

# BEAUMIE KIM

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## EDUCATION

Ph.D. University of Georgia, Athens, GA (Instructional Technology, August 2004)  
Dissertation: Rethinking Cognitive Tool: Its Concept, Design, Application, and Research  
M.Ed. University of Georgia, Athens, GA (Instructional Technology, May 2000)  
B.S. Hanyang University, Seoul, Korea (Educational Technology, February 1998)

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## MAJOR APPOINTMENTS

2013- Associate Professor, Werklund School of Education, University of Calgary  
2006-2012 Assistant Professor, Learning Sciences Lab/Learning Sciences and Technologies Academic Group, National Institute of Education, Nanyang Technological University  
2004-2006 Design Researcher, Center for Educational Technologies, Wheeling Jesuit University  
1999-2004 Research Assistant, Learning and Performance Support Lab, The University of Georgia (UGA)  
1998-2000 Teaching Assistant, Georgia Department of Education Educational Technology Training Center, UGA

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## PUBLICATIONS & REPORTS

### Refereed Articles and Chapters

- Kim, B., Pathak, S. A., Jacobson, M. J., Zhang, B., & Gobert, J. D. (2015). Cycles of exploration, reflection, and consolidation in model-based learning of genetics. *Journal of Science Education and Technology*, 24(6), 789–802. doi:10.1007/s10956-015-9564-6.
- Jacobson, M. J., Kim, B., Pathak, S., & Zhang, B. (2015). To guide or not to guide: issues in the sequencing of pedagogical structure in computational model-based learning. *Interactive Learning Environments*, 23(6), 715–730. doi:10.1080/10494820.2013.792845
- Tan, L., & Kim, B. (2015). Learning by doing in the digital media age: the contention of learning in adolescents' literacy practices. In Lin, T., Chen, V., & Chai, C.S. (Eds.), *New media and learning in the 21st century: a sociocultural perspective (Education Innovation in Singapore Series)* (pp.181-197). Singapore: Springer. doi:10.1007/978-981-287-326-2\_12
- Wang, X., Kim, B., Lee, J. & Kim, M. (2014). Encouraging and being encouraged: Development of an epistemic community and teacher professional development in the classroom. *Teaching and Teacher Education*, 44, 12-24. doi:10.1016/j.tate.2014.07.009
- Kim, B., Tan, L., & Kim, M. S. (2013). The affordances of informant design in educational game development. *International Journal of Arts and Technology (IJART)*, 6 (3), 215-228. doi:10.1504/IJART.2013.055388
- Lee, J. W. Y., Kim, B., Lee, T. L., & Kim, M. S. (2012). Uncovering the use of Facebook during an exchange program. *China Media Research*, 8 (4), 62-72.
- Kim, B., Lossman, H. G., & Hay, K. E. (2012). Learners' informal ideas and model creation for conceptual change. In Lee, C. B. & Jonassen, D. H. (Eds.), *Fostering Conceptual Change with Technology: Asian Perspectives* (pp. 119-140). Singapore: Cengage Learning Asia.
- Pathak, S. A., Kim, B., Jacobson, M. J., & Zhang, B. H. (2011). Learning the physics of electricity: A qualitative analysis of collaborative processes involved in productive failure. *International Journal of Computer-Supported Collaborative Learning*, 6(1), 57-73. doi:10.1007/s11412-010-9099-z
- Wang, X., Kim, B., & Kim, M. S. (2011). Extrapolating from students' preconceptions to 'scientific' consensus: Singapore secondary students' conversation on Earth. *The Asia-Pacific Education Researcher*, 20(2), 261-275.
- Liu, X., Zhang, B. H., Liang, L., Fulmer, G., Kim, B., & Yuan, H. (2009). Alignment between the physics content standard and standardized test: A comparison among US-NY, Singapore, and China-Jiangsu. *Science Education*, 93(5), 777-797. doi:10.1002/sce.20330
- Kim, B. & Reeves, T. C. (2007). Reframing research on learning with technology: In search of the meaning of cognitive tools. *Instructional Science*, 35 (3), 207-256. doi:10.1007/s11251-006-9005-2
- Kim, B., Williams, R. & Dattilo, J. (2002). Students' perception of interactive learning modules. *Journal of Research on Technology in Education*, 34 (4), 453-73. doi:10.1080/15391523.2002.10782361

## Other Articles and Chapters

- Kim, B., Tan, L., & Bielaczyc, K. (2015). Learner-generated designs in participatory culture: what they are and how they are shaping learning (Commentary for the special issue). *Interactive Learning Environments*, 23 (5), 545-555. doi:10.1080/10494820.2015.1067974.
- Kim, B., Tan, L., & Tan, S. C. (2014). "Perhaps this can be for education": learners' cultural models for educational game design. In M. Orey, S. A. Jones, & R. M. Branch (Eds.), *Educational Media and Technology Yearbook* (Vol. 38) (pp.25-46). New York: Springer. doi:10.1007/978-3-319-06314-0\_3
- Wu, L., Looi, C. K., Kim, B., & Miao, C. (2013). Immersive environments for learning: Towards holistic curricular. In R. Huang, Kinshuk, & J. M. Spector (Eds.), *Reshaping Learning - Frontiers of Learning Technology in a Global Context*. (pp. 365-384). New York: Springer. doi:10.1007/978-3-642-32301-0\_16
- Jacobson, M. J., Kim, B., Miao, C., Shen, Z., & Chavez, M. (2010). Design perspectives for learning in virtual worlds. In M. J. Jacobson & P. Reimann (Eds.), *Designs for learning environments of the future: International perspectives from the learning science* (pp. 111-142). New York: Springer. doi:10.1007/978-0-387-88279-6\_5
- Tan, S. C., Kim, B., & Yeo, J. (2010). Learning with technology: learner voice and agency. In M. Orey, S.A. Jones, & R. M. Branch (Eds.), *Educational Media and Technology Yearbook* (Vol. 35) (pp. 117-134.). New York: Springer. doi:10.1007/978-1-4419-1516-0\_8
- Kim, B., & Kim, M. S. (2010). Distributed emotions in the design of learning technologies. *Educational Technology*, 50(5), 14-19
- Hay, K. E., & Kim, B. (2007). Integrated temporal multimedia data (ITMD) research system. In R. Goldman, R. Pea, B. Barron & S. Derry (Eds.), *Video research in the learning sciences* (pp. 521-536). Mahwah, NJ: Lawrence Earlbaum.
- Hay, K. E., Kim, B., & Roy, T. C. (2005). Design-based research - more than formative assessment? An account of the Virtual Solar System project. *Educational Technology*, 45(1) 34-38.
- Kim, B. (2001). Social constructivism. In M. Orey (Ed.), *Emerging perspectives on learning, teaching, and technology*. E-book available at <http://itstudio.coe.uga.edu/ebook/>
- Brill, J., Kim, B., & Galloway, C. (2001). Cognitive apprenticeships as an instructional model. In M. Orey (Ed.), *Emerging perspectives on learning, teaching, and technology*. E-book available at <http://itstudio.coe.uga.edu/ebook/>

