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HaYidion: The RAVSAK Journal

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Editor: Elliott Rabin, PhD

Design: Adam Shaw-Vardi

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RAVSAK

120 West 97th Street, New York, NY 10025

p: 212-665-1320 • f: 212-665-1321 • e: info@ravsak.org • w: www.ravsak.org

**The views expressed in this journal do not necessarily reflect
the positions of RAVSAK.**

RAVSAK would like to thank our associate members:



From the Editor

■ by **BARBARA DAVIS**

I read a wonkmeme today to see if what a
wonkblogger concluded from crowdsourcing
was trending in the twittersphere.

I actually have little idea what that sentence means, although I wrote it. Apparently I'm 404 and have no Tweet cred, but I did engage this week in a heated Facebook exchange about Jewish day schools (which regrettably degenerated into hostility); I heard a story on BBC radio about female journalists who are bombarded with incredibly misogynistic hate mail every time they publish a feminist piece online, and I watched a Jewish politician self-destruct via text message. There are clearly downsides to technology.

But the times they are a-changin' and you don't need a weatherman to know which way the wind blows. Every day brings us new ideas, new technology, new words and new concepts. In the education world, STEAM trumps STEM, gamification takes over the curriculum, instruction is flipped, synchronicity beats asynchronicity, learners become makers and "classroom" becomes a very bad word. Or so one is led to believe from the intriguing articles that comprise this fall's *HaYidion*. In Panama, desks and laptops are being replaced with tablet desks, whiteboards have replaced blackboards everywhere and the coolest teachers are using TED-ed, Knewton, Kerplroof and CarrotSticks.

The timing of this issue reflects its timeliness. The coincidence of the new school year and Rosh HaShanah has always pleased me. I see no reason why a new year should start in the dead of winter. I love the fact that each autumn we welcome back our students with a sense of fresh purpose, newness and excitement—just as we approach the new year with resolve to atone for past failings and take up the challenge of living life fully, creatively and well in the months ahead.

This sense of opportunity, of optimism and enthusiasm pervades the work of the authors in this issue. They seek to break the bonds of the past and open the way for all of us to enter a future of virtually limitless potential. There are some caveats included, as well as some really sound advice. There are pieces that will inspire an instant desire for emulation and others that will make you sit back and say, "Whoa! That's too far out for me." But we hope that you will read them all, share them widely and benefit from them greatly.

May the upcoming year be a good, sweet, dynamic and educationally rewarding one for all! ■



*Dr. Barbara Davis is the secretary of RAVSAK's Board of Directors, executive editor of HaYidion and head of school at the Syracuse Hebrew Day School in Dewitt, NY.
bdavis74@twcyn.rr.com*

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From the desk of Rebekah Farber, RAVSAK Chair

It is a daunting task but a real privilege to be writing my first column as chair of the Board of Trustees of RAVSAK. With a circulation of nearly 4,000, *HaYidion* is no small forum in which to express my opinions. It is an honor to have a voice in this superbly crafted professional publication.

As I begin my tenure, my family, friends and colleagues have repeatedly asked me two questions: Why in the world are you taking on this job? and, What is your vision for RAVSAK? Since these have been in the forefront of my discussions even before taking office, I thought I might attempt to answer them here.

Why take this job?

I was asked to be the successor to our illustrious founding chair, Arnee Winshall, a year before I was to begin. We at RAVSAK believe mightily in succession planning as a best practice for ourselves and our constituent schools. I had plenty of time to think about the job, and I did some serious soul-searching. I am at a stage in my life when community service is very much an option, not an obligation. I have spent years serving my community, and part of me felt it was time to work on my own personal goals and turn the helm of leadership over to younger folks or to those who felt more intent on making their mark.

But a nagging feeling stirred in my kishkes: that Jewish community day schools are the last great frontier in which we have the opportunity to have long-term effect on the longevity and continuity of the Jewish people. Because I have seen firsthand the incredible impact a day school education has on young people, I felt strongly that I had a unique opportunity to strengthen this board, this organization, and ultimately this field, and that to pass the job on to someone else would have been duplicitous to my stated cares and concerns.

I decided that I had been brought to this position at RAVSAK through a series of educational and professional positions and it was time now to step up and play this important role. I am grateful to my colleagues, both professional and lay, at the Abraham Joshua Heschel Day School in Northridge, CA, and the New Community Jewish High School in West Hills, CA, for their encouragement and cultivation over the last 14 years.

What is your vision for RAVSAK?

It may seem magniloquent, but I truly believe the work of RAVSAK is *holy* work. There are few things in life that can have more impact on

a people than education. There is no tool with greater social impact, whether it be educating girls in underdeveloped countries or creating access to college in America. At RAVSAK we have the unique task of representing, networking, enriching, and strengthening 130 schools of over 25,000 students. What greater work can there be than to raise up generations of Jewishly literate, academically proficient, and morally sound members of our community? To me there is no work more holy.

To that end, the best possible goal for RAVSAK is to be strong administratively, sound financially and strategic in all our endeavors. My primary goal is to build out our board to be ever more thought generative and financially supportive. We currently have a small but extremely dedicated and hard working board. Just like our professional staff, that board must grow in order to support the business plan to which we have committed. Board growth will be key to our continued success. My further goals are to actively steward collaboration and cooperation with other like-missioned educational institutions. In my previous role on a large foundation board, I learned that, sadly, there are scarce dollars for white, middle class schools (albeit Jewish). We do not have the luxury of duplicative services. Relationship-building will be key to our continued success.

Another of my goals for RAVSAK is to stay focused and mission-driven. It is easy in this nonprofit world of funders, constituents, competitors for philanthropic dollars and those with other vested interests to get pulled off our course and away from our strategic vision. But that vision has been well constructed to strengthen RAVSAK and serve the field of Jewish education. Staying true to our goals will be another key to our continued success.

Lastly, my goal is to build our network of friends. RAVSAK has historically been a “behind the scenes” professional association drawn upon for its expertise by heads of schools and bureaus of education. But RAVSAK is much more than that and it is important to create a constellation of supporters knowledgeable about RAVSAK’s programs, assets and capacity. Only then will we be truly sustainable.

I look forward to the tasks ahead and to the privilege of working with our amazing staff headed by Dr. Marc Kramer and Dr. Idana Goldberg. I also invite your comments and feedback and welcome the opportunity to have open dialogue on any of the above or other topics.

With warmest wishes for a blessed Jewish new year and school year.

Rebekah



Rebekah Farber is chair of RAVSAK's Board of Directors and co-founder of the New Community Jewish High School in West Hills, California. rebekah.farber@ravsak.org

Good & Welfare

Welcome to RAVSAK's new member schools: **Jewish Academy of Arts and Sciences**, Albuquerque, NM; **Rockland Jewish Academy**, West Nyack, NY; and **Yavneh Day School**, Los Gatos, CA. Bruchim haba'im!

Mazel tov to all the incoming school leaders this year:

- Mollie Aczel, Interim Head of School, **Shalom School**, Sacramento, CA
- Dr. Lee Buckman, Head of School, **Anne & Max Tanenbaum Community Hebrew Academy of Toronto**, ON
- Dr. Jeffrey Davis, Head of School, **Tarbut V'Torah**, Irvine, CA
- Mike Downs, Head of School, **Jewish Day School of Metropolitan Seattle**, Bellevue, WA
- Jennifer Fraenkel, Head of School, **Akiva School**, Westmount, QC
- Dan Goldberg, **Paul Penna Downtown Jewish Day School**, Toronto, ON
- Dr. Michael Kay, Head of School, **Solomon Schechter School of Westchester**, Hartsdale, NY
- Rabbi Darren Kleinberg, Head of School, **Kehillah Jewish High School**, Palo Alto, CA
- Larry Kligman, Head of School, **Abraham Joshua Heschel Day School**, Northridge, CA
- Abby Levine, Principal, **Addlestone Hebrew Academy**, Charleston, SC
- Mitchell Malkus, Head of School, **Charles E. Smith Jewish Day School**, Rockville, MD
- Julie Piaker, School Administrator, **Hillel Academy of Broome County**, Vestal, NY
- Sharon Polin, Head of School, **Community Day School**, Metairie, LA
- Helen Siegel, Interim Head of School, Heilicher **Minneapolis Jewish Day School**, Minneapolis, MN
- Susan Siegel, Head of School, **B'nai Shalom Day School**, Greensboro, NC
- Dr. Scott Sokol, Head of School, **MetroWest Jewish Day School**, Framingham, MA
- Adam Tilove, Head of School, **Jewish Community Day School of Rhode Island**, Providence, RI
- Gary Weisserman, Head of School, **Milken Community High School**, Los Angeles, CA
- Rabbi Jeremy Winaker, Head of School, **Albert Einstein Academy**, Wilmington, DE
- Shari Wladis, Interim Head, **Jewish Academy of Orlando**, Maitland, FL

Bialik Hebrew Day School of Toronto opened a second branch, the Ben and Edith Himel Education Centre, on the Joseph and Wolf Lebovic Jewish Community Campus in Vaughan, north of the city. The new branch provides Jewish children with access to Jewish education only steps away from their homes and other Jewish community facilities. When completed, Bialik's second home will be able to accommodate over 800 students and will include a unique Israel Interactive Centre, an auditorium/gymnasium, junior gyms, an art room, a fully equipped resource center and state-of-the-art technology. ■



Welcoming Lisa Inberg

Lisa Inberg is RAVSAK's new Student Programs Coordinator. Lisa will be placing her efforts into the growing demands of the already successful Hebrew Poetry Competition, Judaic Art Competition, JCAT and the Moot Beit Din. Lisa has a passion for Jewish education and community development. Prior to RAVSAK Lisa worked in Sydney, Australia, for the Board of Jewish Education where she developed student programs for Jewish teens, wrote informal and formal curriculum programs, coordinated workshops and camps and organized and led Israel programs. Prior to this, she taught history and Jewish studies to elementary, middle and high school students at the Emanuel School in Sydney. She has bachelor of arts (psychology and history) and a master's of teaching from the University of Sydney. ■



Dear Cooki

■ by **COOKI LEVY**

I am head of a small (150 students) K-8 school. The administrative team consists of a Judaic studies director, a business manager and me. Budgetary constraints prevent us from hiring additional administrative staff. The board of directors wants to see continued growth of the school, not only in enrollment, but in curricular and programmatic offerings, use of technology and professional development of staff. While I agree with these goals and know I can achieve much in any one of these areas, the expectation that I will accomplish much in all areas at once, with no additional professional support, is unrealistic.

How do I 1) convince my board to modify their expectations, and 2) motivate my teaching staff to take on additional non-teaching assignments at no extra pay to help in some of these areas?

While it is probably little comfort to you, the situation you describe is not at all uncommon. Heads are often caught between the time-consuming demands of the day-to-day operation of the school, the small and large crises that inevitably emerge, and the desire to think strategically, formulate a vision and implement exciting changes. So what to do?

First, you must listen carefully to the expectations of your board. Hear them out; ask clarifying questions; share your vision on each issue. Do NOT be the naysayer, the one who consistently says it won't work or I cannot do it or I have no time.

Say yes—and then add the conditions that must be met first (e.g., before we train the teachers in the use of SMARTboards we must have a plan of when we will purchase them, how we will pay for them, where they will be placed, and what our educational objectives are for their use). Or, say yes, and then add a timeline, determining the order in which you may be able to address issues or changes, emphasizing a multiyear plan. The message to the board (and to yourself!) is that growth plans must be carried out over several years (usually 3 to 5). Once you agree on goals, your work with the board is to prioritize them, sending the message that all cannot be done at one time.

Second, look outside the school for help. Check what resources are available to you from the local public school board, from the local university, from organizations dedicated to the promotion of specific subject areas and skills. Network with

other Jewish day school leaders who may be willing to share some of what they have achieved with you. There are numerous foundations that may be willing to fund specific projects, and local businesses may agree to support your work.

Third, build a team of colleagues and share the work. Many teachers and support staff are pleased to give their time and energy to a project in which they believe and where they feel their input is valued and included. Share your vision with the staff; elicit their feedback; include them from the start in any new initiatives so that they feel that buy-in that is so crucial to garnering help and support. The important thing is to be able to delegate responsibilities to those willing to take them on (and able to perform them, of course). Your challenge is to allow them to carry out their tasks their way, not necessarily yours, as long as the clearly set goals are met and budgets are respected. Of course you must monitor their progress and know what they are planning; make sure they are on track and be available to answer questions, but do not micromanage them! And while you may not be able to pay them for the extra time and effort, you certainly can and should reward them with recognition, perhaps a decrease in duties, an extra personal day... There are many ways to acknowledge teachers that do not carry a large price tag.

Leading a Jewish day school is a complex task, and the demands on your time and energy are vast. Rather than focusing on the resources that you do not have, look at what you do have, empower those around you to help, prioritize, set realistic goals—and appreciate the growth that emerges. ■



Cooki Levy is the director of RAVSAK's Head of School Professional Excellence Project. Previously, she served as the longtime head of the Akiva School in Westmount, Quebec. Dear Cooki accepts questions from all school stakeholders. To submit a question, write to hayidion@ravsak.org, with "Dear Cooki" in the subject line.

RAVSAK's Jewish Court of All Time

What would it look like if Albert Einstein, the Rambam and Golda Meir were sitting in the school cafeteria discussing whether to award reparations to the descendants of passengers from SS St. Louis?

That's exactly what happens when students interact with RAVSAK's Jewish Court of All Time (JCAT) program.

In partnership with the University of Michigan and University of Cincinnati, RAVSAK has offered JCAT to Jewish middle school students across our network for the past four years. More than **1600 students** from 15 schools have participated in this exciting initiative.

In the 2013-2014 school year, JCAT will run in 10 schools, and we are excited to have the Davidson Graduate School of the Jewish Theological Seminary join as a new program partner.

Through this program, middle school students will be linked to undergraduate and graduate students at the University of Michigan and the Davidson School, who will act as mentors to guide students' progress.

What are students saying?

"I really had to think during the JCAT lessons. I had to make the right choices during the times when I was running for justice of what my character might think. I really had to stretch my band of thinking."

I really liked JCAT, I think it was awesome how we got to be our own characters and act like them. I think it was a very good experience to learn about new people.

"I think that we should be able to do this all year. I looked forward to it every other day and I hope next year we can do this again."

6th grade students



What are teacher's saying?

My students are engaged in Jewish history learning in a fun, dynamic and interactive learning space. Students develop research skills, hear different voices of significant Jewish historical figures and are excited about their learning.

Nance Adler, Jewish Day School of Seattle

How can my school participate?

The application process for the 2013-2014 academic year have closed.

For further information on how to apply for JCAT for the 2014-2015 academic year, contact Lisa Inberg, Student Programs Coordinator:

Email: linberg@ravsak.org
Phone: 212 665 1320
Website: www.ravsak.org



Remove this Word from Your Vocabulary!

21st Century Learning Needs

21st Century Learning Spaces

■ by **Prakash Nair** and **Catherine Roberts-Martin**

An international authority in school design, himself a day school parent, explains the philosophy of contemporary educational spaces and illustrates steps schools can take to expand and inspire learning.

Most every time we read any education article or news column online these days, a particular word pops out that makes us cringe. It's an innocent looking word, not obscene or controversial, and most people wouldn't even blink to see it in print or hear it spoken. Yet to us it's a word that's holding this country back from achieving our educational goals in the 21st century, a word first used around 1811 and reflecting the education of that time. So what is this terrible word?

Classroom.

"Classroom" is used routinely as a metaphor not just for schools, but also for education in the broadest terms. However it shouldn't, it must not anymore, or our students won't be able to compete in this current and future world of rapid, endless change. It's a word that's simply too limiting when technology can immediately expand a student's mind and experiences beyond a room with four walls.

Here's an enlightening experiment: fire up your web browser if you aren't reading this online, and Google the word "classroom." Now, look at the images that come up on that first page. What do you see? Whether the image is from today or from the historical society, there are certain shared characteristics in it: uniform desks in rows, teacher at the front, students either sitting there or raising their hands. Now, Google the words "Google office" and compare these images to those of the classroom. If you have a kid handy, ask them where they'd rather be.

Our firm's work planning and designing schools around the world provides us with a vast experience of 21st century learning best

practices. This work is "cutting-edge," but only because most people are not doing it. In the world of education, even safe, well established ideas backed by years of research are considered "experiments" simply because they are not familiar. Compare that to the world outside school where without risk-taking, companies today will never outperform the ones willing to push the boundaries of the possible. And these new best practices in all their variety have one thing in common: the need for new kinds of spaces to support them. The offices of innovative companies like Google, Apple and Skype should be the role models for our schools, not a space derived from a word put into use in the early 19th century.

Education Design Principles for Today and Tomorrow

Environmental scientists have published dozens of studies that show a close correlation between human productivity and space design. This research clearly demonstrates that students and teachers do better when they have variety, flexibility and comfort in their environment—the very qualities that classrooms lack. Those Google images of classrooms illustrate the problem because they show one basic learning modality, teacher lecture, with all knowledge passing through one source in one way. There's little variety, flexibility or comfort visible, and each student is expected to learn the same thing in the same way. While it's true that technology is becoming integrated into learning today, we can tell you that each school we visit has a different level of

[CONTINUED ON PAGE 12]

Students and teachers do better when they have variety, flexibility and comfort in their environment—the very qualities that classrooms lack.



Prakash Nair is the president of Fielding Nair International, an architecture and education firm that specializes in the design of innovative schools; he is a futurist, a visionary planner, architect and one of the world's leading change agents in education and school design. prakash@fieldingnair.com



Catherine Roberts-Martin is FNI's media coordinator and chief editor of DesignShare.com, one of the world's largest forums for innovative school design. cathy@fieldingnair.com



FIGURE 1 This first image shows part of Hillel elementary before the reconfiguration, a typical formation of classrooms along a central corridor.



FIGURE 2 Here is that space during construction, where parts of the walls were removed and replaced with windows and sliding glass doors.



FIGURE 3 Here's the completed space. Glass doors connect the commons with a learning studio, which in turn is connected to another learning space. These doors render spaces as adaptable, allowing for connection when open and acoustical separation when closed. *The space is agile.*



FIGURE 4 This computer lab was a central space in the school before rehab. Technology and experimental workstations were physically separated from the rest of the school.



FIGURE 5 Now without fixed desks, this space is the school's heart, its "mercaz" / learning commons with integrated technology via Wi-Fi and tablets. Student-directed learning thrives: independent study, small-group activities and PBL, with teachers as mentors. *Light and comfortable furnishings can be moved by students.*



FIGURE 6 Outdoor spaces are often underutilized, even in warm states like Florida, yet they can inexpensively add learning space to schools. This space was uninviting and only provided transition space between buildings.



FIGURE 7 Now, with shade, furnishings and direct access to learning spaces inside, this little courtyard provides learning with the natural elements. School Wi-Fi enables students to use their tablets and laptops outdoors. *Students breathe fresh air and get plenty of sunlight.*



FIGURE 8 Teachers in this learning community don't have assigned spaces; they share a professional office with a clear view of the commons. *Teachers collaborate as much as students do; having time and space together allows that to happen naturally.*



FIGURE 9 Two learning studios share a sliding wall, allowing them to open for a larger event and to separate when needed. Transparency enables students to pursue independent study in the commons and still be monitored from these spaces. *Collaboration can easily occur here.*

participation, and in very few places can students comfortably access smartphones, tablets or a laptop for learning, so they work on the floor in corridors. But before we get to the spaces they need, let's define some basic principles for 21st century learning.

Our firm specializes in change agency, and one of the first steps we take with school clients is to ask them to list some universal design principles that most appropriately represent their own ethos and aspirations. Here are some that tend to rise to the top when schools define 21st century learning: (1) personalized; (2) safe and secure; (3) inquiry-based; (4) student-directed; (5) collaborative; (6) interdisciplinary; (7) rigorous and hands-on; (8) embodying a culture of excellence and high expectations; (9) environmentally conscious; (10) offering strong connections to the local community and business; (11) globally networked; and (12) setting the stage for lifelong learning.

Designing a school today also means designing it for tomorrow, and the key to that is agility, the ability of a space to transition quickly and easily between different modes of learning. Whether the spaces lie within a school or some other facility that students access during the day, we know that teachers may need to work in teams, parents and community volunteers who come in to help must be accommodated, businesses may have the resources to offer off-site training and community organizations could permit the use of their recreational, cultural and sporting facilities. Very few of these kinds of spaces that make teaching and learning better and richer look like a traditional classroom.

A school community might even conclude that it makes no sense to break down the school day into fixed "periods," and that state standards can be better met via interdisciplinary and real-world projects, not teaching to the test. So how can we build flexible options into new school spaces? How can we even refurbish current spaces cost effectively? And what do these spaces look like?

Picturing 21st Century Learning Spaces

The following is a comprehensive, summer-fix case study that illustrates the way a traditional classroom-centric school can evolve into a 21st century "learning community" (explained below), and the benefits to learning that can arise from a low-budget, cost-effective renovation.

Hillel Academy is a private Jewish community day school in the Tampa Bay area, accredited by the Florida Council of Independent Schools, and a RAVSAK member. By doing a sequence of renovations, the school was able to transition to 21st century learning spaces incrementally, leading to great success. The first project involved simply opening up the early learning center to the outdoors. The second project was a rehab of the elementary school building, which opened up a traditional row of classrooms along a central corridor and turned it into a Learning community

with a large Learning Commons. The third project was a redesign of the middle school, but this case study focuses on the elementary school.

Better Words Define New Ways of Learning

Many new words that can replace "classroom" as the metaphor for education today: learning community, mercaz or school commons, outdoor learning spaces. What they all have in common is that they *expand* outside of four walls, one teacher, twenty students. This expansion should continue well beyond school grounds to involve parents, community members, even the world at large to become a part of school life.

From a design standpoint, the key to change is to move away from a classroom-based school to a learning community-based school. A "learning community" looks beyond individual classrooms and classroom pairs; it defines a larger group of up to 150 students and around 6 to 8 teachers as an operational unit where "everyone knows your name." They become an integrated community, in contrast to

the classroom model with discrete groups of 25 students and separate teachers. A grouping of this size immediately breaks down the anonymity of large, impersonal and institutional schools. As with Hillel Academy,

a learning community can be easily created within one wing of a traditional school building, and a whole school can be broken down into a series of learning communities.

A string of classrooms provides no learning advantage to individual students beyond what they would get from a single classroom. However, when the space occupied by the same group of classrooms along with the hallway that serves them is transformed into a learning community, the opportunities to personalize learning and increase the number of teaching and learning activities increases dramatically, as the Hillel Academy case study demonstrates.

School spaces should respond to current best practices, not those of the past. Students must be prepared to be lifelong learners, part of the global community and contributors solving the complex problems we face now and in the future. The school building is the most visible metaphor for what we think education itself should be.

One of the parents at Hillel noted a change in her son, who was an indifferent student who couldn't wait to leave school at the end of the day, before a Learning community replaced his classroom. His mom came to pick him up at his renovated school, but he wasn't waiting eagerly by the entrance, and she was surprised that she had to go look for him. After a short search, she found her son in a nook in the colorful, welcoming mercaz, sprawled on a soft cushion next to some of his buddies. He wasn't ready to leave yet.

He was too busy reading. ■

The school building is the most visible metaphor for what we think education itself should be.

New Adult Education Initiative Launches in RAVSAK Schools

We are pleased at the strong interest elicited by the new partnership between RAVSAK and Chai Mitzvah. Chai Mitzvah is bringing its innovative program in adult education, combining text study and multiple experiential initiatives, to the benefit of school communities. The program empowers parents to take a Jewish journey similar to the one that their children experience daily. Schools have the flexibility to determine the audience they want to reach out to, and Judaics faculty have an opportunity to work with a different population.

Chai Mitzvah is an innovative, proven way to deepen Jewish engagement and build community. It is a turn-key program that will encourage parents to get involved with their school, their synagogues, their communities, while they re-engage and reconnect with their own Jewish lives.

Chai Mitzvah strengthens the connections between the parents, the school, the community and local congregations. Much like our children prepare for a Bar/Bat Mitzvah, adults become a Chai Mitzvah, spending nine months committed to study, ritual and social action.

Chai Mitzvah has five components: monthly group learning through a set curriculum, personal independent study, developing or deepening a spiritual/ritual practice, engaging in social action, and finally, celebrating together, acknowledging the journey they've just taken. Appropriate for any kind of Jewish practice, affiliated or not, Chai Mitzvah meets people where they are and guides them along their own path to a more meaningful Jewish life.

Chai Mitzvah is being launched in RAVSAK schools across the United States of different sizes and communities. It's flexible enough to fit into any school's adult

education offerings, showing the students that indeed, learning is a lifelong process.

