Welcome to the spring 2009 issue of Ball State University Research Notes, our new mid-term update on research and creativity at Ball State University. I am pleased to introduce this companion to the larger fall publication, Ball State University Research Innovation + Creativity.

As you can see by the projects displayed in Research Notes, faculty, student, and local community members are engaged in a broad range of innovative activity that is driven by their curiosity and commitment to discovery.

Equal Opportunity to Succeed

In December 2008, Ball State announced a $17.7 million Emerging Media Initiative, which focuses on the university's strengths in this area, accelerating benefits to the state of Indiana by developing media-savvy human capital. The initiative, funded through a combination of institutional reserves, federal and private gifts, and new private resources, gives our students access to cutting-edge opportunities in emerging media across the curriculum and provides the support faculty members need to bring their ideas to market. Learn more at www.bsu.edu/ems.

Focus on Emerging Media

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Ball State University Research Notes is published by the Sponsored Programs Office and University Marketing and Communications. Information presented here, correct at the time of publication, is subject to change.

NENA Relationship Futhers Crisis Communications Project

Ball State has formed a working relationship with the National Emergency Number Association (NENA), one of the nation’s leading emergency service associations, to improve 911 communications. The U.S. Department of Homeland Security’s Federal Emergency Management Agency (FEMA) awarded Ball State a $2.5 million grant to create innovative on-site and online training courses for 911 call takers nationwide. The relationship with NENA will assist in the research phase of the project.

Student Research Focus at Symposium

The scholarly and creative endeavors of our graduate and undergraduate students were the focus of the 44th annual Student Symposium on March 24. From the more than 110 project displays representing diverse disciplines, six students were recognized for their outstanding presentations. Winning projects included a study of red dwarf stars, research on the effect of treadmill training in the April 2009 issue of The Journal of Applied Physiology. The research suggests that changes in the number of red blood cells, hematocrit, and red blood cell adhesion during space flight may be necessary to optimize the inflight exercise regimen for astronauts to improve their muscle performance while in space for extended stays.

HPL Releases Results of NASA Research

The latest NASA-sponsored research from Ball State’s Human Performance Lab was featured in the April 2009 issue of The Journal of Applied Physiology. The research suggests that changes are needed to optimize the current exercise regimen for astronauts to improve their muscle performance while in space for extended stays.

NENA and NENA Relationship Futhers Crisis Communications Project

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Second Life Course Honored

The Institute for Digital Intermedia Arts and Animation (IDIAA) earned the 2009 Institutional Excellence in Information Communications Technology Award from ACM/NA, the Association for Information Communications Technology Professionals in Higher Education. The award recognized the IDIAA, which was created as part of the $20 million Digital Exchange initiative funded by Lilly Endowment Inc., for its Aesthetic Camera filmmaking course offered through the online world of Second Life and integrated Blackboard course management custom software.

Inside This Issue

Analyzing voting systems
Tracking a declining bird species
Making art accessible to the world
Landmark study tracks daily video exposure
Media Use by the Numbers

- 9.5: Percentage of screen time devoted to TV
- 8.5: Percentage of screen time devoted to the Web
- 7.2: Percentage of screen time devoted to video
- 6.7: Percentage of screen time devoted to music
- 6: Percentage of screen time devoted to radio
- 5.5: Percentage of screen time devoted to newspapers and magazines
- 5.3: Percentage of screen time devoted to books
- 4.8: Percentage of screen time devoted to telephone
- 4.5: Percentage of screen time devoted to in-car listening
- 4.3: Percentage of screen time devoted to pay TV
- 3.3: Percentage of screen time devoted to in-flight entertainment
- 3: Percentage of screen time devoted to portable media players
- 2: Percentage of screen time devoted to gaming
- 1.7: Percentage of screen time devoted to PVR

