**Introduction**

The London District Catholic School Board’s current model for managing teacher professional development is a program called PD Place that allows teachers to browse upcoming sessions or search for specific sessions and register for the session. This process is completed entirely online and sessions are offered during the day for which teachers get release days to use as they wish, or in the evenings on their own time. Sessions are usually one-time instruction in technology use. Teachers are eager to register for training in educational applications of technology, but the in-service is either unavailable or ineffective. Most “technology” sessions function as instructional walk-throughs of online or software programs. These sessions treat use of computer programs (learn360, Bitstrips, Microsoft Word, Attendance Support Program) as an end in themselves without addressing the underlying issues and pedagogy of teaching with technology. This briefing note will examine ways to improve professional development to encourage more effective technology use in the classroom by transforming teachers’ pedagogical approaches to using technology in the classroom. The LDCSB will reorganize its delivery and focus of professional development in technology to achieve these goals.

**Background**

Over time LDCSB has struggled to update facilities and hardware for access to technology in classrooms. Most classrooms in the elementary panel have at least one working computer for teacher use with access to the internet and board network. Each classroom is equipped with either a smart board or computer projector, or has access to a projector cart. Most school libraries have a computer lab which can seat at least fifteen students. Other technology available includes digital cameras, document projectors, and in some cases video equipment. The high schools in LDCSB are in the same situation, though some schools support specialized audio-video programs where some students and staff have access to additional technologies.

Teachers are not mandated to use technology in lesson plans or attend any training in technology. How the hardware and software is used is at the discretion of the teacher.

**Current Situation**

Teachers report feeling isolated alone with technology in the classroom and fear making a mistake in front of students, they are nervous that they will break something, and prefer that someone show them how to use the technology (Plair 2008). The PD sessions currently available are aimed at showing teachers how to use programs, but they do not build confidence or transform pedagogy. In LDCSB PD in technology is sparse and there is no program in place to effectively support teacher learning and use of technology.

**Key Concerns**

* LDCSB teachers are behind other school boards in terms of access and use of technology in education. This contributes to our declining enrollment as students move to the public school boards for more differentiated programs and more access to technology.
* Students are not as engaged in the classroom as they could be. Use of technology can help us achieve board initiative such as critical thinking, student centred learning, modeling, backward design etc.
* Teachers are not able to use their allotted release time to register for PD sessions that will directly benefit them in the classroom in technology use.
* Technology is viewed as a gimmick or tool in the classroom. Pedagogy must change so that technology becomes a natural part of teaching, and the tools for this transformation must be made readily available, including more and better training, access to technology experts, training in reflection, peer collaboration.

**Options**

* Employ “knowledge brokers” – experts trained in technology and pedagogy to assistant teachers in implementation of programs on a consistent and personal basis.
* Offer optional intensive training programs for interested teachers and give them leadership opportunities in their schools and family of schools for additional support.
* Offer more PD that addresses pedagogy – focus on changing the way teachers view and use technology in practice using transformational learning and reflective practice
* Create an Electronic Learning Community (ELC) where staff can exchange information and collaborate in real time to support each other and foster continued growth.

**Recommendations**

The options listed here are not enough on their own to change the way PD is administer in regards to technology in the LDCSB. However, understanding that there are limits for implementation, I recommend that we slowly add these resources to our current model. In short, I believe the availability of knowledge brokers would be the most effective and most easily implemented part of this proposal and thus should be done first. Adding PD sessions to PD Place that feature pedagogical approaches is painless, provided we have the staff with knowledge to do so. Ideally, we would hire or find (reassign) a knowledge broker to begin this process. After observing the response and success of this approach, we might consider more seriously implementing an intensive program where needed. An ELC should be set up immediately where knowledge brokers and staff can discuss and share information.

**Implementation**

* Organizational analysis to determine who is available in the board and where we need to hire for knowledge broker experts.
* Consider cost and determine the number of brokers available, create plan to increase amount of support available in a reasonable amount of time
* Implement pilot program for intensive teacher technology training to determine interest and value in our board specifically.
* Call for new and innovating technology workshops to be offered through PD Place. Sessions should include a pedagogical approach rather than a one-time instructional approach.
* Provide mandatory PD on reflective practice for all staff to encourage deeper understanding and consideration of technology use in the classroom.

**Conclusion**

By starting with the current delivery and registration model of professional development, we will be able to change the way teachers experience PD and what is gained in terms of technology. There are many options available for immediate implementation as well as longer range strategies that should allow us to meet our goal of provide better education to our students.

**Introduction**

The London District Catholic School Board’s current model for managing teacher professional development is a program called PD Place that allows teachers to browse or search for specific or upcoming sessions and register for those sessions that interest them. This process is completed entirely online and sessions are offered during the day for which teachers get release time to use as they wish, or in the evenings on their own time. Teachers are eager to register for training in educational applications of technology, but the in-service is either unavailable or ineffective. This briefing note will examine ways to improve professional development to encourage more effective technology use in the classroom by transforming teachers’ pedagogical approaches to using technology in the classroom. The plan is layered and includes employing highly trained technology experts to provide continuous support, peer collaboration and communication, and training in reflective practice.