Mazel tov to participating schools:

Portland Jewish Academy, Portland, OR
 Hillel Academy of Tampa, FL
 N.E. Miles Jewish Day School, Birmingham, AL
 Bnai Israel Jewish Community School, Greensboro, North NC
 Columbus Jewish Day School, Columbus, OH
 Madison Jewish Day School, Madison, WI
 New Orleans Community Day School, New Orleans, LA

There is still time for your school to enroll! For more information on RAVSAK's collaboration with Chai Mitzvah, contact Anita Silvert, director of community outreach, anita@chaimitzvah.org or visit the website, chaimitzvah.org. ■

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JEDLAB: Bringing Network-Learning to Your Classroom

■ by **KEN GORDON** and **YECHIEL HOFFMAN**

Created just this year, JEDLAB has “gone viral” as the forum for dynamic and creative new thinking in Jewish education. Its creators here envision applying JEDLAB principles in the classroom.

JEDLAB started at the 2013 North American Jewish Day School Conference, in Washington, DC. It was 5 am, and we were both awake, tweeting furiously. We decided to go offline. Sitting in the hotel lobby we asked: How could we bring networked learning to the field of Jewish education? How could we integrate the relationships and conversations thriving within social media—such as #jedchat and #jed21 on Twitter, and elsewhere on Facebook, Google Groups and Nings—into the offline spaces, like NAJDSC and our organizations and schools?

About a month later, we read *The Sorcerers and Their Apprentices*, Frank Moss’s great book about the MIT Media Lab. The volume suggested a way—100 ways—to rethink the paradigm of Jewish education. Soon the most inventive and adventurous Jewish educators in our personal learning network read *Sorcerers* and loved it. They talked about it on Twitter. They orchestrated an off-hours webinar. They formed a Facebook group. It came to be known as JEDLAB. This diverse and open network was designed to serve all settings and stakeholders of Jewish education. Its founders and facilitators aimed to foster connections, conversations and collaborations that would result in greater inquiry, experimentation and transformation for the Jewish education we need for the next quarter century, and not just the next five years.

JEDLAB is now one of the few places in Jewish educational life where people can voice their own authentic opinions, without fear and with real support. On JEDLAB, teachers, administrators, parents, academics, development professionals, board members, even students speak not as representatives of this or that school or institution but as individuals trying to articulate their own visions and to improve themselves and their communities. It is a welcoming place where people say “bruchim haba’im” to newcomers, and where dissent and machloket (intellectual dispute) is always (well, almost always) conducted with real re-

spect. Our online conversational threads, which can reach almost 50 a week, can run to 20, 30, even 100 comments. Why? Because JEDLAB encourages self-expression and honest dialogue, an extremely rare situation in the contemporary Jewish ed scene.

JEDLAB is a network, a community, a Jewish-ed minyan, a society. It’s a debating society, an incubator, a 24/6 professional development party. It’s people throwing spaghetti against the wall. Joyful chaos. A family. JEDLAB is what its members think it is, and this can change at any moment. It’s also an online forum. But, unlike most online forums, JEDLAB—which, right now, most consistently manifests itself as a Facebook group—is unsatisfied with merely being a highly engaged online community.

Question is: Can this approach be transposed into Jewish classrooms? We believe that a teacher who treats her students with respect and attention has the ability to create such a community, ready to engage the world as a network of relationships. This model emboldens students to challenge the assumptions that dictate small ideas, and take the risks that reward big ideas.

The Elements of JEDLAB

To understand how to bring JEDLAB to your class, you need to have some sense of our values and vocabulary. JEDLAB seeks to elevate the various conversations in our communities of practice and professional learning networks. We want such conversations to result in real change in our educational ecosystems. Our aim: to instill in the Jewish education world the ideas exemplified by the MIT Media Lab, and illustrated in *Sorcerers*. We’re very much interested in using technology, specifically social media, as a means to harness our ideas and bring together, for collaborative purposes, the salient members of our networks. JEDLAB’s ethos, all relevant to any classroom, includes the following:

Creative freedom: The ability to think creatively and freely



Yechiel Hoffman, co-founder of JEDLAB, serves as the director of youth learning and engagement for Temple Beth Am, and researches network-learning as a doctoral candidate at Northeastern University. yechielhoffman1@gmail.com



Ken Gordon, co-founder of JEDLAB, also co-founded QuickMuse, and is the senior social media and content strategist for PEJE. ken@peje.org

about issues and problems in the world and to come up with innovative solutions because we're not bound by preconceived notions.

Anti-disciplinary work: Experts across disciplines gathering in same space, working outside their comfort zones and not being bound by defined roles. Anyone can have a vision and should have her opinion considered.

Hard fun: "Taking the hands-on approach to learning and building that comes naturally to curious children at play" (Seymour Papert). This is the "demo or die" ethic of the Media Lab.

Serendipity by design: We know "the chance to drink from the fire hose of imaginative ideas and inventions" (Frank Moss) leads to opportunities for serendipity. Freedom, openness and cross-disciplinary teams and collaborations create or design the happenstance to occur much more frequently.

A focus on demonstration and iteration: All ideas should face iterative prototyping—that is, a system in which one demonstrates a prototype, receives feedback, incorporates feedback, and then demonstrates the improved prototype. It's less about manufacturing success, and more so they can fail fast and fail forward. Failure is just a weigh station on the way to success.

Emphasizing both the sharing and inquiry of earlier networks, JEDLAB heightens the opportunities for design thinking, collaboration and experimentation. We hope to broaden and deepen the impact of a flattened network on the field as a whole.

The JEDLAB Model in the Current Educational Setting

Students will respond positively to a JEDLAB-style learning environment. As digital natives, they are familiar with network learning in online platforms. By consciously adopting the JEDLAB model, you can provide them with a framework for a mature and nuanced approach to online engagement that will transform ordinary learning into a holistically awesome experience.

The JEDLAB ethos has already been manifested in a number of different real-world activities that capture the essence of network learning in classrooms. Some might be useful, or at least inspirational, models for your classroom situation.

1. Tikvah Wiener, the founder of the groundbreaking RealSchool initiative at the Frisch School, created with her students a Twitter English final. The kids chose to do a final on Twitter because they wanted something dynamic and interactive, something they could all contribute to. One student shared that she said she understood why they were engaging in their social media experiment: "We're creating our final together," she said, as a means of culminating a year of project-based learning and making-as-learning.

Why should #JEDLAB matter to you (in 140 characters or less)?

JEDLAB is driven by inquiry, passion, and the spirit of community.

Leadership roles are available to anyone who wants to share.

JEDLAB happens on Facebook, in a hallway, on the phone, via Google+ Hangout, at a conference, over coffee, and/or a walk in the park.

The individuals in JEDLAB embrace a belief in representative democracy, open debate, and authentic self-expression.

With Herzl, it recognizes the importance of the dream AND the will. It's the realization that we help must help each other will our dreams.

2. JETS, a distance Jewish learning company in Israel, twins Israeli classrooms and North American classrooms using wikis to support the network learning. "The kids are divided into groups, with an equal number of kids from each country in each group," says JETS' Laurie Sandler Rappeport. "Then they work on projects simultaneously and follow each other's work as all participants post their results on their wikis. At the end of each assignment they can also review the progress of their peers' groups."

3. For a 12th grade course on Jewish thought at the Milken Community High School in Los Angeles, Yechiel used self-contained online platforms to create a community of 60 students from three separate class sections. Students used the space to share ideas with a broader network about their coursework and class conversations. This also opened up new streams of sharing and thinking based on their own self-directed learning. Students exhibited their work and shared outside learning opportunities, such as concerts, lectures and movie releases, and engaged in deep and meaningful dialogue about the critical issues facing their lives.

JEDLAB's Dramatis Personae

One of the reasons JEDLAB has succeeded: the co-founders understand that a strong network needs people who can regularly fulfill specific functions. The network cannot and will not succeed if one person tries to oversee the entire network by herself. It takes a team, a talented and dedicated team, to make it work, by creating a space for the network's members to self-regulate and foster ownership, through the example set by JEDLAB's facilitators.

JEDLAB is a debating society, an incubator, a 24/6 professional development party. It's people throwing spaghetti against the wall. Joyful chaos.

So assemble a team out of your students. Figure out which kids are good at what—some will be great at creating content, others at sparking dialogue—and encourage them to perform them regularly and with seriousness. Consider the following network roles (three of many potential roles), and the people in your class who might have the skills to assume them:

Guardian

The guardian maintains a constant watch over the network and reflects upon the network's needs.

Connector

The connector organizes various system elements (communications, training, support, resources, etc.) to support the network's members.

Conversationalist

The conversationalist works to promote healthy, open, and respectful interaction and inquiry among group participants.

Create a JEDLAB in Your School

You may want to use social media as a way for your class to communicate with you and each other. Don't. Instead, seek first to build strong relationships with your students, to build a community of respect and learning, and then make sure that these values extend to your student's social interactions. JEDLAB has been successful in doing this, and you might apply some of our lessons to your in-class community.

1. **Get your students to tell their stories.** In JEDLAB, we created a group-edited Facebook document in which members take the time to share their Jewish journeys. We then take these narratives, excerpt them, pair them with images found online, and created a Pinterest pinboard. Do the same for your class. When your kids can see and hear who they are (and don't forget to add your own story), they can feel confident enough to learn together. You could have kids experiment with video, artistic, poetry or even musical autobiography. The point: get them to tell and share their stories.

2. **Don't just post articles.** Post articles *and then ask questions*. If you're going to throw content into your class's social media stream, make sure you contextualize it and get your students to think about it. And don't just let people get away with lazy answers in the comments section. Your whole class has an investment in keeping the conversation lively. Encourage everyone to take an active role in prodding the conversation, in the comments section, to the most thoughtful place possible.

3. **Be a model—and get your students to do the same.** In JEDLAB we model behavior very carefully. We try to avoid bragging, promoting ourselves, avoid making fun of other people. Before we post, we aim to ask ourselves, "How will this post or comment help the group?" This reflexiveness and intentionality seems a valuable skill to teach students, one they can employ in many places at various points in their lives.

4. **Make matches.** As intellectual leader of your class, you're in a unique position to help bring together the heterogeneous learners in your charge. You know which kids have a secret passion for a certain band, or a kind of poetry, or a particular sports team or video game or whatever. You know who the libertarians are and the quiet animal activists. You know which ones believe that *Gatsby* is a fool—and which ones think he's a hero—or that Gershom Scholem is the greatest writer of the 20th century (or vastly overrated). Bring these folks together in conversation and classroom projects. Using social media, you can make it happen in a semi-public way.

Treat your class as a community that expects excellence from every member, that demands students take responsibility for the learning and bring their critical and passionate selves to the adventure of education, and you're already creating a JEDLAB experience. The idea is that you learn together, on- and offline, and that you as a teacher are chiefly the senior learning partner, someone who can steer your self-directed students, when necessary.

This method needs an educator who understands the role of teacher as a facilitator and host of a network space. The educator is not the center of the learning experience but the catalyst for each student's encounter with the other and their shared knowledge. Such a person creates a culture in which students feel as free to dream as they are to express doubt, and as willing to fail as they are to succeed. ■

Resources

Network Weaver Handbook by June Holley

Learning by Doing by Richard DuFour, Rebecca DuFour, Robert Eaker and Thomas Many

The Networked Teacher by Kira J. Baker-Doyle

"How Communities of Practice Can Benefit Jewish Day Schools" by Judith Zorfass

"Building Smart Communities through Network Weaving" by Valdis Krebs and June Holley

"Using Network Mapping Simulations to Develop Network Strategies to Lessen Transmission of Infection" by June Holley

Websites

<http://www.drkaren.us/index.htm>

<http://www.networkweaver.com>

<http://paysa09.wikispaces.com/Networks>

<http://www.knowledgecommunities.org/communitydevelopment.jpg>

<http://www.knowledgenetworklearning.net/>



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BREAKING THE

Age Barrier

■ by **MINDY SCHILLER**

The single-age classroom is so engrained in school practice that it is scarcely noticed, multiage groupings often being the fruit of necessity alone. Schiller argues for the intrinsic pedagogic value of the multiage classroom.

“Why is there this assumption that the most important thing kids have in common is how old they are?” asks educational innovator Sir Ken Robinson, in his well-known Youtube video, “Changing Educational Paradigms.” To date, the video has had roughly 11 million views. “If you are interested in the model of learning,” he goes on, “you don’t start from this production line mentality. This is essentially about conformity ... and I believe we’ve got to go in the exact opposite direction.”

Robinson’s statement strikes at the heart of an issue that’s been plaguing schoolchildren since time immemorial: class is either too hard or too boring. Unsuccessful students quickly grow disengaged, labeling themselves as “bad at school”—and, by default, everything else. Gifted students become bored or, more often, arrogant. The only students whose needs are truly met in a traditional classroom are those in the middle, if there really is such a thing.

Attempts to solve the problem are reflected in the proliferation of gifted programs on one hand and learning specialists and Individual Education Plans (IEPs) on the other. The thinking, presumably, is that when the two ends of the bell curve are siphoned off, teachers can finally cater to the middle.

Here’s an idea: what if there were an approach where students were not labeled as “top,” “bottom” or “middle,” but viewed as a fluid spectrum? Where the natural diversity of children’s abilities was celebrated as a tool for innovation, as opposed to a barrier to overcome?

Actually, such an approach already exists. It’s called the multiage classroom.

When, in 1988, Miriam Schiller began as principal of Akiba-Schechter Jewish Day School in Chicago, class sizes were in the single digits. She combined grades as a way of creating larger social groups for students. “As we got bigger and bigger,” says Schiller, “parents would ask me if I would be dividing up the grades like other schools do. And I would say to them, ‘Why? This works so much better.’”

At Akiba, classes are multiage by design, as they have been for the last 25 years. Children are grouped in two-year age spans, which means that in lower school, there are three 1st/2nd grade classrooms and three 3rd/4th grade classrooms. In middle school, where subjects are more compartmentalized, students go from 5th/6th grade to 7th/8th grade. The combination of students changes from one subject to the other—one’s classmates in science may not be the same as in math or history—but they all include at least two grades.

“I never have to explain the multi-age classroom to families that are here,” says Schiller. “They see how successful it is. Only when I talk to prospective families do I remember what ‘normal’ is. Why would I ever go back to ‘normal?’”

In fact, when Schiller explains the benefits of this technique to prospective parents, they often ask her why other schools don’t follow it. In the meantime, the multiage classroom has become one of the school’s strongest selling points.

The Benefits of Multiage Classrooms

Unsynchronized Learning

“In a normal classroom,” says Schiller, “children are on a spectrum. Teachers teach to the middle, remediate one end and



Mindy Schiller is the marketing director at Akiba-Schechter Jewish Day School, where she also teaches middle school. marketing@akibaschechter.org

enrich the other. At Akiba, we take the ‘real’ norm and make it the established norm.” In other words, students naturally progress at their own rate—regardless of what sorts of external demand are placed on them. The traditional graded classroom forces them to align their progress with an imaginary timeline. Thus, students who are falling behind often fake mastery of a subject—building on a weak foundation—and faster students often are forced to slow down. Any child who isn’t synchronized with the traditional schedule forever feels behind and begins a spiral of failure. In contrast, because the multiage classroom covers a two-year span, children have more time to develop as they naturally would, without an external timetable.

Take Paula as an example. Paula was a young first grader and had a very difficult time learning to read. In fact, it wasn’t until midyear that she finally started to grasp the concept of decoding. Once she did, however, she catapulted forward, progressing through the next levels so quickly that she made up for her time lag earlier.

Paula’s process is not unusual. With various ages in the classroom, it’s assumed that there are also many skill levels. There is no expectation that all children will be ready to learn a certain skill simultaneously. Consequently, while Paula was still a little “behind” the other students at the end of 1st grade, she was far ahead of many of them at the end of 2nd grade.

Self-Esteem

Imagine if Paula had been in a traditional graded classroom. She would quickly have grown aware of her inability to master decoding and her self-esteem would have taken a nosedive. This, in turn, would have prevented her from actually progressing. At Akiba, Paula had the time to advance at her own rate. She was only one of many children on the spectrum of the classroom, and thus able to experience continuous success. Similarly, once she was ready to progress more quickly, she was able to do that.

In multiage classrooms, the natural diversity of children’s abilities is celebrated as a tool for innovation, as opposed to a barrier to overcome.



A 5th and 6th grader conduct a physics experiment in science class with their home-made race track

The children who are more mature have a group to associate with. And the children less mature can fall back if they’re not yet ready.”

Differentiation

The model is beneficial not only for the student, but for the teacher as well. According to Miriam Kass, staff development coordinator and former 3rd/4th grade teacher at Akiba, the multiage classroom allows the teacher to create a more open-ended classroom and then differentiate based on the child. “In traditional classrooms,” says Kass, “a good teacher will try to differentiate for those students who stick out on either end. But in the multiage classroom, differentiation is the default.” In other words, the onus is on the teacher to constantly consider how best to reach each student—whether he needs remediation or is ready to fly. “Nobody’s doing the straight and arrow, so the ‘outliers’ don’t stand out as much. I don’t think I had a typical 3rd grader or typical 4th grader,” she adds.

Differentiating instruction can be difficult, but according to Rotfeld, it’s made easier within the two-year loop of curriculum. “The two-year span allows you to take a break from your topic and then when you return to it, you have fresh eyes. It promotes creativity.”

Schiller points to another benefit of the multiage approach, one she discovered in her many years of teaching students how to read.

In a typical classroom, a good teacher will differentiate for students who stick out on either end. In the multiage classroom, differentiation is the default.

“I love [the multiage classroom] both as a teacher and a parent,” says Michelle Rotfeld, science teacher and parent at Akiba-Schechter. “I like the fact that children really can push themselves up. There’s a curriculum in place for them.

The model is beneficial not only for the student, but for the teacher as well. According to Miriam Kass, staff development coordinator and former 3rd/4th grade teacher at Akiba, the multiage classroom allows the teacher to create a more open-ended classroom and then differentiate based on the child. “In traditional classrooms,” says Kass, “a good teacher will try to differentiate for those students who stick out on either end. But in the multiage classroom, differentiation is the default.” In other words, the onus is on the teacher to constantly consider how best to reach each student—whether he needs remediation or is ready to fly. “Nobody’s doing the straight and arrow, so the ‘outliers’ don’t stand out as much. I don’t think I had a typical 3rd grader or typical 4th grader,” she adds.

Differentiating instruction can be difficult, but according to Rotfeld, it’s made easier within the two-year loop of curriculum. “The two-year span allows

A multiage classroom encourages creative redundancy, the concept of teaching a child the same concept but in a different way. She recalls one student who came from another school and who had been told he could not learn to read. A learning specialist evaluat-

ed him, discovering that in fact he was extremely bright. When the learning specialist shared this with his previous teachers and asked them how they might approach him differently, they replied that they would essentially just have to repeat everything again—perhaps more loudly and more slowly. In contrast, creative redundancy accepts the fact that the first method of instruction did not work and therefore cannot be tried again; rather, a new method must be introduced. In a multiage classroom, because of the wide spectrum of abilities, teachers are constantly forced to develop multiple ways of teaching the same skill. A student who has finished reading level 1-1 but is not yet ready to advance to level 1-2 needs a different book at the 1-1 level.

In a multiage classroom, your friends are your friends because they're your friends, not because they're the same age.

Thankfully, the child in question entered first grade at Akiba and is now able to read, because the multiage system had already created an environment of differentiation.

Social Skills

Multiage settings foster cooperative learning skills necessary in a democratic society. Children learn to work with older and younger peers, which more accurately reflects the world they'll encounter as adults. "It creates a more natural pool of friends," says Kass. "Normally, as a student, you're basically told you'll be friends with the same people for the next 12 years. But in a multiage classroom, your friends are your friends because they're your friends, not because they're the same age." While a child is a 3rd grader one year and thus on the younger side, he will be an older and more experienced student to the new group of 3rd graders coming into the class when he's a 4th grader. In addition, because of this overlapping of grades, students are easy friends with kids both older and younger than them.

Scott Salk, a 1st/2nd grade teacher at Akiba, loves the feeling of community created in this setting. "Although initially wary, if not fearful, of teaching in a multigrade classroom after many years with a single grade, I have become a huge believer," he says. In public school, where Scott taught previously, he had always tried to run a classroom that allowed children to move at their own pace, supporting their strengths and weaknesses, and encouraging collaboration. In his experience, the multiage classroom has magnified these outcomes. "Ability levels have a wider range but are thankfully murkier," he says. "Competition is minimized in favor of collaboration and helping one another. While often the older kids are helping younger kids, it's not always the case since more advanced 1st graders will do more helping while 'slower' 2nd graders can always get the help they need without really standing out as such. And there is little as educationally beneficial as one child helping another."

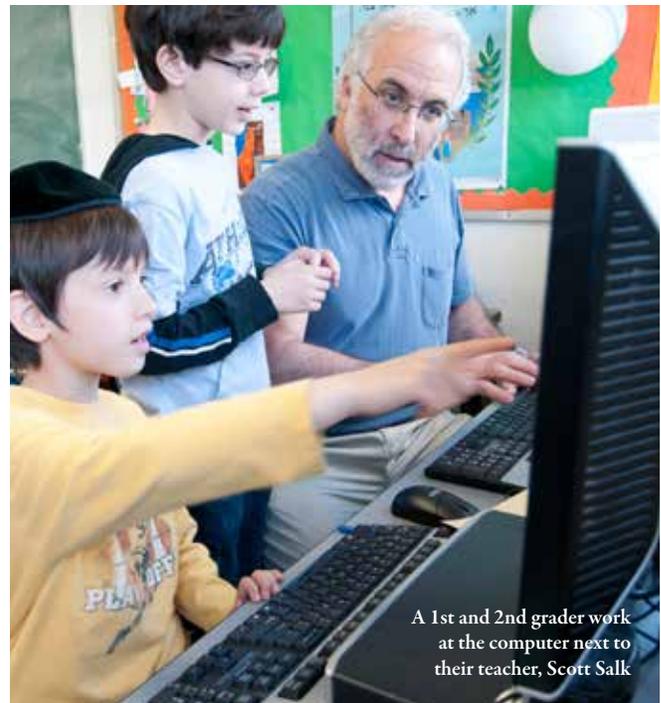
Multiage classrooms also promote deeper student-teacher relationships, since teachers work with each child for two years. "It takes time to get to know someone," says Kass, "to develop a relationship not just with the child, but with the family. And to think that after nine months I would have to say goodbye to my students—whom I've just gotten to know? That would be really sad."

Ability to Reach Higher

Every student has a right to learn something in school in every class, yet often the gifted learn the least. Much of what they are asked to learn in a traditional class they have already mastered. Teachers often make them classroom helpers or let them read books on their own. Consequently, the gifted child is not given the opportunity to learn through "real struggle." If gifted students are not exposed to challenging material, they will not learn how to learn and will certainly not develop the study skills they need for future serious academic pursuits.

Schiller tells the story of one alumnus who, upon entering freshman year at his high school, found that many of his Judaic classes were repeating the same material he had already mastered. So after much communication with the administration and sitting in on other classes, he arranged to take sophomore Judaic classes instead. When his freshmen classmates found out about the arrangement, they were confused. "If you take sophomore classes this year, junior classes next year and senior classes junior year, what will you do senior year?" This question had never occurred to this alumnus. For his peers, who were coming from traditional classroom settings, it was almost as though there was a finite amount of material to be learned and come senior year, this alumnus would have "run out of things to learn." Coming from Akiba, where the spectrum was as wide as the students who created it, this

[CONTINUED ON PAGE 23]



A 1st and 2nd grader work at the computer next to their teacher, Scott Salk

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RAVSAK has entered the coaching business! Thanks to the generous funding of the AVI CHAI Foundation, the Legacy Heritage Fund, and the Ben and Esther Rosenbloom Foundation, RAVSAK announced in July the launch of the Head of School Professional Excellence Project, designed to strengthen new day school directors while preserving valuable knowledge and experience from recognized field leaders. The program is one of the critical projects outlined in the strategic plan developed by the RAVSAK Board of Directors for strengthening Jewish day school education throughout the field.

This innovative effort is directed by Cooki Levy, retired head of The Akiva School in Montreal, and it matches highly successful and experienced Jewish day school leaders (called deans) with newly minted, wonderfully talented and highly motivated Jewish day school heads (called fellows) for a year of one-on-one coaching and mentoring. The unique blend of the deans' vast experience as day school heads with the specialized skills of coaching offers each fellow the opportunity to grow professionally, lead with confidence, and advance the goals of his or her school and community.

The cohort of deans includes Karen Feller, head of school at Donna Klein Jewish

Academy in Boca Raton, Florida; Dr. Bruce Powell, head of school at the New Jewish Community High School in West Hills, California; Lynn Raviv, retired head of the N. E. Miles Jewish Day School in Birmingham, Alabama; Dr. Elliott Spiegel, retired head of the Solomon Schechter School of Westchester, New York; and Betty Winn, retired head of the Abraham Joshua Heschel Day School in Los Angeles.

