CORE

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The CST & Support for Technology-Enhanced Teaching & Learning

Ron Sheese, Academic Director, CST

The recently completed CST review process has led to an expansion of the Centre's support for York instructors who wish to use computer-based technologies in their teaching in addition to its current programs. A copy of the final review report is available from the CST or on the CST website (http://www.yorku.ca/cst/report03.PDF). In this issue of CORE we wish to introduce the community to some of the aspects of that expanded support as well as to the ideas and values that lie behind it.

The Centre's support will be offered at two levels. One, at the level of the individual instructor, involves consultation, workshops and seminars that will be offered in much the same manner as our existing teaching support programs are offered. The other, at a broader administrative level, involves coordinating with the various technical support units across the university to facilitate planning about the use of technology in teaching and learning. At both levels, the CST's primary goal will be to maintain a discussion grounded in pedagogical issues, insuring that emphasis is placed on the instructional goals that the computer technologies are designed to serve.

What is TEL?

TEL is an acronym for *technology-enhanced learning*, a phrase that has gained ascendancy as the means for referring to the use of computer-based technologies in the teaching and learning process. That the technology is computer-based is understood, rather than stated; but this nuance is important because the phrase does not typically refer to the more traditional technologies of instruction such as chalkboards, discussion groups, multiple-choice examinations, etc.

The phrase *technology-enhanced learning* has the positive feature of emphasizing learning as the goal of the instructional process; and the word *enhanced* suggests that technology be seen as supplementing conventional instructional processes rather than replacing them. The phrase is sometimes criticized, however, for an implication that using technology in teaching will automatically enhance learning. Widely diverse technologies are lumped under the acronym TEL. Each of these can be employed in quite different ways by different instructors and in different situations, and the benefits and costs of each will be similarly variable. The CST helps both instructors and programs to assess the usefulness for their specific instructional purposes of various technologies, and we also assist with implementation of the technologies which seem appropriate to those purposes. We encourage York instructors to think of the CST as the starting point for consideration of whether and how to implement TEL in their courses.

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UPCOMING EVENT:

August 25 - 28, 2003
Summer Institute for New Faculty Teaching at York

IN THIS ISSUE

(Support for TEL...continued)

Making instructional goals primary

Virtually every participant in the CST review process attached great importance to insuring that instructional goals and values would lead the use of new technologies in teaching at York. To lead with instructional goals and values means that participants in CST programs are asked to reflect initially on their teaching purposes and philosophies, to examine the teaching and learning problems they are trying to solve. The outcome determines the direction of subsequent conversations about any possible computer-based technological enhancements. The remainder of this article provides a sense of the ideas that might be included in such a conversation. A separate article describes how the CST has begun to lead technology planning at York through the TEL Coordinating Committee (see below).

Areas of promise for TEL

The articles in this issue of CORE are based on just a few of the instructional goals for which promising technologies are available. Many long-standing instructional goals could have been considered. For example, lecturers seek to conjure up instructive images for their student audience; and while many are skilled at the use of words alone to accomplish this task, the availability of slides, films and videos has made evocation of such images more reliable. Today the possibility of visiting, under an instructor's guidance, websites devoted to important people, locations, events, cultural artifacts and ideas extends this ability greatly.

Some other examples can be mentioned briefly. Many instructors seek to enhance opportunities for their students to interact with the ideas and processes under consideration in a course. Websites, online simulations, online case studies and electronic discussion groups all offer potential enhancements to the traditional classroom opportunities of this sort. Increased opportunities for practice and feedback can be gained from judicious design of self-testing materials to be posted on a course website. And instructors can also gain valuable teaching time by distributing course materials and maintaining course records electronically.

TEL issues and further discussion

Despite the potential benefits of TEL initiatives for teaching and learning, many people point to the need to consider the potential costs as well. There are certainly financial costs involved, and the CST will encourage all those with whom we work to evaluate the success of their TEL projects in both academic and financial terms.

But not all the costs potentially associated with TEL are financial. Some educators fear that use of technology will sometimes result in technology-diminished rather than technology-enhanced learning. For example, many people point with enthusiasm to technology's potential to enable students to take greater responsibility for their own learning; but if self-responsibility is taken to mean that students need no guidance, or that there is no need for professional design of learning environments, then loss, rather than gain, seems very likely to follow for most students. Like the library, the internet is an invaluable resource for the learner; but well-designed instruction is needed in order to gain their full benefits.

