

UB Teaches and learns

by DVIAC Committee Members

DVIAC: using digital video applications to enhance teaching and learning

The ETC convened faculty and IT professionals from several UB professional schools to form the Digital Video Instructional Applications Committee (DVIAC). The group meets regularly to discuss shared interests in exploiting digital video as an enabling technology to train students for professional practice. Each member uses digital video to model processes and skills relevant to their discipline, and to promote higher levels of student engagement with course content. DVIAC members have presented their projects at the 2004 Conference on Instructional Technology and have an article in press reporting on their work. They are currently working to develop a common assessment tool and are seeking continuing grant funding for their projects.

In this issue of UBlearns Update, we feature four DVIAC teams who present brief overviews of their experiences using digital video in seated and asynchronous settings. A full demonstration and panel presentation of DVIAC projects will be offered December 3, 2004, from noon to 2:00 PM, in 120 Clemens.

Authentic and Reflective Learning

Catherine Cook-Cottone, Counseling, School & Educational Psychology
Jim Collins, Learning & Instruction

Digital video instructional applications create a unique learning space not replicable in the real-time classroom. They are unique in that they provide the authentic experiences needed for true constructivist learning while at the same time allowing for a reflection and review process. Authenticity in learning refers to the process by which practitioner/learner abilities are acquired through active engagement in the expected tasks and roles of their prospective trade competencies and not just by reading or talking about them. It is believed that through this process students negotiate real life challenges rather than imagined or textbook provided approximations. As described by Collins, Cook-Cottone, Robinson, and Sullivan,¹ "It is the difference between reading a romance novel and having a broken heart." For most of us, it is pretty clear which experience yields the most robust long term retention.

By integrating authentic practice and digital recording, the active learning process is enhanced with a truly reflective component. Whether it be a case study of a psychiatric patient, a library reference desk interview, a counseling session, a medical diagnostic interview, or a teaching lesson, the learner can process the dynamic audio and video format as carefully and reflectively as one could a written document. That is, student learners can study the processes. Through use of digital video, the cognitive processing demands are remarkably altered in a manner that can enhance learning outcomes by decreasing memory and processing demands as well as by providing a format

within which the learner can reflectively process video data while building understanding. To explain, in unrecorded classroom demonstrations or active practice, reflective learning requires strong use of assumingly accurate, auditory, kinesthetic, and visual memories. The reflection process then requires a review and analysis of those memories. So, while remembering what had happened, the learner is also trying to process and evaluate the experience. With digital video review, the learner is freed from storage and recall demands and can view and review the active learning experience. With this now unallocated processing capacity and the luxury of on-demand review the students can better respond to higher order questions, make sophisticated observations, and even make theoretical and empirical connections with the captured video.

In counselor and teacher training applications digital video provided the platform for a highly effective peer review process. While the application of the digital video was quite profession specific in terms of the pragmatic technical demands, all students were able to demonstrate complex cognitive processing of the professional skill applications. Notably, these learning

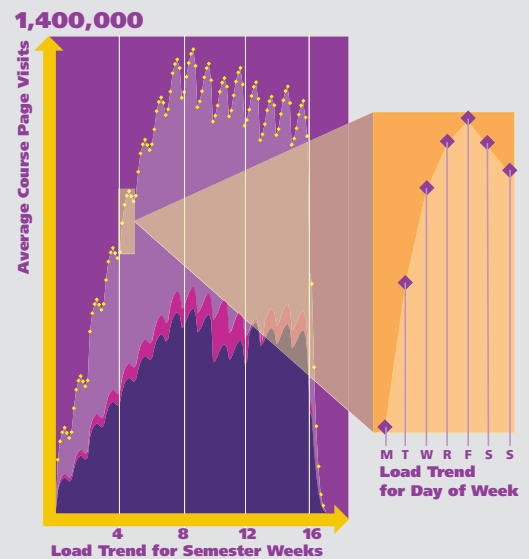
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UBlearns System Update

Averaging nearly 1.4 million, daily page visits to UBlearns have doubled since fall 2003. An analysis of page visits over the last two and current semesters provides indicators for typical user trends and server loads for both day of week and week in semester.

The semester server load trend shows a quick rise of user activity early in the semester peaking in the ninth week.