Intensive training of the deans began in late June in Toronto; a second session was held in Los Angeles in August. Additional follow-up sessions will be held at the RAVSAK conference in January. Led by Peter Sturupp, headmaster of Pickering College

in Ontario, Canada, a trained and experienced coach, the group of deans studied and practiced the skills needed for successful coaching, exploring the ways in which each can establish positive, productive and powerful relationships with two of the ten fellows in the cohort. The sessions were stimulating, reminding all participants of the excitement and the challenge of learning new skills and approaches. The sessions were capped by a discussion with Prof. Barry Levy of McGill University about models of Jewish educational leadership in antiquity. Additional training sessions continued over the course of the summer in preparation for the start of the new school year.

Fellows come from schools large and small across North America. They include Jennifer Fraenkel, Akiva School, Montreal; Gary Weisserman, Milken Community High School, Los Angeles; Alina Spaulding, Akiva School, Nashville; Dr. Richard Cuenca, David Posnack Jewish Day School, Davie, FL; Larry Kligman, Abraham Joshua Heschel Day School, Northridge, CA; Daniel Goldberg, Toronto Heschel School; Rabbi Jeremy Winaker, Albert Einstein Academy, Wilmington, DE; Sharon Levin, Jack M. Barrack Hebrew Day School, Bryn Mawr, PA; Sam Chestnut, The Lippman School, Akron; and Nellie Harris, Rockland Jewish Academy, West Nyack, NY.

In addition to weekly conversations, the fellows will benefit from a visit to the school by their dean. Fellows will be able to speak together via conference calls to share insights, experiences and challenges. The entire group—deans and fellows—will convene as part of the RAVSAK conference to be held in Los Angeles in January.

Fellows are expected to be in the early years of their work as heads of Jewish day schools, and both they and the deans remain committed to insuring the Jewish quality of the schools, which also contribute financially to their head's participation. Initially the program has been funded for two years. Application forms for the 2014-2015 school year will be available in the spring of 2014. ■

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[CONTINUED FROM PAGE 20]

was a paradigm shift. The most effective form of motivation is self-motivation, and when children know they are the sole owners of their progress, they may fly to the stars and beyond. Consequently, many do.

Self-reliance

In a multiage classroom, given the breadth of skill levels, no teacher can instruct the entire class all the time. Consequently, says Kass, children are more engaged in their own learning because the teacher is not an integral part of every lesson. "As a teacher, I have to create opportunities for kids to be engaged in small groups and in various roles." This kind of control over their own learning translates into more self-reliant children who actually take responsibility for their learning and are not totally dependent on the teacher to direct it.

Humility and Leadership

Remaining in the same classroom for multiple years provides every child with the opportunity to be both a learner and a teacher. A new student in a multiage classroom learns from older/brighter role models. As he ages in the group, he will have the opportunity to teach others—thereby building in redundancy to master concepts—and become a leader to younger/slower students. Most people will agree that there is no better way to learn a topic than to teach it. More important, this type of scenario creates character traits like humility and leadership. No student should feel he is always at the top or bottom of a class. Because the multiage classroom is a fluid learning community, he will be each at some point in time.

Perhaps the greatest benefit of the multiage classroom is that its culture permeates the entire school, creating a stronger and more authentic community. Cross-pollination between ages is the norm, not the exception, so children naturally feel connected to a larger pool than simply their own age group. This year, for instance, because of rising enrollment, Akiba divided what had always been an all-school play into two separate plays: one performed by the lower school and the other performed by the middle school. In end-of-year evaluations, many students complained about this division, claiming they wanted to return to a performance where everyone was included and 1st graders could mix with 8th graders. The administration is now seeking outside venues in which to perform the play so that every child can fit on stage.

Sir Ken Robinson rails against the concept of compartmentalizing children simply because of what he calls their "date of manufacture." To him, age is an arbitrary and misleading wall that should be torn down. If the students' end-of-year responses are any indication, these walls have already been torn down.

Students of any educational institution ultimately graduate and become contributing members of society, where they are asked to collaborate with peers of varying ages. Jewish day schools aim to develop not only contributors to society, but leaders of it, and great leaders inherently understand the power of community. At Akiba, multiage classrooms have created a vibrant community of learners. ■



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What Schools Can Learn from the “Maker Movement”

■ by SYLVIA LIBOW MARTINEZ and GARY S. STAGER

Two leading proponents of “making” and “tinkering” in education explain the nature of this movement and the principles behind it, while offering advice and inspiration for re-making your school into a maker school.

There’s a technological and creative revolution underway around the world that educators should be aware of: the Maker Movement. The Maker Movement advocates a DIY (Do It Yourself) attitude towards the world, especially the technological world. Makers worldwide are developing amazing new tools, materials, and skills and hoping the whole world joins in the fun. Using technology to make, repair, or customize the things we need brings gee-whiz excitement, engineering, design and computer science to the masses.

The Spring 2012 Bay Area Maker Faire, organized by *Make* magazine, attracted over 100,000 children and adults who came together for a weekend of tinkering, crafting, inventing, showing-off, learning, and making together. Communities around the world are holding their own Mini-Maker Faires that bring people together to share what they know and can do. Community-run spaces called hackerspaces, fab labs, and tech shops are popping up all over the world, offering remarkably rich learning environments where novices learn alongside experts. These communal learning spaces are a model of what is possible when we rethink education for the 21st century. Remarkably, it’s not a sterile, high-tech vision of solitary computer users clicking away on canned lessons. The Maker vision of learning is vibrant, whimsical, communal, and driven by personal interest.

A growing library of literature inspires learners of all ages and experiences to become inventors and seize control of their world. Online communities serve as the hub of a digital learning commons, allowing people to share not just ideas, but the actual programs and designs for what they invented. This ease of sharing lowers the barriers to entry as newcomers can easily use someone else’s code or design as building blocks for their own creations.

Fortunately for educators, this maker movement overlaps with the natural inclinations of children and the power of learning by doing. It holds the keys to reanimating the best but oft-forgotten learner-centered teaching practices.

The ethos of the Maker Movement is to “give it a go,” an attitude that many young children have about the world, yet seems to diminish with each advancing grade. Another saying popular among Makers is “If you can’t open it, you don’t own it,” which embodies both a recycling ethic that resonates with young people and what we know about learning. If the learner doesn’t own their own learning, the memorized factoids fade away all too quickly.

In his book *Fab: The Coming Revolution on Your Desktop—from Personal Computers to Personal Fabrication*, MIT professor Neil Gershenfeld describes the next technological revolution as one in which people will make anything they need to solve their own problems. Gershenfeld predicts that for the cost of your school’s first computer, you will soon have a Fabrication Lab or fab lab—a mini high-tech factory—capable of making things designed on a computer.

Three forces have made his predictions accessible and affordable today:

Computer controlled fabrication devices. Over the past few years, devices that fabricate three-dimensional objects have become an affordable reality. These 3D printers can take a design file and output a physical object. Plastic filament is melted and deposited in intricate patterns that build layer by layer, much like a 2D printer prints lines of dots that, line by line, create a printed page. With 3D design and printing, the ability for students to design and create their own objects combines math, science, engineering and craft.



Sylvia Libow Martinez is currently president of the nonprofit Generation YES organization, a maker, mom, video-game designer and electrical engineer. sylvia@inventtolearn.com



Gary S. Stager PhD is a veteran teacher-educator and speaker who has taught making in the classroom for more than 30 years. gary@stager.org

Physical computing. New open source microcontrollers, sensors and interfaces connect the physical world to the digital world in ways never before possible. Many schools are familiar with robotics, one aspect of physical computing, but a whole new world is opening up. Wearable computing, where circuits are made with conductive thread, makes textiles smart, flexible, and mobile. Plug-and-play devices that connect small microprocessors to the Internet, to each other, or to any number of sensors mean that low-cost, easy-to-make computational devices can test, monitor, and explore the world.

Programming. There is a new call for programming in schools, from the Next Generation Science Standards to the White House. Programming is the key to controlling this new world of computational devices and the range of programming languages has never been greater. Today's modern languages are designed for every purpose and every age.

You may be asking, "All that tinkering and high-tech wizardry may be fine for MIT professors and students, but what does it have to do with my school?"

The most obvious implication is for the ways computers are used in school. Making and personal fabrication are a clear departure from the status quo. Instead of training another generation to perfect secretarial skills via word processor instruction or drilling basic skills, computers can and will be used to shape the world of the student.

Kid makers possess a skill set and self-efficacy that will serve them well in school, as long as they are engaged in interesting activities worthy of their capacity for intensity. Despite the swirling politics and external pressures on schools, the maker movement may offer teachers cause for optimism. The stuff of making is super-cool and gives those teachers so inclined another chance to reanimate progressive education. If your administrator likes to buy shiny new things, then there are plenty of things to buy that actually amplify the potential of children. Silicon Valley billionaires are endorsing the nonprofit Code.org, which advocates for kids to learn computer programming. President

According to MIT professor Neil Gershenfeld, in the next technological revolution people will make anything they need to solve their own problems.

Obama, Bill Gates, the CEO of Google, and the Association for Computing Machinery are campaigning for computer science to be a curriculum staple from kindergarten to twelfth grade.

None of these experiences or the materials that enable them are inconsistent with the imaginations of children or with the types of learning experiences society has long valued. Making is a stance that puts the learner at the center of the educational process and creates opportunities that students may never have encountered themselves. Makers are confident, competent, curious citizens in a new world of possibility.



Tinkering is the process of design, the way that real science is done. Many inventions were "mistakes" that turned out to be valuable.

Tinkering is a powerful form of learning by doing, an ethos shared by the rapidly expanding maker community and many educators. Tinkering is the process of design, the way that real science is done. It is not unstructured, but a process of iteration towards a goal that may not be well defined. Many inventions were created on the way to somewhere else, or were "mistakes" that turned out to be valuable. We owe it to our children to give them the tools and experiences that real scientists and engineers use, and the time is now to bring these

tools and learning opportunities into real classrooms. There are multiple pathways to learning what we have always taught, and things to do that were unimaginable just a few years ago.

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Project-based learning is a term that encompasses how all this can happen in a classroom, and fortunately also provides a deep and rich library of research and teaching techniques to support deep learning through making and tinkering.

We unabashedly believe in kid power and know that teachers hold the key to liberating the learner. The values, tools and activities of the maker movement enrich and accelerate that process.

With prices falling and options multiplying by the minute, these futuristic technologies are within the reach of the average classroom. Nevertheless, technology by itself is going to change not how students learn, only the conditions that teachers create in their classrooms. A “makerspace” is a state of mind as much as a space or the stuff in it. A makerspace invites creativity, messing about with tools, materials, and big ideas—all driven by a wise leader who steers students towards meaning.

Teachers can make their classroom a makerspace by providing these four crucial elements:

- A good prompt, motivating challenge, or thoughtful question
- Appropriate materials
- Sufficient time
- Supportive culture, including a range of expertise

The genius of this approach is that it is self-evident. If you lack one of the four elements, it is obvious what needs to be done. Teachers who provide these elements will start to see their students become confident makers and creative learners.

Libraries are cross-curricular and multigrade, and often have extended hours. All these are advantages for a makerspace.

Options for makerspaces vary widely depending on the classroom (or other space), the teacher, and the students. If the library is an option, build on the existing advantages. Libraries are cross-curricular, multigrade, and often have extended hours. All these are advantages for a makerspace. In the past decade, many librarians rebranded themselves as Library Media Specialists; now without changing the acronym, they can be Library Maker Specialists—making meaning, making learning possible, and making things.

Maryann Molishus, a teacher in Pennsylvania who has taught both second and fifth grade, shares this:

“What do you want to learn and how do you want to share it with the class?” This is how I began second grade for many years. The ideas would start off ordinary. “I want to learn about tigers, and I will write a book about them.” Then, there would continue to be requests to make a variety of animal books. Eventually there would be a child who seemed to want to challenge me—did I really mean ANYTHING? “I want to be a book critic and make my own television show,” or “I want to be a scientist, mix things up, and see what happens,” or “I want to make a video game.” There would be a collective gasp. Surely that’s not what I meant. But, I’d casually write down the requests, give a nod, and continue on with more requests until the animal book authors would begin asking to change their ideas to less traditional projects. It happened every year. And knowing that students, both in second and in fifth grade, are surprised by what they can do means that each year my goal is always to make what seems to them to be the extraordinary the norm for my classroom.

Other options would be to create a “maker cart” that moves



between classrooms. Josh Burkner, a technology resource teacher in Connecticut, uses the free computer programming language Scratch and a clever interface device called a MaKey MaKey to create projects that are completely customizable for each classroom. Students can write their own programs that interact with real world objects to create games that interact with the real world. Imagine a video game of your own invention that uses bananas as the controllers, or a custom-built Operation game! Each game is unique and different, but every student must grapple with the design process, engineering challenges and real world math along the way. Josh works with individual teachers to integrate these projects into the curriculum and themes of each classroom, and uses older students as beta testers and peer mentors.

In secondary grades, the subjects are often taught separately, diminishing the time for students to experience science and math as integrated areas. Making is a way of bringing authentic design thinking and engineering to learners. Such concrete experiences provide a meaningful context for understanding abstract science and math concepts. Creating opportunities for making with imaginative new materials and technology makes learning come alive and cements understandings that are difficult when only studied in the abstract.

We must reimagine school not as a place to *prepare* students for some future experience, but as a place where students *are* inventors, scientists and mathematicians *today*.

Often the results of bringing making into a school are powerful but disruptive. Making creates a need for expanded time schedules, more options, and greater flexibility on the part of teachers. It means that administrators need to trust teachers (and students) that the complexity of project-based learning is purposeful, not chaotic. It may be out of the comfort zone of some that not every student does the same thing at the same time. However, the rewards of creating powerful learning opportunities for students should overcome temporary discomfort. We must reimagine school not as a place to *prepare* students for some future experience, but as a place where students *are* inventors, scientists and mathematicians *today*.

The tools and ethos of the maker revolution offers insight and hope for schools grappling with what it means to be educated in the 21st century. The breadth of options and the “can-do” attitude is exactly what students need, especially girls, as they tend to opt out of science and math as time goes on. But hands-on making is not just a good idea for girls; all students need challenge and “hard fun” that leads to big ideas and inspires them to dive deeper. Making school subjects interesting and fun is not pandering to young sensibilities. It honors the learning drive and spirit that is all too often crushed by endless worksheets and boring vocabulary drills.

ADDITIONAL RESOURCES

Invent To Learn: Making, Tinkering, and Education in the Classroom <http://www.inventtolearn.com> - This website is the home of a groundbreaking book by Sylvia Libow Martinez and Gary Stager. *Invent To Learn: Making, Tinkering, and Engineering in the Classroom* gives educators a practical guide to bringing 21st century tools, technology, and pedagogy to any classroom. The website also includes recommended books and hundreds of links to resources and professional development for making, tinkering, and engineering in the K-12 classroom.

Video – Making in Education – Gary Stager’s interview with Steve Hargadon at the 2012 San Mateo Maker Faire <http://youtu.be/RVJfba1TAhg>

Constructing Modern Knowledge – premier event for teacher professional learning with the tools and materials of the 21st century. <http://www.constructingmodernknowledge.com>

Learning by Making: American kids should be building rockets and robots, not taking standardized tests by Dale Dougherty (*Slate* magazine online) <http://slate.me/132EezD>

Make magazine The bible of the Maker Movement. <http://makezine.com/>

Sylvia’s Super Awesome Maker Show is a video series produced by Sylvia, an 11-year-old maker, and her father. The videos are youthful and vibrant examples of playful technology. <http://sylviaishow.com/>

Why I LOVE My 3D Printer (and you will too!) is a video of a passionate talk by 12-year-old Schuyler St. Leger. <http://igniteshow.com/videos/why-i-love-my-3d-printer-and-you-will-too>

Joey Hudy Goes to the Whitehouse Joey Hudy is a young maker and entrepreneur who surprised President Obama with a homemade marshmallow cannon in the White House. <http://blog.makezine.com/2012/02/07/joey-hudy-goes-to-washington/>

The Story of Caine’s Arcade <http://cainesarcade.com/>

Even if educators don’t have access to expensive (but increasingly affordable) hardware, every classroom can become a makerspace where kids and teachers learn together through direct experience with an assortment of high- and low-tech materials. The potential range, breadth, power, complexity and beauty of projects have never been greater thanks to the amazing new tools, materials, ingenuity and playfulness found in today’s maker materials. Turning every classroom into a makerspace and every child into a maker is the path to creating truly personal learning for every student. ■

The Games We Play: Leveraging Gameful Learning

■ by **TIM SAUNDERS**

RAVSAK's middle school program JCAT developed from the pioneering work on educational games taking place at the University of Michigan. Saunders, a Michigan alum and gaming colleague, presents ways to gamify the classroom.

Gamification. Gameful learning. Gamified learning. These terms are used to describe a growing movement and the various ways teachers engage students through game play. All teachers do it; it is valuable to think about how this pedagogic tool can enhance student learning and accomplish the 21st century goals we seek to impart to our students.

I propose a simple question: what is it to play games in a classroom? As a classroom teacher who serves as a member of the Playful Learning Initiative (PLI) board, a national movement of educators supported by the Games+Learning+Society Group and the Learning Games Network, I take a broad look at what gamified learning could be. Games are inherently creative. Anything involving cards, role playing, digital media, playing boards, individual lessons, months-long play and sports are game for learning experiences. Even as a one-hour (or one-day) activity, game-based learning—like other creative pedagogies—can more robustly engage critical thinking, collaboration and risk taking.

So what can gamified learning look like? In my fourth grade language arts classroom we compared and contrasted characters and events from Sharon Creech's *Walk Two Moons* and Andrew Clement's *The School Story*, two books we used as interactive read-alouds to begin the school year. I wanted students to have robust discussions in heterogeneous-ability groups and dig into what we had read together. We split up into five groups of 4-5 students and then played the game "Would You Rather?" Of course, this version I customized ("skinned" in gamer terminology) for the lesson. Each group had 20 questions that compared and contrasted events and characters from the two books, e.g.:

- Would you rather be Sal or Natalie?
- Would you rather be friends with Ben or Zoe?
- Would you rather go to Sal's school or Natalie's school?

After drawing a card, the questioning student would write an answer in secret and then read the question to the group. The group then had to come to a consensus on what they thought the questioner would answer. If they were able to correctly guess, then they would move their game pieces one space forward on the game board (another very simple customization I made with paper and black marker). If the group did not guess correctly the questioner would move their piece forward.

I designed the previous questions to elicit students' ability to empathize with literary characters and their circumstances. However, other questions were framed differently, such as:

- Would you rather lie to surprise your mom, or lie to protect your friend?
- Would you rather keep the books that your late father read to you, or the postcards your late mother sent you?
- Would you rather lose your mother (Sal) or father (Natale)?

These emotionally compelling questions led students to have strong conversations about interpersonal relationships, and dynamics like loss. I remember the look on one of my students as she read the card asking which parent they would rather lose. She paused for a moment, picked up her pencil to write, then stopped again and looked up at the ceiling. After a moment, she turned to me and asked if it was her parents or the characters from the book. My response was an ambiguous, "What do you think?" She finally wrote down a name, and then read the question to her group. It was met with a dulled silence. Eventually one of the girls said this was a horrible question, and that they couldn't possibly choose. From there they had a subdued discussion; the consensus was that they couldn't lose their mothers and then moved on to the next question.

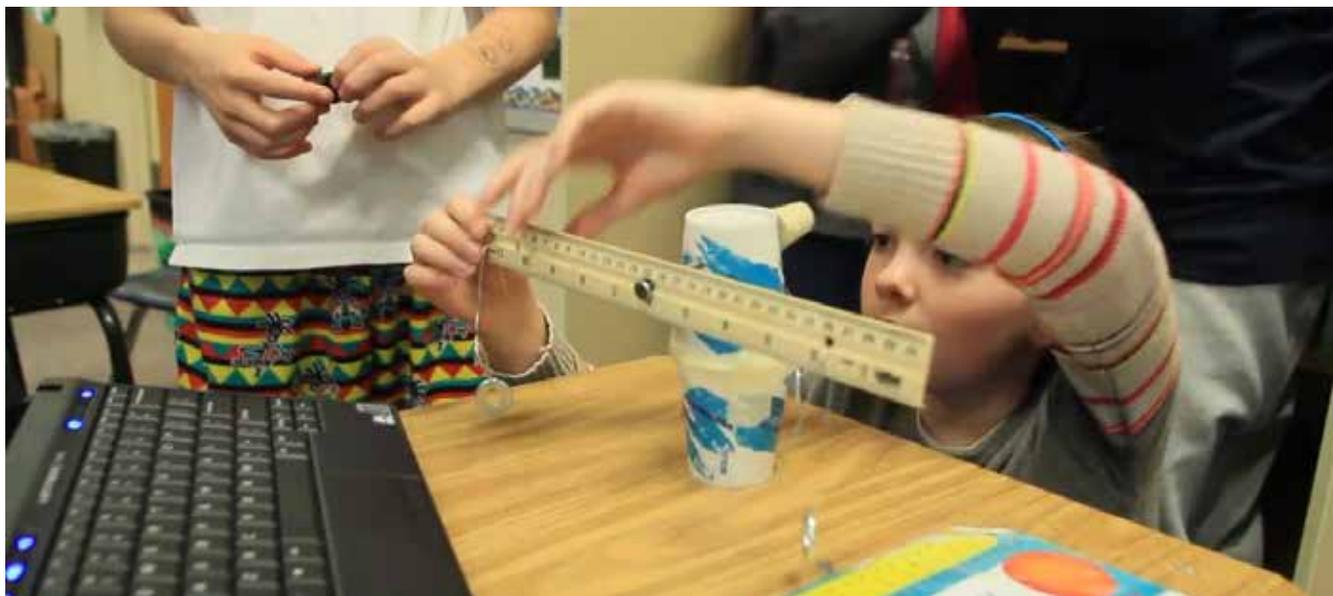
Once the game was completed, students came back together and we had a whole-class debriefing. My role was that of discussion facilitator. Students described how their thinking evolved as



Tim Saunders is a 4th grade teacher in East Grand Rapids, Michigan. tim.saunders41@gmail.com, gameful-learning.org

time went on. We compared how different groups answered the same questions. One of the students whose group drew the “which parent would you rather lose” card mentioned that it was hard to answer that question. There was a ripple of conversation from that statement, as some students rushed to say they had that question too, and others couldn’t believe that question was in the deck. One student quietly spoke up, recalling that they looked at both books differently after thinking of losing one of their own parents. At this point many students silently nodded their heads in agreement. The value of these debriefing sessions are hard to overestimate.

I noticed students “failing” time and again; that is, students often thought they had completed a lab/level when, in fact, they needed to complete more work. However, within these failure cycles students’ frustration was almost nonexistent. Prior to adopting a gamified approach to a science unit, students generally were not enthusiastic about having to correct written work or relearn a concept. But playing the unit as a game, students encouraged each other, helped teach each other, and were highly motivated to work towards mastery. This was significantly different from the traditional approach I had been using in science, where the students felt compelled to be correct the



I teach four units of science, and one of them is states of matter. For this unit I applied ideas from Lee Sheldon’s book *The Multiplayer Classroom*. The unit was now a game, called “Matter Quest,” with levels, characters, experience points and collaborative guilds. I also moved the game onto an online wiki where students could share data, results, reflections and make predictions about future learning.

While these additions to the unit aided student engagement, I also wanted to add gaming elements that could increase my understanding of their learning. There were 11 labs posted to the wiki as levels. To prevent students from moving through all of the labs without having their work and conceptual understanding checked, I made each level password-protected. Before students “leveled up,” I visited student groups, read everyone’s online work, asked questions about labs, and conducted informal formative assessments. If students didn’t show a complete understanding, or if they were missing important concepts, I’d ask them some guiding questions to help them put the missing pieces together. Once I was satisfied that they had completed the level satisfactorily, I’d give them the password for the next lab.

Playing the science unit as a game, students encouraged each other, helped teach each other, and were highly motivated to work towards mastery.

first time attempting to answer a question or complete a lab.

By providing a more autonomous work space for the students, and decentralizing my role as the instructor, I was free to float from group to group and check in on their understanding while they were completing labs.

This gave me a much better opportunity to work with the students as individual learners, and it gave the students more space and autonomy to explore the labs with their guild. They took greater risks in trying to understand how labs could be completed, especially when it came to creating tools like balances with a set of materials (ruler, cups, paper clips, masking tape, a nail). They played for experience points, instead of a grade, and I feel that liberated them to take risks, fail and try again.