A further issue involves the influence of TEL on the manner in which courses are prepared. As instructors contemplate a greater use of technology in their courses, many are likely to feel pulled away from their primary interests in order to learn and implement the associated technology. The CST has approached learning about technology use in a manner similar to learning about lecturing, leading discussions, designing assignments and other teaching skills. However, another approach – frequently found in distance education settings – is to divide the technological aspects from the overall design of the course and to involve others in the "production" of the course. What are the benefits and costs associated with thinking of a faculty member as the "content provider" on a production team?

The CST wishes to be known as a site for full discussion of issues like these, as well as the starting point for good advice about how to move towards the potential benefits of TEL initiatives. We will be working over the next year to provide further opportunities for both.

The TEL Coordinating Committee

The CST has assumed responsibility for chairing the TEL Coordinating Committee, a group composed of representatives from the various technology support units on campus and associated faculty members. The committee meets once or more per month to discuss issues and resource planning with respect to the use of technology in teaching. The CST's role as Chair is to coordinate the activities of the university's technology support units in a manner that maintains the primacy of an instructional perspective on their work. The CST's participation on the Committee also greatly facilitates our ability to inform instructors about the possibilities for enhancing their teaching with technology. It also improves our ability to set up appropriate and effective interactions between instructors and technology support personnel.

The TEL Coordinating Committee is constructing a website, **http://www.yorku.ca/tel**, which will bring together in one location information about the possibilities and resources for technology-enhanced teaching and learning at York. The website is still very much a developing project, so we encourage everyone to visit it and send suggestions for modifications and additions that would enhance its usefulness.

The Committee has initiated a number of projects to improve the ability of York instructors and units to gain the potential benefits of TEL. The most visible of these is the TEL Workshop Day held on May 7. This event provided an opportunity for demonstrations of existing TEL initiatives, discussions of TEL issues and possibilities, and exchanges of ideas about the practice of teaching and learning with technology. A major part of the Committee's work will be to provide a coordinated approach to professional development with respect to TEL. Please refer to the website often to learn about current professional development opportunities.

Also on the website, one will find a complete list of the units and individuals participating on the TEL Coordinating Committee.

Online discussion lists:

Promoting active learning & collaboration

Monique Adriaen, CST Faculty Associate, Department of French Studies, Faculty of Arts

As information technologies become more interactive and more distributed, they can be readily incorporated into learning-centered instructional strategies. This means that the focus of our instruction can shift to guiding and mentoring the learning process; we can integrate technologies to engage our students in active learning and collaboration.

Electronic discussion lists provide good examples of the possibilities for such a shift. Easily implemented, lists provide a flexible instructional tool that can be used for a variety of learning purposes. To be successful, however, they require sound administration and good pedagogical oversight.

Let us look in more detail at how discussion lists can be used to promote active learning and collaboration, and at what management issues instructors need to keep in mind when integrating discussion lists into their teaching. Discussion lists can serve three important roles: social, collaborative, and academic.

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SOCIAL

As a communication tool, discussion lists can obviously fulfill a social role, allowing learners and instructors to communicate with each other easily, to share ideas, and to learn from each other. But even this simple role needs to be managed properly to function effectively.

Discussion lists can help build a sense of class community. They provide an efficient means of communication between instructor and learners, permitting instructors to share such administrative information as reminders about assignment deadlines, upcoming tests, and reading assignments. Most often, however, online discussions function as an extension of classroom discussions. Topics are selected and posted by instructors or students, and ideas are exchanged for comment and analysis. By giving students time to reflect before posting their ideas, discussion lists can encourage more thoughtful contributions, give silent students a voice, and foster good interpersonal skills. They can be used as a forum to explore topics before class. In this way, they provide instructors with a window into students' understandings and misconceptions about the course material, and allow them to address these in their lectures.