## Refereed Proceedings

- Kim, B. & Gupta, D. (2016). Making design activities gameful using a role-playing card game. In *Proceedings of the 12<sup>th</sup> Games+Learning+Society Conference*. Madison, WI, USA: Games Learning Society.
- Gupta, D. & Kim, B. (2016). Critical thinking with aesthetic elements of Minecraft. In *Proceedings of the 12<sup>th</sup> Games+Learning+Society Conference*. Madison, WI, USA: Games Learning Society.
- Kim, B., Gupta, D., & Clyde, J. (2016). Gamefulness in designing digital game-based learning through a role-playing game. In M. A. Takeuchi, P. Preciado Babb, & J. V. Lock (Eds.), *IDEAS 2016: Designing for Innovation Selected Proceedings* (pp. 41-50). Calgary, Canada: University of Calgary. Retrieved from <http://hdl.handle.net/1880/51220>
- Gupta, D., Rasporich, S., & Kim, B. (2016). An emergent design for Minecraft. In M. A. Takeuchi, P. Preciado Babb, & J. V. Lock (Eds.), *IDEAS 2016: Designing for Innovation Selected Proceedings* (pp. 31-40). Retrieved from <http://hdl.handle.net/1880/51215>
- Gupta, D. & Kim, B. (2015). Evaluating geography as game aesthetics for engagement. In *Proceedings of the 11<sup>th</sup> Games+Learning+Society Conference*. Madison, WI, USA: Games Learning Society.
- Kim, B. (2015). Playing with Gameful Activities and Assessments: Avatars and Experience Points in a Graduate Course. In *Proceedings of the 11th International Conference on Computer-Supported Collaborative Learning*. Gothenburg, Sweden: International Society of the Learning Sciences.
- Kim, B., Gupta, D. & Clyde, J.V. (2015). Gameful Space, Activities and Assessment for Game-Based Learning. In Preciado Babb, P., Takeuchi, M., & Lock, J. (Eds.). *Proceedings of the IDEAS: Designing Responsive Pedagogy Conference* (pp. 90-100). Calgary, Canada: Werklund School of Education, University of Calgary.
- Kim, B. & Ho, W. (2014). Emergent practices and distributed emotions in educational game play. In *Proceedings of the 2014 International Conference on Computers in Education* (pp. 578-587). Nara, Japan: Asia-Pacific Society for Computers in Education.
- Gupta, D. & Kim, B. (2014). Aesthetic design for learning with games. In *Proceedings of the 2014 International Conference on Computers in Education* (pp. 624-629). Nara, Japan: Asia-Pacific Society for Computers in Education.
- Kim, B. (2014). A graduate course as a game to learn about digital game-based learning. In A. P. Preciado Babb (Ed.), *Proceedings of the IDEAS 2014: Rising to Challenge Conference* (pp. 103-112). Calgary, Canada: Werklund School of Education, University of Calgary.
- Gupta, D. & Kim, B. (2014). Connecting aesthetics and engagement in game based learning. In A. P. Preciado Babb (Ed.), *Proceedings of the IDEAS 2014: Rising to Challenge Conference* (pp. 81-90). Calgary, Canada: Werklund School of Education,

University of Calgary.

- Kim, B., Tan, L., & Kim, M. S. (2012). Learners as informants of educational game design. In *Proceedings of the 2012 International Conference of the Learning Sciences* (pp. 401-405). Sydney, Australia: International Society of the Learning Sciences
- Lee, T. L., Kim, B., Kim, M. S. & Lee, J. (2012). Finding voices and developing agency in classroom learning. In *Proceedings of the 2012 International Conference of the Learning Sciences* (pp. 451-458). Sydney, Australia: International Society of the Learning Sciences.
- Kim, M. S., Lee, W. C., Ye, X. & Kim, B. (2012). Enriching multimodality in learning through integrating computer modeling to support a learner generated topic: Lunar libration. In *Proceedings of the 2012 International Conference on Computers in Education*. Singapore: Asia-Pacific Society for Computers in Education.
- Kim, B., Tan, L., & Kim, M. S. (2011). Why we should design educational games with learners: The affordances of informant design. In *Proceedings of the 2011 International Conference on Computers in Education* (pp. 441-448). Chiang Mai, Thailand: Asia-Pacific Society for Computers in Education.
- Looi, C.-K., Wu, L., Kim, B., & Miao, C. (2011). Agent-Mediated Immersion in Virtual World: The Implications for Science Learning. In G. Biswas, S. Bull, J. Kay & A. Mitrovic (Eds.), *Proceedings of The 15th International Conference on Artificial Intelligence in Education* (pp. 507-509). Auckland, New Zealand.
- Kim, B., Wang, X., Lee, J., & Kim, M. S. (2011). Learners' ideas about plate tectonics and collaborative game play. In Spada, H., Stahl, G., Miyake, N., Law, N. (Eds.), *Proceedings of the 9th International Conference on Computer Supported Collaborative Learning* (pp. 920-921). Hong Kong, China: International Society for Learning Sciences.
- Kim, M. S., Lee, W. C., & Kim, B. (2011). Modeling the solar system: A case study of Singaporean youth. In S. Barton et al. (Eds.), *Proceedings of Global Learn Asia Pacific 2011* (pp. 998-1003). Melbourne, Australia: AACE.
- Lee, J., Kim, B., & Kim, M. S. (2011). Creating the intercultural learning narrative using social network sites status updates: An innovative approach in using social media. In S. Barton et al. (Eds.), *Proceedings of Global Learn Asia Pacific 2011* (pp. 1819-1826). Melbourne, Australia: AACE.
- Ruffolo, L., Kim, B., Kim, M. S., & Lee, J. (2011). Jello Tectonic Plates for learning geoscience. In S. Barton et al. (Eds.), *Proceedings of Global Learn Asia Pacific 2011* (pp. 1538-1547). Melbourne, Australia: AACE.
- Wang, X., Kim, B., Lee, J., & Kim, M. S. (2011). Developing an epistemic community in the classroom for teacher development. In S. Barton et al. (Eds.), *Proceedings of Global Learn Asia Pacific 2011* (pp. 1272-1281). Melbourne, Australia: AACE.
- Kim, B., Tan, L., & Kim, M. S. (2010). Unpacking Learner Voices for Educational Game Design. In Montgomerie, C. (Ed.) *Proceedings of ED-MEDIA 2010-World Conference on Educational Multimedia, Hypermedia & Telecommunications*. Chesapeake, VA: AACE.
- Lee, J., Pang, A., Ruffolo, L. & Kim, B. (2010). Designing around preconceptions in earth science. In Abas, Z. W., Jung, I., & Luca, J. (Eds.), *Proceedings of Global Learn Asia Pacific 2010* (pp. 1217-1222). Penang, Malaysia: AACE.
- Lee, J., Kim, B., & Kim, M. S. (2010). An exploration on the use of Facebook as a tool for social support on an intercultural exchange program. In Abas, Z. W., Jung, I., & Luca, J. (Eds.), *Proceedings of Global Learn Asia Pacific 2010* (pp. 1898-2020). Penang, Malaysia: AACE.
- Kim, B., Pang, A., Kim, M. S., & Lee, J. (2009). Designing with learners for game-based collaborative learning: An account of T-rex group. In Dimitracopoulou, A., O'Malley, C, Suthers, D., & Reimann, P. (Eds.), *Proceedings of the 8th International Conference on Computer Supported Collaborative Learning* (pp. 120-122). Rhodes, Greece: International Society for Learning Sciences.
- Pathak, S. A., Kim, B., Jacobson, M. J., & Zhang, B. H. (2009). Failures and successes in collaborative inquiry: Learning the physics of electricity with agent-based models. In O'Malley, C, Suthers, D., Reimann, P., & Dimitracopoulou, A. (Eds.), *Proceedings of the 8th International Conference on Computer Supported Collaborative Learning* (pp. 199-203). Rhodes, Greece: International Society of Learning Sciences.
- Zhang, B. H., Kim, B. & Jacobson, M. (2009). Opportunities and challenges in sustaining and scaling up ICT-based pedagogies in Singapore schools. *Proceedings of 3rd Redesigning Pedagogy International Conference 2009*. Singapore: National Institute of Education.
- Pathak, S. A., Jacobson, M. J., Kim, B., Zhang, B. H., & Deng, F. (2008). Learning the physics of electricity with agent-based models: The paradox of productive failure. *Proceedings of 6th International Conference on Computers in Education* (pp. 221-228). Taipei, Taiwan: Asia-Pacific Society for Computers in Education.
- Kim, B., Lossman, H. G., & E., H. K. (2008). Integrated modeling-based inquiry for addressing astronomy misconceptions: From sky, sketches, and styrofoam to 3D computational models. In P. A. Kirschner (Ed.), *International Perspectives in the Learning Sciences: Creating a Learning World*. Utrecht, The Netherlands: International Society for Learning Sciences.