My students weren’t the only ones playing around. Students were invested in a game narrative because I was transformed into Creepor the Emissary, a brown-cloaked villain who was threatening the planet with untold terror. Within each level Creepor asked students to solve a riddle. Taken altogether, the riddle answers formed a larger message revealing his master plan for Earth. From words such as “fire,”

[CONTINUED ON PAGE 30]

“smoke,” “lightning,” “star,” and “volcano,” the students crafted interpretations of the message.

The truth is, I never made a final decision about the message’s final version! Instead, I read selected responses that were, “Pretty close to what I think Creepor is trying to say.” The students, by now well in on the joke and playing along with my improv as Creepor, found this to be a satisfying conclusion to the story and the unit. By giving the students a chance to co-create the ending, they had a piece of ownership in the story. Since no one interpretation was deemed correct, students saw elements of their own ending to be part of the conclusion, and this allowed more students to be included in the authorship of the story.

Some ideas for educators looking to implement similar experiences: First, play games. It may sound simple, but play some games. “Would You Rather?” was inspired by the Zobmondo board game. Many teachers around the globe leverage video games within and beyond the classroom. Jeremiah McCall’s *Gaming the Past*, describes how he uses the simulation “Civilization” to teach social studies. Joel Levin has leveraged “Minecraft” into varied gameful learning experiences. As Kurt Squire notes in his book *Video Games and Learning*, many teachers who play games themselves find connections between game play, their teaching and students’ interests.

Second, start small. Rather than jump in with a gamified unit, look to start with a small lesson, or even an attention-getting activity at the beginning of a lesson. Give yourself, and your students, a chance to enjoy a gameful experience in the classroom that has a beginning, middle and end, without the pressure of sustaining it for a marking period or semester. This is especially true if teachers are attempting gamified experiences without a colleague to share the experience.

Third, find support. I was incredibly lucky to begin working on a gamified classroom with the support of my research partner, Amanda Pratt, while a graduate student at the University of Michigan-Flint. With her assistance, I’ve expanded my support network through the PLL, and the Coalition for Gameful Learning, a professional development group for teachers interested in the effects

Making time each day to facilitate thinking about *how* you played the game can be just as informative as the time spent playing the game.

of gamified experiences on classroom learning. Your most important supporters, aside from students, will be the building staff you interact with daily. Share your experiences with them, and see if you can find someone you

work with who would be interested in trying it as well.

Fourth, remember to debrief. I cannot overemphasize the benefits of debriefing after playing a game with your class. Whether it’s a single lesson, or a full unit, making time each day to facilitate thinking about *how* you played the game can be just as informative for you and your students as the time spent playing the game. Adding in a short written reflection after the debriefing as an “exit ticket” for students before moving on to another activity is also a successful technique, which gives an important voice to students who aren’t comfortable speaking out about their own thinking, especially in the first days of debriefing when no one is quite sure how it should look or feel.



In the end, games are another tool in the pedagogical toolbox. They are not the only way to teach and learn with students, but they are increasingly important. There are days where games may appear messy, loud and a bit chaotic, but that is an important part of the design process. Using debriefing time to evaluate what works and what doesn’t allows for reflection and revision going forward. Most days games fall together in spectacular fashion, and students and teachers are thrilled with what they discover together.

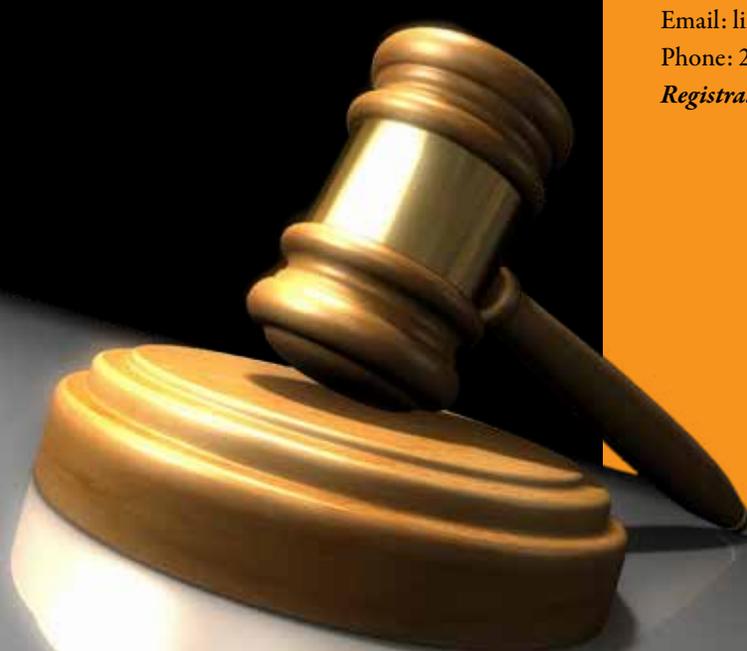
Educators interested in trying games in their classroom should give it a go. Isn’t it time to play? ■

Moot Beit Din

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Moot Beit Din takes real modern situations that we could potentially face in our lives and shows us that using resources that we thought otherwise obsolete can be a viable solution to these problems.

Tamar T.

What are teachers saying?

RAVSAK's Moot Beit Din program is a really rewarding way to interact with students. It brings out a new dimension in studying Jewish texts. It adds a different type of student into the mix of Jewish study.

Rabbi Mark Goodman,
Denver Jewish Day School

The Moot Beit Din program allows my students to engage with the sources of our tradition in a creative and dynamic fashion. It provides them with an opportunity to actively situate themselves within millennia-old conversations about how Jewish life can be lived.

Rabbi Joshua Ladon,
Jewish Community High School of the Bay

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Getting Started with PBL

■ by **TIKVAH WIENER** and **ANDREA ROSE CHEATHAM KASPER**

The authors are both researchers of project-based learning and champions of ambitious initiatives in PBL. They explain the varieties of PBL, offer examples from day schools and give guidance for professional development.

Educational leaders have recently shown interest in the pedagogical approaches John Dewey advocated early in the twentieth century. These pedagogies endorse learning in which students mimic the world of work by solving real-world problems that force them to employ higher order, multidisciplinary thinking and engage students using their passions and interests. The educational models are known as project-based learning (PBL), inquiry-based learning (IBL) and student-driven learning (SDL). The growth in technology, our flattened world and the need for an innovative and creative workforce are making these educational approaches not only more attractive but necessary for today's world. More importantly, these making-as-learning models infuse the classroom with joy and purpose and create empowered and creative lifelong learners.

Terms

While educators are intrigued by the notion of these pedagogies, many don't know how to get them started in their schools and classrooms. One barrier is confusion about what PBL/IBL/SDL are, since many terms exist for the models and are used interchangeably.

Project-based learning is a dynamic pedagogical approach where students engage directly with real-world problems. Students work collaboratively with peers to investigate problems or essential questions, in depth, and produce an end project or product that has relevance in the real world. These culminating projects are diverse in nature and can be visual, musical, technological and physical.

Inquiry-based learning is also project-oriented and based on constructivist theories of learning. While both PBL and IBL have learners engage in collaborative work and multidisciplinary thinking as well as the creation of an end project with authentic purpose, IBL focuses on enabling students to formulate questions and come up with resolutions independently.

Student-driven learning incorporates either PBL or IBL, but also allows students to choose their projects based on their passions and interests.

This article will employ the term PBL to include all three models, unless one particular model is under discussion.

Efficacy Research

The empirical research on project-based learning provides a persuasive case for its effectiveness in developing high-level thinking skills, research capabilities and collaborative working techniques. PBL also results in enhanced creativity and innovation in students, qualities they will need for the 21st century.

While research supporting student gains in 21st-century skills as a result of PBL continues to be published, project-based learning has not been widely implemented in the American school system. The difficulty of appropriately training and supporting teachers to effectively implement PBL remains a barrier to adoption of the learning model.

Professional Development

The fact is that school professionals should feel confident about implementing PBL as long as educators are provided with the necessary scaffolding to do it well. The literature suggests that poor implementation of PBL might leave students floundering and lost, without the skill and ability to focus and apply themselves with necessary rigor.

This is because a PBL classroom must be run in a manner that is completely different from what educators are accustomed to. An overwhelming challenge for many teachers is having to "let go" of their idea of what it means to be in control of the classroom and of what it means to be a teacher. The research also finds that striking a balance between "letting go" and not providing enough structure for the students is difficult for many, resulting in students being given *too* much responsibility without the appropriate support and feedback.



Tikvah Wiener is an educator at The Frisch School in Paramus, New Jersey, and runs RealSchool, an inquiry-based, student-driven learning program. Tikvah.Wiener@gmail.com



Andrea Rose Cheatham Kasper is director of teaching and learning at Krieger Schechter Day School in Baltimore and in the 8th DSLTI cohort. Akasper@ksds.edu

Since teacher structuring of PBL is crucial to encouraging students to be both thoughtful and substantive in their inquiry, it is essential that teachers are given the appropriate professional development and support for effective implementation. The most successful models of teacher training provide cycles of collaboration, enactment and reflection, allowing educators and administrators to gain new visions of instruction, develop rich conceptions of the features of PBL, and learn strategies for enacting practices congruent with theory.

One of the most important features of PBL is its focus on process and mastery rather than on completion. At the culmination of a PBL unit, the teacher has not only assessed her students' knowledge in a content area. She is also aware of the critical thinking, reasoning, and divergent thinking skills students have honed; the contributions they have made to their group work; the oral and written skills students have demonstrated in presenting their findings; and the creativity, artistic abilities, and/or digital literacy they have developed as they completed different parts of the unit.

Because educators have to learn how to structure a PBL classroom and how to carefully construct the complex layers of a PBL unit, schools must build time into the teachers' schedules for professional development. At the Science Leadership Academy in Philadelphia, an inquiry-based learning public high school, students leave the campus every Wednesday afternoon to do internships, so teachers have two and a half hours of meeting time each week built into their schedules.

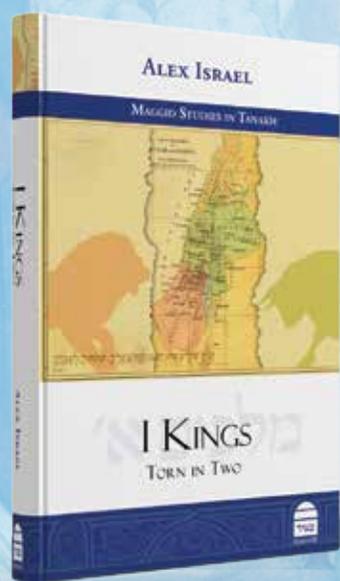
Also helpful for schools interested in PBL is the designation of an administrator not only to implement the methodology and provide ample opportunities for teachers to collaborate and reflect on their practices, but also to manage the scheduling of the PBL units.

PBL and Jewish Education: Case Studies

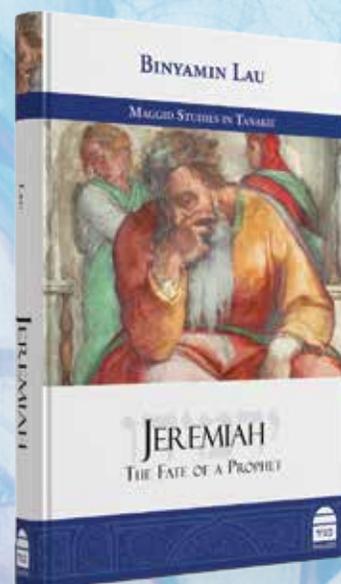
Within Jewish day schools, the focus on text learning born out of the Jewish tradition may seem to limit the kinds of curricular and temporal flexibility that PBL demands. However, the challenge of balancing text study and development of textual skills with creating meaning out of those texts for today's modernized and technologized students could be answered by PBL. Having to complete multidisciplinary projects that have relevance in the real world enables students to see how their Jewish knowledge can be utilized across subject areas in authentic ways.

PBL requires an essential or driving question; careful design of the project that includes not only a project plan but also a set calendar and rubrics for assessing the various components of student work; presentation of work, and reflection. The following case studies of PBL in the Judaic studies classroom and Jewish day school setting provide examples of how to get started with PBL in multiple ways. Not all the case studies contain all the elements of PBL described above, but that is an important point. The PBL model is flexible and adaptive, so in getting started, school leaders and educators should consider what is best for their needs.

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Valuable New Resources for Tanakh Teachers



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Rabbi Lord Jonathan Sacks

"...reanimates the text for a new generation."

Aryeh Tepper, Jewish Ideas Daily



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PBL at Yavneh Academy and IBL and SDL at The Moriah School

Rabbi Aaron Ross of Yavneh Academy, an elementary school in Paramus, NJ, has been implementing PBL in his seventh-grade Chumash classroom for the past few years, particularly for a project where students research an area of the laws of kashrut. Ross provides the resources, which he collects on a wiki he created and in hard copies he makes available in the classroom; note the high- and low-tech learning management systems. Since Ross carefully structures his PBL units to ensure students emerge from them with a specific body of knowledge, he quizzes students, often using apps such as Socrative, which allows teachers to load multiple types of questions into a quiz that is graded instantly. Ross can see immediately who has grasped a concept and who hasn't.

Ongoing reflection and assessment of student mastery of material is essential in PBL. Ross here demonstrates how that can be done using an app, but educators can feel comfortable knowing there are many ways to help students reach benchmarks: through quizzes or even longer tests; through reflective written pieces; research papers, and even through art projects. Another important part of PBL is allowing for student voice and choice. Ross has built that into his project as well, allowing students to choose not only the area of kashrut they want to research but the digital platform they will use in their final presentations: PowerPoints, videos, Prezis.

Educators must also create PBL presentations that have authentic purpose. This past year, Ross was highly successful in doing so. He used his PLN (personal learning network) on Twitter to connect with a seventh-grade history teacher at Denver Christian Academy who had taught his students about the Chanukah story and the restrictions on keeping kosher that Jews faced during Antiochus' reign. Ross and the teacher arranged for Ross's students to teach the laws of kashrut to the seventh-grade boys at the Catholic school. The presentation piece of the PBL unit, then, became one of tremendous authentic purpose, as Ross's students had to explain esoteric religious concepts, ones they were familiar with, to those who had never heard of them before.

Ross's PBL units are carefully crafted ones which he has honed over the past few years and keeps building on. It's important for school leaders and educators to know they can begin small and then add to projects as they master PBL. For example, Rabbi Avi Bernstein, who teaches at The Moriah School, an elementary school in Englewood, NJ, became interested in IBL and SDL and piloted them this past year with seventh graders in his Talmud and Jewish law classes.

Bernstein's project was on a smaller scope than Ross's, and it was inquiry-based and student-driven rather than carefully guided PBL. Bernstein asked his students, "What is one area or mitzvah in Jewish life that you never seemed to understand and wish to know more about?" This simple but powerful question allowed authentic purpose in the IBL unit to flow from the interests and passions of the students.

Bernstein's students chose myriad and wide-ranging topics to explore: animal cruelty, the process of a Jewish wedding, the laws of kashrut, and the laws of gossip were a few. Whereas Ross was able to preselect sources for his students because he had planned the topic of the PBL unit, Bernstein was unable to do so, since an inquiry-based classroom allows student questions to lead the learning. Instead, Bernstein worked with his students on how to curate information from the Internet; he showed them which sites they could rely on and which were faulty. As a result, his students' digital literacy skills were developed in a different way than Ross's were. Ross's students learned how to have a meaningful conversation online about their religion with peers across the country, while Bernstein's students learned how to use the web to answer questions they had about Judaism.

As one can see from Ross's and Bernstein's experiences, educators experimenting with PBL, IBL and SDL can employ any of the models, depending on their classroom needs. Furthermore, teachers shouldn't feel they are sacrificing rigor or the need to teach textual skills in order to employ these models. Because Ross's students were carefully led through the learning process, they emerged with as deep a knowledge as they would have had they been taught in a traditional manner.

In addition, Ross finds student engagement with PBL is high. All educators want students deeply engaged with learning, but in the Judaic studies classroom, that engagement has more import as it has the capacity to create a strong connection to Judaism. Bernstein's approach also fulfills a goal of the Judaic studies classroom: making religion meaningful for students. Bernstein allowed the students' interests to dictate how they would create a meaningful assignment about their religion, and the project worked. The students *were* excited about what they were learning and found meaning in what they created.

RealSchool: an IBL and SDL Program at The Frisch School

Two years ago Tikvah Wiener began RealSchool, an IBL and SDL program at Frisch, a high school in Paramus, NJ. RealSchool, which began as an extracurricular activity, has students decide what and how they learn and has them engage in learning by doing. RealSchool's fashion show is an example of how to infuse Jewish values into a multidisciplinary project.

The fashion show, run by Wiener and Frisch's art teacher Ahuva Mantell, arose out of the desire of many of the female students to incorporate their love of fashion into a school activity, but because RealSchool has members with diverse interests, the students were able to collaborate and create a show that went beyond mere fashion. For example, RealSchool has members on teams such as The Arts, Graphic Design, Religious Identity, and Social Action and Entrepreneurship, all of which contributed to the show.

This past year's theme, for example, was "Who's the Fairest of Them All?," and the show's aim was to advocate for fair-trade practices and the eradication of human slavery. RealSchool's Social Action and

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RAVSAK Visits: Upstate New York Schools

Over the past two years, RAVSAK staffers have hit the road to pay visits to member schools. We recognize that there's a limit to what we can learn by emails and phone calls; in order truly to understand a school, we need to see it and experience it firsthand. When we visit schools we spend time in offices and in classrooms, speaking to school heads, board members, faculty and students. We want to learn your successes and challenges, to appreciate what makes your school special, to scan its DNA, and to explore how RAVSAK can help your school thrive in new ways.

Recently, RAVSAK toured our schools in upstate New York: Hillel Academy of Broome County (in Vestal, outside Binghamton), Hillel Community Day School (Rochester), Kadimah School of Buffalo, and Syracuse Hebrew Day School. We saw four schools, among the oldest in our network, all within the "small" range of the RAVSAK spectrum, all of which serve as vital pillars for their local Jewish communities. All are renowned for their outstanding academics, and in all of them the students engage in incredibly rich, dynamic Jewish and Hebrew study, creating proud, knowledgeable Jewish leaders of the future. We saw heads who lead with professionalism and passion, who ensure the highest quality education and work tirelessly to recruit widely and retain every student. We met board members with great faith in their schools, who are optimistic that their schools can grow and prosper and are doing all they can to make that happen.

Nothing is more inspiring than to witness the remarkable work that these schools cultivate in their students. In Syracuse we saw second graders dance and sing the times of day in Hebrew, while sixth graders discussed advanced theological and interpretive issues as they read Exodus and Rashi's commentary in Hebrew. In Rochester, students were preparing the walls and ceilings of hallways with their artwork for the annual Art and Literature Evening. Students in Vestal were constructing models of the Mishkan, the ancient Tabernacle, and a second grade parent led students in an orchestra after school. Over in Buffalo, students use Raspberry Pi, an inexpensive, credit-card sized computer, to learn programming and create new devices for an Invention Convention.

These schools are an inspiration to their stakeholders, their communities, and to day schools everywhere. ■



BUFFALO



SYRACUSE



ROCHESTER



VESTAL

Embracing Experimentation

■ by **JONATHAN WOOCHE**R

RAVSAK is delighted to welcome Dr. Jonathan Woocher, a renowned visionary in Jewish education, to the pages of *HaYidion*, where he will have a platform to offer his guidance and inspiration to our readership.

Almost since its beginnings, American Jewish education has looked to the larger educational environment for ideas on how to carry out its mission. The great wave of Jewish educational innovation that began almost a century ago under Samson Benderly and his disciples was deeply informed, perhaps even inspired, by the progressive educational ideas and developments of its day. Thus, it is not surprising that the topics that fill general education journals and blogs today are showing up increasingly in our publications and schools (and our camps, youth programs, ECE programs, etc.) as well.

This is a good thing. Jewish education needs to be refreshed by good ideas whatever their source (including re-mining our own long history of learning and teaching). But we also need to be mindful that latching on to the latest trends in general education is not a panacea. The history of educational innovation and change argues for a cool skepticism about many of the ideas being touted so enthusiastically. Educational structures and practices are difficult to change, and often for good reason, given education's vital role as a cultural transmitter across generations.

We need, therefore, to embrace new thinking and new approaches with an experimental mindset. Viewing the adoption and adaptation of ideas now prominent in general education from an experimental perspective doesn't just mean that "we'll try them

to see if they work." It means doing so with the measure of rigor and reflection that we associate with scientific experiments. As in experimental science, learning from the accumulation of innovations should be our primary initial goal.

The record of Jewish education in this regard has not been great. To our credit, we do try lots of things. But we frequently fail to do so in ways that both enable us to identify and articulate what we have learned and to share those learnings, even with those pursuing similar pathways.

The formula for capitalizing fully on today's thirst for innovation involves several steps that are simple to state, though (admittedly) not always so easy to implement in a day school or other setting. It involves:

1. Formulating hypotheses that we can test. Why do we believe that introducing on-line learning (or another innovation) is a good thing? What do we expect to see happen as a result? How can we know if this is in fact taking place?
2. Carefully monitoring what happens. We should look not only for evidence for or against the hypotheses we have formulated, but for unanticipated effects as well.
3. Iterative learning. It's rare for a new practice to succeed fully right out of the box. Innovation today is increasingly done through a cycle of quick trials and refinements (or even "pivots," where you move in a different direction to seek the same goal).

4. Reflection. Taking the time to step back and assess what has been learned and what the next steps are. Ideally, this should involve all of the stakeholders impacted by the innovation being introduced.

5. Sharing. The best learning about the potential value of new educational approaches for Jewish education will come from sharing the experience of multiple experiments. Educators and institutions need to report publicly on what they are learning and to participate in conversations that allow broader frameworks of knowledge to emerge.

There is one more critical requisite for implementing this experimental approach across the Jewish educational landscape: support from funders. It's obvious that introducing new programs and pedagogies requires resources. What is perhaps less obvious is that creating the infrastructure for a learning-oriented approach to innovation requires resources beyond those needed for the innovations themselves. Happily, there are some notable funders who have made support for experimentation and fieldwide learning core elements of their philanthropic approach. However, in the understandable eagerness for "results," the recognition that some experiments not only may, but must fail for learning to advance can be too easily lost among all parties.

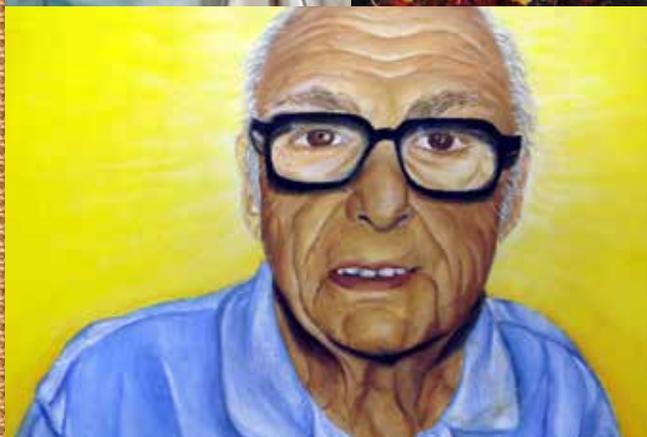
Our job is to ensure that these experiments yield real learning and, ultimately, real gains, for students, schools and the field as a whole. ■



Dr. Jonathan Woocher works in a senior capacity with the Lippman Kanfer family on its philanthropic and educational initiatives. jon@lippmankanfer.org

RAVSAK's Jewish Art Contest

RAVSAK, in partnership with the Aleph Society's Global Day of Jewish Learning, presents a prestigious and impressive contest that allows students to compete and share their works with students across the country and beyond.



This amazing opportunity gives our students an exciting platform to bring together two passions: the arts and Jewish text. RAVSAK's Jewish Art Contest encourages participants to artistically express themselves in creative enriching ways through their interpretations of Torah. We are excited to be a part of this project.

Karen Feller
Head of School
Donna Klein Jewish Academy

Register NOW for this year's Art Contest.

For details of the program and to register, please contact Lisa Inberg, Student Programs Coordinator

Email: linberg@ravsak.org
Phone: 212-665-1320

*Registration deadline is October 11, 2013
Artwork submission December 20, 2013*

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PBL in Our Schools

“The self is not something ready-made, but something in continuous formation through choice of action.” - John Dewey

Project-based learning, at heart, is giving students the opportunity not just to discover themselves but to create themselves. When the projects come together successfully, they empower students to self-create by applying the values imparted by Jewish day schools: exercising responsibility, collaborative exploration, taking action based on knowledge, enthusiasm for learning and creating something new and valuable. Below are examples of PBL in RAVSAK schools that translate Jewish learning into practice, draw important lessons, and derive benefit for participants, other students and the larger society.

