Ball State School of Nursing
Simulation & Information Technology Center
Fall 2010 Newsletter

Special points of interest:

- CLINICAL SIMULATIONS & VOLUNTEER CLIENT EN-COUNTERS PROMOTE CLINICAL DECISION MAK-ING & USE OF PATIENT CARE TECHNOLOGIES
- Distance Education/Web-Enabled Learning Support Continues and Expands . .
- ONLINE LITERATURE SEARCHES, EXPANDED UNIVERSITY LIBRARIES SERVICES, AND UPDATED LIBRARY AND SCHOOL COLLECTIONS
- TELECOMMUNICATION TECHNOLOGIES ASSISTS COMMUNICATION, TEACH-ING, LEARNING

CLINICAL SIMULATIONS & VOLUNTEER CLIENT ENCOUNTERS PROMOTE CLINICAL DECISION MAKING & USE OF PATIENT CARE TECHNOLOGIES

Clinical simulations have increased from six different simulations in fall 2007 to thirty-seven in spring 2010 with a total of 591 simulation runs during the spring 2010 semester. These simulations cover the spectrum of clinical nursing classes. Simulations are selected by faculty. Sources include Medical Education Technologies, Inc. (METI) Program for Nursing Curriculum Integration (PNCIs) and faculty-created simulations. The clinical simulation program includes the use of volunteer patients and the use of Second Life virtual reality.

The Second Life program is being used for two different virtual simulation experiences by the sophomore nursing students as an opportunity to interview virtual clients in assessing their nutritional status and their genitourinary sexual health. This provides a non-threatening venue as students begin to develop assessment skills. These learning opportunities are followed-up by a live interview with volunteer standardized clients to complete an entire health history assessment. Volunteer patients are also used for the senior level management course simulation experiences. The use of volunteers has increased from 42 different volunteers donating 108 hours in the fall 2008 semester to 70 volunteers donating 144 hours in the spring 2010 semester. Simulations are updated regularly in a cooperative effort between SITC staff and appropriate course faculty.

Quality Improvement in Clinical Simulations: Student Perceptions, Research, & Faculty/SITC Personnel Collaboration
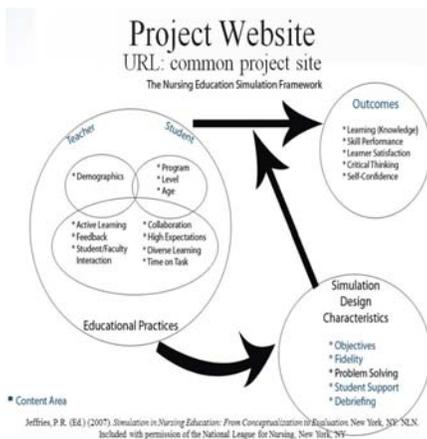
Throughout the year, faculty and SITC personnel assess effectiveness of the clinical simulation program. During spring 2010, ninety-one percent of the baccalaureate students indicated that the clinical simulations helped them feel both better prepared to implement actual nursing practices in the real world and better able to understand and apply concepts learned in the classroom. Many students also perceived that they better understood the diagnoses and disease processes after simulation encounters. Additionally, volunteer clients have responded very positively on evaluations, relaying that the students, faculty, and staff were very professional. Communica-

tion and organization was further praised by the volunteers. The SITC plans to continue expanding the population of standardized patients.

Using this evaluation data, faculty and SITC personnel continue to improve the quality, function, and fidelity of the simulations, providing a smooth learning experience for both students and staff. Realistic details are injected into the simulations to better transition students to an actual clinical environment using this information. For example, the NUR 340 Gastrointestinal Bleeding simulation

now includes more specific student roles such as an admission nurse who actually acquires a nursing history on the patient; this simulation also includes more hands-on skills, such as actually gathering supplies, priming and starting an IV during the simulation. A second example involves changing the NUR 404 Home Care simulation to extend the care of an acute care simulation patient from the previous NUR 340 course to the home care setting. This simulation will debut fall 2010. The SITC staff has also accomplished an overall organization of simulation charts and supplies across the Nursing courses.

