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# The Creation of the Edgewood Experiential Lab and Learning Commons for the 21st-Century Learner

TAMARA MITCHELL AND FRAN POTVIN-SCHAFER

[Editor's Note: An extended gallery of photos of the Edgewood Experiential Lab and Learning Commons can be found online at <https://sites.google.com/site/edgewoodlearningcommons2012/?invite=CJnkyN4K>]

*But Peg was putting all that behind her now. She wanted big, she wanted better, she wanted best. . . . She wanted to climb the world's tallest mountain. She'd heard the view was quite something. (Oppel, 2004, 2)*

In 2006 Edgewood Public School started on the ARC (accommodation review committee) journey as part of a process whereby neighboring secondary schools and K-6 feeder schools carefully examined the teaching and learning in this family of schools (FOS) in the Toronto District School Board (TDSB). Utilization and capacity rates, enrollment trends, and facility and program needs were carefully examined through the lens of future projections, sustainability, and the rigor and relevance necessary for 21st-century learners.

At Edgewood PS, a K-8 school with approximately 380 students, almost half at the intermediate level, we focused on previously implemented changes to support student learning as a response to our underpinning belief in an inclusive learning environment. Past changes included a common school entry, dismissal and recess schedule, minimization of rotary subjects, removal of lockers for the intermediates, and the physical reorganization of classrooms, such as interspersing intermediate classes throughout the building. The infrastructure of our program delivery at the time was mainly dependent on the design and technology program. Students were transported by bus to the local senior school, which was equipped with metal and wood shops and cooking and sewing rooms. Students rotated through the shops during the course of the year. This posed many challenges,

as the design and technology program was not aligned with the Ontario Ministry of Education curriculum; it was difficult for teachers to connect with parents from a different school; money and staff were taken from Edgewood's annual allocation to support the design and technology model; there were transportation costs to move students to the host senior school; and, perhaps most importantly, Edgewood's entire infrastructure and schedule was dependent on the senior school. From the daily scheduling of periods to time demands on intermediate staff to cover teachers in the primary grades, the challenges were great. Students would often be absent or arrive late and miss the bus, so they would not attend the senior school for that period. Student misbehavior at the senior school was constantly being dealt with by staff and administrators, and disengagement was a concern. What had been in place for so many years was no longer working. In moving forward with the insights gained, Edgewood was granted a new science and technology lab, complete with power tools.



**Library**

Our project would be a pilot for our board of education.

What came next was a collection of forces that resulted in a synergy that would set the stage and foster the vision of what would become the Edgewood Experiential Lab (EEL). To separate the components and describe events in a linear fashion would not encapsulate the alignment of the many factors involved. From the visionary FOS superintendent of education to the executive superintendents and architects and their guiding questions, to the TDSB program departments and the creative Edgewood staff, each cog in the wheel played an important role in the actualization of a project that put student learning at the forefront. From the start, collaboration played an instrumental role as we moved from vision and conceptualization to planning and, finally, implementation. Fullan (as cited in Loertscher, Koechlin, & Zwaan, 2011) insightfully points out that “when teachers within a school collaborate, they begin to think not just about ‘my classroom’ but also about ‘our school’.” (107)

In preparation for the creation of the new FOS secondary school that would see the joining of the two existing secondary schools, administrative staff in the FOS were educated and exposed to relevant visions of facility and programming needs for the 21st-century learner.

From these inspirations and a great deal of input from the Edgewood staff, we answered the architects’ questions in regard to specific activities the students would be engaged in in the new space. From our site-based committee, staff envisioned a facility that supported students in hands-on, cross-curricular learning; embedded technology in the teaching and learning process; fostered various student groups, as well as team planning and teaching; supported students’ physical movement and various student learning modalities; and supported how teachers taught even though the existing physical space had always posed restrictions.