Faith—and Bread—Take Time and Energy to Develop

By Sharon Freundel, Judaic Director, Jewish Community Day School of the Nation's Capital, Washington, DC



Our fifth graders explore Yitzi'at Mitzrayim (the Exodus from Egypt) as part of their Tanakh studies. One enduring understanding of the unit is that *Faith and trust take time and energy to develop*. The nascent Israelites did not quite trust God even until the end of their wanderings in the wilderness, and they were certainly skittish about this relationship at the beginning. This idea is an esoteric concept for modern eleven-year-olds. The notion of anything taking time and/or patience is foreign to the “wired” generation.

Three years ago, a student asked about the matzah in light of the verse (Shmot 12:34)

וַיִּשָּׂא הָעָם אֶת בְּצִקוֹ טָרֶם יְהִמָּץ—“The people took their dough [with them out of Egypt] before it was leavened.” He wanted to know the significance of the Torah mentioning the unleavened dough, especially as the Torah tells us they had eaten matzah the night before as part of the korban Pesach (the Passover sacrifice). This led students to ask questions about where yeast came from, especially as there were no supermarkets. Their teacher, Shifra Kaufman, decided to kill two birds with one stone and respond to that question with project-based learning while having the students experience something that required time and energy to develop.

She found online a recipe for sourdough starter and created separate jars for small groups of students. Sourdough starter is a mix of flour and water, which is left open to draw yeast spores from the air itself. It needs to be replenished each day with the correct amounts of flour and water and tended carefully for a number of weeks. The students took turns “feeding” the jars each day and bringing them home over the weekend to continue growing the mixture. They began to understand that not everything occurs instantaneously and to appreciate how much more difficult life was before our modern conveniences.

When the starter was done, the students selected different kinds of dough to bake: one using the sourdough starters, one with store-bought yeast, and one with no yeast or leavening of any kind. They mixed the doughs, kneaded them, allowed them time to rise, and finally baked them. Then they compared the outcomes in terms of appearance, smell and taste. They experienced the differences between various kinds of bread and commented on how much more meaningful the bread made with their own sourdough starter was (despite the fact that it was by far not the tastiest) as they had seen it through from beginning to end.

As the students watched the yeast grow and baked their bread, they also asked many questions about challah and its place as today's primary "Jewish" bread. The class took a field trip to a challah bakery in Baltimore and learned about the process of making challah and other Jewish baked goods (such as bagels). In addition, when some students

went to a farmer's market and saw challah-shaped breads labeled "brioche," the class researched challah's shape and origins.

The students then began small-group research about topics related to bread such as challah, mannah, matzah and the lechem hapanim (showbread). Some learned Torah sources about one of these breads, some, archaeology or history, and some, the traditions surrounding bread, such as hand washing and Birkat Hamazon (Grace after Meals).

Through their research, the students found that the earliest historical evidence of leavened bread was found in Egypt, leading many historians to believe it was developed there. This fact led to discussion and reflection on the original question that started the project, the significance of unleavened bread for bnei Yisrael the day after they left Egypt. The students made the connection themselves between celebrating the first seven days of freedom by not eating the kind

of bread that free Egyptians might have been eating while they were slaves. They also traced their own learning beginning with the big idea and ending with further knowledge of one of the staples of the human diet.

At the end of the project, the students compiled their personal research together with written reflections on what they had learned about yeast and the energy it took to make bread, the significance of both leavened and unleavened breads in the story of Yetziat Mitzrayim and challah as a Jewish symbolic food. They created videos, PowerPoint presentations, Prezis and written essays combining all the things they had learned into a format with which they taught each other about what they had discovered.

Three years later, these students remember this Tanakh unit better than almost any other unit they encountered. The project-based learning made an educational impact on them that they still carry with them. ■

Achieving Civic Engagement and Tikkun Olam through PBL

By Matthew Vacca, Academic Coordinator and History Department Chair, New Community Jewish High School, West Hills, CA

Seniors in my American government and politics class complete a social advocacy project in which they consider issues in need of repair, create a campaign to advocate for change, develop online resources to help educate and inform their community, and employ a host of skills necessary for the 21st century learner. The ubiquitous laptop or tablet makes these objectives eminently possible, and instructing in a one-to-one device environment is crucial for the success of this project.

This assignment is in keeping with the mission of New Community Jewish High School, which puts forth a values-based approach to education, presenting students with the opportunity to expand their network and use social media for social good. At New Jew, our first Expected School-wide

Learning Result (ESLR) is for students to engage in acts of Tikkun Olam. We also ask that our students consider what is truly important in life and understand "a big thing from a little thing," in order to keep life challenges in perspective.

There are three main curricular goals in this assignment: 1. create a space for students to explore personally relevant areas for civic engagement; 2. connect students to the world outside of the classroom and create opportunities for them to tackle real world challenges; 3. stress skills needed for 21st century learners, such as creative problem-solving, collaboration, complex communication, digital literacy, initiative and ethical decision-making. Students select their own groups based on mutual interests and skill sets during a short interview and

polling exercise conducted in class. A more sophisticated version of this exercise would ask students to create a résumé and interview each other in a speed-dating format. Each group works together to complete nine "deliverables" (below) or components over four months. Examples of student initiated topics include safe teen driving, anti-bullying, promotion of self-esteem for teens and creating a culture of healthful eating.

Organization and Structure

Groups create, design and maintain a website, like Google Sites or Tumblr, dedicated to the topic. Using their chosen platform, student groups name the organization, create a logo and slogan, and post a clear mission statement, measureable goals and

PBL in Our Schools

explanation of guiding Jewish values. Using Google Documents, each group writes a contract, where they define, assign and schedule tasks and document this arrangement on a project timeline.

White Paper

Groups submit a 400 word summary of the issue to the instructor. This briefly indicates what the issue is, states the group's specific position and proposes a solution(s).

Fact Page

Expanding on their research for the white paper, the fact sheet is a brief statement of the issue accompanied by documented statistics and facts, and a clear statement about a proposed solution, all posted online. In addition, a documented and compelling human-interest story or real-life anecdote and links to other organizations that advocate on behalf of the issue are required.

Contact Stakeholders and Form Coalitions

Students reach out and offer to assist organizations and lobby politicians who share the same interests. Using Google Spreadsheets, groups maintain a contact list and document all communication.

Develop Educational Materials

Posted on the group site, this component creates a central repository of information that is annotated, organized, documented and professionally presented, while providing a "Frequently Asked Questions" and compilation of annotated links to articles and outside media that pertain to the issue.

Digital Storytelling

Students create a five minute advocacy documentary embedded on the group site that seeks to frame the issue rhetorically by using



music, quotes, images, documented facts and interviews.

Explain and Launch a Social Media Campaign

Using sites like Facebook, Tumblr,

Twitter, Instagram and YouTube, groups use social media to reach and communicate with a widespread audience about the issue, using their cultivated materials. Groups submit to the instructor a 250 word reflection explaining how their social media strategy was incorporated to advocate and raise awareness.

2000 Word Research Paper and Annotated Bibliography

Based on scholarly articles, documented sources, and news articles, this paper answers the following questions: 1) What is cause of the issue? 2) What impact is the issue having on the community? 3) How does the issue relate to Judaism and Jewish values? 4) Who has the power to directly address the issue? 5) What are the solutions the team has identified?

Present their Findings to a Community Panel

Groups select an audience of faculty members. In seven to ten minutes groups discuss their mission and goals, identify solutions, effectively use visual aids and demonstrated presentation skills, while reflecting on the project experience and taking questions from the panel.

Links to student work where videos, social media content, and other educational materials can be found:

"Simplicity": sites.google.com/a/ncjhs.org/g5

"License to Kill": sites.google.com/a/ncjhs.org/g2

"Renew": renewyou.tumblr.com

"iHeart Health": sites.google.com/a/ncjhs.org/a3

"Together Against Bullying (TAB)": sites.google.com/a/ncjhs.org/d1 ■

Israel and Texas: A Tale of Two Topographies

By Jeni Rosen, Principal, Austin Jewish Academy, Austin, TX

“Before I did this project, I thought Israel was a scary place that I would never want to visit. Now I can’t wait to go there.” AJA 4th grader

Teacher Kathy Rosenmann loves sharing her enthusiasm for Texas history with her students, and this year, took it a step further by comparing Israel, the Jewish homeland,

special instruction in how to read expository texts to obtain critical information. Students used websites, videos, books and magazines to gather information about their assigned regions. Using graphic organizers, students took notes on a variety of topics including animals, plants, resources, climate, landforms, bodies of water and major cities.

Compare/Contrast Paper

Synthesizing the information learned through research, students completed graphic organizers and then wrote a paper comparing and contrasting the geography of Israel and Texas.

Meograph Trans-Atlantic Tour

The Meograph is a multimedia program



with their current home, Texas. The essential question guiding this unit of study was: How does understanding geography affect people’s affinity towards a particular region?

Over the course of a month, students became immersed in developing an understanding of the themes and elements of geography including human/environment interactions, movement, places/regions, physical systems and the world in spatial terms. This project-based study allowed students to draw conclusions about the similarities and differences in geographical regions and to foster an appreciation for and pride in these two special places. As their understanding grew so did students’ sense of identity, belonging and responsibility.

The project was divided into five parts, and students worked in pairs.

Research and Information Gathering

The teacher provided

Relief Maps

Students learned about scale and proportion along with the regions, landforms, bodies of water and elevations of both Israel and Texas. They then designed pizza boxes to represent each place and constructed relief maps that included surrounding states/countries, color-coded regions, major cities and rivers, a scale and a key.

Expository Paragraphs

Students participated in a variety of writing lessons before composing descriptive paragraphs about the geographic components of Israel and of Texas. Each student’s seven paragraphs were displayed inside his or her pizza box.

that allows users to combine maps and links and tell stories in the context of when and where. AJA students researched four interesting places to visit in both Israel and Texas. They planned, wrote and narrated a Trans-Atlantic tour highlighting their chosen places of interest. To see an example go to www.meograph.com/itay531/12554/texas-and-israel-meograph.

The teacher provided daily feedback and used rubrics to evaluate final products. Students completed self-assessments and evaluated team functioning and final products, as well as the overall project. To celebrate their hard work, students created edible Texas-shaped pizzas and Israel-shaped cookie cakes that were shared with parents. As a culmination, students formally presented their projects to their parents and a panel of community members at AJA’s spring Portfolio Day. The school hopes this unit has sparked an interest in students to further build on their understanding and love for Israel and Texas and to become invested citizens. ■



PBL in Our Schools

Teaching Ritual Practice

By Rebecca (Farber) Bubis, High School Jewish Studies Teacher and Jewish Life Coordinator, Tarbut V'Torah, Irvine, CA

High school students in a course on Jewish rituals decided this past year to accept their principal's offer and pilot Tarbut V'Torah's first project-based learning class. Taking a break from traditional frontal learning, they proposed a how-to booklet on Jewish ritual practice replete with a focused goal and a timetable. Their aims, in their own words, were to "learn better leadership, communication and research skills." What they ended up creating was beyond our imagination: a thought-provoking and well-balanced handbook to guide any newcomer through the steps and meaning of these practices.

The crew of seven consisted of one freshman, two sophomores, three juniors, and a senior. Given that this was to be a beginner's introduction, the students were forced to exclude many rituals from their book. After much deliberation, they wrote a disclaimer at the outset informing the audience that this book would not take into account denominational or communal differences. It would also not consider Jewish moral values, history or textual traditions. The book was to be strictly about rituals from today.

Their divisions were familiar: weekday rituals, Shabbat rituals, holidays, lifecycle events and kashrut. Each section they subdivided into categories (i.e., Shacharit), and in each category they produced a list of required elements to cover (Birkhot HaShachar, She-



THE GUIDE TO EMBRACING YOUR INNER JEW

ma etc.). Their ability to divine common ground despite different backgrounds was surprising.

They worked in four rotating teams. The first team wrote the explanation of the ritual, the second wrote the meaning and greater significance of the ritual, the third worked at the computer on design and layout, and the fourth collected quotations

and prepared images. The first and second teams researched the rituals' components from a variety of sources and ultimately displayed a sophisticated and genuine appreciation of each one. The third and fourth teams also worked closely together, meeting with the visual arts faculty to produce effectively packaged content which had an orderly and attractive format.

The road was not always smooth. Some of the students were well versed in mitzvot, others not; some of the students had experience working on long-term group projects, others not. But all of the students were invested in creating a book they would be proud to call their own. And their teacher had to learn to relinquish control while still properly assessing them.

Every few days they would meet as a class for a check-in. During this time they would submit work for peer review, including both product and process, confirm that there was a unifying theme throughout each section, and divvy up the responsibilities for the next pieces. Knowing that their friends were watching encouraged the students to proactively demonstrate intent and thoughtfulness.

This student-powered work promoted both ownership and self-respect. The class excitedly awaits giving their completed, fifty-page handbook to incoming generations of new students. ■

Youth Philanthropy: Learning for a Lifetime

By Lynn Raviv, Director of Development, N. E. Miles Jewish Day School, Birmingham, AL

How can we support our school motto, "Learning for a Lifetime"? How can we motivate students to think about what they are doing and not just about "getting it done"?

Tikkun Olam and Menschlichkeit, two core values that are embedded in our curriculum, are supported through the Abroms Youth Philanthropy Initiative, our day school project-based yearlong activity, named for the

family which matches the funds the students raise, doubling the amount of their philanthropy. According to "Changing the Face of Giving: An Assessment of Youth Philanthropy," a study commissioned by the Irvine

Foundation and written by the Youth Leadership Institute, “Youth philanthropy initiatives help to build the kinds of skills that improve young people’s self-esteem, academic achievement and future success,” and increase the chance that the participants will be involved as philanthropists as adults.

The Abroms Youth Philanthropy Initiative is designed to support this finding. This initiative encouraged students to raise money to be donated to nonprofit agencies they deem important. Having this hands-on experience gives our students substantial opportunities for deep understanding of our school’s Jewish values.

During the year the students invite representatives from a number of nonprofits to visit the day school to share information about the work their agency does. In some cases, students visit the nonprofits and volunteer their time. The result of this experience is extraordinary. In addition to the visits to the nonprofits or the visits of guests to the school, the group of 6th-8th grade students meets several times a month with the development director to learn about philanthropy and create ideas of ways to act on their new knowledge.

Here is what one of the students had to say about this important part of their education:

Through our philanthropic endeavors we all learned endless amounts of life-changing information. This information helped us choose the organizations we donated to. All these nonprofits are terrific examples of what we have learned here throughout our days at the NEMJDS, Tikkun Olam, repairing the world, one of the values that we all searched for when choosing the recipient organizations. We saw in all of these great nonprofits the way they contributed to our mission of repairing the world, making it a better place.

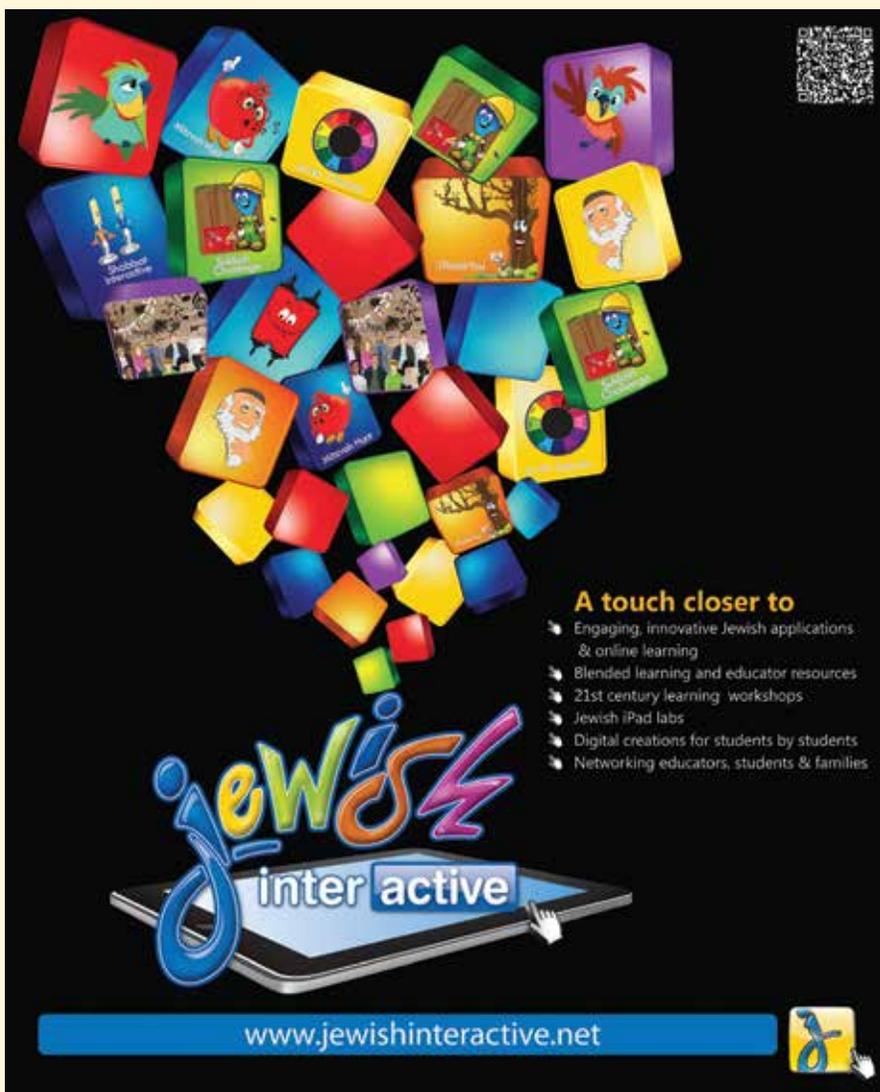
The students raised \$2500 through two pancake breakfasts and a film festival that featured films created, directed and produced by the students—a project they undertook especially to raise more funds for

philanthropy. They developed a very sophisticated process of determining which organizations would receive allocations and how much each would receive. This process took place in three hourlong meetings where the students listened when their peers were speaking, were very serious about the discussions, and shared their ideas about what they had learned about the organizations, helping them make their choices.

In late May, students, teachers, organization representatives and community members gathered in the school library to witness the culmination of this initiative as students awarded checks to seven different nonprofit agencies in the Jewish and extended community. It was by far one of the most

meaningful events in the students’ school experience.

This project caused our students to engage with the larger community by learning of its needs and the vehicles to meet those needs. It forced them to analyze various approaches and make judgments about what they wanted to support, and it led them through fundraising projects which they created and implemented. They learned to listen respectfully and ask questions, and to make decisions over ways to use limited funding successfully. This experience is the essence of project-based learning that can awaken a young person’s passion to do good and provide a model of how to get something accomplished. ■



The advertisement features a central graphic of numerous colorful, 3D cubes floating in a cluster. Each cube displays a different Jewish-themed illustration, such as a parrot, a menorah, a rooster, and a menorah. In the top right corner, there is a QR code. Below the cubes, the text "Jewish interactive" is written in a stylized, colorful font, with "Jewish" in blue and "interactive" in white on a blue background. Below this, a tablet device is shown with a hand cursor pointing at it. At the bottom, a blue banner contains the website address "www.jewishinteractive.net" and a small logo of a hand holding a pen. To the right of the banner, there is a list of features under the heading "A touch closer to".

A touch closer to

- Engaging, innovative Jewish applications & online learning
- Blended learning and educator resources
- 21st century learning workshops
- Jewish iPad labs
- Digital creations for students by students
- Networking educators, students & families

www.jewishinteractive.net

Full STEAM Ahead! Cultivating 21st Century Skills

■ by **DANNY AVIV** and **KAREN EVERETT**

STEM education is the hottest trend, especially in the US, where students lag behind counterparts abroad. Aviv and Everett argue for STEAM instead, combining technical learning with art and design to foster student creativity across the curriculum.

American primary and secondary educational institutions, including Jewish day schools, are recognizing the need to adequately prepare students for the educational and professional realities of the information age. In the past, education often focused on the dissemination of content with the assumption that students would acquire relevant job skills along the way. Past performance assessments emphasized the recounting of facts, figures and formulas. Incorporating STEAM (science, technology, engineering, art and mathematics) into the curriculum and culture of our schools will help address the educational requirements for 21st-century preparedness.

The past few years have seen the explosion of STEM (STEAM minus the art component) initiatives in elementary and secondary education. The addition of art into the STEM mix is now being championed to ensure the inclusion of creativity and design as teachable 21st-century skills that are necessary for the successful development of any technological innovation or invention. In addition, the educational design of school is moving away from the compartmentalizing of students into areas of interest. In other words, theater “geeks” can also be computer “geeks” as light and sound require significant technological skills; and art class is moving organically into the digital world with CAD (computer-aided design), digital photography and sculpting with 3D printers.

At the Solomon Schechter School of Westchester in Hartsdale, New York, our multidisciplinary pre-engineering Sci-TECH curriculum is capturing the innovative spirit and innate curiosity of our high-school students. Beyond the classroom, it is catalyzing a schoolwide move toward a comprehensive STEAM culture.

Sci-TECH

Our school just completed the second year as a founding member of the American Sci-Tech Network, sponsored by the Center for Initiatives in Jewish Education (CIJE, thecije.org) and modeled after the Israel Sci-Tech Schools Network (ISTSN, israel-scitech-schools.org) high-school engineering program. CIJE is a nonprofit organization which works to enhance and enrich the quality of Jewish education through innovative STEM programs such as Sci-Tech. ISTSN is a network of high schools, industrial schools, educational centers and technical, engineering and academic colleges throughout Israel. A hundred thousand students, Jews, Arabs, Muslims, Christians, Druze and Bedouins from every part of Israel and every social and economic level, are producing the next generation of Israeli engineers and the citizens of the “start-up nation.”

The educational design of school is moving away from the compartmentalizing of students into areas of interest. Theater “geeks” can also be computer “geeks.”

Through CIJE, we received a two-year introduction to the Sci-Tech engineering curriculum developed by ISTSN, including laboratory equipment, teacher training, and technical support in the form of an engineering instructional advisor. Launched in 2011, the CIJE-ISTSN partnership is being taught in 14 Jewish day schools in the New York area and will be taught at an additional eight California high schools in 2013-14.



Dr. Danny Aviv teaches STEAM at Schechter Westchester. daviv@schechterwestchester.org



Karen Everett is the director of admissions and outreach at Schechter Westchester. keverett@schechterwestchester.org

Sci-TECH at Schechter Westchester is a selective three-year program beginning in the 9th grade. It counts as a full academic class (as opposed to an elective) that students take in addition to conventional science and math and replaces the second world language (all of our students take Hebrew) in the high school schedule. Although it is hard to demand a three-year commitment from 9th graders, the extensive curriculum requires it. In the Sci-TECH classroom, students work independently in teams of three or four to acquire the knowledge and skills they need to solve technical and task-oriented real-world problems. Each year culminates with a final project in which each team conceives, designs and constructs a prototype technological device that fulfills an identified need. Throughout this process, students develop essential interpersonal skills and an appreciation for technological innovation—and have a whole lot of fun.

The Sci-TECH curriculum was specifically developed to foster the life skills, learning habits and work ethic needed to thrive in a 21st-century workforce. Those skills include collaboration proficiencies, digital literacy, critical thinking, perseverance, communication and social skills, teamwork, self-management, time management, as well as media and technology skills that involve accessing and evaluating information.

As educators, we must answer some difficult questions: How do we foster and measure a student's ability to work in teams? How do we determine each team member's strengths and develop project management plans that capitalize on these strengths? How do we best measure a student's understanding of the breadth and depth of knowledge that literally exists at their fingertips? More importantly, how do we best cultivate their ability to access and synthesize that knowledge when each problem they are trying to solve requires a different research path? Ultimately, how do we prepare students for careers and jobs that do not yet exist? At Schechter Westchester, we believe that

Sci-TECH brings us closer than a conventional science curriculum to answering these questions..

Challenges

Implementing Sci-TECH into our high school curriculum presented many challenges. We had to modify the Israeli program to align with the realities of an American Jewish day school. Specifically, we had to find the time in our already crowded schedule to add another full academic course, we had to create learning modules which were more consistent with our current block schedule, and we had to create content better suited to the American educational model of unit assessments and grades.

Sci-TECH, while lively and fun, is also extremely demanding. For recruitment, we continue to refine our admissions process to identify the types of student who can handle the rigor of the program as well as reap the most benefit from it. All interested students must complete an application in the spring of 8th grade that includes a personal statement, school transcript, and recommendations from both science and math teachers. More informatively, each candidate is interviewed by a Sci-TECH teacher along with the upper school science department chair.

We have found that a student's past academic success ("straight As") is not sufficient in itself as a predictor of success in this type of team-oriented, project-based course. We require that our prospective Sci-Tekkers maintain a minimum B average in all their subjects. Their teachers and dean must confirm their ability to handle this course in addition to all of their other high school work.