To function smoothly in this essentially social role, discussion lists need to be monitored closely but discreetly by instructors, and rules for participation need to be explained clearly at the outset. For example, netiquette rules outlining acceptable and unacceptable online communication, guidelines as to the frequency and the tenor of the contributions, and evaluation criteria need to be spelled out for students at the beginning of classes. As in classroom oral discussions, instructors should intervene online with thought-provoking questions to initiate and stimulate the discussions, as well as to validate students' ideas and comments, thereby building trust in the value of their contributions.

COLLABORATIVE

Lists can also promote collaboration among students. Through well-designed collaborative and cooperative work, students may be exposed to multiple points of view, develop deeper understanding, practice problem-solving, and gain confidence in their abilities to analyse information.

Instructors can create small discussion groups (four to ten students, depending on class size) to become, for example, virtual study groups. These groups, which can be thoughtfully balanced on relevant dimensions, might prepare material for lectures and class work, work on small projects (such as case analyses), or simply review materials for tests and exams.

It is not only collaborative skills that can be facilitated by such groups; electronic groups can also help students develop critical and analytical skills. For example, as they analyse case studies or prepare readings, students can learn to identify key issues and arguments, find supporting evidence, determine the underlying assumptions, make inferences, and draw conclusions.

However, students will often need coaching in collaborative work techniques and modes of analysis in order to gain these benefits. Instructors should model for students how to evaluate contributions, and give feedback. Exemplar forms of feedback may be used to guide students and to reduce the workload.

ACADEMIC

Clearly, the social and collaborative order of discussion lists blend into the academic role when they are used to foster critical thinking and analytical skills. They can facilitate development of reading and writing abilities as students interpret, critique and respond to their peers' ideas. They can encourage students to reflect on the material and the content of the discussions, as well as to elaborate and articulate their own understandings. But, instructors need to monitor the discussions in order to encourage students to go beyond merely expressing their opinions and to develop cogent arguments. Students will likely need to be coached on how to analyse, evaluate, and present an argument, and on how to listen, read, and respond with understanding and empathy.

Discussion lists can be used for a variety of learning activities demanding critical assessment, higher order thinking skills, and

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(Online discussions...continued)

collaborative work such as peer editing of student writing, building a FAQ list (questions and answers), building a glossary of the important concepts in a course, building a database of sample test questions, to name a few.

SOME GUIDELINES

When setting up a discussion forum either on a course web site or simply through an e-mail program, there are a few guidelines to keep in mind.

Students' participation is not guaranteed. Students will engage in this activity when they are properly motivated both intrinsically and extrinsically. They are more likely to be engaged when the online activities serve a clear meaningful pedagogical purpose, and when their efforts, time, and commitment are recognised and adequately rewarded.

Students will also be more inclined to contribute if they feel they are in a safe environment, in a small group, with clear rules for online behaviour.

They will also participate more if they have a clear idea of what is expected of them. Instructors should model good responses and coach students.

Participation in online discussions can be time-consuming for both instructor and students. Students need to be aware that the discussions are monitored, that their contributions are valued, and that they will receive timely feedback. Instructors need to establish rules of participation (frequency and type of contribution) in order to limit the use of online discussion to manageable proportions.

Finally, online discussions need to be well organised. The logistics of the discussion forum as well as the topics should be planned in advance. Students should know how to sign on, and where to look for answers to their technical problems. They should be aware of the evaluation criteria and the rules for their participation. Topics should be closely linked to course readings and content.

When properly managed and used judiciously, discussion lists have the potential to enhance the learning experience of students by engaging their mind and strengthening the social and intellectual bonds of the classroom community.

UNIVERSITY-WIDE TEACHING AWARD WINNERS

The Senate Committee on Teaching and Learning is pleased to announce the recipients of this year's University-Wide Teaching Awards for teaching excellence. These awards honour those who have significantly enhanced learning at York.

The Committee received 25 strong files representing teachers across the campus who have clearly made an impact on their students and colleagues. The Committee recognizes the work involved in putting the nomination files together, and thanks the students, faculty and staff who took the time to put forward the nominees.

This year's winners are:

Senior Full-Time:
Walter Whiteley
Arts/Mathematics and Statistics

Full-Time:
Michaela Hynie
Atkinson/Psychology

Part-Time/Contract:
Patrick J.J. Phillips
Arts/Philosophy

Teaching Assistant:
Frances Joan Latchford
Arts/Philosophy

Recipients will each be honoured with a cash award from the Parents Association, as well as with a plate on the University Teaching Award plaque in Vari Hall, a desk plaque and a citation presented at convocation.