NLN Grant: Multisite Simulation

Project Website
URL: common project site
The Nursing Education Simulation Framework

Jeffries, P.R. (Ed.) (2007). *Simulation in Nursing Education: From Conceptualization to Evaluation.* New York, NY: NLN. Included with permission of the National League for Nursing, New York, NY.

Data analysis and dissemination phases are now occurring for the national/international simulation research. Dr. Beth Johnson is the Co-Principal Investigator along with Dr. Kathie Lasater of Oregon Health and Science University for the NLN grant, "Redesigning Clinical Learning through Simulation and Practice: Clinical Judgment in Action." This research study involves a three-phased simulation of an 80-year-old hip fracture "patient" for students in NUR 340. Students cared

for the patient pre-operatively, immediately post PACU, and two days post-operatively when she developed delirium. Bi-weekly multi-site conference calls took place in preparation of the actual study spring, 2010. The four participating U.S. sites included Oregon Health and Science University (Ashland), Oregon Community College (Portland), Brigham Young University (Utah), and BSU. One international site, University of Worcester (UK), also participated. Video recordings of each simulation have been evaluated by faculty to measure clinical judgment used by the

students during their care of the patient. Partnering faculty member, Dr. Kathie Lasater of OSU, presented the methodology of this study at the Sigma Theta Tau International Research Congress in Orlando in July, along with support from BSU's Dr. Johnson. A manuscript from that presentation will be written this fall in preparation for publication spring of 2011 entitled, "Using Emerging Technologies to Implement a Multisite Research Collaborative: A Methods Study." The SITC created a project website to streamline resources among the five sites.

Pyxis Brings Patient Safety and Informatics to Life at the SITC

In an effort to improve clinical outcomes, decrease medication errors, decrease cost, improve patient safety, and increase security of medications, technology has been put to work in the world of medication management and administration via the Pyxis MedStation. The Pyxis MedStation system is the leading automated dispensing system that supports decentralized medication management. Pyxis improves efficiency of medication handling through secure storage of medication on the nursing unit, decreasing first-

dose drug administration times of both routine and prioritized stat medications. Its use decreases medication errors by a documented 38%, which limits harm to the patient as well as the unnecessary expense of additional patient treatment. Several medication safety features are incorporated into Pyxis, including limiting access to a single dose, information on medication use, and clear warnings to the clinician about potential interactions, patient allergy contraindications, and incorrect dosage times. Other

benefits include narcotics management, secure handling of medications, fingerprint access by authorized healthcare professionals only, and documentation of use. The use of Pyxis also supports regulatory compliance efforts.

The SITC Pyxis has been programmed in collaboration with Ball Memorial Hospital, a Clarian Partner, to reflect the same extensive drug database as the

Pyxis Brings Patient Safety and Informatics to Life at the SITC Cont..

hospital Pyxis. This continued partnership allows undergraduate students to train on equipment with the same programming as they will see in the acute care setting. NUR 232 faculty and SITC personnel successfully integrated student use of the Pyxis system into NUR 232 spring semester. Students receive orientation to the system at the beginning of 232 including the use and function of Pyxis as well as individual student fingerprinting for secure access to medications. During the oral medication administration competency, NUR 232 students actually retrieve simulated medications from Pyxis for their competency "patient" after verification of physician orders, patient allergies, and double checking the five rights of administering medications (right patient, right time and frequency, right dose, right route, and right drug). For fall 2010, SITC personnel will work collaboratively with NUR 330 faculty to expand Pyxis use for all simulated Schedule II drugs for the 4 NUR 330 clinical simulation experiences. This exp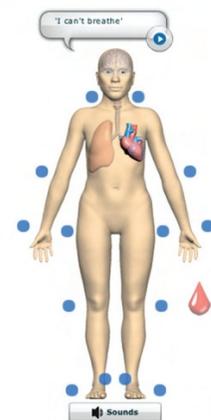anded use of Pyxis in the SITC will continue to prepare undergraduate students to gain knowledge of and experience with current technologies widely used to increase patient safety in healthcare facilities across the nation.