Our experience reveals that the most successful Sci-TECH students are tinkerers, builders and unrelenting problem solvers. We

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It's Okay to Say No When You Have a Vision of **Yes**

■ by **BARBARA GEREBOFF**

Gereboff argues that, before jumping into change driven by a particular technology or educational philosophy, a school should develop a principled process for collaborative review and evaluation.

We turned down an offer from a national foundation to subsidize the building of a dedicated computer laboratory, some educational software and the purchase of a dozen Smartboards three years ago. We had previously done some thinking about technology goals for our school and we were pretty certain that a computer lab was “old school” and that our wireless school was more progressive. The software looked like technology’s answer to the workbooks that we eschew, and we had recently heard from one of our parents that there were new, more nimble alternatives to Smartboards. But could a foundation really not know this? Were we arrogant, or just plain wrong, in our assumptions?

We convened a meeting of our staff technology committee to address these questions: is a dedicated computer laboratory necessary or desirable in a wireless school, is the proffered software compatible with our teaching philosophy and are Smartboards “cutting edge” or dinosaurs? The committee’s research supported our original assumptions and framed our thinking as we moved forward in considering initiatives. Four principles have emerged for considering any initiative: *compatibility* with the school’s educational philosophy and mission; *engagement* with entrepreneurs, educators and local resources who are working in these fields; openness to *suggestibility*; *capacity*—both financial and human.

Although we rejected the items that were specifically proposed by this foundation, the idea that STEM was an area in which we wanted to focus resources grew out of this encounter. Up until this point, science, technology, engineering and mathematics operated as silos. We wanted to consider what it would look like if we shone a light on all four of these areas. We wanted to do this not because STEM is the new “hot” area in education, but because it made sense in our particular environment. Since the

encounter with the foundation three years ago, we decided to turn our school into a STEM center, where we emphasize every aspect of STEM and connect it to our curricula and school mission. Our approach is systemic, addressing curricular choices as well as the way we do all of our business (i.e., admissions and development, business office, front office).

Compatibility

There are so many STEM initiatives available that represent very different learning philosophies. There are programs that are skills-based and those that encourage discovery learning. To successfully integrate STEM initiatives into a school, the education leadership needs to match those initiatives to the school’s philosophy. Our school uses UbD (Understanding by Design) to specify curricula choices (using Atlas curricula software), and our program leans heavily in the constructivist tradition where inquiry-learning, interdisciplinary units and project-based learning are normative. Given this emphasis, adopting the Singapore method for teaching mathematics matched our focus on inquiry learning and mathematical understanding. We rejected, or limited, the use of any STEM initiatives that were primarily skill-based and searched for those applications and programs that would empower our students to learn and that would propel our curricula forward. Alan November’s work on using technology to empower students informs our thinking. A school with a greater emphasis on factual learning would choose different applications.

Engagement

The environment in which a school sits can serve to inform curricula choices. Our reaction to the visiting foundation drew



*Dr. Barbara Gereboff is the head of school at Ronald C. Wornick Jewish Day School in Foster City, California.
bgereboff@wornickjds.org*



heavily from local culture. We sit at the tip of the Silicon Valley and our school is shaped in many ways by this reality. Our parents, grandparents and donors are innovators and entrepreneurs leading the technology revolution. They are the scientists working in revolutionary biomedical and marine biology research, and they are the design engineers who are creating the items that simplify our daily lives. If our school were located in Washington, DC, we might focus more on STEM applications to the political arena, and if we were in the middle of the agricultural centers of our country we might want to focus our energy more on agricultural applications. The professions of our parents and donors can inform our curricula choices, provide important role-modeling for our students and create a deep connection to untapped groups to our schools.

Early in our journey, we made some connections to local companies in our area that are experimenting in the K-8 education environment. Two of our administrators attended a training session with Google employees where they learned gaming techniques to use with faculty and students to generate ideas and to clarify problems. One administrator attended a workshop with Sol Khan, and shortly thereafter we began letting students sign on to Khan Academy when they need to relearn or practice particular skills. A few of our teachers and our technology teachers partnered with a local museum to develop and to test an educational game.

We have connected to a local technology company that creates educational software for the military. Together we're writing a grant to test critical-thinking development among children using software adapted from other applications. We've visited IDEO (a premier design center in Palo Alto) and have trained our teachers using their educational toolkit (which is free and available on their website). We received a gift from another local company—Marketo—that

In our middle school science fair, local scientists serve as judges, evaluating projects in their field and providing important feedback.

provides us with software that analyzes visitors to our website and sends them appropriate information regularly based on their interest.

Successful professionals provide valuable guidance for students. Connecting our students to local scientists is an important part of our middle school science fair. The science projects in our fair evolve from student work that begins in sixth grade and can continue through eighth grade, and the people called in to judge are local scientists who evaluate projects in their field and provide important feedback.

Suggestibility

Like so many educators hearing about some innovation in another school, we too had been guilty of jumping into defensive mode (*that's nothing, here's what we do ...*) or shutting down, not wanting to add one more item to our plate. We've found another stance that is very useful: the openness to suggestibility. We listen, we run the idea through our criteria (does it fit our teaching philosophy, etc.), and then we consider testing the idea.

A couple of years ago, we had heard about the use of QR (Quick Response) codes at one school. When we presented QR codes to the staff, we charged the staff with demonstrating how QR codes had pedagogic import for our school. At a staff meeting, a week later, our fourth grade team presented the idea that a fourth grade learning goal is student awareness of "audience"—knowing how to present ideas to particular audiences. They argued that having their students explain their work using QR codes would be compatible with that curricula goal; thus the use of QR codes became normative in the fourth grade.

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The success of any shift in emphasis or initiative in any school is dependent upon a receptive staff. Like most schools, we have some early adopters and others who are more hesitant. The staff needs a collegial atmosphere with scaffolding to learn new techniques. They also need a school culture where a “no” is a “maybe,” and where it is normative to try, to fail and to try again.

Capacity

Developing a sharp focus around STEM or around any major program initiative requires strategic planning. Each goal needs to be considered in light of human and financial resources. Are there staff people that have the ability and knowledge that would serve the school better in the new area of emphasis? Are there staff at neighboring institutions who could be leveraged? Are their staff leaders who can teach the rest of the staff?

We successfully moved a long-time Judaic studies teacher who had excellent technology knowledge and skills into a K-3 technology teaching position. We grew our technology department from one part-time IT person and part-time teacher to a full time IT person, and a full-time and a three-quarters time technology teacher.

Both teachers have time assigned to meet one on one with teachers to explore new ideas that would apply to particular grade levels.

We share a campus with our local JCC and they have an excellent IT department. We share with them two other full-time backup IT staff people, and we included them in our search for the right IT person with a school focus. To support our science and engineering initiatives, we added two part-time science teachers, growing the department from one teacher to three colleagues who have scheduled time to work together.

In planning staff development around our STEM initiatives, we have chosen to

Like most schools, we have some early adopters and others who are more hesitant. The staff needs a collegial atmosphere with scaffolding to learn new techniques.

learning and to have staff members always on hand to explain or to teach other staff members.

We are a small school (215 students), and not a particularly wealthy school either. But with careful planning and sharp focus, it was possible to grow our initiatives with minimal budget impact. In three short years, the following are some of the items that have become

part of our school: kindergartners discovering structures—of cities, of bodies, of buildings and then building their own city; first and second graders keeping digital portfolios of their work; third graders blogging with each other within their literature circles. Starting in fourth grade, students use Google documents in their collaborative research.

Fourth graders create an invention or an app that could be used for a mitzvah that they have researched. Fourth grade also wires a model city. This year, one group of students created a hydro-engine to power the electricity in their model city. Middle school students engage in digital music, photography, movie and art creation. They solve forensic cases in science

labs, and they build bridges and test their strength. Last year, our administration created a game for our teacher in-service set in the city of San Francisco to consider feedback loops in gaming. Our marketing team is ever mindful of social media—a few of us are regular “tweeters” and “bloggers.”

The essential lessons learned from this journey are these. Strike a balance between saying “no” to items that are not compatible with your school philosophy while also remaining open to suggestibility.

Leverage local talent. Plan strategically: assess and redeploy your resources around your focus. ■



One group of fourth-grade students created a hydro-engine to power the electricity in their model city.

Full STEAM Ahead! Cultivating 21st Century Skills

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seek self-declared “geeks,” but not necessarily in science or technology. We find that students who begin with genuine excitement, are independent and self-motivated, and can negotiate the challenges of working in teams are the ones who will benefit most from Sci-TECH.

Our Sci-TECH classroom is unlike a classic science classroom both physically and pedagogically. Currently Sci-TECH classes meet in a high school science lab previously used exclusively for biology and chemistry. In the future, we hope to create a dedicated Sci-TECH space—a combination electronics/robotics/computer design/fabrication laboratory where students have the resources to fully develop their final projects.

In fact, we see Sci-TECH as the 21st century version of what used to be known as “shop class.” Walking into our Sci-TECH classroom, you are greeted with tables filled with student projects, which take months to put together, in various states of construction. There is an air of controlled chaos; teams of students are huddled around laptops and everywhere you look there are gadgets, tools, wires, electronics components, art and building materials.

Relatively little class time is spent lecturing. Students are not fed information to be regurgitated later on an exam. Rather, they are taught basic scientific and technological ideas and information, given goals, tasks and parameters, then set free to research, tinker and discover largely on their own. Course areas include engineering principles, computer programming and mechatronics (where mechanics and electronics overlap). Students work almost exclusively in teams to complete laboratory assignments, participate in design challenges, and develop their final projects.

Students must also keep a course journal, which is modeled after an engineer’s notebook. They reflect on the challenges presented by assignments, share thoughts on how well their teams are functioning, and develop strategies to work more efficiently and effectively. Many Sci-Tekkers begin the three-year course frustrated by having to work in teams, but by the end of the second year, they have learned to identify key tasks required to meet project goals, how to delegate responsibilities (including the role of team leader/manager), how to present in front of the class, and how to manage their time successfully.

Evidence of Success and Outreach Beyond the Classroom

As educators, Sci-TECH offers us tangible evidence of the acquisition of 21st century skills. In 9th grade, first-year Sci-Tekkers seem tentative, wanting to be handed the solutions, and not necessarily understanding what it means to be part of a professional project team. Students are confronted with having to work with everyone on their team, whether they like them or not; teams are assigned, not chosen by the students.

By 11th grade, and in many cases long before that, Sci-Tekkers are excited to jump right into a problem, know how to establish the team protocol and project plan, are able to define critical questions and go out into the virtual and real worlds to gather information to get answers. Final projects require both written and oral presentations and demonstrations in front of not only fellow classmates and teachers, but also professionals in related STEAM fields.

Student teams dream up projects that track their own personal interests and experiences. Projects developed this past school year include a school bus tracking device to automatically monitor elementary school children as they get on and off the bus; a SMART merging system to alert cars when it is safe to get on a highway; and an electronically controlled stage prop rose that can be used to drop petals for a local theatre production of *Beauty and the Beast*. The first two of these address direct concerns in their lives—younger siblings falling asleep on the bus and insecurities of a new driver—and the third beautifully demonstrates the melding of arts and technology.

Outside of the Sci-TECH classroom, we are learning more about the steps required to build a STEAM Jewish day school. For example, because we have always viewed ourselves as a community resource, we developed additional programming to foster STEAM literacy in our greater educational community. That programming includes a distinguished lecture series entitled STEM Talks which brings professionals in STEM-related fields to speak to students, parents and teachers from our own and nearby schools; and the STEM Educators Network which meets for dinner before each STEM Talk for the exchange of curricular and instructional ideas and experiences.

We are also finding that investing in a high school course such as Sci-TECH enhances our reputation as a school of excellence and innovation. This has direct effects on recruitment and outreach, especially during the critical 8th to 9th grade transition.

STEAM Is Here to Stay

Just as the best way to acquire a language is to begin learning at an early age, so too we believe that STEAM education must be infused into the core curriculum of our lower and middle schools. For Jewish day schools committed to providing outstanding secular and Judaic academics in addition to full and robust afterschool athletic and arts programs, this will continue to be a challenge. The school day is already full, so there is limited time for new courses. And because the majority of our students participate in afterschool activities, they arrive home late with a heavy homework load.

Adding STEAM courses to current schedules will require creativity and commitment on the part of educators and administrators. The ultimate goal is to ensure that all of our students graduate fully prepared for the demands of 21st-century higher education and careers without sacrificing the *mentschlichkeit* which is the heart and soul of Jewish education. ■

RAVSAK's Annual Hebrew Poetry Contest

RAVSAK's Hebrew Poetry Contest is a proven program that has inspired students to produce works of demonstrable excellence as they use their Hebrew language skills in creative new ways.

To date, over 800 students from 30 day schools have participated in the RAVSAK Hebrew Poetry Contest.

In matters of Hebrew language learning in the Jewish community, "identity" has become the current buzz word, and rightly so. Still, the writing of poetry is an art. We call upon these young Hebrew learners to manipulate what they have acquired, to mold their creations from this clay. The aesthetic of the endeavor springs from an initial distancing from the material. I like to imagine these day school poets taking stock of their Hebrew assets and venturing into their act of creation—of self-expression. Along with the inevitable struggles, they may also experience the "pleasure of the medium" and get a glimpse of the gift of the Hebrew language.

Janice Silverman Rebibo
Israeli poet and past judge of
RAVSAK's Hebrew Poetry Contest

תחרות השירה העברית

The only thing that can save the world is the reclaiming of the awareness of the world. That's what poetry does.

Allen Ginsberg

How can my school participate?

Register NOW for this year's Hebrew Poetry Contest.

Please contact Lisa Inberg, Student Programs Coordinator, for program details and more information.

Email: linberg@ravsak.org

Phone: 212-665-1320

Registration deadline is October 25, 2013.

Poem submission deadline is February 28, 2014.



[CONTINUED FROM PAGE 34]

Entrepreneurship team worked on the idea for the show and chose an organization the show would raise money for: Somaly Mam, a nonprofit dedicated to end female slavery. A member of the Social Action and Entrepreneurship team worked to bring a volunteer to the fashion show, to raise awareness of and funds for the organization. Meanwhile, a member of the Graphic Design team designed the show's logo, which appeared on all the promotional materials as well as on the fashion show T-shirt. The RealSchool Arts team also got involved in the fashion show; under the guidance of Mantell, The Arts team created an exhibit about female oppression and slavery.

Of course, the Fashion Team chose the clothing the models wore, but here is where the show also became an opportunity to infuse Jewish values into student learning and passions. Because the show already had a fair-trade theme, Wiener suggested each grade wear clothing representing women in Tanakh who had worked for social justice. For example, a group of freshmen models wore formal gowns to represent Ruth as the royal forebear of David, while a group of juniors donned business wear to represent the daughters of Tzafchad, who insisted to Moses on their right to own land even though they were women.

Wiener also worked with the Frisch Dance Team to incorporate their performance into the fashion show. The Dance Team captain choreographed dances that related to the biblical women the models were representing. On the night of the show, the Religious Identity team narrated the event, explaining how the models' clothing connected to Jewish women's fight for equality and justice.

Because RealSchool has been an afterschool program, Wiener has not had to create rubrics or assessments to help students meet benchmark goals. However, a rigorous learning process has emerged nonetheless, and all on the students' own time. Students working on the fashion show meet once a week throughout the year during their breakfast time, and as necessity demands when the fashion show nears. Based on their own interests, students have specific tasks to complete, which the teachers make sure are done as needed.

The students don't feel as if they're working, however. Because they love the show and are excited about creating it, their work seems like play, and they remain enthusiastic throughout the planning process. Wiener uses that enthusiasm to help students see the multidisciplinary ways they can think about a project and how to create authentic purpose in one, not just by creating an event but by using Jewish values to create a better world.

Conclusions

PBL, IBL and SDL create innovative learners ready to tackle the complex issues facing the world today. In addition, applying these pedagogies to Jewish studies courses and in multidisciplinary ways enables students to think deeply and creatively about their relationship to Judaism. The excitement and sense of empowerment students feel as they undertake a PBL unit ensures that they will feel joyful about and can connect to *all* subject areas in a real way. ■

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Creativity, Curriculum and the Common Core

■ by **ANGELA MARZILLI** and **JAMIE CLUCHEY**

The authors demonstrate how the Common Core standards can be an ally to day schools, providing benchmarks against which they can be evaluated by prospective parents, and offering a framework for faculty collaboration and professional growth.

Jamie: When I came on board at Levey Day School in Portland, Maine, last August, I felt like Alice falling through the rabbit hole. The world of day schools, as we all know, is unique. One of my first steps was to look at the curriculum. Coming from a public school background, I was accustomed to using the Common Core State Standards (CCSS) as a benchmark in all of my planning, instruction and assessment. I did not find these standards to limit my freedom to teach creatively or through experience-based models, although I know that in many states the mandated curriculum can be stifling. Using the structure of a set of clear standards was different but not opposed to the culture of developing thematic units based on student and teacher interest that I encountered at Levey.

The Common Core State Standards are controversial in educational settings across the country, to say the least. They can provide great benefits, however, in the independent day school setting. With the freedom of developing a more flexible curriculum, CCSS can offer day schools benchmarks as we establish a scope and sequence of what will be taught and learned throughout a student's time in our schools. No matter what opinion one has about CCSS, these standards are the norm in the majority of states, and provide each of us with a grounding point: a document to use and gauge the rigor and scope of content being taught at our schools, and a strong picture of the content children in other settings are learning.

When I began as head at Levey, an important goal of the board was to develop a guaranteed curriculum to share with families and the community. What follows is the story of walking the

line between rigorous standardized learning and the creativity and student-driven learning that happens in day school communities.

The Vision

Jamie: As educators, we know that curriculum is a cornerstone in every school. Curriculum guides instructional decisions, the purchase of educational materials and professional training. Both formative and summative assessments are tied to curriculum, as are the reporting systems we use to share progress with our boards, parents and community. In any type of intervention,

it is crucial to have standards based on curriculum to discuss; we look for gaps in learner understanding, develop plans to fill those gaps, and then assess to measure growth and plan next steps. Without curriculum, teachers

are hampered in their ability to best serve students, and heads of school are equally hampered in our ability to best serve teachers and our community.

My vision for the year of professional development was twofold. First, I hoped to develop, with my teachers, a mutually agreed upon math curriculum for our school. This math curriculum would be based on what was being taught in the school as well as the Common Core math standards. While using the CCSS in professional development might at first receive pushback in a day school setting where use of the CCSS is not mandated, I wanted to ensure that there were no content gaps in our curriculum and that our students would graduate Levey meeting or exceeding the same standards as their peers at other schools. This is particularly important for us as a PK-5 school, where most

No matter one's opinion about CCSS, they are the norm in most states and enable us to gauge the rigor and scope of content taught at our schools.



Angela Marzilli is the STEM/Project Based Learning Specialist at Educational Consulting, LLC. info@consultingeducators.com



Jamie Cluchey is head of school at Levey Day School in Portland, Maine. jcluchey@leveydayschool.org

students move into public or independent schools for 6th grade. The math curriculum would guide our instruction, assessment and reporting. We would also develop a process for review and revision of the curriculum.

This way, teachers would have curriculum to guide their instructional planning, and Jamie and I would have clear next steps (representations, strategies, and mathematical language) for our continued work in math.

FIGURE 1

Grade 3: Algebraic Thinking	
Concepts	<ul style="list-style-type: none"> Numbers can be represented in different ways Numbers create patterns. These patterns can be used to solve mathematical problems.
Skills	<ul style="list-style-type: none"> Can solve two-step word problems using 4 operations Can represent problems using equations that include variables to represent unknown quantities Can identify and explain patterns

Second, I planned to cultivate a reflective mindset in my teachers regarding curriculum and to develop a collaborative process for revising curriculum. As a former teacher, I know all too well how the demands of the day can impede the process of reflection on our work, no matter how critical it is or how much we want to find the time. Knowing that professional development at Levey had been inconsistent in the past, I wanted to set a tone of professional collaboration early on as well as establish some protocols and procedures for how we work together as colleagues.

The Process

Jamie: A goal in my entry plan was to enhance collaboration and reflective practices among faculty. While I have a passion for curriculum design, I decided that bringing in an outside consultant would allow me to be a collaborative member of the team rather than the facilitator of the work. Using Title II funds to support our work, I hired Angela, a consulting STEM specialist. During the month of August, Angela and I read *Small Steps, Big Changes: Eight Essential Practices for Transforming Schools Through Mathematics* by Chris Confer and Marco Ramirez. We agreed to use the model set forth in this book to create the scope and sequence for our curriculum. Our goal was to provide the faculty with a consistent structure for their work. Angela and I continued to meet monthly in order to reflect collaboratively on past professional development meetings and plan for future work sessions.

Angela: The model Jamie and I decided to use separates math into topics, then develops lists of concepts, skills, representations, strategies and mathematical language for each topic. Jamie and I focused on completing the concepts and skills for each topic (see fig. 1) during professional work sessions over the course of the school year.

We divided the mathematics curriculum into topics. Some, like multiplication, we knew would be developed in second through fifth grade. Others, like numbers in base ten, would have concepts and skills in all grade levels. We grouped topics that had fewer grade-specific concepts into grade bands; for instance, teachers wrote concepts and skills for data analysis in PK-2 and 3-5. Finally, when working on mathematical reasoning, we worked as a PK-5 group, looking for concepts and skills in which all fifth grade students would be proficient before graduating from Levey.

Professional work time occurred during half-days Jamie built into the Levey calendar. This was the first time the Levey community had half-days for professional development, so both Jamie and I were dedicated to ensuring the time was well spent. We began each session by doing some math together, either a number talk (see fig. 2) or another puzzle to warm up our mathematical thinking. Then teachers worked in pairs to outline a set of concepts and skills in a mathematical topic, writing their work on large pieces of chart paper. Once all the grade levels and/or grade bands were completed within a topic, we hung the chart paper up in ascending order and all looked for coherence across the concepts and skills.

Through this non-threatening process of design and organization,

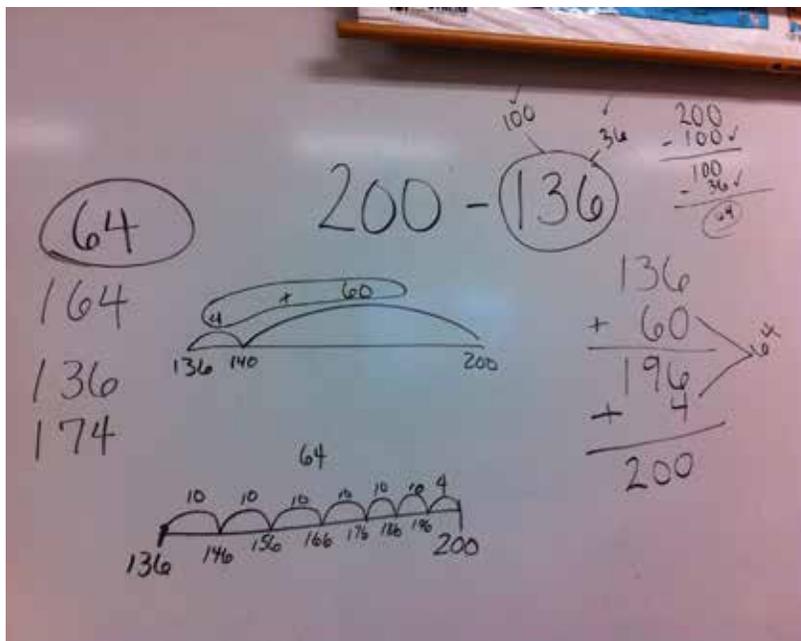


FIGURE 2

teachers were able to share their own mathematical thinking and take risks among their peers. This resulted in identifying curricular areas that were more of a challenge for them as well as honing in on gaps in instruction throughout grade levels that left students inexperienced by sixth grade. They also discovered concepts that were being taught

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Creating a Culture of Experimentation with Social Media to Enhance Student Learning

■ by **LISA COLTON** and **DEREK GALE**

This article aims to demystify social media by encouraging simple, concrete steps that will enable faculty to start using these tools while ensuring that technology serves the school's educational goals and vision.

T rue integration of technology into curriculum is still a new, emerging and rapidly evolving field. Often we see schools laying technology on top of curriculum to be able to demonstrate that they're a "21st century school," but "technology for technology's sake" is never a good answer. What's interesting about social media is not the technology, it's what the technology makes possible. Further, while the current skills of teachers and available technology infrastructure may be a challenge (and of course vary widely), learning social media tools and applying them in classroom settings requires little infrastructure and minimal training.

But it does require creativity, experimentation, and a willingness to let the learning opportunities emerge. Here, we lay out 4 key lessons to help schools and teachers use social media to enhance student learning.