- Zhang, B., Jacobson, M. J., Kim, B., Deng, F., Lin, X., & Pathak, S. (2008). Exploring modeling and visualization technology (MVT) enhanced biology teaching and learning in Singapore. In P. A. Kirschner (Ed.), *International Perspectives in the Learning Sciences: Creating a Learning World*. Utrecht, The Netherlands: International Society for Learning Sciences.
- Jacobson, M. J., Lim, S., Kim, B., Lee, J., & Low, S. (2007). An Intelligent Agent Augmented Multi-user Virtual Environment for Learning Science Inquiry: Design and Research Perspectives. In T. Hirashima, U. Hoppe & S. Young (Eds.), *Supporting Learning Flow through Integrative Technologies*. Amsterdam, Netherlands: ISO Press.
- Kim, B., Calinger, M., & Reese, D. D. (2006). Using Satellite Resources for Scientific Inquiry. In R. Mizoguchi, P. Dillenbourg, & Z. Zhu (Eds.), *Learning by effective utilization of technologies: Facilitating intercultural understanding* (pp.89-96). Amsterdam, Netherlands: ISO Press.
- Kim, B., & Hay, K. E. (2005). The Evolution of the Intellectual Partnership with a Cognitive Tool in Inquiry-Based Astronomy Laboratory. In T. Koschmann, D. D. Suthers, & T. Chan (Eds.), *Computer supported collaborative learning 2005: The next 10 years!* (pp.281-290). Mahwah, NJ: Lawrence Erlbaum.
- Kim, B., Elliott, D., & Holschuh, D. (2002). 4-D Modeling Tools and Mental Models: What Can We Learn From Usability Testing? In P. Barker & S. Rebelsky (Eds.), *Proceedings of ED-MEDIA 2002* (pp. 978-983), Denver, CO.
- Hay, K. E., Elliott, D., & Kim, B. (2002). Collaborative Network-Based Virtual Reality: The Past, the Present, and the Future of the Virtual Solar System Project. In G. Stahl (Ed.), *Proceedings of Computer Support for Collaborative Learning 2002 Conference* (pp.519-520). Boulder, CO: International Society for Learning Sciences.
- Reeves, T. C., Benson, L., Elliott, D., Grant, M., Holschuh, D., Kim, B., Kim, H., Lauber, E., & Loh, S. (2002). Usability and Instructional Design Heuristics for E-Learning Evaluation. In P. Barker & S. Rebelsky (Eds.), *Proceedings of ED-MEDIA 2002* (pp. 1615-1621), Denver, CO: AACE.
- Kim, B., Orey, M., & Tallman, J. (2001). Introduction to Computers for Teachers Online: A Corporate (Epic Learning) and University (UGA) Partnership. *Proceedings of the Annual Meeting of the Eastern Educational Research Association* (pp. 953-956). Hilton Head, SC.
- Kim, B., & Orey, M. A. (2001). Introduction to Computers for Teachers Online: An Evaluation of a Virtual Classroom. *Proceedings of Design: Connect, Create, Collaborate Conference in Honor of Kent L. Gustafson* (pp. 45-48). Athens, GA: The University of Georgia.
- Han, S., Kim, B., Wang, S., & Bhattacharya, K. (2001). Web-Based Collaborative Learning Environment: Theoretical and Practical Discourse and Future Directions. *Proceedings of Design: Connect, Create, Collaborate Conference in Honor of Kent L. Gustafson* (pp. 138-143). Athens, GA: The University of Georgia.
- Orey, M., & Kim, B. (2001). Blended Learning: What Do They Use in an Online Introduction to Computers For Teachers? In W. Fowler & J. Hasebrook (Eds.), *Proceedings of WebNet 2001* (pp. 953-956). Orlando, FL: AACE.

### Magazine Articles

- Allen, S., Mims, C., Roberts, S., Kim B., & Ryu J. (2004, January). *Internship experience: Engaging in the big discourse Tech Trends*, 48, 44-48.

### Technical Reports

- Kim, B., Calinger, M., Reese, D. D., & Kirby, J. (2005). *Tools for Innovative Science Education: Formative Evaluation of SVS/World Wind* (No. COTF/PART1/9-2005). Wheeling, WV: Wheeling Jesuit University, Center for Educational Technologies.
- Reese, D. D., Kim, B., Palak, D., Smith, J., & Howard, B. (2005). *Concept paper: Defining inspiration, the inspiration challenge, and the informal event* (No. COTF/IB1/6-2005). Wheeling, WV: Wheeling Jesuit University, Center for Educational Technologies.

## PRESENTATIONS

### Refereed Presentations

- Kim, B., Gupta D., & Clyde, J. V. (2016, May). *Promoting gamefulness in design activities with a role-playing game*. Paper presented at the 2016 annual conference of the Canadian Society for the Study of Education (CSSE). Calgary, Canada: University of Calgary.
- Gupta D., & Kim, B. (2016, May). *Does the aesthetic design of digital games foster critical thinking in learners?* Poster presented at the 2016 annual conference of the Canadian Society for the Study of Education (CSSE). Calgary, Canada: University of Calgary.
- Bastani, R., Gupta D., & Kim, B. (2016, May). *Teaching children about complex systems using digital games*. Poster presented at the 2016 annual conference of the Canadian Society for the Study of Education (CSSE). Calgary, Canada: University of Calgary.
- Walton, C., Kim, B., Easton, M., Whyte, C. & Bastani, R. (2016, May). *Using game design as an interdisciplinary learning tool*.