METI Redefines Simulations, Again

With the latest software from METI, simulations are able to run smoother and more realistic than ever before. The new software will allow real-time, realistic physiological changes to simulation patients based on drug administration or medical interventions. With a redesigned interface, allowing on-the-fly changes of vital signs and easier scenario setup, as well as a sleek new design and application window, it is appropriate for them to give it the name Muse. This new software will allow faculty and SITC personnel to take full advantage of all the features of the METI manikins in a quick and effortless way, allowing simulations to grow and develop into the most severe cases while still remaining realistic and educational.

Distance Education/Web-Enabled Learning Support Continues and Expands . . .

The SITC is responsible for the support of all of the School of Nursing's online distance and on-campus web-enabled courses. Online courses are done purely at a distance not requiring students to come to the Ball State campus. Web-enabled courses are those courses that are on-campus and utilize online resources. The SITC provides support through the telephone, e-mail, and in person based on the needs support of the individual.

Help Desk Support at the School of Nursing

With increased numbers of students in online courses, the SITC has stepped up in their level of technology support – enhancing tech support at the University level. With the addition of the Tech Help Line a few years ago and the addition of a third tech specialist position, the SITC unit has been able to provide better support coverage for distance students by providing live technical support from 7:30 A.M. eastern standard time until 10:00 P.M. eastern standard time Monday through Friday. Since the SITC began tracking call statistics, there have been nearly 1600 calls. 40% of all calls have been distance education related. Support calls have generally been related to the Blackboard courseware system, in-Qsit online quizzing system, and for mobile device and software application support.

Faculty Support for Online Course Delivery

SITC personnel continue to work in partnership with faculty to provide students with the best mix of technology to ensure a problem free delivery of the online course materials. An example is the continued support for the integration of the Sonic Foundry Mediasite recording system into the course materials; allowing faculty to add streaming video presentations into the Blackboard courseware system. The SITC has also continued support for mobile devices and have been actively searching for mobile software and applications that will enhance the students learning environment – this includes current collaboration with University Libraries to interface with their mobile device homepage access to library information resources. For the fall 2010 semester, there are a projected 39 graduate courses and 41 undergraduate courses scheduled to run. This is an increase of approximately 18 percent, based on the average of 38 graduate courses and 30 undergraduate courses during the previous year. In anticipation, the SITC is proactively taking steps to enhance our support services to continue to provide the best possible support services for our distance education population.

Faculty Development Website Launched

Since Spring 2010, Dr. Beth Kelsey has collaborated with faculty and SITC personnel to develop a new e-Faculty Development community to help provide new and existing faculty with the tools and information they need to be a successful faculty member. The Blackboard community area introduces the faculty member to school, college, and university, and provides information about who we are, and what they need to know to get started. The faculty member can also find information on how to set up a course, department and university policies, clinical information, professional development, and the various resources that are available. This newly developed electronic community area will add to existing new faculty orientation sessions offered on-site.

Ball State School of Nursing Simulation & Information Technology Center

ONLINE LITERATURE SEARCHES, EXPANDED UNIVERSITY LIBRARIES SERVICES, AND UPDATED LIBRARY AND SCHOOL COLLECTIONS

The Ball State University Libraries continue to offer a wide range of resources and services to students, faculty, and staff. Services offered include library instruction sessions tailored to your student's assignment. The sessions can take place in the library, in your classroom, or online. For example, graduate students in NUR 605 participate each semester in online chat sessions facilitated by the course faculty and instructional librarians.

Some of the undergraduate nursing courses have onsite instructional sessions. You may sign up for an instruction session online http://www.bsu.edu/library/collections/instsvs/schedulingforms/. For more information about the library instruction program contact Lisa Jarrell Phone: (765) 285-5356 e-mail: ljjarrell@bsu.edu.

Steve Duecker, is the Ball University Libraries'

liaison to the School of Nursing and may be contacted with questions about library services. Phone: (7650 285-3324 e-mail: skdueckcer@bsu.edu.