First, we need to acknowledge that the tools, uses and applications of technology are a constantly moving target. You could invest in a massive teacher training effort today, and by next year some of it will be passé, and new ideas and tools will have emerged. Thus, lesson number one is that we need to adopt a *nimble, open and flexible* culture that supports experimentation, reflection and sharing, so teachers, schools and our field as a whole engage in a constant process of iteration to improve our practice and share what's working (as well as what's not). How can you help your teachers be experimental and playful with the tools at their disposal?

In the software world (and now starting to expand elsewhere too), this is called "agile development." Products are developed in an iterative and incremental process where solutions evolve through collaborations between self-organizing, cross-functional teams (which often include customers and marketers, not only the developers, and in our context could include students, teachers, parents and others). The agile approach promotes adaptive planning and evolutionary development—a constant process of responding to change.

In the Jewish day school context, we should also recognize that this approach to problem solving is a valuable skill to be teaching our students, from editing papers to science experiments to art projects. To be successful Jewish 21st century citizens, our students need to know how to solve problems, use their own networks, and apply available tools in purposeful ways. While many of them know juvenile uses of many common tools, they are quick to apply those skills to much more purposeful endeavors when challenged and given the opportunity.

For example, in collaboration with the Jewish Women's Archive, a group of high school students contributed photos of their mothers and grandmothers to an online archive on Flickr, and researched their family histories through names, tags and groups. By chatting with the organizer of a collection of photos about women in World War II, one student even found photos of his grandmother in a DP camp that no one in his family had ever seen before.

Second, recognize that we are not striving just to use technology for technology's sake, but as a powerful (and often simple) tool to deepen, broaden and energize student learning. Too often we see teachers layering technology on top of what they generally do, making curriculum more complicated, investing serious resources in new hardware, or chasing "shiny objects" (the latest new gadget or app) to be able to say they are using the latest technology.

Instead of layering on top, encourage teachers to think deeply about how to *integrate technology* into the curriculum to help achieve stated curricular goals in new, deeper, broader or more creative ways. By emphasizing the importance of gaining quality by integrating a tool, you de-emphasize the technology for technology's sake. The result is less anxiety, fear or stress about pushing the right buttons, choosing the right tool, or the cost of major investments. Oftentimes, the most valuable tools are already at your fingertips, and don't require a steep learning curve. They require play. Which is quite an effective way to learn.



Lisa Colton is the chief learning officer for See3 Communications, and the founder and president of Darim Online, a nonprofit which runs social media training programs for day schools and other Jewish organizations. lisa@see3.com, [@darimonline](https://twitter.com/darimonline)



Derek Gale is director of marketing & communications at Bernard Zell Anshe Emet Day School in Chicago. dgale@bzsaeds.org

For example, through the Darim Online Social Media Boot Camp for Educators, funded by The Covenant Foundation, the Bernard Zell Anshe Emet Day School in Chicago explored the use of a variety of simple, readily available tools in the classroom. They encouraged teachers to experiment and play, and then to document what they were doing and how it went.

One teacher used Twitter to reach out to the author of a book they recently read, and coordinated a video Skype date to connect students directly with the author. The students prepared questions and engaged in a conversation with an author—a unique, no-cost, low-stress and profound experience for all involved.

The Knoxville Jewish Day School is piloting a new Google-inspired 80/20 approach, reallocating the technology PD funds to give teachers the freedom and support to pursue their own projects.

Another BZAEDS teacher experimented with an app called Explain Everything to produce her first “flipped classroom” video, which she then posted on YouTube for students to watch and comment on. By allowing students to watch a video versus listen to a live lecture, and by sending them to YouTube—a platform with which they are all familiar and of which many are regular users—she was able to offer a different way for the students to engage with her while they were in the classroom. The positive student feedback was beyond the teacher’s wildest dreams—they thought it was a cool way to learn, begged for more videos and even asked to learn to make the videos themselves.

Third, encourage a *social and collaborative process of professional learning* within your school community. While there is no right or wrong way to integrate technology, there are better and worse ways to achieve your goals with quality and elegance. The question is: what’s the best path to achieve it? No single professional development experience is going to teach you all that you need to know. And no one technology specialist can provide the creative ideas and full integration each teacher will need. Thus, rule number three is to workshop your ideas, share, document, and share some more. We can all benefit from learning what others are doing and how it’s going.

At BZAEDS, administrators and technology leaders are not only encouraging teachers to experiment and innovate, but also to share with one another via teacher-led professional development sessions. As teachers share, their colleagues are inspired to try new ideas, and now have a go-to person as a resource. Further, colleagues workshop ideas together in grade-level and/or cross-departmental teams, discussing what could have gone more smoothly, or how to expand on an idea the next time around. As they document their efforts, they are literally creating a toolkit of case studies for their faculty to use. (Read more about BZAEDS at bit.ly/bzaeds-blog.)

The Knoxville Jewish Day School graduated from the AVI CHAI-funded Jewish Day School Social Media Academy this year with a renewed commitment to extend their new social media and technology skill from the office into the classrooms. After considering various school-wide technology initiatives, they decided that this coming year they are piloting a new Google-inspired 80/20 approach. One of the famous benefits of working at Google is the 20 percent time program. Google allows its employees to use up to 20 percent of their work week to pursue special projects—at first random, pie-in-the-sky or playful ideas, but a number of which go on to become some of Google’s best products.

KJDS is reallocating the technology professional development funds to give each teacher the freedom and support to pursue her or his own projects. “The focus is on the experience,” says Head of School Miriam Esther Wilhelm. “Because we are offering the freedom to ‘work on whatever you want,’ we are also offering the freedom to fail, because without failure there can be no innovation or true experimentation.” Teachers will have requirements for reflection, reporting and sharing, and they hope to have a diverse set of “experts” on staff who can all serve as resources for one another. (You can learn more about their plans here: bit.ly/kjds80-20.)

Fourth, *develop your own personal learning network through social media*. This meta-experience will help keep you up to date on tools and functionality, will connect you to other who are experimenting and have ideas to share, and will assist you as you seek to use various tools by speeding up your learning curve and helping you hit the nail on the head the first time around. As it says in Pirkei Avot 1:6, “Find yourself a teacher, acquire for yourself a friend.”

There are a number of Facebook groups that are a great place to start. JEDLAB (facebook.com/groups/jdsmedialab) conversations are often 20-50 comments long, and members love to chew on interesting ideas and help their colleagues dream big and be creative. The JDS Social Media Academy (facebook.com/groups/jdssocialmedia) includes day school representatives who are actively using social media for marketing and alumni relations, as well as integrating these tools into the classroom, and is a great source of practical advice. Darim Educators (facebook.com/groups/darimeducators) includes Jewish educators from a variety of settings who are using all sorts of tools in their curriculum and are always willing to share their experience and offer suggestions.

We are living, teaching, and learning at a revolutionary time. The accessibility of information and engagement that our students enjoy today is truly unprecedented. The pace of change—of the technology, our students’ lives, and the culture in which we live—is rapid and sometimes overwhelming. Thus, as leaders we must be attentive to designing internal learning cultures that support experimentation, celebrate discoveries, and promote knowledge-sharing to advance everyone’s work. As Jews we are great at learning, but we need to be careful not to become paralyzed by our desire to master something before using it. Na’aseh ve-nishma: sometimes we have to *do*, and then we will *understand*.

What tools will you start playing with this year? ■

Modeling Positive Speech and Other Jewish Values in Connected Learning

■ by **DEVORAH HEITNER**

Day schools have the responsibility—and opportunity—to lead their community in demonstrating respectful norms for tech and social media use. Heitner offers helpful guidance in this area.

As school's increase their incorporation of 21st century learning, teachers and administrators often approach me with questions about keeping kids safe online. Parents also are filled with questions. Third graders want iPod Touches, and fifth graders are asking for smartphones. Schools are supplying technological devices such as Chromebooks or iPads, or asking families to purchase them for their children. Teachers and administrators want to create opportunities for students to engage digitally but they are concerned about some of the negative messages they have heard about screen “addiction” or online cruelty.

One thing both teachers should keep in mind is that the technology may be intuitive for kids, but using it for its best purposes still needs to be explicitly taught. Both teachers and parents can do a lot of great modeling for responsible, thoughtful and caring communication both digital and face to face. However, parents may find that they have few opportunities to model good communication for children and mentor them to be good communicators using cellphones, computers and other digital media. When today's parents were children, they heard their parents' phone calls because phones were in public spaces in the home. Even communication that was supposed to be private could sometimes be overheard. Today's children are more isolated from adult communication because so many communications take place via email or text or on a phone in a private setting. School can be an excellent space for kids to learn about digital community because unlike a worldwide community such as Twitter or Google Plus, a class or school online community is of a manageable size where people interact both on and offline.

Day schools have the opportunity to translate Jewish values into rules for student digital engagement. For example, positive speech—avoiding lashon hara—is a value that we would all do well

to remember in person *and* online. Because rapid and massive sharing makes any derogatory speech potentially much more damaging, our contemporary world makes avoiding negative speech much more important. Making that explicitly part of classroom digital community, and having the students work together to define derogatory and positive speech, is a great first step toward teaching this crucial lesson. Civility can be modeled and made explicit.

Conflict resolution is another area where educators have an opportunity to mentor students by addressing the tendency to avoid dealing with difficult emotions in person, and to feel disconnected and less empathetic when behind a screen. We all know that sometimes we say things online that we would not say in person. A sixth grader recently showed me all the texts that precipitated her breakup with her best friend, texts she had saved since the fight months before and reread frequently. This demonstrates the need to talk explicitly with students about how to decide when to talk in person and when digital communications are appropriate. It is especially important for students to be aware that it can be hard to repair an emotionally charged situation without communicating in person. Choosing a communication medium wisely and not out of fear is part of the skill set of conflict resolution.

If parents suggest that their children are struggling with distractions when completing homework on a tablet or laptop, educators can work with the parents and students to figure out how to tame the distractions. Acknowledging that this is a challenge that teachers also face is a good first step. Sharing productivity applications like “Freedom” and “Leechblock” that block online distractions for a certain period of time could be a real gift to students and parents at your school.

Some other important reminders for educators as we teach the next generation of digital mentsches:



Devorah Heitner is the founder and director of Raising Digital Natives, a consulting and professional development resource for schools wishing to cultivate a culture of responsible digital citizenship. devorah@raisingdigitalnatives.com

Use technology as a window, not a mirror.

How can we use the incredible opportunity for instant global communication for something more important than finding out what our friends are wearing or where they went on vacation? Inviting experts (including student's parents or relatives) into the classroom via Google hangout extends the classroom community and gives students opportunities to engage with people around the world.

Encourage creation over consumption.

Consuming content is not bad. Educators don't want students to stop reading. But we also want to encourage students to design, blog, play games that involve creating their own storylines and experiences.

Don't assume the worst.

Start from the assumption that students want to do the right thing, they just don't always know how. In some cases, students themselves can decide what the negative consequences of a digital misstep should be. Sometimes the experience itself is a consequence.



Don't count on filters or monitors to keep students "safe."

They need adult engagement. Filters are a VERY blunt instrument. It's not that these tools have no place, just that they shouldn't be the first go-to method for teaching digital citizenship or keeping students safe. That said, young children do not need any unsupervised Internet access. If a device is in a classroom at a "station" used by younger students, it should be locked into the app or apps that have been chosen for them. Don't assume five-year-olds won't open something else. They can, and they will!

Look for applications that are "digital playgrounds" vs. "virtual playpens."

Here I am citing the research and terminology coined by Tufts early childhood technology scholar Marina Bers. Bers argues that

open-ended software that gives a child autonomy allows the child to accomplish developmental tasks, whereas applications and software that merely have children perform rote tasks, while not harmful in small doses, fail to offer the autonomy that children need for their developmental and educational progress.

Encourage collaboration and creating parts of a whole.

We talk a lot about collaboration, but having a group of students take turns editing an essay on Google docs is a different experience from in-person, real-time collaboration. Try different methods of collaboration for different projects and give students a space to reflect on how these experiences worked.

Cultivate your own digital literacy.

For example, if your students play Minecraft, play with them, or at least learn enough to understand and engage with them about it. Learn from colleagues on Twitter. Play around with Instagram.

By creating learning networks infused with the values of positive speech and lovingkindness, we are preparing students to participate in the social media world in a positive and engaged way in school and beyond. When our classrooms open up by sharing work, bringing in global guests to "hang out" digitally, or through collaborative research, we are demonstrating the true potential of connectivity. We can create a digital ethic that makes it feel wasteful to use the incredible gift of connectivity for navel-gazing.

Teachers should feel empowered to teach and model respect and boundaries in the digital world. When we ask our student's permission before we share their work (on our blogs, at faculty meetings, in conferences, etc.) we are modeling respectful communication. Our connected world means students and parents have more access to us beyond the school day. This has many advantages, but it is also acceptable to set limits. As the boundaries between our work lives and home lives become more permeable, teachers can let students know when and how they want to be contacted. Students often have no idea of what is acceptable and are relieved to have expectations clarified.

Finally, educators are at the forefront of a huge paradigm shift that can make adults feel overwhelmed. Teachers play an important role in helping parents recognize that they don't have to feel helpless or clueless; rather, they need to engage with kids and ask them to talk about their experiences. Educators can also remind overwhelmed parents that adults have more social wisdom than their children, even though the children are digitally savvy.

Young people need and desire a chance to share what they are discovering in their work with both parents and teachers. The digital world provides unprecedented opportunities for our children's learning, for families and schools to connect across distances and for us all to share and collaborate, but we need to show our students thoughtful and responsible ways to do this, even as we give them space to innovate, experiment and create. ■

Synchronous or Asynchronous?

Selecting the Best Online Learning Options for Your Students

■ by **ARYEH EISENBERG**

Online learning options are divided by one main criterion: time. Is the offering ready made, accessible at all times, or is it live with real people teaching? This article maps this territory and explains the differences in cost and benefits.

Online learning options have become a standard part of the academic programs of many Jewish day schools. For a variety of reasons including cost savings, staffing, and technology integration, schools have been relying more and more on online class resources. As with traditional educational options, it is important to understand the different types of online educational programs that are available. Different options can cater to the needs of different students. It is important that educational providers know the options available and how to select the best program for your students.

When online learning first became available, websites such as Khan Academy were viewed as the industry standard. It is a simple enough premise. Students just need to go online, search for the subject they want to learn and watch the videos. While the videos themselves may be fairly dry and even boring, there is little doubt that the content being delivered is of the highest quality. Sounds easy enough, but the question is, does this type of approach actually meet the needs of the majority of our students?

In many cases, schools that start with this simplistic approach end up seeking a replacement. While online educational options do enable schools to offer more options, the needs of the students still must be acknowledged and met. For the “average” student, watching non-interactive videos and answering questions does not really fill the educational need. Luckily, the number of online learning options and the types of available online classes have both increased in recent years, giving schools and students several options.

When choosing an online learning program, schools must first decide whether to use a synchronous or asynchronous learning platform. Asynchronous options are self-paced and prerecorded lessons which students can access online and proceed through the provided materials at their own pace. Several companies currently provide asynchronous learning options, including Khan Academy

as well as Pearson, K12 and IXL. The benefits to asynchronous platforms include low costs and the ability to start and stop at any time. The available course lists are also vast, meaning that in most cases schools can find an online option, even for a specialty subject. In addition, most of the asynchronous options allow a school’s teachers and administration to view the progress and marks of enrolled students at any time.

However, there are two main problems with asynchronous offerings. First, this type of program works well with the motivated students but has not proven as successful with the less motivated students. Second, these programs are not at all personalized. If a student needs additional help in a specific area, there is no one to provide the needed assistance.

Some schools have experienced a lot of success with asynchronous programs such as K12. Lauren Arie Gelman is the director of the Pre-Collegiate Learning Center in East Brunswick, New Jersey. The high school uses a variety of blended learning techniques to teach the students, and uses online courses as a central part of the in-school instruction. For Gelman, asynchronous courses have often been a perfect fit in the blended learning environment. “Students can work at their own pace to complete the assigned work. Our teachers are here to answer questions and to give additional instruction. So while the support system may not always be part of the course, we provide any help requested by the students. In addition, most of the asynchronous course options are very reasonably priced, which makes adding new courses and continuing existing courses easy.”

The Ben Gamla Charter School in Plantation, Florida, uses online courses provided by the State of Florida’s Virtual School. According to Ben Gamla’s principal, Rabbi Chaim Albert, the list of available courses is vast. “Students can take just about anything they need online. If we do not offer a specific course in-house, there is almost sure to be an online option through the Florida Virtual School platform.” In order to track students and to provide aca-



*Aryeh Eisenberg is the director of special projects for Bonim B'Yachad, a leading online educational provider.
aryeh@bonimbyachad.org*

democratic support, the school has supervising teachers who are available to students during office hours, study halls and by email.

Despite its flexibility and affordability, asynchronous learning has not been the answer for all schools. Beth Tfiloh Dahan Community School in Baltimore, a pre-K to 12 community Jewish day school, was one of the first Jewish day schools in the US to integrate technology into the learning environments. Online courses and technology integration are quite common at Beth Tfiloh. While the school offers a wide range of traditional courses, the ability to use online class options as a supplemental tool enables the school to provide each student or groups of students with the specific educational programs they need.

According to Zipora Schorr, Beth Tfiloh's director of education, Beth Tfiloh has used several different online course platforms in both the middle school and high school. While asynchronous options were certainly easy to arrange and implement, the school has had more success in the past few years with synchronous online courses. "The live courses do a much better job of blending with the traditional learning environment. Students are already used to working with a teacher and they know what to expect. Knowing that the student's learning styles and needs are being addressed makes us much more comfortable with online courses."

NFTY's EIE program brings US public school students to study in Israel for a semester of high school. While the students are in Israel, they must continue their current courses assigned by the schools back home. After comparing asynchronous platforms with synchronous solutions, the school realized that the live class structure works better overall. Rabbi Baruch Kraus, the principal of NFTY's EIE program, agrees. "With live classes, we know that the students are being mentored and are being tracked. If there is a problem with a student, we know that we will be informed, just like with a regular class."

So while asynchronous courses can be a perfect fit for certain students, many students still need the traditional student-teacher interaction. As discussed, asynchronous courses are essentially take-em-or-leave-em; the product will likely be high quality and professionally produced, but it will not be tailored to your school's needs and vision and certainly not differentiated to your students' learning styles. Synchronous programs generally are much more nimble in their ability to tailor their product to specific schools and students, because they provide a live online teaching experience.

While students are not in the same physical location as the teacher, the online sessions work very much like traditional classroom-based classes. In most cases, students participate in their synchronous online classes during the regular school day. When their classmates may be in a regular classroom, students assigned to an online class go to the school's computer lab or another similar location. Students log in and work live with the same teacher throughout the course. The online teacher teaches an interactive class which includes participation as well as traditional class elements such as homework, projects, quizzes and tests.

There are several advantages to synchronous online classes. Because the sessions are live, students actually become active participants, rather than passive learners. Most online teachers require regular participation

as a main part of the class grade. Many of the providers offer personalized classes, meaning that the classes are designed to meet the needs of the specific students enrolled in the course. The school ordering the online class becomes a part of the educational process rather than just an observer. Many schools have found more success with synchronous classes because of the personal nature of the courses. Even the less motivated students are able to succeed as they are encouraged and monitored every step of the way.

My organization, Bonim B'Yachad, ran a pilot program this past academic year with The Binah School, a new Jewish day school for girls in Sharon, Massachusetts. The school uses online and blended learning solutions as an integral part of its academic program. The school took its Hebrew language classes and decided to shift the entire program to synchronous online learning. Rina Hoffman, the school's director, explained, "Hebrew language was a subject that needed a different approach. The students up to that point really did not enjoy learning Hebrew and therefore did not put forth the needed investment into their Hebrew studies. The thought was that by introducing students to a new way of learning Hebrew, we could bring back the excitement and passion for the language that was missing before." We collaborated to create a personalized program that met both the skill levels and the interests of the students. The program was highly successful and will be expanding for the coming school year.

So what are the down sides to synchronous online classes? For one, the price is often higher than for the asynchronous model. For example, K12 charges between \$400 and \$500 for a typical yearlong online course, which is roughly the monthly cost for synchronous courses. Second, asynchronous courses really are self-contained, meaning that whether there is one student or twenty students enrolled in a given course, the school has little to no responsibilities. While the school has the option of staying invested in a course's progress, this is not mandatory.

Currently, there are a number of companies in the US that provide synchronous services to Jewish day schools, including Bonim B'Yachad, JETS and Tomorrow's Genius. These companies offer different types of personalized learning programs. Another option is the VHS Collaborative, which, while not specifically for Jewish schools, has several Jewish day school members. VHS offers live courses for students from schools all over North America; participating schools have no input in scheduling, and with so many students there is often little to no personalization or individual attention. Several colleges and universities also provide online courses that can be made available to high school students (www.onlinecourses.com), depending on the state and school district.

With so many options and so many different variables, how can each school choose the online course option that works best? Well, there is no easy answer, but each administrator knows his or her students strengths and weaknesses. At the end of the day, the goal is to give students the tools needed for academic success. Some students can handle asynchronous options and have the motivation to make sure that the work is submitted. Other students need more personal involvement, making synchronous learning a better fit. If there is a need for Judaic studies or Ivrit-based online learning, the options are a bit more limited as platforms such as K12 do not offer these subjects.

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Looking Beyond the 21st Century: Growing a Staff Development Garden of Innovation

■ by **DEBBIE BROWN**

To undertake the kinds of changes described in this issue, one school created a new position, “director of innovations,” whose mandate is the cultivation of faculty development to reorient pedagogical practice.

As educators we are striving to meet the demands for “21st century learners,” but at the core of that work are teachers, the most influential people in the shaping of students’ lives. Preparing teachers to meet this enormous challenge requires a systemic vision for which there is a high level of layered support, ongoing learning and a serious commitment to a dynamic in-house professional development system.

Research shows that most professional development is traditional stand-and-deliver, consultant-based (which is costly) and fragmented. It is disconnected from the real problems schools encounter and is inconsistent. 57% of teachers in the United States receive no more than 2 days of professional development yearly and fewer than 25% receive 4 days. According to a major research project from Stanford and The National Staff Development Council, in order to have a significant impact on student achievement, as defined by raised test scores, those educators who receive 50 hours on average a year are able to raise student achievement by a minimum of 21 percentage points.

The Talmud states, “When you teach your son, you teach your son’s son.” To meet these challenges, Donna Klein Jewish Academy in Boca Raton, Florida, created the position of director of innovations to oversee and develop this important mission. The mandate for this new role required tremendous investment of resources on the part of school leadership. Fifty hours of professional development is a true investment. Pushing out of our comfort zone, taking on this challenge of true transferable, replicable, scalable and sustainable learning is a true investment. Creating the 21st century learner is a true investment; the challenge is more complicated than it ever has been.

At the heart of this journey is data collection. It is impossible to go on a journey with no map (standards), no compass (as-

essment) and no directions (teaching plan and methodology). Assessment informs our instruction. It is an objective and unemotional view of students provided the entire cycle of data is used. The cycle of assessment includes: screening all students as a wellness check three times a year, monitoring students on a frequent basis using progress monitoring tools, which are informal quick measures that demonstrate learning, and if needed, administering a diagnostic, an intensive assessment that gives us very detailed information about a child’s strengths and weaknesses.

We screened all of our K-4 students in the spring 2013 with a research-based, normed, reliable and valid assessment. We used this data in concert with a teacher-needs survey and the school’s educational priorities to develop a Teaching and Learning Summer Institute. Our teachers participated in a three-day intensive, focused set of trainings designed for hands-on learning. This was the first of our new annual summer institutes. All teachers participated in Common Core 101, specific research-based strategy instruction for each of the five areas of reading (phonological awareness, phonics, fluency, vocabulary, comprehension) and included training in screening tools, and ongoing progress monitoring tools for the five areas of reading.

These three days were the jumping-off point for our systems-wide change. Over the summer the teachers have been challenged to utilize the standards, assessment and research-based strategies, modeled and practiced during the institute, to develop their instruction for the first two weeks of school. During those two weeks, students will be screened by their teacher in reading and math. Reports will be generated and data will be analyzed. Teachers will meet weekly in grade level teams with myself and the principal to discuss each student, interpret the data and solve problems. No child or teacher can be left behind because these 50-minute meetings are in the master schedule for the year. Adequate time has been invested for optimal success.



*Debbie Brown is the director of innovations in learning at the Donna Klein Jewish Academy in Boca Raton, Florida.
brownd@dkja.org*

Our data collection has shown the need for an uninterrupted literacy block to include the five areas of reading blended with a reader's/writer's workshop, and six traits of writing (a methodology that systemically looks at one aspect of writing at a time). All of this is designed for blended learning that is differentiated. We are utilizing the Common Core State Standards as the blueprint for learning and ongoing progress monitoring tools to rise to the challenge of this rigorous new learning. This has been carved into the master schedule.