The day of the week trend shows rapid growth early in the week, peaking on Thursday and Friday followed by reduced page visits on weekend days.



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outcomes were manifested in a relatively user friendly format. For example, in the counseling training application students uploaded their practice therapy sessions, making the counseling video available through UBlearns for the peer review process. Students could sit at their home computers, texts in hand, and carefully complete the text-to-practice peer review process.

Early observations suggest robust learning outcomes across several fields of study. The use of digital video instructional applications makes active authentic learning more accessible for reflective study and may enhance pedagogical efficiency. In the teaching lessons in our data, the course topic was the teaching of writing. Digital video was used to develop, record, examine, and critique instruction in cognitive writing strategies. Typically, such an assignment is carried out in the form of a traditional research project, reported in writing for the professor's eyes only. This time we produced videos of the instruction, shared and critiqued them in small groups, and published them on CD-ROM complete with transcripts and comments by authors. All elements were stored and indexed on CD and made available to everyone in the course. Each teacher contributed one video project, and received more than 50 in return. Certainly this degree of participation, reflection, and sharing must enhance pedagogical efficiency more than the traditional written research project. This is constructivist learning at its best because each teacher-in-training makes the subject meaningful for her or himself, but each does so actively and socially, by living the act of teaching and sharing it with others.

¹ Cook-Cottone, C., Collins, J., Robinson, J., Sullivan, R. "Technology and New Directions in Professional Development: Applications of digital video, peer review, and self-reflection." *Journal of Educational Technology Systems*. 33 (2) 2004.

Provocative Learning

Barbara Rittner, School of Social Work

Steve Sturman, School of Social Work

Sometimes online courses can present students with a more robust learning experience than a seated class.

This past summer, the School of Social Work (SSW) presented an online course in Psychopathology to 98 matriculated and non-matriculated students in four sites (Corning, Jamestown, Rochester and Buffalo). This course delivered a little over 40 hours of taped lectures on 75 diagnoses that incorporated slides and film clips detailing the major mental health diagnoses. The course was presented in UBlearns. When the course finally went "live," a total of 31 filmed standardized patient examples were included in the course, 10 of which were developed by SSW through an Educational Technology Grant.

Student response to this course was robust enough to ask whether a better learning experience might be provided online rather than in a seated section. The most dramatic indication of the degree of engaged learning was how many students asked questions and made comments in the UBlearns discussion board during the course of the semester. In a seated class, normally, one or two students may raise a hand to ask questions or make a comment and one or two might post comments or questions to the online discussion board per unit. In the online version of this course there were 240 posted questions and comments to the discussion board in a 12 week period. The nature and quality of the questions posed online also demonstrated a deeper understanding of the materials and a greater mastery of the subject matter being discussed. Another indication of the degree of engaged learning was students indicating that they often "reviewed" the lectures (meaning they watched them again), something not available to them in a seated class, suggesting that they invested far more hours in learning the materials than typically occurs in a seated class. When asked for feedback, students made comments such as:

"I can't say enough about what a positive experience taking SSW580 online has been for me. The ability to preview and review the material as often as necessary, stop the lectures to take notes, and work at times most convenient for me have been huge."

"I also enjoyed the course much more than I had anticipated for all of the reasons people have already cited. What an advantage to be able to sit down for lecture when you are ready to concentrate and take in the information. As some have mentioned, I did miss the classroom interaction and the ability to ask questions and discuss examples in the moment, but not enough to keep me from considering this medium in the future"

*"I read all the postings and I agree with **all** of the positives that were mentioned!"*

Assessing Clinical Competency

Andrea Manyon, Family Medicine

Karen Panzarella, Rehabilitation Sciences, Exercise & Nutrition Sciences

Assessing clinical competency in students of health care professions has been a concern for educators in medical schools and allied health professions. Dr. Andrea Manyon from the School of Medicine and Dr. Karen Panzarella from the School of Public Health and Health Professions have responded to this concern through the use of video with standardized patients (SP). Standardized patients are lay people who are trained to portray a disease or diagnosis and interact with students in a scripted manner. Our medical school has used SPs for many years to assess clinical skills of medical students. These encounters are videotaped and scored by "expert" evaluators who are faculty or clinicians in the field of medicine. Standards for competency are determined by the expert evaluators. Students who fall below standard participate in remediation and are allowed to retake the examination to achieve mastery.