The reality is that the design of learning environments is a complex assignment. While the solutions may be simple or elegant, they can almost never be “simplistic.” We need to understand the complexity of the human experience as noted . . . in order to understand what “learning” is about. (Nair & Fielding, 2005, 7)

Through many consultations with the architects, who had tremendous ideas and listened to our staff suggestions, questions, and concerns, we collectively conceptualized a facility that included ample use of glass to ensure student safety and supervision, “messy” areas, and more managerial zones, work spaces, and construction areas. Initially the focus was on the intermediate learner and the creation of a “suite”; however, this contradicted our view of the intermediate learner as a role model and integral member of an inclusive school community. We needed the lab to address the needs of all learners in our building. Ultimately the program needed to drive the facility. Jacobs (as cited in Loertscher et al., 2011) states, “Rather than being victimized by our program structures, we should be creating new types of learning environments for a new time and for various types of teaching and learning. Not to do so is a declaration not to learn.” (7)

From this belief we developed a science and technology lab and visual arts studio



**Tech Lab**



**Collaborative Space**

situated side by side filled with natural light, with updated and flexible wiring to accommodate technology and science demands and glass walls to ensure clear sight lines. The architects suggested flexible furnishings, including tables that connected in various configurations to physically accommodate the primary and intermediate learner, and castors on chairs to enhance student mobility. These considerations would also afford flexibility for the future, as schools respond to projected decreasing enrollments and reconfigurations.

As we discussed, probed, and hypothesized, it became increasingly important for us to ensure that the retrofitted facility did not become “more of the same” in a prettier space. In order for our vision to come to fruition, we needed to delve deeper and look at the interconnections between facility, staffing, programming, and scheduling.

In the past, our teacher librarian was instrumental in supporting student learning and professional development for staff. The partners in action model was key to our school improvement plan and a vehicle for moving student learning forward.

We had built staff capacity in regard to the development of higher order thinking skills and critical literacy to improve student achievement. The revised Ontario Ministry of Education Science and Technology curriculum also focused more extensively on higher order thinking skills

and the big ideas. The vehicle through which we garnered the most success with our school improvement initiatives would be the next step, the natural segue. We knew we must include the library in our vision for the experiential, cross-curricular teaching and learning experience for our community of learners. We could see how this partnership would take our school community, students, and staff to a new level of collaboration and learning.

This was the beginning of our journey to create a facility that would embrace and further deepen pedagogical values (partners in action, team teaching, best practices) already in place at Edgewood and

develop a multidisciplinary approach in collaboration with all participants: administration, teachers, support staff, students, and parents.

Such an undertaking requires strong shared leadership and a willingness to cooperate and collaborate on the part of the school staff. From a principal’s perspective, when such a transformation is implemented, consistent and shared leadership is the cornerstone for moving forward. Not only does the principal need to have strong convictions, but these beliefs must also be “owned” by all stakeholders, and the process must be supported with appropriate assistance, such as teacher release time, skills training, and explicit demonstration of the alignment of professional development with the school and district’s vision of improvement. A climate of trust must be created in order for all stakeholders to take risks, reflect, and continue to grow. A willingness to be flexible and critical and listen to many voices is also instrumental in the fine tuning of every aspect of programming, as perseverance is modeled through every step of the process.

In September 2010, the EEL and library were officially opened for students and staff. At the same time the TDSB library community was all abuzz with the new Ontario School Library Association (OSLA) document *Together for Learning: School Libraries and the Emergence of the Learn-*



**Collaborative Space**

*ing Commons: A Vision for the 21st Century* (2010). Upon reading the document, we were overwhelmed with excitement at the concept of the learning commons and what an uncanny similarity it had to our vision of the EEL and the library. The eminent OSLA document confirmed that our journey to create a facility and program to entice 21st-century learners and provide a multidisciplinary, differentiated, and engaging approach to learning within and beyond the walls of the school was indeed reflective of current theory. So began the transformation of the Edgewood library to the Edgewood learning commons.

Our journey to this point had been exhilarating and required substantial commitment of time, energy, and foresight, and now we were faced with putting our ideas and convictions to the test. How would the program unfold? How would we move two hundred intermediate students through a technology lab consisting of two drill presses, three scroll saws, and a band saw? How many classes should we move through at one time? A myriad of questions flooded our thoughts, from safety, teacher comfort, integration, and equitable access to our old friend time and how would we find enough of it to get everything done!