New Databases Added to the Ball State University Libraries Articles and Databases Page

Recently three new databases were added to the Ball State University Libraries Articles and Databases page http://www.bsu.edu/libraries/databases/index.php?tab=all

Health & Wellness Resource Center includes nearly 400 health/medical journals, hundreds of pamphlets, over 700 health-related videos from partner Healthology, Inc., and articles from 2,200 general interest publications in addition to

a broad collection of Gale reference titles. **Health Reference Center Academic** includes abstracts and some full text from nursing, allied health and medical journals; consumer health magazines; newsletters; pamphlets; newspaper articles; topical overviews; and reference books. **Nursing Resource Center** is designed for nursing students and includes journal articles, nursing reference, and diagrams. It covers

disease and drug overviews, care plans, relevant journal results and animated anatomy and physiology diagrams to complement the core encyclopedia texts. The information is written in accessible language for students completing class assignments and preparing for clinicals as they learn how to care for and treat patients. Search results are returned in tabs that correspond to steps in the nursing process.

Tutorial & Mediasite Overview of Information Literacy Tools – Faculty/Student Use

Steve Duecker and Kevin Brooks are in the process of making a suite of MediaSite videos. There will be one on each of the following resources: CardCat, Micromedex, CINAHL, Medline EBSCOhost, and Mosby Nursing Consult. The database presentations will discuss the content, strengths, unique features, and use of each database. There will also be

tutorials covering library services such as Interlibrary Loan, MultiLink, Course Reserves, Ask a Librarian. A multi part tutorial about Endnote (a citation management software provided free to people affiliated with Ball State University) is planned. Kevin will be doing a tutorial which introduces the viewer to research by taking them through the research

process covering various resources and services. The tutorials are designed to help familiarize faculty with the many library resources that facilitate teaching and learning.

New Acquisitions – Multimedia Resources

Bracken Library has some recent additions to their DVD collection. These titles were purchased with funds allocated to the School of Nursing and housed in the Library. If you have requests for book or media titles, please submit to Kay or Susette. Funds are allocated each year to update/enhance the School of Nursing collection.

New titles include:

- Healthcare: What's Spirituality got to do with it?
- Managing multiple assignments
- Professional behavior in healthcare professions: Professionalism and self-presentation
- Type I Diabetes in Adults: Management
- Type II Diabetes Management in Children
- Pain Management and atient Care: Pain Treatment Programs for Special Populations
- Compassion in Action: Being Effective in Emotionally Difficult Situations
- Second Opinion Television Series (Hosted by Peter Salgo) Episodes List: Dementia, Stroke, End of Life, Memory Enhancement, Osteoporosis, Macular Degeneration, Longevity, Osteoarthritis

Faculty and SITC Personnel Update Multimedia Resources: Nursing Collection
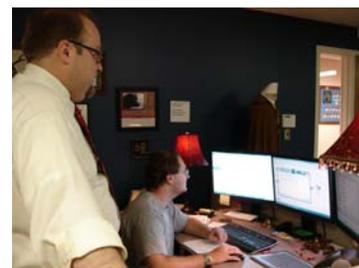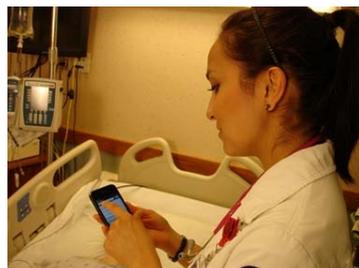
During Spring and Summer 2010, SITC personnel collaborated with faculty to review and update the School of Nursing multimedia resource collection. Outdated materials have been eliminated; other programs have been updated, including new digitalized instructional information about the Pyxis Medication Station and the Alaris IV pumps. These programs are now loaded on the over 50 SITC lab computers to replace VHS versions students had to previously check out to watch. Hardware on all lab computers has also been updated. Plans are being made with the renovation of CN216 this fall to add six more networked computers along with a printer. This additional area will allow students a place to work and print materials when both computer labs happen to be closed for classes or examinations.

TELECOMMUNICATION TECHNOLOGIES ASSISTS COMMUNICATION, TEACHING, LEARNING

There are a number of updates in the emerging technologies being used at the School of Nursing for the upcoming academic year. The following segments will introduce and discuss a few of the new developments.