In addition to assessing clinical (technical) skills in students via video, Drs. Manyon and Panzarella have expanded the testing to examine students' ability to integrate their scientific knowledge with clinical communication skills. During these simulated encounters the SP asks scripted questions about the case (or disease) that prompt the students to (integrate) respond. The scripted questions are real life questions that a patient may typically ask a health care provider. Attributes of integration have been defined and matched to a rubric for scoring.

Through collaboration, the video assessment technique has been successfully transferred to the Doctor of Physical Therapy program where it is built into courses in the first and second year of the curriculum. Physical therapy students are also required to self-assess their video tapes and to complete a peer assessment. Students' self-assessment projects are added to their academic portfolios. Substantial positive feedback has been received from students and faculty.

Role Playing and Peer-Review

Judith Robinson, Library & Information Studies

Robin Sullivan, Educational Technology Center

Library and Information Studies (LIS) students working with Professor Judith Robinson participated in a peer-review/self-reflection assignment to practice good reference interview behavior, the step that ensures that the librarian retrieves the actual information sought by the customer. In the role-playing scenario, one student asked an intentionally vague question, which the student in the role of a reference librarian used to practice clarification techniques such as open questions, pauses, and active listening. The video role-playing sessions were posted to the newly established UB central streaming server and were linked through UBlearns. Students used the UBlearns discussion forums to critique their own interview and the interview of one randomly assigned student colleague, using a checklist of criteria.

Perspectives

by Lisa Stephens, Associate Director, Distance Education and Videoconference Operations (DEVO)

Incorporating Audio/Video Streaming to Enhance a Course

As adjunct professor for COM240: Survey of Mass Communication, I am challenged to engage students through a balance of traditional lecture, text and new media applications. Survey courses tend to begin with historical textbook information and move forward to contemporary relevance chapter by chapter. The instructor's edition of the textbook provides useful "cookie cutter" materials but I find supplemental media more motivating and engaging for students. Enhancing the course by inviting local experts or by supplementing lectures with audio or video clips is a great way to keep material fresh. The blend of lecture, textbook, PowerPoint, film/video, guest speakers and contemporary news provides raw ingredients to draw students into a meaningful discussion and thoughtful reflection. Incorporating multiple media elements, however, is often a challenge. Building a custom media library for my course, and posting links to these resources within UBlearns is one strategy to achieve seamless access to supplemental course materials.

For example, I use clips from National Public Radio (NPR) and affiliated programs to illustrate course topics. Though NPR stories pass quickly during commute time, they are usually too long during valuable class time. To remedy this, I use smaller portions of the story to focus discussion or illustrate a point during lectures, and link to the complete story as required content outside class. All of the link information is posted to the course syllabus & learning resources section in UBlearns.

Classroom Tip: To present media files in an electronic classroom, pre-load Real Player or Windows Media Player and cue-up selected media. Embed a link in your PowerPoint, UBlearns site or course Web site that automatically starts the selected clip in the media viewer.

Building a custom library of expert lectures or other audio/video material can be used to create an asynchronous lecture or an additional course resource. If you intend to capture guest presentations for future use, it's critical to ask permission to record and to subsequently present the lecture in class or over the Web. UB centralized services offer several options for in class audio/video capture of a lecture:

- request a DEVO "mobile cart" (devo.buffalo.edu),
- contact ITS to request that the lecture be taped (its.buffalo.edu),
- borrow a "do it yourself" camera and a wireless microphone from your department, ITS or ETC.

After the lecture has been captured during class, you'll have in hand either a video tape which can be encoded for streaming or a digital media file that can be transferred to a streaming server. I have had success with capturing guest lecturers using these campus services. Some examples of successful captures include:

- Lou Michel reading passages from his best selling book, "American Terrorist: Timothy McVeigh and the Oklahoma City Bombing" and responding to student questions regarding journalistic ethics
- Tom Riley, Executive Director of LCTV explaining the value of empowering communities with the ability/opportunity to produce their own television content as an extension of the First Amendment
- Mike Barone, a public relations executive from Travers, Collins & Company presenting case studies.
- WBFO's Gabe DiMaio presenting a terrific lecture about the role of public radio and how he personally transitioned from "top 40 rock & roll" to his current role at WBFO.