A learning commons, as mentioned in *Together for Learning*, “is a vibrant, whole-school approach presenting exciting opportunities for collaboration among teachers, teacher librarians and students. Within a learning commons, new relationships are formed between learners, new technologies are realized and utilized, and both students and educators prepare for the future as they learn new ways to learn” (3). The learning commons approach includes four key components: physical and virtual space, equitable access, learning partnerships, and technology in learning. These would be our guiding principles.

While the gap between theory and reality can be frustrating and potentially overwhelming, the realization of what the process truly entails allows us to take a deep breath and recognize that it takes time, commitment, success, failure, review, revision, and creativity.



### Library Fiction Area

At first this pristine, lavish space seemed somewhat daunting; after all, it would be a model for the TDSB, and those are large shoes to fill. How would we do justice to this space and all its incredible tools for learning and properly service our 21st-century learners? As professionals, we would be pushed beyond our comfort zone.

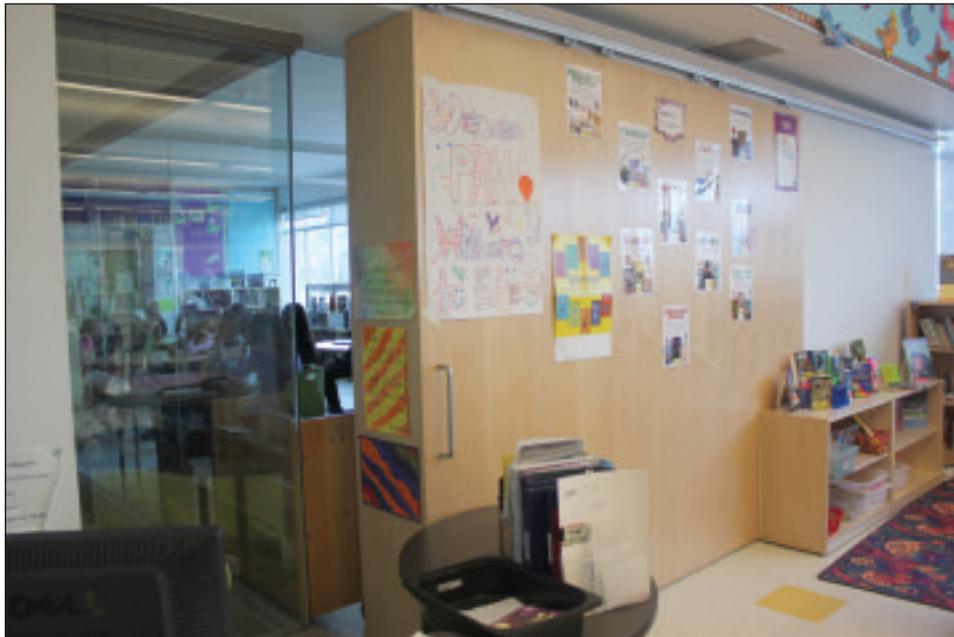
*Peg scaled precipices, skated glaciers, and crossed chasms on icicle ladders.* (Oppel, 2004, 7)

The fever of excitement in the EEL and learning commons is spreading as it becomes a community where each student and staff member *gradually* sees a place for him- or herself. Sometimes it takes on a life of its own, and we jump on for the ride. Facilitating such a dynamic environment, with staff and students interacting at various levels—with each other, with the space and program—along with an ever-changing schedule, new practices, and a synthesis of ideas from all parties can be likened to harnessing Jell-O! Catching it is impossible; one can only manage to keep it on the path.

Our conceptualization of the physical space takes on a whole new dynamic as students interact with their surroundings. The EEL consists of an art studio, technology lab, science room, and gallery—an original hallway that serves as flexible space for flexible groupings, with café

chairs, tables, and wheeled chairs, fifteen laptops in mobile carts, whiteboards for small-group collaboration, and display cases for student work or books. The learning commons sits on the other side of the gallery and houses tables that can be moved to accommodate various groupings and a mobile Smartboard, as well as two carpeted areas with pillows for read-aloud and student enjoyment. A large sliding wooden door closes to create two separate spaces—the carpet area and the table area—which allows for simultaneous classes. The learning commons, while embedded in the EEL program, services students in all grades from kindergarten to grade eight, for media, critical and digital literacy, music, and reading advocacy.