- Presentation given at the IDEAS 2016: Designing for Innovation. Calgary, Canada: University of Calgary.
- Kim, B. (2015, June). *Brokering for learning with boundary objects in a paleontology museum*. Paper presented at the 2015 annual conference of the Canadian Society for the Study of Education (CSSE). Ottawa, Canada: University of Ottawa.
- Gupta, D., & Kim, B. (2015, June). *Aesthetics and Analysis of Digital Games*. Poster presented at the 2015 annual conference of the Canadian Society for the Study of Education (CSSE). Ottawa, Canada: University of Ottawa.
- Kim, B. (2015, May). *Transforming the Culture of In-service Teacher Graduate Course with Gameful Assessment*. Panel presentation as part of “Navigating the Tensions of Assessment: Exploring Micro-cultures in Teacher Education” at the 2015 annual conference of the Canadian Society for the Study of Education (CSSE). Ottawa, Canada: University of Ottawa.
- Kim, B. (2014, May). *What count as meaningful practices in educational game play?* Paper presented at the 2014 annual conference of the Canadian Society for the Study of Education (CSSE). St. Catherines, Canada: Brock University.
- Kim, B., Ho, W., Ruffolo, L. & Lee, J. (2013, April). *Emergent Identities and Practices in Educational Game Play*. Paper presented at the annual meeting of American Educational Research Association, San Francisco, CA.
- Lee, J. & Kim, B. (2013, April). *Voices of exchange students: The role of Facebook during the sojourn*. Paper presented at the annual meeting of American Educational Research Association, San Francisco, CA.
- Kim, B., Pathak, S., Jacobson, M. J., Zhang, B., & Deng, F. (2009, April). *Cycles of exploration, reflection, and telling in model-based learning of genetics*. Paper presented at the annual meeting of National Association for Research in Science Teaching (NARST), Garden Grove, CA.
- Kim, B., Wang, X., Tan, L., Kim, M., Lee, J., & Pang, A. (2009, April). *Designing with Stakeholders for Learning Innovations: Voyage to the Age of Dinosaurs*. Paper presented at the annual meeting of American Educational Research Association, San Diego, CA.
- Jacobson, M. J., Kim, B., Pathak, S., Zhang, B. H., & Deng, F. (2009, April). *Agent-based models and learning the physics of electricity: The paradox of productive failure*. Paper presented at the annual meeting of the American Education Research Association (AERA), San Diego, CA.
- Jacobson, M. J., Miao, C., Kim, B., Shen, Z., & Chavez, M. (2008, December). *Research into learning in an intelligent agent augmented multi-user virtual environment*. Paper presented at the Workshop on Web Intelligence & Intelligent Agent Technology in eLearning (TUMAS-A 2008), Sydney, Australia.
- Jacobson, M. J., Kim, B., Lee, J., Lim, S., & Low S. (2008, March). *Virtual Singapura: Adaptive Scaffolding in an Intelligent Agent-Augmented, Multi-User Virtual Environment for Learning Science Inquiry*. Paper presented at annual meeting of the American Educational Research Association, New York.
- Kim, B., Lossman, H. G., & Hay, K. E. (2008, March). *Affordances of 3D Isomorphic Models in Learning of Planetary Motion and Light*. Paper presented at the Annual Meeting of American Educational Research Association, New York.
- Zhang, B., Deng, F., Jacobson, M., & Kim, B. (2008, March). *Exploring the representational affordances of two types of modeling tools*. Paper presented at the annual meeting of the American Education Research Association, New York City.
- Kim, B. (2007, August). *Cognitive, Behavioral, and Emotional Aspects of Emerging Learning Partnership*. Paper presented at the biennial meeting of the European Association for Research on Learning and Instruction, Budapest, Hungary.
- Zhang, B. (2007, April). *The Alignment of Societal Goals for Science Education, National Syllabi, and Assessments: The Case of Singapore’s O-Level National Science Syllabi and 2006 Science Examinations*. Paper presented at the annual meeting of the American Educational Research Association, Chicago, Illinois.
- Reese, D. D. & Kim, B. (2005, October). *Designing the Design Space: when the Interface Carries Some of the Teaching Load*. Paper presented at the 2005 annual meeting of International Visual Literacy Association, Orlando, Florida.
- Kim, B. (2005, April). *Looking Through Multiple Lenses: Reflection on the Methodological Approach in Learner-Technology-Activity*. Paper presented at the annual meeting of the American Educational Research Association, Montreal, Canada.
- Kim, B., & Hay, K. E. (2004, April). *Creating Universe with Computer: Charting the Structure of Distribution between Learner and a Cognitive Tool*. Paper presented at the annual meeting of the American Educational Research Association, San Diego, CA.
- Kim, B., & Reeves, T. C. (2004, April). *Reframing Research on Learning with Technology: In Search of the Meaning of Cognitive Tools*. Paper presented at the annual meeting of the American Educational Research Association, San Diego, CA.
- Hay, K. E., Kim, B., Roy, T. C. & Apedoe, X. (2004, April). *Virtual Reality Modeling-Based Inquiry: Conceptual Coherence and Alternative Theories Trials*. Paper presented at the annual meeting of the American Educational Research Association, San Diego, CA.
- Apedoe, X., Kim, B., & Hay, K. E. (2003, October). *Virtual Solar System: How do we know if students are learning?* Paper presented at the annual Meeting of the Association of Educational Communications and Technology, Anaheim, CA.
- Allen, S., Roberts, S., Ryu, J., Kim, B., & Mims, C. (2003, October). *Finding Your Niche in AECT: from Graduate Student to Seasoned Professional*. Paper presented at the annual meeting of the Association of Educational Communications and Technology, Anaheim, CA.

- Hay, K. E., Kim, B., Couch, T., Apedoe, X. & Fournillier, J. (2003, April). *Integrated Temporal Multimedia Data Research System: Integrating Qualitative Methods into Digital Video Research*. Paper presented at the annual meeting of the American Educational Research Association, Chicago, IL.
- Kim, B., Elliott, D., & Holschuh, D. (2002, November). *Cognitive Tools and User's Mental Models: Lessons Learned from Usability Testing*. Paper presented at the annual meeting of the Association of Educational Communications and Technology, Dallas, TX.
- Kim, B., & Hay, K. E. (2002, November). *Virtual Solar System as a Cognitive Tool: A Case Study*. Paper presented at the annual meeting of the Association of Educational Communications and Technology, Dallas, TX.
- Hay, K. E., Hickey, D., Elliott, D., Kim, B., & Kaufmann, J. (2002, January). *Integrated temporal multimedia data research system: The present and future of digital tools for research*. Paper presented at the 15th annual QUIG Conference on Interdisciplinary Qualitative Studies, Athens, GA.
- Bhattacharya, K., Wang, S., Kim, B., & Han, S. (2001, November). *Experiencing Web-based Collaborative Learning: Critical Issues and Strategies*. Paper presented at the annual meeting of the Association of Educational Communications and Technology, Atlanta, GA.
- Orey, M., Kim, B., & Tallman, J. (2001, November). *Computers for teachers online: A continuing partnership between Epic Learning and UGA*. Paper presented at the annual meeting of the Association of Educational Communications and Technology, Atlanta, GA.