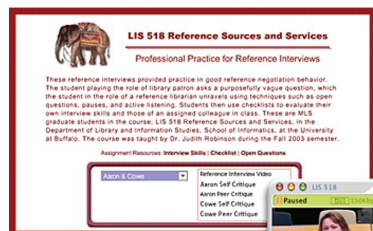
My goal is to continue to develop COM240 by building out the content library with the possibility of offering it as an online or attendance optional class. It would be an unattainable goal without the assistance of departmental IT folks and/or the centralized services available through DEVO, ITS and the ETC.

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The logistics of the course assignment were designed in collaboration with Robin Sullivan, an ETC Instructional Designer, to help meet Professor Robinson's teaching goals. Distance Education Video Operations (DEVO) staff coordinated the interview capture sessions in the distance education videoconferencing facilities, providing a streamlined system for capturing student video sessions. A class-based electronic portfolio was developed to bundle the entire process including the reference interview videos, links to resource materials, checklists for critiques and examples of open-ended questions, and self/peer critiques. The portfolio was distributed to each student on CD.



CD-ROM interface with an external, streaming video of a staged reference interview

The collaborative efforts between the faculty member, ETC, and other campus IT units resulted in a vehicle for collaboration that encouraged discussion among students seated on campus and also with students participating in the course through video distance learning.

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Video Resources @ The Libraries

The University Libraries maintain a video and audio collection covering most disciplines. Multimedia materials can be found through a Keyword Search of the BISON catalog limiting to video or audio format. In addition, the Libraries subscribe to the database AccuNet/AP Multimedia Archive which contains photos and audio clips from around the world. A number of Web sites might also be of interest including:

- Vanderbilt Television News Archive <http://tvnews.vanderbilt.edu/> holds evening news broadcasts from the major U.S. national broadcast networks: ABC, CBS, NBC, and CNN. Tapes are lent for a fee.
- FeedRoom.com <http://www.feedroom.com> provides streaming video of television news, sports, business, politics, entertainment stories.
- Singing Fish <http://www.singingfish.com/> is a multimedia search engine that provides access to audio, video, and images on the Internet.

— Cynthia Tysick, Art & Sciences Libraries

For discipline specific media resources, consult your subject librarian <http://ublib.buffalo.edu/libraries/staff/specsubj.html>

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Meet Your Support Staff

Martha Greatrix

Video Services Support Specialist



Martha joined the University at Buffalo Professional staff in 1999 as manager of the south campus distance learning site and became part of ITS Video Services when it was newly expanded in 2003.

Her work in ITS Video Services focuses on supporting all production team efforts such as scripting, shooting and editing in order to create professional quality video productions for faculty and staff. She conducts UBlearns Express

workshops on the south campus and can also provide assistance to faculty who want to incorporate video into their UBlearns courses.

Martha worked as a video editor in the newsroom at channel 4 for over 10 years. During this time, she completed graduate school here at UB and received a Master of Education with a concentration in the area of Instructional Communication & Design. Before joining UB, she was the media services coordinator at Genesee Community College, where she produced many instructional and promotional videos.

Martha is a native of Western New York and lives in West Seneca with her husband Paul and two young children.

Contact Martha at: 716 829 3582

From the Editor

Campus-wide interdisciplinary interest in digital video and other media elements to enhance teaching and learning is on the rise. ETC, ITS and DEVO offer a range of support services to faculty wishing to incorporate media elements in their teaching. Consider these opportunities to learn more about digital video support services, to increase your skills, or to explore effective uses of digital video for teaching and scholarship:

- Attend the ETC-sponsored special event: DVIAC: using digital video applications to enhance teaching and learning, December 3, noon to 2:00PM, 120 Clemens
- Join DVIAC, a faculty and IT staff digital video interest group
- Register for an ETC video workshop. Upcoming sessions include: UBlearns Best Practices: video; Flash: video; and iMovie: introduction
- Schedule an ETC consultation session to identify campus resources and supports for your digital video project
- Contact ETC to setup a small group or one-on-one digital video training session

For full descriptions of centralized video support services visit:

- **ETC** – etc.buffalo.edu
- **DEVO** – devo.buffalo.edu
- **ITS** – its.buffalo.edu