In the afternoon, on a given day during instructional time, a visitor could see grade seven students working collaboratively on planning, creating, and building a wooden arm to withstand a certain mass; grade eight students working on a culminating activity powered by hydraulics or pneumatics cutting wood on the scroll saw in the tech lab (under the eyes of a trained educational assistant and teacher); students in the gallery working on computers or borrowing laptops to take to classrooms; kindergarten students listening to the teacher read a story; and grade three students learning music through interactive websites on the Smartboard. Or in the morning, in the arts



**Moveable Wall in Library**

studio, the grade four and five teacher and her volunteer could be viewing the digital news reports they created in literacy and drama; a grade seven or eight teacher using the Smartboard in the science room to teach math concepts; the special education teacher sitting with a group to support literacy learning in the classroom; and lastly, the teacher librarian discussing the Blue Spruce nominees with the grade one and two class.

Lunch hours boast various clubs led by various teachers: girls club led by the guidance teacher; robotics by the kindergarten teachers; or the homework club led by two French teachers that entails reading, French, math, religious accommodations, drama, and music. Our grade eight science teacher runs tech lab clinics for students to complete their design challenges. The newsletter club and student council all meet regularly to discuss and write about school initiatives and Edgewood happenings, while the library club helps manage and display the print materials.

It is a menagerie of learners, both student and adult, united in one space! The electric hum of engagement resonates in the mind of the passerby.

The new vision of the learning commons sets the library as the hub of activity in the school—a magnet for a range of teaching professionals to connect with students and to extend their own profes-

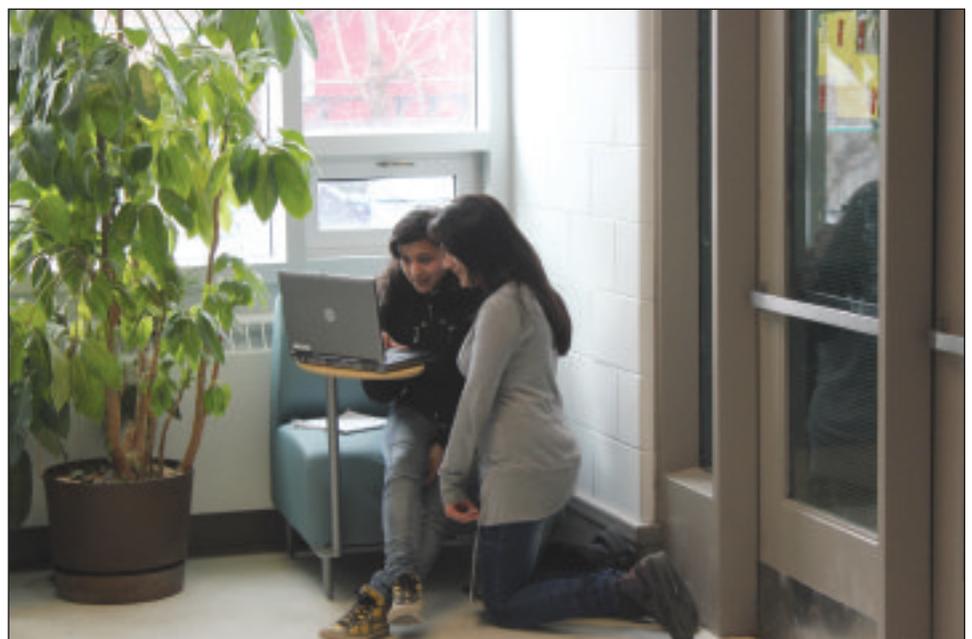
sional learning and practice. (Loertscher et al., 2011, 142)