The art of email taming

Louise Hayes, Administrative Studies, Atkinson Faculty of Liberal and Professional Studies

These tips help speed replies to over one thousand student queries per semester in Atkinson's Introduction to Financial Accounting Course. Louise Hayes coordinates the course and credits the coordinated efforts of the Course Counsellors, Faculty, Atkinson Computing Services and Computing and Network Services' Helpdesk with reducing email volume and shortening email response time while course enrollments have grown to over 2,000 students per year.

Try some of the lion taming tips below to tame the email beast in both large and small enrollment courses.

Don't act alone

Lion tamers plan their acts carefully and work with others to make sure beasts are well cared for and help is available quickly when needed. *Plan and coordinate difficult email taming acts with computing and network personnel.*

Cage the beast (the email)

Use web-accessible, shared-access email account(s) rather than personal email account(s) for course email. Computing and network personnel can help you create such accounts. Shared-access simplifies delegating email duties and monitoring the frequency and quality of TA responses. Web-accessibility permits the email beast to be tamed from anyplace at anytime – lions are often tamed better with many small sessions rather than fewer longer sessions.

Control the cage door and check the emergency exit

Be very specific about use of email in the course outline and at the first class. Take these opportunities to *set student expectations*: tell students when they may expect a response to their email queries and any special rules for sending those queries. (Should their name and section be in the subject line? Are messages not sent from York email accounts accepted?). *Tell students where to go, or phone, if their emails don't receive prompt responses or if they have personal matters they wish to discuss.* Excessive use of the 'emergency exit' may indicate a problem in the cage that requires immediate attention.

Keep the beast happy

Happy lions are easier to tame. Instruct TAs to remove answered queries from the course email inbox. Not only will keeping the inbox empty make it easier to see what queries still need responses, it will also reduce frustration: large inboxes are extremely slow to load and may time out web-based email clients. *Check the inbox daily*, or more frequently near exams and assignment due dates, and call TAs if messages are not getting answered promptly. Since messages need not be opened or read when the message dates are checked, this inbox audit often takes only a second or two. For large enrollment multi-section classes, consider making this inbox check and follow-up calling a duty of a coordinating TA.

Acknowledge receipt of messages to which replies can not be promptly sent

There will be times when emails may not be answered within the established timeframe. A quick, personalized reply stating when to expect the answer to the query, or the grade for an online assignment submission, minimizes the 'did you receive my message?' messages.

Equip and organize the cage

Every trade has its tools and techniques. Lion tamers use chairs, whips and props. Email tamers use email client sort, file and search techniques. *Time spent learning to use the sort, file, view and search features of an email client is time well spent.* Successfully managed course email accounts use folders to save and organize responses. Examples of folders which might be used include the following:

- online assignment submission folders
- an FAQ folder with sample responses to frequently asked questions (FAQ)
- a grade folder containing correspondence on grade queries, assignment extensions, grade changes, transfer of weight to the final
- a folder for student recommendations for course material changes

Crack the whip

Review the email replies sent by new TAs and faculty for tone, content and timeliness. Insist 'reply with history' is used for all email responses as timeliness and appropriateness are difficult to assess otherwise. Would the email be appropriate if included with a student petition? Did the salutations include the students' names? Were expressed student frustrations and difficult personal circumstances acknowledged respectfully at the beginning of the reply without giving false hope or discussing blame? Was the email signed? Were difficult messages forwarded promptly to faculty?

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STLHE/SAPES 2003

Plus Ça Change...

23rd Annual Conference of the Society for Teaching and Learning in Higher Education

University of British Columbia, Vancouver, BC

http://www.ubcconferences.com/events/stlhe/index.html

June 11-14, 2003

(The art of e-mail taming...continued)

Restrict cage entry

Tone is difficult to master but critical for email taming survival. There are some folk who are just not cut out for email taming; for example, aggressive folk who do not master the art of polite, prompt, fact based personalized email response. Mauling is an ugly risk of taming. When possible, assign email duties to TAs with natural email talent to minimize time spent on damage control.

