

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Appendix 1[15]

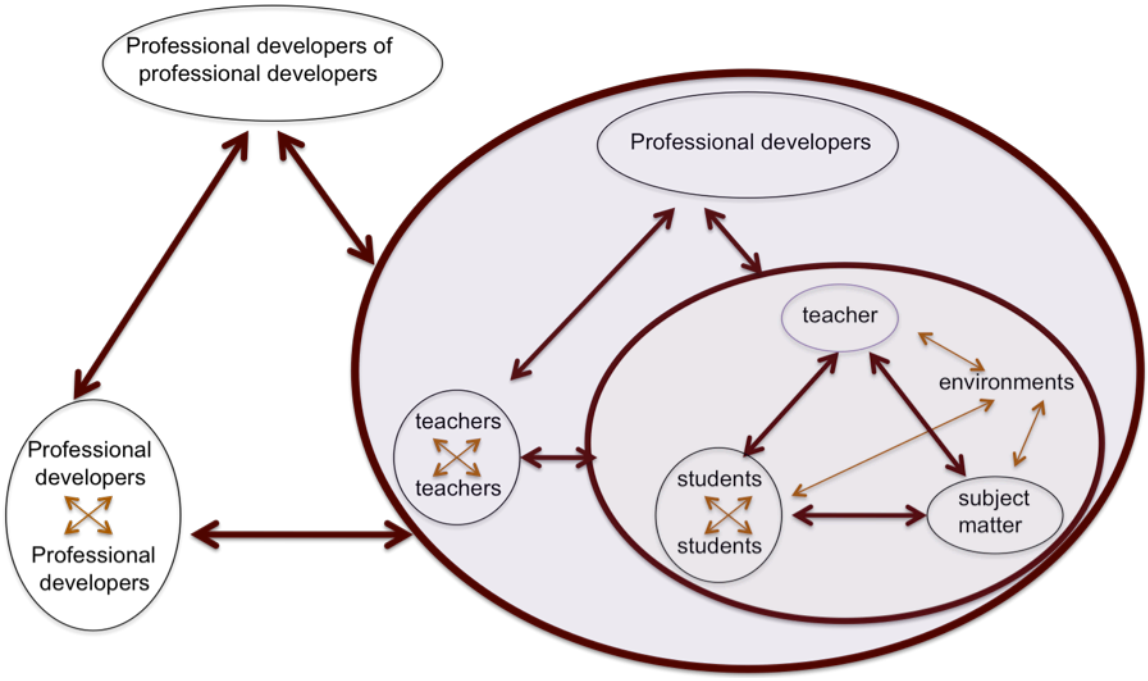

Figure 3: Professional Developer Learning Triangle

In the same way that teachers need to think about the student as learner, the professional developer must think about the teacher as learner. The subject matter of the curriculum for professional developers is the learner instructional triangle as well as the teacher instructional triangle. It includes engaging with fellow professional developers and together "getting smarter" about how to help teachers learn to teach their students become active learners of "X". This process also assumes a teacher, the professional developer of professional developers.

[15] Deborah Ball introduced this graphic into the design and curriculum work of MTEI in 1996.

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