The authors' words assure us that we are keeping to the path. The new facility required a shift in programming from the traditional, literacy-based partners in action model to a more interdisciplinary approach, which involved science, technology (both power tools and information technology), literacy, and social studies, with the role of the teacher librarian undergoing a metamorphosis to meet the needs of the students, teachers, and school. Once the facility was built, all intermediate teachers, the teacher librarian, and the educational assistant were trained on the power tools,

and the teacher librarian and educational assistant, who felt most comfortable taking the lead, would train the students and manage the tech lab. Building capacity in this leadership would, hopefully, come in time. Simultaneously staff throughout the school were being trained on an interactive whiteboard of one kind or another (Smartboard, Mimeo, Mobi) to support instruction and learning.

*Slowly, the balloon rose into the air. They floated down through the night, the stars close enough to pluck right out of the sky.* (Oppel, 2004, 26)

During the first year of implementation we met in teams—science instructional leader (when time permitted), grade teachers, and the teacher librarian—to plan, implement, and assess units of study and student learning. We tried our best to integrate areas of the curriculum that seemed to fit without being contrived or deliberate, with each teacher bringing to the table her/his area of strength. For example, drama lent a hand in the learning of osmosis; virtual cells were explored; Smartboard activities provided interactive learning through literacy and technology; glow powder helped students explore the spread of disease; and microscopes provided a hands-on approach to cell exploration. The synergy of various teacher strengths provided a richer,



**Cafe Chair**



**Homework Club**

more engaging program for students and allowed teachers to support and learn from one another. In *The New Learning Commons: Where Learners Win! Reinventing School Libraries and Computer Labs*, Loertscher et al. make this critical point:

The establishment of the learning commons as a collaborative community of learners opens the door for the reinvention of instruction and learning experiences and, consequently, for effective school improvement. In the learning commons we experience many types

and layers of collaboration, with everyone working together to analyze and improve teaching and learning for all. (107) Such collaboration with the teacher librarian also occurred with other grade teams and individual teachers in the primary and junior divisions throughout the year.

Our first-year experiences allowed us to reflect and refine our approach and schedules and to go deeper in many ways. With a certain comfort level in place, we find ourselves in the position to reinvent our practices and further improve student

learning. Capacity in the technology lab has been created as the grade eight science teacher trains equipped students on the mighty band saw, while the EEL educational assistant and the teacher librarian guide students working on culminating tasks. Collaboration allows us to grow and change with support and the understanding that we are not alone in engaging students. Just recently, for example, in developing success criteria with the grade seven students regarding a particular activity, the grade seven science teacher and the teacher librarian modeled the process of conferring and clarifying with each other, a key part of what students have to do when working in teams. After the class we were able to reflect on our practices and revise our instructional strategies. Our journey to this point has been full of peaks and valleys, exciting new learning accomplishments, and partnerships at every level. A trust has been built that allows us to focus on the real goal—student achievement—and lays a foundation for meaningful collaboration and risk taking.

*But Peg was the restless sort. She was pushing nine, and she figured it was high time she made something of her life. After all, she wanted big, she wanted better, she wanted best.* (Oppel, 2004, 30)

So what is next for our community of learners? After sixteen months of having the EEL with the learning commons fully implemented, many results have positively impacted teacher/student learning. The capacity to use technology and incorporate it in meaningful ways to propel student learning has been profound. Interactive whiteboards, laptops on sign-out, and desktops throughout the gallery support students in accessing content, applying and translating skills, and laying the foundation of an inquiry-based learning approach. Student tardiness and absenteeism has decreased considerably, and student testimonials attest to the fact that they embrace the experiential, interconnected approach to learning and are engaged.

Staff members recognize that in order to reach the 21st-century learner we need



## PICTURE BOOKS

### DELIGHTFUL DOGS AND COLORFUL CATS

**Bailey.** Harry Bliss. Scholastic Press, 2011. \$16.99. 978-0-545-23344-6. Grades K-2. Bailey would be top dog at school, if only he could stop eating his homework, digging in the garbage can, and howling in music class. Simple cartoon illustrations add visual jokes to this knee-slapper.