Some brave email tamers refuse to answer questions when the answers are contained in materials the students should have read. These brave email tamers believe they can train students by referring them back to materials rather than answering questions directly. Other email tamers take a gentler approach, and believe a small portion of students can never be trained and answer their questions directly to minimize time spent handling complaints. The most talented email tamers use a combination of reply approaches and instinctively tailor their responses to the specifics of the query.

Heed the beast's growl, but show no fear

Requests for clarification of information presented in the course outline, assignments and/or the course website are likely to make up the lion's share of student queries. *Avoid email deluges by taking immediate corrective action when messages arrive from the diligent, eager beaver students* indicating a possible error or ambiguity in course materials or website postings. These students begin assignments days, even weeks, before the majority of students. *Consider the course email account as the course early warning system.* Ask TAs to be alert for signs of trouble and forward them immediately.

Recognize the limits of wild beast taming

Reply asking students to call or visit to discuss certain matters. Many of the more difficult queries are more efficiently and effectively answered over the phone or in person.

Clean the cage

Establish email deletion, retention and archiving policies that conform to Faculty guidelines.

Change the taming act

Lion tamers are live performers and change their act over time in response to audience reaction. At the end of each course, explore technical and procedural solutions targeted at reducing future email volume. Review the volume and nature of common queries, discuss the course mail with TAs and brainstorm with computing and network personnel ways in which email may be better tamed. Some procedures/techniques that might be considered include:

- Tweak instructions for accessing and using online course content. Ask instructors of online courses to show you their email scars from the semesters when students had technical difficulties!
- Establish and communicate a protocol for handling technical queries. Students always email their instructors in the absence of clearly articulated protocols.
- Ask TAs if it is possible to time-shift and stagger their email duties. More frequent reply sessions shorten email response time and reduce repeat queries.
- Prepare canned responses to frequently asked administrative questions, e.g., what do I do now as I was ill and missed the exam? Reducing the time spent on administrative queries leaves more time for quality time spent dialoguing on course content.
- Set up a course website.
- Investigate using a listserv or other method for broadcasting email messages to all students. Warning: maintaining email distribution lists for all but the smallest of classes is a task best coordinated with computing and network personnel. While listservs are easily set-up with student email data imported from class list information, problems arise if students have not set-up, or do not use, their York email accounts.
- Consider using online discussion (asynchronous) or chat (synchronous) facilities.

With thanks to Debbie Fraser, CNS Client Support Services, for her helpful contributions to this article.

Using web sites to connect with students

Monique Adriaen, CST Faculty Associate, Department of French Studies, Faculty of Arts

Course web sites, either alone or as part of a course management system such as WebCT, Learning Space or Blackboard, are now becoming a common feature of many courses. This article explores what might be on a course web site and how to make good pedagogical use of it, whether you are just starting out or you already have a well-established site.

Generally, when one first designs a course web site, the aim is to make it an easily accessible entry point for students, to course material and course administration information. Designed to assist face-to-face teaching, a course web site will typically include information such as the syllabus, a statement of the course philosophy, the evaluation policy, the course bibliography, course assignments, and contact information. This basic format can be expanded to multiple pages containing lecture outlines and lecture notes, and supplementary content material. Through hyperlinks students may also be directed to other sources of information and opportunities for further study. Beyond this fundamental function of the web as a convenient access to information, however, there are other web characteristics that can be exploited to serve important instructional purposes.

The second most prevalent use of the web is as a means of communication. At the very least, a web page typically includes a means of email contact that allows students to communicate with the instructor. A variation on this is to allow students to submit assignments electronically and receive feedback from the instructor. Discussion lists for asynchronous communication as well as chat rooms for synchronous chats are also common features in web-based course management programs such as WebCT and Learning Space. Through participation in a discussion list, students can delve into the course material more deeply. In small groups that meet online they can explore issues raised in class or prepare readings collaboratively before class. Instructors who monitor such discussions can gain valuable insight into their students' understandings and misunderstandings of the course material. Discussion groups can also be used to develop students' abilities to work collaboratively and learn from each other. For example, they can serve as a forum for peer review of work to be submitted. Other examples of collaborative projects include the creation of a collective database. For instance, students can contribute questions (and answers!) to a common FAQ list or build a glossary of important concepts, or even a resource web site. Chat rooms, when they are used to create a study group, can also promote cooperative learning. Instructors can use a chat room to meet electronically with students at specified times and hold virtual office hours. Discussion lists and chat rooms can help foster a stronger sense of community among students, especially in large classes, and they can also open the classroom door to additional opinions and information when other experts in the field are invited to participate.