Educational Technology Center

University Libraries
212 Capen Hall
Buffalo, NY 14260-1680

Workshops

To view schedule and register for upcoming UBlearns workshops,

GO TO > <http://etc.buffalo.edu> > Instruction > Workshops



UBlearns contacts:

For software and technical support, contact Systems support: ublearns@buffalo.edu or 645-2803
For course development and instruction, contact Faculty support: etc@buffalo.edu or 645-7700

UBlearns Update is a newsletter for faculty and staff to share knowledge in the area of teaching and learning using UB's centrally supported course management environment. **UBlearns Update Newsletter** is a joint publication of UBlearns Advisory Group, the UBlearns Support Team, the *Educational Technology Center*, and *Instructional Technology Services*. To submit articles for consideration, contact Carole Ann Fabian, Director, Educational Technology Center at cafabian@buffalo.edu or 645-7700 x2.

Updated October 27, 2004

Streaming Video

This document outlines the best way to provide streaming video to students via UBlearns.

Basic Recommendation

Upload streaming video files to a streaming media server and link to your file through UBlearns.

Discussion:

What is streaming video?

Video (and audio) files that “stream” do not download to the viewer’s computer so the file begins to play within a few seconds of clicking the link. Initially a small amount of the file is sent to the receiving computer and stored temporarily (buffered). As the file plays the rest of the data is transferred in the background; the viewer doesn’t experience any interruption during playback. To stream a file it must be placed on a dedicated streaming media server.

A video file that is not streamed will be downloaded and saved on the viewer’s computer. Large files can take a long time to download especially if the viewer’s network connection is slow. Files are downloaded when they reside on a server that is not capable of streaming (e.g. most web servers) or if the file resides on a streaming server that has not been configured to deliver that file format. The UB central streaming server is currently not configured to stream QuickTime Files.

Media players

In order to view a streaming file, a media player (browser plug-in) is required for the specific file format. Real Player, Windows Media Player and QuickTime Player are free and available for download:

<http://devo.buffalo.edu/streaming/mediaDownloads.htm>

Getting server space

Before you can put your digital video or audio file onto a streaming server you need to have a directory created for you on either Stream, the UB central streaming server, or a departmental streaming server.

To determine available streaming server allocation contact:

- Node support for departmental streaming server
<http://www.cit.buffalo.edu/nodes/>
- Mark Woodard for UBlearns related video files
mwoodard@buffalo.edu
- UB Stream server for non-UBlearns related video files
cit-stream@buffalo.edu

Once a server allocation has been determined, you will receive an email message from the server host containing:

- 1 the directory path—for example
`net/stream/data1/web/www/insecure/shared/ublearns/johndoe`
- 2 and the directory URL—for example
`rtsp://stream.buffalo.edu/shared/ublearns/johndoe` or
`mms://stream.buffalo.edu/shared/ublearns/johndoe`

Uploading a file to the server

Use an FTP (File Transfer Protocol) program such as FileZilla or Secure Shell—Secure File Transfer Client (SSH) to upload your video files to the server. Both programs can be downloaded from the iConnect@UB Tech Tools software download site:

<http://wings.buffalo.edu/computing/software/>

Use the following information to connect to your streaming server space:

- Host/Address: `ubunix.buffalo.edu` (or the server address supplied through your technology node)
- Your UBit username and password
- In the Remote Site field enter the directory path sent to you by the server administrator, e.g.:
`/net/stream/data1/web/www/insecure/shared/ublearns/johndoe/`

When you are ready to copy your files to the server—simply find them on your local system and drag them over to the Remote Site window.

Linking to your file in UBlearns

In UBlearns navigate to your course and add an external link:
UBlearns LOGIN > COURSES > YOUR COURSE > CONTROL PANEL > COURSE DOCUMENTS > ADD EXTERNAL LINK

Enter your streaming file URL using the appropriate format.