Blackboard iPhone/iPod App Allows Mobile

The recent release of the Blackboard Mobile Learn application now allows Ball State faculty and students to instantly access their Blackboard courses and organizations from their Apple iPhone or iPod touch. The application is BSU compatible and is available to download at no cost via the App Store. Students can check their Blackboard course to keep track of their assignments, due dates, grades for each assignment, and current news directly from the faculty. The application also gives students access to course communication tools, such as class discussions, blogs, journals, and class rosters. Online media, including music, videos and images uploaded by instructors will also be appropriate media-specific software. To learn more, visit http://www.blackboard.com/Mobile/Mobile-Learn.aspx

iClicker Devices Promote Student Interaction

The School of Nursing is continuing with the integration of iClicker technology. The technology has already been implemented NUR 330, 340, & NUR 350 courses. The "iClicker" is a small device about the size of a remote control that is used to increase student participation in the classroom. The instructor can incorporate questions in a multiple choice format on Powerpoint presentations and students use their "iClicker" remote to respond to the question on the screen. Students can earn participation points, grade points, or both at the discretion of the instructor. After the results have been tallied, the instructor can initiate classroom discussion based on the results. Studies have shown the use of the "iClicker" in the classroom has increased test scores on an average of 10 points. We are ready to expand the use of the "iClicker" to any course, beginning the Fall 2010 semester.

Concept Mapping Software: Inspiration and the Thinking Classroom Resource

Thanks to external grant funding, faculty at the School of Nursing now have access to the concept mapping software, Inspiration 9 – the same software used at Teacher's College. Created by Inspiration Software, this concept mapping software is used by more than 25 million students and teachers worldwide. Inspiration 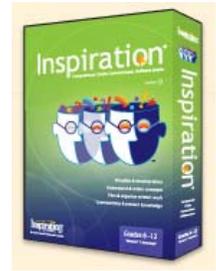9 is essentially a visual concept mapping tool intended on helping students and faculty improve their thinking by visually structuring the thought process. Students use Inspiration to brainstorm, plan, organize, think, outline, and present. Whether you are finding topics for lecture, taking notes, organizing ideas for a major research paper, or building a presentation, Inspiration allows users to communicate ideas clearly and demonstrate knowledge, comprehension, and retention.

In addition to software access, faculty has access to a digital copy of the book, The Thinking Classroom: Using Inspiration to Meet Curriculum Standards. Check with

the SITC personnel for information about access to these resources and stay tuned for faculty development/sharing ideas about integrating the concept mapping software into didactic, simulation, and clinical focused activities.

SITC Fall 2010 Semester Hours

SITC3, CN 355:
8AM-5PM
Monday-Friday

SITC2, CN 214:
8AM-10PM
Monday-Friday

Any changes to lab hours will be posted as needed

Meet the 2010-2011 SITC Graduate Assistants

Joshua is a Master's student in Biology, working towards a MS in biology (concentrating in Bioinformatics) and obtaining a Biotechnology Certificate. He graduated Cum Laude from BSU in spring 2010 with a BS in Genetic, Biochemistry, and Cellular/Molecular Biology.

Mark has an A.S. degree in Computer Information Systems from Purdue-Anderson, B.M. in Music Engineering Technology from Ball State, and is currently pursuing an M.S. in Information and Communication Sciences.

Matt has served in the Navy Reserves in the Middle East. He is currently working towards a Master's degree in Information and Communication Sciences.

Marc graduated from Ball State in July 2010 with a degree in Graphic Arts Management and minors in Business Administration and Telecommunications. He is currently working towards a Master's degree in Information and Communication Sciences.

SITC Staff—Fall 2010

Director Simulation and Information Technology Center

    Kay Hodson-Carlton

Lead Technology Services Specialist

    Brandon Campbell

Technology Services Specialist

    Britain Bryant

    Jason Ziarko

Nursing Computer & Multimedia Lab Manager

    Susette Bokelman

Graduate Assistants

    Joshua Fortriede

    Mark Richardson

    Matt Dodge

    Marc Chatot

Clinical Lab Specialist

    Allison Ottinger

    Becky Fights

Clinical Lab Assistant

    Karina Edwards—Senior / NUR406, 408

    Cassie Greeson—Junior / NUR340, 350

    Emilee Lind—Senior / NUR404, 406, 408

    Jennifer Swihart—Senior / Pre-Med

Simulation & Technology Assistant

    Scott Brooks