**Issues**

Most “technology” sessions function as instructional walk-throughs of online or software programs. These sessions treat the use of a computer program (learn360, Bitstrips, Microsoft Word, Attendance Support Program) as an end in itself without addressing the underlying issues and pedagogy of teaching with technology. Plair grieves the format and delivery of technology PD sessions and the “how-to” workshop approach which “lacks the continuity that teachers need to develop the confidence and efficacy leading to technology fluency” (2008). Martin notes that high-quality PD includes “long duration, follow-up support, active engagement in relevant activities, access to new technologies, collaboration and community building among participants, shared understanding of student achievement” (2010). This is one area that must be greatly improved in the LDCSB and will cause a ripple effect y by improving teacher satisfaction, practice, and pedagogy and thus the education of our students.

Some key concerns in the delivery of teacher PD in technology in LDCSB is that we are falling behind as a whole in our effective use of technology and the results are noticeable: stake holders are frustrated on many levels. I believe that lack of effective technology use is our school contributes to declining enrollment and delivery of differentiated and special needs programs, and prevents us from offering many programs provided by the public boards. Teachers are not confident enough to use the technology that we do have, and are not provided enough high-yield options to learn. No community exists in the board for collaboration or support and technology has not been integrated as part of our pedagogy as it has not been made a priority.

**Options**

There are several possible options to consider in finding a remedy to these problems as outlined below. I believe the options will work in concert to ensure that the LDCSB keeps up with other boards in their use of technology and the student learning and benefit that comes with being current and engaged in continued improved practice. The options I have identified include employing “knowledge brokers” to facilitate technology use, increased and improved professional development for teachers, Electronic Learning Communities (ELC) for collaboration, and encouragement of reflective practice.

It is important to train key people to take on leadership roles in technology in the organization. Two possible options include hiring technology experts or training key teachers so they are able to train and support other staff. Plair suggests employing highly trained individuals to provide constant personal support for teachers whom she calls “knowledge brokers”. These brokers would be skilled in educational technology and pedagogy which would ease integration issues raised by resistant veteran teachers (working fifteen years or more), and aid in proper selection of tools to support and enhance instruction, essentially functioning is as go-between for teachers seeking to engage more effectively with technology in their practice (2008). This cuts down on training cost and breadth of the training program without forcing resistant teachers to train. This practice is currently in place in the LDCSB in the form of a board office technology expert, but lacks the availability required to function effectively as there is far less support available than needed. We need to hire or create more brokers to work with teachers in the classrooms to enable them to implement and use technology available. To supplement the expert knowledge brokers, we should train teachers who volunteer to participate in an intensive program that helps them to connect technology to curriculum and provincial standards in a pedagogical approach. Martin notes in his evaluation of such a program that “research has emphasised the importance of exposing teachers to explicit models of how student learning unfolds within particular content areas” so they can apply their understanding to learning (2010).

The Maryland Technology Academy Leadership Program provides an intensive teacher training program intended to build technology skills, integration, and leadership is an example of a professional development program that has been successful. In their report on the program McPherson, Wizer, and Pierral describe it as intensive (2006). The three-week program illustrates some critical items for successful technology PD for teachers including “opportunities to build knowledge of theory and rationale, to observe demonstrations and modeling that facilitate learning, to practice targeted skills, and to engage in collaborative work with peers” (2006). The program features networking and teambuilding with opportunities to reflect and share learning. The continuity and communication was found to be “critical to educators’ success in changing their practice as they face inevitable challenges of the work environment”. This essential continued contact and peer engagement in reflection was made possible by an electronic learning community (ELC) established to share information, and enable ongoing asynchronous *and* synchronous communication. Participants in the PD were asked to stay in contact as support for each other and continue to reflect, post, and respond to peer postings. This is an excellent way to build confidence, improve practice, get new ideas, and collaborate on new projects and with new technologies, while actually engaging in technology use, and at a low cost.

 Professional development is a critical factor in changing the practices, beliefs, and attitudes of classroom teachers, but is also an avenue for educational reform (Roberts, 20120). Where traditional models of teacher education have been “top down” , lacking teacher input, more recent approaches have highlights the need for use of adult learning principles including “providing information, support, and modeling in a variety of modes personalized for the particular needs of the participant’s within their professional context (Roberts, 2010). Essentially participants must be involved in the learning process from every angle and engage in reflective practice in order to honestly explore their own role in and understanding of education. Reflection allows teachers to examine their own belief systems and assumptions regarding education and technology, identify what is may be holding them back. Roberts et al recommends asking questions such as: “what worked? What is not working? What will I do differently next time? Participants were asked to journal reflectively at least two or three times a week” (2010). The sample program to which he refers also included heavy teacher participation in workshops (sharing reflections, collective topics displayed visually, brainstorming, small group and cooperative learning techniques) and continued support, collaboration, and discussion after the meeting was over. The program also encouraged the use of reflection in evaluating and evolving practice in light of the information brought to light, which would be compiled online in the ELC.

**Conclusion**

Due to the nature and size of the task at hand, and with my limited access to organization knowledge (including human capital), I am unable to examine further the possible implementation of the described strategies for improvement. However, I believe that much could be done at a reasonably low cost to greatly improve the level of technology training teachers receive and the amount of that learning they successfully bring with them to the classroom.

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