### Invited Talk/Special Sessions

- Kim, B. (2015, June). *Playing with Gameful Activities and Assessments: Avatars and Experience Points in a Graduate*. An invited talk given at the Faculty of Education. Hong Kong, China: University of Hong Kong.
- Kim B. (2014, April). *In-between learning and play: Where do our children learn and develop?* (In Korean). A public talk given during National Math and Science Competition (NMSC) hosted by the Association of Korean-Canadian Scientists and Engineers (AKCSE). Calgary, AB: University of Calgary.
- Kim, B., & Tan, L. (2011, November). *Informant Design Approach for Educational Game Development*. A talk given to the Department of Communications and New Media, Faculty of Arts and Social Sciences. Singapore: National University of Singapore.
- Kim, B., Lee, T. L., & Lee, J. (2012, November). Voyage to the Age of Dinosaurs project. Demonstration during the Learning Sciences Lab Open House ICCE 2012 November LSL Open house  
<http://www.lsl.nie.edu.sg/icce2012/program/interactive-events/#ie2>
- Kim, B., Tang, M., Ng, L. H., Ng, P., Kim, M. S., Ruffolo, L. R., Wang, X., Lee, J., & Tan, L. (2011, May). *Linking ideas, experience, and contexts of our Earth in and out of classroom: Sharing the approach and experience from the VAD project*. Special Session at The 4th Redesigning Pedagogy International Conference: Transforming Teaching, Inspiring Learning, Singapore.
- Kim, B. (2008, August). *The Use of Interactive and Digital Media (IDM) for Engaged Learning: Voyage to the Age of Dinosaurs*, Invited Presentation at the International Conference on Teaching and Learning with Technology (iCTLT), Singapore.
- Kim, B. & Miao, C. (2007, June). *Serious Immersion and Embodied Learning: Traces of Dinosaurs in Earth System Science*, Invited Presentation at the 2<sup>nd</sup> Symposium on Distributed Learning and Collaboration (DLAC-II), Singapore.

### Workshops/Seminars

- Kim, B. (2016, April). *Creating a playful culture of learning with gameful assessment: Avatars, experience points and boss battles in a graduate course*. Presentation given at the Werklund School of Education, Calgary, AB: University of Calgary.
- Kim, B., Clyde, J. V., & Gupta, D. (2015, March). *Enhancing the Learner Experience with Experience Points: Considerations in Gamifying the Classroom*. Workshop given at the Taylor Institute for Teaching and Learning, Calgary, AB: University of Calgary.
- Kim, B., Ruffolo, L., & Lee, J. (2011, May). *Game-based learning workshop: VAD project*. Workshop with Singapore Polytechnics students. Singapore: National Institute of Education.
- Kim, B. (2011, March). *"Voyage to the Age of Dinosaurs" Project*. OER Workshop on Issues of Scalability. Singapore: National Institute of Education.
- Kim, B., Kim, M. S., Tan, L., Pang A., Wang, X., Lee J., & Ruffolo, L. (2010, February). *Learning with Dinosaurs in and out of School Boundaries*. Interactive Sharing Session, "Informal Learning in and out of Singapore Schools". Singapore: National Institute of Education.
- Kim, B., Kondo, T., Pang, A. & Lee, J. (2009, December). *Playing and learning with dinosaurs in and out of school boundaries*. Interactive event at the 17<sup>th</sup> International Conference on Computers in Education. Hong Kong, China: Asia-Pacific Society for Computers in Education.
- Kim, B., Kim, M. S., Wang, X., Ruffolo, L., Pang A., & Lee J. (2009, November). *Learning Design*. Design Workshop conducted with Catholic High School and Xinmin Secondary School. Singapore: National Institute of Education.

- Kim, B. (2009, July). *Expertise and Learning*. Seminar conducted as part of Educational Theory Seminar Series for the Ministry of Education officers. Singapore: Ministry of Education.
- Kim, B., Kim, M. S., Tan, L., Wang, X., Ruffolo, L., Pang A., & Lee J. (2009, May). *Game story experience*. Design Workshop conducted with Catholic High School and Xinmin Secondary School. Singapore: National Institute of Education.
- Kim, B. (2009, February). *Serious Immersion and Embodied Learning*. NTU School of Communication and Information Seminar Series. Singapore: Nanyang Technological University.
- Kim, B., Kim, M. S., & Tan, H. T. (2009, April). *Modeling what we observe in the sky*. Workshop conducted for Catholic Junior College, Singapore. Puggai, Malaysia: National Institute of Education.
- Kim, B., Tan, L., Kim, M. S., Pang, A., Wang, X., & Lee, J. (2008, November). *Dinosaur game play and ideas*. Design Workshop conducted with Catholic High School and Xinmin Secondary School. Singapore: National Institute of Education.
- Kim, B., Anderson, K., Tan, L., Pang, A., Wang, X., & Lee, J. (2008, May). *Making stories of Earth and dinosaurs*. Design Workshop conducted with Catholic High School and Xinmin Secondary School. Singapore: National Institute of Education.
- Kim, B., Anderson, K., Tan, L., Pang, A., Wang, X., & Lee J. (2008, January). *Learner conceptions*. Design Workshop conducted with Catholic High School and Xinmin Secondary School. Singapore: National Institute of Education.
- Kim, B., Lossman, H. G., & Melia, A. J. (2008, January - February). *Astronomy day: Modeling-based inquiry practices*. Singapore: Science Centre Singapore & National Institute of Education.
- Kim, B. & Lossman, H. G. (2007, October). *3D astronomy modeling for solar system*. Workshop conducted for the educators of Science Centre, Singapore. Singapore: National Institute of Education.
- Kim, B. & Hickey, D. T. (2006, June). *Designing, Assessing, and Evaluating Innovative STEM Instruction using the Virtual Design Center*. Workshop conducted at the 2006 International Conference on Learning Science, Bloomington, Indiana: International Society for Learning Sciences.
- Ruberg, L., Kim B., & Deustua, S. E. (2006, June). *Aligning Student Learning with Astronomy Research: The Virtual Design Center*. Workshop conducted at the 2006 American Astronomical Society annual meeting. Calgary, Canada: AAS.
- Reese, D. D. & Kim, B. (2005, October). *Going beyond: Inspiring the next generation of explorers through NASA's inspiration tools and the Virtual Design Center*. Workshop conducted at the 2005 annual meeting of Association for Educational Technology and Communication, Orlando, Florida: AERA
- Kim, B., & McGee, S. (2005, June). *Doing Scientific Inquiry the Way it is Supposed to Be: Team Research with Emerging NASA E-Education Advanced Learning Technologies*. Workshop conducted at the Computer Support for Collaborative Learning 2005 Conference, Taipei, Taiwan: International Society for Learning Sciences.

## PROJECTS

### University of Calgary

Students as game designers: Exploring the role of students' game design literacies in collaborative project-based learning (10/2015, 12 months)

This project is funded through the Werklund School of Education's Partner Research School Initiative at the University of Calgary (\$16,340).

Project Role: Principal investigator (PI)

Creating a Playful Culture of Learning with Gameful Assessment: Avatars, Experience Points and Boss Battles in a Graduate Course (7/2014, 24 months)

This project is funded through the Werklund School of Education's Teaching Innovation Grant at the University of Calgary (\$12,490).

Project Role: PI (Co-PIs: Jerremie Clyde, Diali Gupta)

Learning with dinosaurs: Understanding the shared spaces and boundary objects for Earth Science education (9/2013, 12 months)

This project is funded through the University of Calgary's Vice-President (Research) starter grant (\$5,000). This is a background research that intends to explore how learners, teachers, experts and museum educators are using the shared spaces (e.g., museum space, natural environment such as badlands) and boundary objects (e.g., scientific findings as exhibitions, fossils), and that seeks for external funding for designing interactive learning environments.