The web enhances opportunities to interact not simply with people but with the course material as well.

The web enhances opportunities to interact not simply with people but with the course material as well. Online quizzes, especially in simple formats such as multiple choice, can be implemented fairly easily. Instructors can also design online tutorials for a specific skill, concept, or issue. Research has shown that providing problems with full or partial solutions to students can be beneficial in their learning process. Case studies, the analysis of data sets, and guided analyses of readings are other examples of learning activities that can be completed online. Multimedia simulations, demonstrations, and virtual field trips are also possible, although they require more sophisticated programming. As students interact with the material and receive feedback, they gradually build their knowledge and personal understanding.

The web can also function as a publishing medium. Students can be encouraged to supplement their essays with multimedia resources and submit them as web documents. Their work can be posted in a student gallery to showcase best practices. Adopting a web format for student projects has several advantages. First, students' interest and effort are often raised with the knowledge that their work will be published and on display for critical appraisal by more than their instructor alone. Second, it is easy to archive these documents and build portfolios of students' work over the course of the year. A database of student work can easily be built over several years and serve as a teaching resource and as a shared knowledge base.

To end this brief overview of the pedagogical uses of course web sites, here are a few tips to keep in mind when you decide to create a course site or expand the web component of your course.

It is best to start small, and to keep your site simple and easy to use. Begin by making your site a quick access point to course information and materials and work progressively to incorporate a number of features and activities that engage students more in their learning.

There is no need to become fluent in HTML before setting up a course web site. Technical support can guide you from the initial to the final stages of your project. Some of your existing documents may be uploaded with minimal manipulation. Others will need to be reformatted, rewritten, scanned, or digitised. When designing a site, navigation issues need careful consideration. It should be easy for your users to construct a mental model of your

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TA Day 2003

Thursday, September 4

21st Annual TA Day Conference

A One-Day Conference of Professional Development for Teaching Assistants at York University

Check out
www.yorku.ca/cst
for updates!

(Using web sites to connect with students...continued)

site. This will ensure that they will find the information they seek quickly and efficiently. Templates are available to facilitate design and layout, learning the basics of a course management program or a program such as Dreamweaver for constructing web pages will quickly make you more independent.

It is also important to set realistic expectations regarding your own time and energy commitment as well as that of your students. Clear guidelines for participation in online discussions, for example, need to be set. It is also important to realise that a web site needs to be maintained regularly, and reviewed periodically. Information can grow stale, and links to outside information may change or disappear.

Some instructors worry that a web site rich with course material will have a negative impact on class attendance. While this may indeed happen, it is less likely to be a problem if lecture time is used to enhance the students' learning experience, and to engage them in active learning. When designing the site, consider carefully what activities are best accomplished online and what other pursuits are done best face-to-face. For example, clearing up misunderstandings is probably more easily done through face-to-face interaction. It is also easier to convey a bit of humour in the classroom than electronically. If, on the other hand, your students are not making sufficient use of the course site and you wish to encourage them to do so, it is important to integrate the site in your teaching for example, by using the information it contains in your lectures, or by making some of the links required readings.

Finally, remember that web sites are works-in-progress. This means there is room to innovate and experiment. Gradually try out additional features to see how they work. Some (such as keeping track of students' logins, for instance) may prove useful in certain cases, and not in other circumstances. Some may require a manageable amount of effort (such as monitoring an online discussion); others will demand considerable technical expertise (as in the case of online simulations). But by simply making use of the web's strengths of providing access to a wide range of resources and connecting people together distanced in time and space, you can easily begin to be innovative and creative in your pedagogical uses of the web.

Integrating a web site in your course will bring important changes to your teaching practices and your students' learning. By balancing thoughtfully the information and activities you include on your site with those in your lectures and tutorials, you can significantly enrich the learning experience of your students.

We're moving:

In July, the CST will be moving to the first floor of the new TEL building located at 88 Pond Road.

Feel free to drop by!

York Logo

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