Depending on your file format select either A or B:

A Real Media File (.RM)

`rtsp://stream.buffalo.edu/shared/ublearns/YOURFOLDER/YOURFILE.rm`

- Replace YOURFOLDER/YOURFILE with the names of your folder and file
- Be sure to include the proper file extension (.rm)

Important! Use `rtsp://` instead of `http://` at the beginning of your URL

B Windows Media File (.WMV)

`mms://stream.buffalo.edu/shared/ublearns/YOURFOLDER/YOURFILE.wmv`

- Replace YOUR FOLDER/YOURFILE with the names of your folder and file
- Be sure to include the proper file extension (.wmv)

Important! Use `mms://` instead of `http://` at the beginning of your URL

Questions or Comments

For assistance with streaming media projects contact:

Educational Technology Center (ETC): Cameras and basic editing software are available to faculty who wish to produce their own video content, and provides facilities to convert your existing video to digital files for web, CD or multimedia delivery.
etc@buffalo.edu

Distance Education and Video Conference Operations (DEVO): Provides distance learning and live video streaming services for faculty and staff who need to broadcast their message to a wider audience via webcast or videoconferencing.
devo@buffalo.edu

Instructional Technology Services (ITS): Video Services is a fee based University resource that produces original content for faculty and staff requiring comprehensive and professional production services.
media@buffalo.edu

UBlearns FAQ's

by Mark Woodard and Sue Michel-Giolando



The questions most commonly asked by instructors at the start of a semester

Mark Woodard, Chief Application Administrator,
Blackboard on UBlearns, ITS

Sue Michel-Giolando, Assistant Administrator for UBlearns, ITS

Q Why am I unable to access the course sites I just 'enabled' for use on UBlearns via the Blackboard Instructor Web Interface (BIWI)?

A BIWI requests for UBlearns course sites are processed once per day at 8am. Course sites become available at 9am. This process runs everyday except Sunday. Requests recieved on Saturday or Sunday are processed on Monday morning.

Q I have student reports stating that they are unable to access UBlearns early Sunday morning, can you explain?

A Every Sunday from 12am to 3am the UBlearns course management service is shut down to perform system backup and maintenance. During this time UBlearns is not available. Users attempting to log on while the shut down is in effect may receive an error message. UBlearns system maintenance information is available by selecting the 'Service Downtime' link on the UBlearns' front page.

Q I would like to give a colleague, not affiliated with UB, access to my UBlearns course site for the purpose of guest lecturer, is this possible?

A Yes, Application Administrators have the ability to grant UBlearns access to 'non UB affiliated' users. Instructors should submit access requests to: ublearns@buffalo.edu.

Q Can students view grades for other classmates when 'Make Item Visible to Students' is selected for gradebook items?

A No, Blackboard is configured by default to allow students to view their own grades but not those of classmates.

Q There are several different roles I can assign to my Teaching Assistants; can you describe what each represent?

A Course Roles control access to the content and tools within a course. Each user is assigned a role for each Course in which they participate. For example, a User with a role of Teaching Assistant in one Course can have a role of Student in another Course. Instructors may use these roles to delegate some of the responsibility for maintaining the course.

Instructor: Instructors have access to all areas in the Course Control Panel. This role is generally given to the person developing, teaching or facilitating the class. If a Course is unavailable to students, Instructors may still access it.

Teacher's Assistant: The Teacher's Assistant role has access to nearly everything in the Course Control Panel. If the course is unavailable to students, Teaching Assistants may still access the course. Unlike the Instructor, the Teaching Assistant will not appear in the Course Catalog listing.

Course Builder: The Course Builder role has access to most areas of the Course Control Panel. This role is appropriate for a research assistant or to an assistant who has limited responsibilities and who should not have access to student grades.

Grader: The Grader role has limited access to the Course Control Panel. A Grader would assist the Instructor in the creation, management, delivery, and grading of Assessments and Surveys. A Grader may also assist the Instructor with adding manual entries to the Online Gradebook.

Student: Student is the default Course User Role. Students cannot access the Course Control Panel.

Tell Us What You Think ...Ask Us A Question

We would like to know what you think and answer questions that you have... Please complete the form below and fax to: 716-645-6207 or complete the form online at: <https://ublearns.buffalo.edu/ublearns/updateForm>

1 The most useful section of UBlearns Update newsletter is

2 The UBlearns Update newsletter would be better if:

3 I could use a "best practices" tip sheet on:

4 Suggest a topic for future editions of UBlearns Update newsletter:

5 I have a question about using Blackboard on UBlearns:

Please contact me. My email address is _____