We have identified a literacy coach at each grade level in order to build capacity in our school and grow our leaders from within. Coaches will attend a monthly training based on data and needs and then train their team in a train-the-trainer model.

Another important aspect of support and development is the creation of a teacher blog, password-protected. The innovative blog will be a hub of timely articles, research and highlights of classroom instruction. Most importantly, this will be a sacred space for teachers to ask questions, make comments, share ideas and get answers. We are creating our own virtual learning community that is without judgment and solution driven.

In addition, all of our teachers will attend monthly staff development sessions, topic-focused, based on standards and data. Several half-days have also been set aside for professional development. This is a systemic approach to staff development built from the inside out.

At Donna Klein, we believe that in order to meet the challenges of tomorrow, we must systematize staff development. This is a serious commitment made by our administration to develop each teacher much like we develop each student, with a prescription, a plan, and most critically, follow-up and feedback.

Even the most engaging and important staff development just becomes a shelf-sitter if not for coaching and mentoring, follow-up and individual differentiated support. Teachers will have the opportunity to sign up for customized coaching and mentoring. One teacher may need to see a small group in action working on a cognitive strategy, while next door a teacher may need an observation as another set of eyes to solve a specific problem. As we ardently strive to prevent students from falling through the cracks, likewise it is vital for each teacher to feel that their learning is extended beyond a few hours in training, creating transferable, sustainable and ultimately generalized learning. We subscribe to the *I do it, We do it, You do it* model for our students and for ourselves.

The Talmud says, "Every blade of grass has its angel that bends over it and whispers, Grow, Grow..." We, the educators, are each other's angels at Donna Klein and together we are growing a garden where each blade of grass (our students) is unique and special. Using nutrient-rich soil (standards and data), watering and fertilizing the grass (teacher education), and pulling out the weeds (ongoing monitoring and support), we will grow our garden and it will flourish for generations beyond the 21st century. ■



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When Timeless is Trendy: Professional Development for 21st Century Teaching

■ by **LAUREN APPLEBAUM** and **MIRIAM HELLER STERN**

To enable teachers to succeed in incorporating new tools and methods into their practice, administrators need to put in place frameworks for teachers to engage in shared reflection and inquiry.

Reflection is an ancient practice, and inquiry is as old as humanity's search for meaning. These timeless practices are the foundations of two mutually reinforcing trends in teacher learning: collaborative reflective practice and practitioner inquiry. In our experience training both novice and seasoned educators, we have found that the skills of reflection and inquiry are essential for teachers to succeed in implementing any of the latest trends in education.

In every generation there is a demand for educators and schools to adjust curriculum and instruction to meet the emergent needs of society. The current call is to prepare students to succeed as entrepreneurs and innovators in a rapidly changing economy and a world in need of repair. In response, project-based learning, design thinking, and flipped classrooms all emphasize the use of teacher guidance to help students think creatively and apply their learning collaboratively and authentically. These practices undergird the core four Cs of 21st century skills: critical thinking, communication, collaboration and creativity.

Twenty-first century skills are not learned by rote like multiplication tables and Hebrew verb conjugation. They are habits of mind, dispositions that are gained through application, practice, a developing self-awareness of one's thought process and an ability to learn from others. This kind of student learning requires teachers to shift their classroom stance for at least part of the time from a "sage on the stage" model of teaching to a "guide on the side," to encourage students to wonder, hypothesize, learn from their mistakes and try again. In the affective realm, teachers need to help students take ownership of and feel empowered by their learning.

How can teachers make the shift to 21st century teaching? They must have 21st century professional learning opportunities. Such opportunities will help them develop this same skill set for them-

selves and model those dispositions and behaviors for their students. As Brandeis professor Sharon Feiman-Nemser writes, "If we want schools to produce more powerful learning on the part of students, we have to offer more powerful learning opportunities to teachers."

There is a strong consensus in both general and Jewish education research literature that professional learning needs to be reflective, evidence-based and collaborative in order to be effective. *Reflection* is essential for teachers to be mindful, analytical and deliberate about their teaching practice. *Practitioner inquiry* enables teachers to investigate their dilemmas and use data to inform their decisions. *Collaboration* enriches both the reflection and the inquiry, bringing minds together to foster deeper perspective and creative problem solving. While each of these practices can independently be a driver for change, they are even more powerful when utilized together.

If we want teachers to experiment successfully with new methods in their classrooms, they need a space outside of those classrooms to process the results with colleagues. While a teacher might think about the success or failure of an attempt to use iPads in a lesson on the drive home, or muse over it in a journal, reflection is strengthened and deepened when teachers engage in it together. Joseph McDonald, a pioneer in the field of collaborative teacher reflection, notes that "so much of our knowledge of practice is tacit, and becomes subject to critique only when we reflect on it in the company of others." In our work with teachers, we have seen them struggle to find the time and space to do this reflection unless the school gives them the gift of a regular, structured meeting time as part of its professional development strategy.

One format for this work is a Critical Friends Group (CFG). CFGs allow educators to have focused, structured, sustained conversations about their teaching practice. A CFG is not just a space to vent or self-promote; reflecting in a group setting intro-



Lauren Applebaum is associate dean of the Graduate Center for Education at American Jewish University in Los Angeles and a certified Critical Friends Group Coach. lapplebaum@aju.edu



Miriam Heller Stern PhD is dean of the Graduate Center for Education at American Jewish University in Los Angeles, where she teaches practitioner inquiry. mstern@aju.edu

duces a level of accountability to a teacher's work when teachers learn to challenge and stretch each other respectfully and helpfully. Groups of teachers follow "protocols" or conversation guidelines which offer rules to allow for rigorous feedback on each teacher's questions. These questions might evaluate student work: "Does this essay demonstrate the skills of critical thinking that the 5th grade curriculum requires?" Or they could examine teacher work: "Will this final project for my math class allow me to see if students really understand fractions?" They might consider enduring dilemmas: "I find myself frustrated by student misbehavior during morning tefillah and am not sure if any of my strategies are helping."

While a CFG can encourage teachers to help each other work on their individual goals, the collaboration can also provide a launch pad for implementing a broader school change agenda. Rather than just dreaming or discussing (or complaining!) together, educators can give each other feedback on specific practice in the service of questions such as, "How can our school culture support teachers and students in creating a culture of 21st century learning?" and "How do we help parents buy into instructional approaches that are different from how they were schooled?"

Similar popular models of collaborative professional learning are Communities of Practice (CoPs) and Professional Learning Communities (PLCs). While experts draw shades of distinction between the techniques of each, all three models should enable teachers to explore and develop new methods of teaching and learning through ongoing routines of collaborative reflection, experimentation and analysis, with the goal of improving professional effectiveness and student learning outcomes. One aspect of the CFG model which we find particularly compelling is in the title itself: it defines the participants' roles in the discussion as both supporting and challenging, and thinking critically, mirroring our 21st century expectations for our students.

While collaborative reflection is an important vehicle for assessing new experiments, these discussions also require an evidence base to overturn assumptions and draw conclusions for practice. Evidence may include but not be limited to student work, classroom environment, artifacts representing school culture (newsletters, extracurricular programming), interviews and surveys of constituents and teacher's observations. Collecting evidence does not necessarily require an outside observer, who can be threatening; when introduced to the skills of practitioner inquiry, teachers can learn to collect the data and analyze it themselves. A popular form of practitioner inquiry is action research, where teachers test out a new experiment and study the results.

Discovering and making sense of evidence in their own practice empowers educators to self-evaluate and make informed decisions about

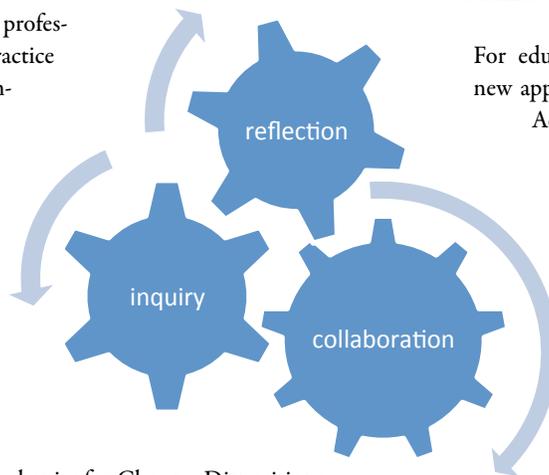
Resources for further learning

To learn more about Critical Friends Groups and protocols:

- ♦ Visit the National School Reform Faculty at www.nsrffharmony.org
- ♦ Check out *The Power of Protocols* by Joseph McDonald et al.

To see examples of practitioner inquiry, see: www.goingpublicwithteaching.org

how to best adopt the instructional trends they hear about. A group of teachers engaging in inquiry projects together might explore what motivates students to do their best work. They might ask themselves, "How can we tell when a student misunderstands during project-based learning?" or "How do we know if those iPad lessons are really enhancing student learning?" These types of questions—alive and present for art teachers and Talmud teachers and math teachers alike—can be the subject of thoughtful reflection and can invite educators to utilize evidence along with their instincts.



Mechanics for Change: Dispositions for 21st Century Teaching

For educators, being told they must take on a new approach to teaching can feel overwhelming. Adopting new trends in professional development is a lot like adopting a new exercise regimen: at their core the exercise engages the participant in practices with timeless and clear value, but they are repackaged with new language, choreography and music that can feel unfamiliar, even alienating. The first time you walk into a Zumba class or a yoga studio you might feel overwhelmed by the steps or the level of mindfulness, stability, flexibility and stamina required. But if you have exercise partners to go with, and you return week after week, the new habits can be developed and sustained until the practice feels natural and beneficial.

As university-based teacher educators, we are often invited by heads of school to give "inspiring" one-off workshops to kindle a new idea in the minds of teachers, who are then expected to go off to their siloed classrooms and implement it. This is akin to taking the whole staff to a cardio barre exercise class when no one really knows what cardio barre is and there is no internal support for ongoing learning of the new trendy practice. Even an extended retreat, which can be a shot of educational adrenaline, can fizzle in practice without ongoing conversation, inquiry and support when everyone is back in their classrooms. The effectiveness of the teacher learning lies in the routine. As with exercise, routine collaborative reflection and inquiry foster the stability, focus and strength teachers need to move beyond their fear or discomfort to step up to the challenge of meeting the needs of 21st century learners. ■

Flipping In-Service Professional Development

■ by **VARDIT RINGVALD** and **JANICE SILVERMAN REBIBO**

Flipped learning is usually evoked as a tool for the classroom. The authors, leaders in the training of Hebrew educators, developed a method of flipped instruction for PD that can serve as a model for schools and other programs.

We have found that the flipped classroom is an ideal framework for conducting in-service professional development for Hebrew teachers.

Flipped learning has fallen in and out of favor. It surged in the 1990s when web-based instruction and full-out online classroom management systems became the vogue. “Blended learning” and “hybrid programs” morphed easily into the “flipped classroom,” taking advantage of computer and Internet technologies along with face-to-face learning. The most dramatic inversion came in the form of video-packaging of knowledge. Videos replaced in-class lectures by the instructor or guest experts. Students were prepped with prepackaged knowledge for their subsequent classroom activity, consisting of probing or experiential learning.

If you discuss flipping with experienced classroom teachers, however, the reviews are mixed. There are some apparently serious issues with personalization and transitioning. Theoretical questions arise about the objectification of knowledge in video packaging, which could obstruct a learner’s reflective abstraction and ability to move to other contexts. Students may become dependent and lack resourcefulness. Why is it then that the flipped approach is so effective for Hebrew language in-service PD? What can we learn from this?

Hebrew at the Center was formed to respond to the need to strengthen student Hebrew language acquisition outcomes through in-service work with classroom teachers on assessment-based second language teaching and learning. After initial successes with individual schools, we began designing a systematic, multiyear, regional approach for delivering cost- and time-effective PD to large numbers of school personnel. We employed a “hybrid” model with a significant percentage of technology-based interactions.

Over time we developed a multitiered approach: 1) professionalize a school’s Hebrew leadership, their Hebrew language coordinator or lead teachers first; 2) then support these leaders in mentoring and professionalizing the entire Hebrew faculty of their schools. Our model of flip learning for in-service PD emerged from this hybrid, multitiered model during a regional project with LA schools, in partnership with BJELA and with technology-targeted support from the Covenant Foundation and the Ben and Esther Rosenbloom Foundation.

Our goal for teachers is the improvement of their teaching methods in order to maximize the Hebrew language outcomes of their learners. When Hebrew teachers embark on their journey of embracing new knowledge and new skills, they undergo a dual process: they must unlearn their old ways of teaching and learn new concepts to be translated rapidly into new skills. Our version of flip learning for in-service PD resulted from this need.

We can begin to understand the viability of flip learning for language educators in the context of Bill VanPatten’s work on “processing instruction.” As we have observed in our programs, the phases that language teachers go through when transforming their old, familiar ways of teaching parallel the phases that language learners must go through when acquiring a new language. Moreover, we surmise that the language acquisition model is useful for understanding the universal process undergone by educators engaged in PD, regardless of their particular discipline.

According to VanPatten, learners move through four stages when acquiring a new language. First is the *input* stage. This phase of the acquisition process allows them to become *embedded* in the new language and understand the meaning of new elements presented to them. In the second stage, learners *intake* and absorb many of these new elements. During this phase of the process, they are able to make use of such elements only in exactly the same way in which they first encountered them. In the third stage, characterized as



Vardit Ringvald PhD is the director of the Institute for the Advancement of Hebrew, a joint initiative of Middlebury College and Hebrew at the Center. ringvaldv@gmail.com



Janice Silverman Rebibo is the senior program officer and technology director of Hebrew at the Center. janicer@hebrewatthecenter.org

the *developing system*, learners are now able to use their meta-linguistic understanding and differentiate and categorize these same language elements according to their linguistic structures. In the fourth and last stage, called the *output stage*, learners are ready to make use of the new language. They retrieve, recombine and manipulate language forms in order to create new meanings.

In the same way, teachers in training must first understand the new concepts they need to internalize. They must also rid themselves of their old knowledge and skills. Because this dual process of learning and unlearning occurs simultaneously, teachers will require constant access to the new knowledge.

At first, our central innovation for our in-service PD offerings was the production of an extensive video series (fifteen to date) intended to package our *HATC Tools* for Hebrew language teaching and learning. Asynchronous video delivery of our expert lectures, as well as interviews and roundtable discussions with additional experienced leaders and practitioners in the field, afforded repeated yet cost-effective exposure that would benefit any teacher PD program. Flip learning was not our explicit objective at the time. It evolved naturally because we chose to open each of our LA learning modules with an Internet-posted video. By doing this, we were in effect already engaging in the basic, most familiar form of classroom flipping: frontloading video-packaged knowledge.

In contrast, our fully developed flip model is not linear. It permits constant access, surrounding learners with the new knowledge. Both before and during the period in which they meet with experts and peers in-person and online, teachers can also stream videos in their free time and at their own convenience. In the PD programs we now implement, they also download and view slide presentations and take part in a community of practice bulletin board for listening and reading about new concepts. There they view a variety of examples and read and post comments in moderated peer discussions. Returning to the VanPatten model, the teachers maintain control of their own time and resources and can sustain a pleasant *input* phase for as long as they wish and need. As adult learners who are also fully employed professionals, teachers find that this approach creates a long-term, user-friendly environment.

As they repeat the above *input* process again and again, most of these in-service teachers find themselves *intaking* the new knowledge, i.e., memorizing the materials in the same way they were presented to them. They can recite definitions, summarize the content and describe the examples given to illustrate and clarify the new ideas.

At this point they are offered the opportunity to participate in a Q&A session with the expert. This may be either in a distance format (phone or video conference) or face-to-face. The goal of this session is to help teachers unpack the new materials by breaking them down into smaller elements and by elucidating further. The most efficient ways to accomplish this transitional phase involve answering questions and analyzing case studies related to the topic. In addition, the mix of online and in-person interactive workshops that form part of their training allow them to experiment with the new concepts through exercises and drills that imitate true classroom situations. This allows for internalization of the concepts.

Recording these Q&A and workshop sessions and making them accessible online for teachers to revisit allows them to review the cases and repeat their learning independently—again, on their own time and at their own pace. These activities foster the teacher's *developing system*. Their processes of synthesis and integration, like those of second language learner, eventually lead to *output* with their new knowledge having become available for productive use.

Following Van Patten's model, the *output* stage of our PD design would be the phase in which these learners implement a new concept with the help of a mentor. This implementation phase requires the teachers to demonstrate their ability to retrieve information about the topic in real time in their classrooms. The presence of a mentor, sometimes from a distance due to considerations of logistics and resources, permits monitoring of their activities and immediate feedback. In our approach, the support given by the mentor creates the sense of a safe space in which teachers may experiment with the new way of teaching. It facilitates what might otherwise be an abrupt, perhaps unsuccessful transition to implementation.

Because their flipped learning environment is made up of so many elements and options that they may rely on and access on their own, these Hebrew educators become independent, resourceful learners. In this environment, they take responsibility for their own learning process and demonstrate an increased capacity for advancing from stage to stage.

We were spurred to consider the theoretical underpinnings of our multi-dimensional structure when we observed the relative success of the LA participants in internalizing the concepts and methods. (Our Boston *Hebrew at the Center* schools may be seen as forming a region in addition to our Atlanta and LA regional projects, and we have delivered our PD services to more than 20 individual schools and camps.) The LA group's overall pace stood out early on when we began to hear the "language" of the *HATC Tools* coming from several participants.

We observed that when designing and constructing an in-service PD program, even when distance is not an issue, a well considered variety of asynchronous and synchronous approaches to PD activities can impact outcomes. Other strategies eased the anxieties of transition from stage to stage, especially mentoring through to the *output* stage. Ideally, the teacher is an active participant in personalizing the scheduling and coordination of individual or small group mentoring sessions. Thus we may see continuous mentoring as a flipped function as well because it occurs alongside real-time, interactive group PD. Mentoring is thus external but also critical to the fullest success of hands-on activities.

Mapping our program in terms of VanPatten's insights helped us bring to light the connections between activities and learning processes in this regional PD program. On this basis, we recommend an approach to PD that is both blended and flipped. While Internet technologies may or may not be chosen to facilitate real-time, interactive activities, asynchronous means such as videos, slide presentations and message boards make content "flippable." As we learned from our experience with our Hebrew language projects, participants in in-service PD benefit when such flipped activities make up a large proportion of a program. The balancing act between extrinsic and intrinsic program

[CONTINUED ON PAGE 70]

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[CONTINUED FROM PAGE 53]

annually that didn't require reteaching.

The Product

Angela: By the end of the school year, we had created a set of concepts and skills, either by grade level or grade band, for all the mathematical topics covered in the CCSS. In most cases, the concepts and skills closely mirrored those in the standards but were written in a more useful way for teachers to use in planning instruction. Jamie typed the lists we had developed, and she and I created a large poster with the entire curriculum

arranged in throughlines for teachers to review (fig. 3). Our final work session was a chance for teachers to make last-minute revisions to the entire curriculum, emphasizing that this curriculum would be used for a year before reflecting and revising again next summer. It was also a chance for teachers to feel a sense of pride and accomplishment in all the hard work we had completed together that year.

The final scope and sequence provided the teachers a chance to look at curriculum from a “big picture” perspective. By looking at math instruction from the eyes and experience of students as they travel K-5, they were able to gain compassion for students in their journeys toward mathematical proficiency as well as a true appreciation for the importance of grade level curriculum. Teachers took great ownership over their roles in the development of the curriculum, and began to view one another as resources for differentiation.

Jamie: By having an outside consultant facilitate conversation and curriculum development, I found that conversation was open, honest and productive and agendas were completed. A part of my professional vision is to create a faculty culture where teachers think as critically about my ideas as they do their own; as educators we are on equal footing when sharing ideas and reflecting. As a participating member of the group, I was able to be seen as a non-threatening entity, something that I think can often be a challenge for new administrators.

Next Steps

Angela: In my work next year at Levey, I plan to focus on the representations, strategies and mathematical language portions of the math curriculum we are developing.



FIGURE 3

Jamie and I envision teachers with toolboxes of games, lessons and strategies to use with students as they develop the concepts and skills we have identified as the Levey math curriculum. While teachers will still participate in professional development meetings I facilitate focused on developing these toolboxes, Jamie and I hope that a large part of our work together will focus on me either teaching or observing in classrooms and reflecting with teachers afterward. This will give teachers a chance to try strategies and reflect on the experience as well as the opportunity to watch their students participate in math lessons led by another teacher. Both will

help teachers refine their practice while always connecting the work to the concepts, skills and now strategies, representations and mathematical language we have included in the math curriculum.

Jamie: Our new math curriculum is a work in progress, and I look forward to refining it throughout the next school year with Angela and the teachers. It is also a well organized structure that provides teachers with confidence and foundation for their instruction and provides families with the knowledge and understanding of what is being taught to their children. While complex in the big picture, grade-level snapshots are simple and not overwhelming.

Next year, as we continue to work with Angela on refining the math curriculum and developing strategies, we will also embark on a new road: literacy. I will be facilitating this process and it is my hope that the professional culture that has been established will transfer to our work in each content area. While the teachers at Levey at first questioned both the need for a curriculum review and our use of the CCSS to guide that review, once the process had begun they realized the value of each. Using our experience as a model can help guide any day school through similar curriculum work.

Even schools with curricula in place should consider reviewing it in light of the new standards—particularly schools like ours whose students graduate to continue their education in other area schools. A common set of standards gives us, as educators, the opportunity to calibrate our expectations and look critically at curriculum. The

Common Core State Standards may appear daunting at first, but we have found that when combining rigor, high expectations and creativity in schools, we as adults thrive along with our students. ■

Teachers took great ownership over their roles in the development of the curriculum, and began to view one another as resources for differentiation.

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Reshet Teva launched following this summer's Nevatim conference, co-sponsored by RAVSAK, at the Pearlstone Center outside

Baltimore. Participants enjoyed three days in beautiful surroundings, with the farm on one side and woods on the other. The conference was designed to serve beginners as well as experienced garden educators. Some schools had established programs, while others sought basic information on soil and seedbeds. Some sessions catered to each group separately, while others provided inspiration no matter the school's level.

Participants not only acquired useful information and expert curricular lessons; they also got to experience the learning firsthand. They took part in a scavenger hunt, connecting Jewish texts with aspects of the farm; planted aleph-bet boxes, with seeds that will grow into the shape of Hebrew letters; harvested wheat, threshed and winnowed it, then ground it into flour, while

learning of the 11 melachot, tasks, that the Talmud derives from making bread; practiced hitbodedut, a spiritual practice pioneered by Rebbe Nachman, among many other activities. They visited the Irvine Nature Center to get ideas for designing outdoor recreation spaces beyond the garden/farm.

A highlight of the conference was a session entitled "From Farm to Table." Participants picked their own food and prepared it themselves, using their own recipes; some made delicious salads and roasted vegetables while others learned the basics of cheese-making. After two and a half hours of hard work, how delicious this banquet tasted—beteyavon!

Sign up for Reshet Teva today! Contact Elliott Rabin at erabin@ravsak.org. ■

Flipping In-Service Professional Development

[CONTINUED FROM PAGE 65]

activities is shared with the teachers, who are allowed to control the flip.

When teachers share control of the extent

and repetition of their use of activities we design, we also acknowledge their individuality as learners and empower them on their journey toward independence from the outset.

In short, providing learners with the means to repeat the lessons at their own convenience, need and pace empowers each person to learn the material *al pi darko*, in his or her own way. ■

Synchronous or Asynchronous?

[CONTINUED FROM PAGE 59]

A few things to keep in mind when choosing a partner company:

Get references. Any reputable online learning company should be able to provide more than 1 or 2 other schools as references.

Pilot. If the company being considered is new, or if online learning is new for your school, then run a short-term program with a few students before making a long term commitment.

Vet. Make sure that the teachers working with your students meet your approval. There is nothing wrong with asking to interview an online

teacher, as you would a regular staff member.

Supervise. Whether you are using synchronous or asynchronous online classes, stay involved as you would with a regular class. Pop in to sessions every so often and access the back ends so you can see how the students are performing. Do not wait until it is too late to fix a problem.

Explore. Maximize the usage of online learning. Online courses are a great way to expand your academic course offerings. If you are apprehensive about online learning, start with an elective course. Then, once you are more comfortable, you can introduce online core courses.

Online learning has enabled schools to create more educational possibilities and to engage the students in new ways. Some experts say that within the next ten years, a majority of school courses will be in an online format. According to a recent study commissioned by Pearson Learning, 6.7 million students are currently taking at least one online course. As educators, we must strive to find the tools that will help our students the best. Online learning is no longer the future of education—it has arrived. Take advantage of the numerous resources available to bring your school and students the most and best educational options possible. ■



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Moving the Needle: Galvanizing Change in our Day Schools

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