Project Role: PI

## National Institute of Education, Nanyang Technological University

Playing and Learning with Dinosaurs In and Out of School Boundaries: Games, Discourse, Shared Spaces for Earth Science Education (7/2010, 27 months)

This project was funded through the research grant from National Institute of Education's Office of Education Research (OER 29/09 BK, S\$249,980). The purpose of this project was to develop a conceptual framework for Game-integrated Experiential Learning in school context and to follow up on the grant (NRF2007-IDM003-068) focused more on the design and development of an educational game called Voyage to the Age of Dinosaurs (VAD). VAD prototype was not developed to use alone to solve all the learning difficulties within a fantasy setting; instead it intended to connect experiences and activities in and out of the game and in and out of the classroom. Using this framework, we attempted to encourage learners' to connect their own ideas and experiences with geography concepts.

Related Website: <http://isle.lsl.nie.edu.sg/>

Project Role: PI

An Embodied Modeling-Based Inquiry Activity Towards Participatory Learning Environments (9/2010, 24 months)

This project was funded through the research grant from National Institute of Education's Office of Education Research (S\$249,994). Based on what we learned from the recent study (Kim & Kim, 2007-2009), we aimed to explore different modes of representations and student modeling activities as to how they influence teaching and learning. Based on embodied cognition and multimodality, we proposed an Embodied Modeling-Based Inquiry Activity (EMBLA) for bridging the sky-gazing practices and understanding of planetary motions/light. With EMBLA, each mode of modeling engages learners in in-depth inquiry process addressing their prior beliefs and experiences beyond the mere acquisition of factual information.

Project Role: Co-PI

Intelligent Agent-Augmented Multi-User Virtual Environments: Research into Designs for Learning Environments of the Future (10/2008, 36 months)

This project was funded by National Research Foundation, through Ministry of Education Interactive & Digital Media Research and Development program (S\$ 1,696,000). This project conducted a program that integrated computational intelligent agents with the functionality and affordances of a 3D multi-user virtual environment. The first aim of the project was to enhance the functionality of a prototype 3D IAAMUVE (intelligent agent-augmented multi-user virtual environment), called Virtual Singapore, which is a 19<sup>th</sup> century virtual Singapore for secondary science and geography education. The second aim of the project was to conduct learning sciences research with this system to explore ways to enhance IDM enabled science and social studies education in Singapore schools and in teacher education courses at NIE.

Project Role: Co-PI (PI: Chunyan Miao, School of Computer Engineering; Other co-PIs: Chee Kit Looi, Learning Sciences Lab; Mark Chavez, School of Art, Design, and Media; Lane Shen, School of Electrical and Electronic Engineering; Michael J. Jacobson, University of Sydney)

Serious Immersion and Embodied Understanding: Traces of Dinosaurs in Earth System Science (09/2007, 36 months)

This project was funded by National Research Foundation, through Ministry of Education Interactive & Digital Media research programme (NRF2007-IDM003-068, S\$1,034, 040). This project intended to develop, research, and implement a program that addresses important issues in the Earth Science education and will incorporate important design principles of learning, social interactions, and human-computer interactions. This project also created knowledge about how learners immerse themselves into such learning environment and deepen their understanding, how associated emotions affect learning in the prototyped environment, and how knowledge and activities in schools can be extended to informal settings in Singapore context.

Related Website: <http://isle.lsl.nie.edu.sg/>

Project Role: PI (Co-PIs: Chunyan Miao, School of Computer Engineering; Mark Chavez, School of Art, Design, and Media; Lane Shen, School of Electrical and Electronic Engineering)

Virtual Space Exploration: Observing, Modeling, and Understanding Astronomical Phenomena (03/2007, 24 months)

This project was funded through NTU faculty Start-Up Grant (S\$97,530). In collaboration with the Singapore Science Centre, this project intended to provide opportunities for informal education institution to engage public in in-depth inquiry practice in interesting astronomical phenomena. The modeling-based inquiry and the computer software that supports the approach, called Astronomicon, were the main components of this project's approach.

Project Role: PI



Enhancing Inquiry-based Science Learning through Modeling and Visualization Technologies (02/2007, 18 months)

This project was funded through the Learning Sciences Lab (LSL) research funding from Singapore Ministry of Education (MOE) (S\$199,000). The purpose of this project was to investigate how students' experiences with modeling and visualization technologies might enhance their science inquiry skills and content knowledge in core Singapore science subject areas such as physics, biology, and chemistry. The project was an international collaboration with researchers and resources from the Concord Consortium, Northwestern University, and the University of Michigan.

Project Role: Co-PI (PI: Baohui Zhang, Learning Sciences Lab; Other co-PI: Michael J. Jacobson, Learning Sciences Lab)

Virtual worlds and intelligent agents for learning science: Innovative technology and pedagogy for Singaporean schools (11/2006, 18 months with continuation grant)

Funded by LSL/MOE (S\$195,505; S\$49,995), this international project built upon the ongoing River City research project at Harvard University as part of collaboration with computer engineering scientists at Nanyang Technological University and with researchers at the Singapore Learning Sciences Laboratory (LSL). This project developed a Singapore version of the existing US River City environment in which the synthetic characters in the new Singapore River City environment was augmented with advanced agent technologies developed by the NTU research group in order to investigate contextual, situational, social, and emotional dimensions of virtual experiences for learning.

Project Role: Co-PI (PI: Michael J. Jacobson, Learning Sciences Lab and Chunyan Miao, Nanyang Technological University; Other co-PI: Zhiqi Shen, Nanyang Technological University)

### **Center for Educational Technologies, Wheeling Jesuit University**

Classroom of the Future (COTF) (2004-2006)

Funded by National Aeronautics and Space Administration (NASA), COTF supports various research and development efforts in Science, Technology, Engineering, Mathematics (STEM) education. The theme of NASA's missions then was to inspire the next generation of explorers. During 2005, COTF's efforts were focused on defining the construct of inspiration, developing hypotheses about learner inspiration, and testing the hypotheses.

Related Website: <http://www.cotf.edu>

Project Role: Researcher (Literature review and design concept development)

Virtual Design Center (VDC), COTF (2004-2006)

Funded by NASA, the VDC project was operated under COTF program. It was an effort to provide research-based educational technology design guidelines for educational researchers, NASA designers, and educational technology designers.

Related Website: <http://vdc.cet.edu>

Project Role: Project manager (Development and revision of the VDC content, facilitation of the VDC workshops, facilitation of advisory board activity, etc.)

Mid-Atlantic Region Space Science Broker (MARSSB) Program (2006)

Funded by NASA, the MARSSB outreach specialists bring scientists and educators together to convey NASA space science discoveries to your students and public audience.

Related Website: <http://marssb.cet.edu> (link no longer active)

Project Role: Researcher (Working with MARSSB project personnel to introduce VDC to scientists and educators in various outreach events)

InSTEP (Integrating Strategies and Technology in Education Practice) (2006)

Funded by Department of Education, InSTEP program provided a dynamic multi-tiered professional development program to West Virginia K-12 teachers. The effort was focused on developing an online master's program provided by Wheeling Jesuit University.

Related Websites: <http://www3.cet.edu/instep/>

Project Role: Researcher (Course development)

NASA Learning Technologies (NLT) Project Pilot Study, COTF (2005)

The NLT funded activities and collaborated with endeavours that incorporate NASA content with revolutionary technologies or innovative use of entrenched technologies to enhance education in the areas of math and science. The COTF agreed to provide evaluation for the four NLT tools' potential for learning.

Related Website: <http://www.nasa.gov/offices/education/programs/national/ltp/home/>

Project Role: Lead on designing and conducting evaluation studies

Earth System Science Education Alliance (ESSEA) (2005)

Funded by National Aeronautics and Space Administration (NASA), the ESSEA was a partnership among

universities, colleges, and science education organizations dedicated to improving Earth science education. The effort focused on the revamping the ESSEA courses by integrating more NASA resources and conducting design-based research.