**A cat like that.** Wendy Wahman. Henry Holt, 2011. \$16.99. 978-0-8050-8942-4. Grades PreS-2. A cat describes a perfect friend—someone who doesn't yell, strokes gently, doesn't interrupt a daily bath, and plays all the right games. With simple, brightly colored art just right for sharing with groups of children.

**One moon, two cats.** Laura Godwin. Illus. by Yoko Tanaka. Atheneum, 2011. \$16.99. 978-1-4424-1202-6. Grades K-2. Under the same moon, two cats—one from the city, one from the country—slip outside to take strolls, comb whiskers, chase mice, and then race home when thunder booms. The illustrations' deep, rich shadows and soft textures will make viewers want to stroke them.

**Princess Zelda and the frog.** Carol Gardner. Photos by Shane Young. Feiwel and Friends, 2011. \$16.99. 978-0-312-60325-0. Grades K-2. This version of *The Frog Prince*, illustrated with hilarious photos of bulldogs in elaborate court (and frog) costumes, will have young audiences rolling in the aisles. "Oh, BFF, you were so right. / I used to toss and turn at night. / But with you snoring next to me, / it's plain to see—we're meant to be!"

**Saving Audie: a pitbull puppy gets a second chance.** Dorothy Hinshaw Patent. Photos by William Muñoz. Walker, 2011. \$16.99. 978-0-8027-2272-0. Grades 1-3. Heartbreaking but hopeful, this is a true story of a pit bull who was bred to fight.



Arts Studio

to delve deeper into digital citizenship and virtual spaces and, in particular, build a virtual learning commons as one of our next steps. The EEL and learning commons are accessed by all students in the school at various times for various activities; however, regarding the science and technology portion, the intermediates tend to have more access than the rest of the school. Timetables need to be examined through a critical lens in order to ensure flexibility in scheduling to support equitable access for all students and staff. We will be challenged to further think outside the box to discover creative approaches to include multiple programs and student needs.

The collaboration among staff has increased and extended throughout the building, in addition to our EEL. The former library space was converted into two open-concept grade one and two classrooms where the culture of collaboration is further supported by authentic team-teaching practice. All staff have participated in coteaching three-part mathematics lessons, and students collaborate and observe teachers problem-solving together in class throughout the day.

*The successful schools focus on the future, with the goal of teaching students how to think—not simply what to know.* (Daggett & McNulty, 2005, 1)



Arts Studio Gr 4 and 5



Gallery

Our goal, then, is to identify strategies that build sustainable student/staff collaboration so that, for example, teamwork, creativity, risk-taking, and common assessment practices will be naturally embedded in the school culture for years to come so that our learning community of staff and students continues to be a dynamic group that explores new paths. Loertscher et al. (2011) As for our student learners, they thrive in the new space. It provides room for them to move and take charge of their learning. They “love the cool new lab” and the hands-on activities, and even the most restless and unmotivated students’ interest can be captured, particularly in the lab. They think designing, creating, and building helps them become better thinkers and problem solvers. Often when the clean-up signal is announced, their jaws drop and they say, “Really? We have to go?” “These forty-minute periods are not long enough!” Or “Wow those double periods really fly by!” On those days, when the time escapes all the learners in the room and the bell rings, it can be difficult to get students to stop—the best evidence of student engagement! Students tell us they think the tech lab affords them experiences and opportunities that will help them pursue their goals: One grade eight student, thrilled about his hydraulic neck-pain solution, wants to be an engineer and is grateful to have access to this kind of learning early on; another student, taking automotive mechanics in

grade nine, is always enthusiastic to find out what she’ll be doing next in the EEL.

Offering these differentiated, multidisciplinary approaches to learning will provide pathways for all students to explore, grow, and learn and will help develop an understanding and respect for each other’s strengths and interests, which will transfer to the world beyond the walls of Edgewood. Being immersed in this environment in elementary school can only allow for broader, and perhaps clearer, choices for high school and postsecondary endeavors for our 21st-century learners.

*After all, she wanted big, she wanted better, she wanted best. And she’d already set her sights on something new.* (Oppel, 2004, 30–31)

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