Media Research Tracks Video Use

- Which age group is the largest consumer of video media?
  - The results might surprise you: it’s not young people or teens, instead consumers ages 45-54 average the most daily screen time—just over nine-and-one-half hours.
  - A recent study conducted on behalf of the Nielsen-funded Center for Research Excellence (CRE) by Ball State’s Center for Media Design (CMD) and Sequent Partners released in March revealed how consumers access video content within their daily lives. In the $3.5 million viewing Year Video Consumer (VCM) study, CMD researchers directly observed participants throughout the day.
  - Using handheld smart keyboards equipped with a custom media collector program developed by Ball State, observers recorded—in 10-second increments—consumer exposure to visual content presented on any of four categories of scenarios: traditional television; computer; mobile devices, such as a BlackBerry or iPhone; and “all other screens,” such as in-cinema movies, other messaging, and GPS navigation units.
  - All told, the VCM study generated data covering more than three-quarters of a million minutes or a total of 952,000 days, making it the largest and most extensive observational study of media usage ever conducted.
  - “What differentiates this study from all other attempts to measure video exposure at the consumer level is its scale, the range of media covered, and the fact that it is focused on consumers first and the media second. It’s not a study about TV or the Web or any other medium—it’s about how, where, how often, and for how long consumers are exposed to all media,” says Mike Blohm, director of research and insight for CMD.
  - Past studies had employed self-reporting participants, which led to questionable data as some media was over-reported and some under-reported.
  - The direct observation method employed during the VCM study produced unsolicited precise data, and the quality of that data enabled a type of analysis of media behavior in the U.S. that has never been achieved before.
  - “Direct observation of consumers’ use of video enables us to better understand their concurrent exposure to multiple media, often in the context of other life activities,” says Jim Spadich collaborator of Sequent Partners. “Winning this ‘competition for attention’ is the most significant challenge media and advertising face today and having accurate information is a prerequisite for success.”

Bringing Art to the World

The nearly 11,000 works of art in the Ball State University Museum of Art’s collection, including well-preserved paintings and sculptures by Whistler, Homer, Degas, Childe Hassam, and Lie Riekman, will soon be available online. Through the Digital Images Distributed Online project, which was funded by a grant from the Institute of Museum and Library Services, the exhibition collection, consisting of images from six centuries and 5,000 years of art, is being photographed and cataloged in a searchable online database. This project is part of a larger initiative known as Art Changes World, a program of the National Endowment for the Arts Digital Corridor. The corpus was formed as a result of a national $25 million Endowment award and the enhancement of Ball State’s Digital Exchange Initiative.

Improving Elections

Ball State’s Bowen Center for Public Affairs is part of a major national initiative to examine and improve elections. The project is the result of voting into system—large, conveniently located polling places—in-person voter turnout, cost, and efficiency on Election Day compared with traditional neighborhood precincts. The initiative is funded by the Pew Charitable Trust and is part of a national movement to find innovative solutions to perceived shortcomings in the current voting systems and machines used around the state, establish a standardized set of criteria for evaluating voting machines, and recommended best practices for voting call centers. The project may impact the way voters in Indiana and around the country cast their ballots.

Protecting a Declining Species

For nearly a decade, Kaleem Islam has been observing a small blue-and-white bird that makes its summer home in the foothills of southern Indiana hardwood forests. Deep blue with white tips on its wings and white tail spots, the cerulean-warbler is indigenous to the eastern and Midwestern United States and winters on the slopes of the Andes in southern Andean region. While the population has declined, and the species is currently listed on the Audubon Watchlist.

Teaching Environmental Lessons

A major initiative at Ball State is the National Science Foundation’s “Innovate to Educate” program. The initiative is part of a major national project to examine and improve elections. The project is the result of voting into system—large, conveniently located polling places—in-person voter turnout, cost, and efficiency on Election Day compared with traditional neighborhood precincts. The initiative is funded by the Pew Charitable Trust and is part of a national movement to find innovative solutions to perceived shortcomings in the current voting systems and machines used around the state, establish a standardized set of criteria for evaluating voting machines, and recommended best practices for voting call centers. The project may impact the way voters in Indiana and around the country cast their ballots.

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