Related Website: <http://www.cet.edu/essea> (link no longer active)

Project Role: Research design, literature review, and report writing

### **The University of Georgia**

Virtual Reality Modeling Project (VRMP), Learning and Performance Research Laboratory (LPSL) (2001 - 2004)

Funded by National Science Foundation (NSF), VRMP was an undergraduate Astronomy lab reform effort. Main features of this lab included students' 3D dynamic modeling and inquiry-based approach in order to answer fundamental questions about planetary light and motion.

Principal Investigators: Kenneth E. Hay, LPSL & Instructional Technology, UGA and J. Scott Shaw, Physics and Astronomy, UGA

Related Website: <http://cybernet.com/programs/368/index.html>

Project Role: Assisted grant proposal (supporting website development and proposal editing)

Lead instructional designer (curriculum development and software design)

Researcher (data collection and analysis)

Integrated Temporal Multimedia Data (ITMD) Research System, LPSL (2000 - 2004)

Funded by NSF, ITMD project was an effort to advance a conceptual and technological system for the collection, storing, indexing, synchronization, visualization, collaborative and interactive analyzing, and reporting of temporal digital multimedia data. The highlights of this system include collecting multiple simultaneous tracks of data (audio, video, computer logs, computer screens, etc.) in digital form, compressing the data in real-time so that it can be easily stored and access, and then mixing the data together in the collaborative web-based analysis phase of the research.

Principal Investigator: Kenneth E. Hay

Project Role: Assisted grant proposal (initial testing of technology and process, supporting website development, and proposal editing)

Researcher (collecting and processing data, developing codes, coding and analyzing data, training new coders, and improving collection and analysis systems)

Fossilization Web-Based Learning Environment, Cognitive Tool Team at IT, UGA (2001 - 2002)

On the initiative of UGA Instructional Technology department professors and graduate students to developed an effective cognitive tool for learning, this web-based learning environment was designed to help 10th graders have more clear understanding about the concept of fossilization. This web-based tool, being used in Athens Academy in Athens Georgia, featured situational paths of exploring causes of fossilization, including ecological and physical burial conditions.

Principal Investigators: Thomas C. Reeves, Instructional Technology, UGA and Jack Kridler, Athens Academy

Related Website: <http://iris.nyit.edu/~skwang/fossil/>

Project Roles: Instructional designer (analysis of needs and content, and design of learning interactions)

Virtual Gorilla Modeling Project, LPSL (Spring 2001 - Summer 2002)

Funded by NSF, the Virtual Gorilla project provided an environment to explore gorilla motion and behavior using innovative Virtual Reality (VR) modeling tools. Students analyzed the actual behaviors of gorillas at the zoo (Atlanta Zoo), modelled their behaviors using computer modeling, and experienced as a juvenile gorilla in an immersive VR environment.

Principal Investigator: Kenneth E. Hay

Related Website: <http://cybernet.com/programs/370/index.html>

Project Roles: Assisted grant proposal (supporting website development and proposal editing)

Lead instructional designer (design of 3D behavioral modeling tool)

Virtual Geophysical Exploration Environment (VGEE), LPSL (Fall 2000 - Spring 2001)

Funded by NSF, VGEE was an inquiry-based geosciences learning environment where students used high-end visualization tools to analyze authentic data in order to understand complex weather phenomena.

Principal Investigators: Mary Marlino ([marlino@ucar.edu](mailto:marlino@ucar.edu)), University Corporation for Atmospheric Research (UCAR), Kenneth E. Hay, UGA, Don Middleton, UCAR, and Mohan Ramamurthy and Robert Wilhelmson, Atmospheric Science, University of Illinois at Urbana-Champaign,

Related Website: <http://www.dpc.ucar.edu/vgee/>

Project Roles: Instructional designer (developing the meta-context of the learning environment)

Conducted formative research (conducting testing and interviews with prototypes)

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## TEACHING AND SUPERVISION

### Graduate Courses

EDER 603/701: Advanced Research Methods (Design-Based Research), University of Calgary (Winter 2015)  
 EDER 701: Advanced Research Methods (Action-Based Research), University of Calgary (Winter 2014)  
 EDER 679: Special Topics in Educational Technology (Design-Based Learning), University of Calgary (Summer 2014)  
 EDER 679: Special Topics in Educational Technology (Digital Game-Based Learning), University of Calgary (Summer 2013, 2014, 2015)  
 EDER 775: Advanced Seminar on Technology-Enabled Learning Environments, University of Calgary (Winter 2013, 2014, Summer 2015)  
 EDER 673: Instructional Design, University of Calgary (Winter 2013)  
 MLT 808: Design of Interactive Learning Environment, NIE/NTU, Singapore (Spring 2008, Fall 2010, Spring 2011, Fall 2011, Spring 2012)  
 MLT 807: Cognitive Foundations of Learning Sciences, NIE/NTU, Singapore (Fall 2009, Spring 2010)  
 MLT 801: Foundations of Learning and Knowledge Building, NIE/NTU, Singapore (Fall 2007, Fall 2008, Spring 2009)  
 Co-Instructor, EDIT 6200: Learning Environment Design I, UGA, Athens, GA (Fall 2003)  
 Co-Instructor, EDIT 6180: Instructional Development, UGA, Athens, GA (Spring 2003)  
 Co-Instructor, EDIT 6100: Introduction to Instructional Technology, UGA, Athens, GA (Spring 2002)

### Undergraduate Courses

EDUC 404: Field Experience I (Fall 2013)  
 DED 107: ICT for Meaningful Learning, NIE/NTU, Singapore (Fall 2011, Fall 2012)

### Diploma Courses

QED 527: ICT for Meaningful Learning, NIE/NTU, Singapore (Fall 2012)  
 QED 552: ICT for Engaged Learning, NIE/NTU, Singapore (Fall 2006, Spring 2007)

### Short Courses/Teaching Assistantship

Co-Instructor, Deep Learning with ICT in Teaching and Learning, Professional Development Workshop for St. Andrew's Junior College, Singapore (May, 2012)  
 Guest Instructor, Leadership in Education Program course taught by Katherine Bielazyc, NIE/NTU, Singapore (Spring 2010)  
 Instructor, Evaluation Planning Workshop for UGA Instructional Design and Technology Certificate Program, Lawrenceville, GA (Fall 2003)  
 Instructor, Macromedia Fireworks and Flash, Media Magic Inc., Atlanta, GA (Spring 2000)  
 Co-Instructor, WebCT Workshop, Medical College of Georgia Nursing School, Athens, GA (Fall 1999)  
 Teaching Assistant, InTech (Integrating Technology) Programs, Educational Technology Training Center (ETTC), UGA, Athens, GA (Fall 1998 - Spring 2000)

### Student Supervision

Diali Gupta as a supervisor (Ph.D. in progress), University of Calgary, Canada  
 Reyhaneh Bastani as a supervisor (Ph.D. in progress), University of Calgary, Canada  
 Jim Loughlin as a supervisor (Ed.D. in progress), University of Calgary, Canada  
 Paromita Trask as a supervisor (Ed.D. in progress), University of Calgary, Canada  
 Chris Ostrowski as a co-supervisor (M.A. in progress), University of Calgary, Canada

Flora Liu as a supervisory committee member (Ph.D. in progress), University of Calgary, Canada  
 Deborah Lambert as a supervisory committee member (Ph.D. in progress), University of Calgary, Canada  
 Pamela Heath as a supervisory committee member (Ed.D. in progress), University of Calgary, Canada  
 Edie Heaven as a supervisory committee member (Ed.D. in progress), University of Calgary, Canada  
 Annette Melgosa as a supervisory committee member (Ed.D. in progress), University of Calgary, Canada  
 Rob Carver as a supervisory committee member (Ed.D. in progress), University of Calgary, Canada

Jason Lee Wen Yau as a supervisor (Received Ph.D. in May, 2013), Thesis Title: Intercultural Learning and Social Support Through Social Networking Sites: An Exploration on Facebook, NIE/NTU, Singapore

### Students' Theses Examined

Sutapa Dey's Master of Science (MSc in Computer Science, passed, 2014), Thesis Title: Towards Code Obfuscation Through Video Game Crowdsourcing, University of Calgary, Canada.

Robert Louis' Master of Art (M.A. thesis passed, 2013), Thesis Title: A Descriptive Case Study of Meaningful Online Learning Experiences in the 3D Virtual Game "Quest Atlantis", University of Calgary, Canada.

Melissa Ng Mei Pao's Candidacy (Ph.D. in progress in 2012), Thesis Title: A Case Study on Mathematical Discourse in Mathematical Problem Solving, NIE/NTU, Singapore.

Ngau Aik Fun's Candidacy (Received M.A. in 2010), Thesis Title: Learning Mathematics Through Epistemic Games, NIE/NTU, Singapore.

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## HONORS AND AWARDS

University of Calgary Teaching Awards nominee in the Award for Full-Time Academic Staff category, 2015

Best paper award nominee at the 19<sup>th</sup> International Conference on Computers in Education, Chiang Mai, Thailand, 2011  
*"Why we should design educational games with learners: the affordances of informant design"*

Best paper award (2<sup>nd</sup> author) at 2011 Global Learn Conference, Melbourne, Australia  
*"Creating the intercultural learning narrative using social network sites status updates: An innovative approach in using social media"*

UGA-Invited Student Participant at the Professors of Instructional Design and Technology Annual Meeting, 2004

Distinguished doctoral student nominee, University of Georgia, 2004

University-wide Dissertation Completion Award, University of Georgia, 2003 - 2004

Excellence in Media Production, AECT International Student Media Festival, 2003  
 For the production of Fossilization Web-based Learning Environment

AECT Cochran Intern Award, ECT Foundation, 2002

University-wide Research Assistant Scholarship, University of Georgia, 2000 - 2002

M.Ed. Distinguished Student, University of Georgia, 2000

Study Abroad Scholarship, Hanyang University, 1998 - 2000

Merit Scholarship, Hanyang University, 1997

LG Global Challenger (<http://challenger.lg.co.kr/>), Group LG, 1996  
 Third prize on team report

Merit Scholarship, Hanyang University, 1993

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## OTHER PROFESSIONAL EXPERIENCE

Evaluator, Program proposal submitted at New York Institute of Technology (2009)

Design Researcher, Center for Educational Technologies, Wheeling Jesuit University (2004-2006)  
 Research and development in various programs, including NASA-Sponsored Classroom of the Future program

Research Assistant, Learning and Performance Support Laboratory (1999 – 2004)  
 Maintained and updated LPSL website/Led instructional design projects/Conducted research projects/Designed graphics for project posters/Edited proposals for grants/Developed websites for grants/Co-authored proposals and papers for Conferences

Graduate Assistant, Educational Technology Training Center, UGA (1998 – 2001)  
 Assisted InTech training sessions/Developed step-by-step course guides/Redesigned and maintained ETTC website/Developed teaching materials for an MS Outlook course/Designed database for National Association of Research in Science Teaching (NARST)/Developed online data input forms for NARST/Developed InTech training teacher questionnaire database and online forms

Translator: a case study book for the International Organization for Standardization (ISO) from English to Korean, ISO Consulting (2000)

Web Designer: an educational and personal webpage, Department of Recreation and Leisure Studies, UGA (1999)

Transcriber: video recording of project management course, Samsung Data System (1998)

Translator: college students' English textbook from English to Korean, Hanyang University (1998)

Translator: employee training manuals from English to Korean, Samsung HRD Center (1997)

Storyboard designer, Samsung Pico Plus Educational Computer Books, Open Production (1996)

Research Assistant, Institute of Educational Technology, Hanyang University (1993 - 1994)  
 Designed and developed corporate training materials and educational multimedia

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## SERVICES

### University Committees

Research Advisory Committee (RAC), Werklund School of Education (2014-present)

Student Academic Appeals Committee (SAAC), Werklund School of Education (2014-present)

Learning Technologies Task Force, University of Calgary (2013-2014)  
 Learning Sciences Lab Professional Events Committee, National Institute of Education (2009-2010)  
 Ad-hoc committees, Werklund School of Education (2013-2015): Graduate Student Conference Travel Grant review committees, Graduate Award Competition (GAC) review committee

### **Scholarly Services for Journals and Professional Organizations**

Editorial (2013-present)

Editorial board member of Interactive Learning Environments (ILE) (2015-)

ILE guest editor for a special issue (Learner-generated designs in participatory culture)(2013-2015)

Journal manuscript reviews (2010-present)

Journal of the Learning Sciences (JLS) / Instructional Science (IS) / Research and Practice in Technology-Enhanced Learning (RPTEL) / International Journal of Arts and Technology (iJART) / International Journal of Mobile Learning and Organisation (iJMLO)/Australian Journal of Education (AJE) / The Asia-Pacific Education Researcher (TAPE) / Journal of Computers in Education (JLCE)

Review of chapters in edited books

Educational Innovations and Contemporary Technologies: Enhancing Teaching and Learning (Redmond, Lock, & Danaher 2015)

Handbook of Research on Didactic Strategies and Technologies for Education: Incorporating Advancements (Pumilia-Gnarini, Favaron, Pacetti, Bishop, & Guerra, 2012)

Reviews for the meetings of professional organizations (2001-present)

American Educational Research Association (AERA) / International Conference on Learning Sciences (ICLS) / International Conference on Computer-Supported Collaborative Learning (CSCL) / International Conference on Computers in Education (ICCE) / IEEE International Conference on Advanced Learning Technologies (iCALT) / The Canadian Society for the Study of Education (CSSE)

Reviews for Singapore local conferences (2008-2012)

Redesigning Pedagogies Conference organized by NIE/ International Conference on Teaching and Learning with Technology (iCTLT) conference organized by Singapore Ministry of Education

### **Conferences Committees**

International Conference on Computers in Education, program committee, session chairs (2007-present)

International Conference on Computers in Education, Tutorial co-chair (2007)

American Educational Research Association, IT-SIG session chair (2006)

NIE LEGO Engineering Conference, Panel presentation forum chair (2006)

IT design Conference committee, UGA, Athens, GA (2001)

Assistant Coordinator and Editor, NARST (National Association of Research in Science Teaching) Annual Conferences programs (1999-2000)

Volunteer for Annual Meeting of Association for Educational Communications and Technology, Atlanta, GA (2001)

### **Other Services**

Internal reviews of research proposals and manuscripts (2009-present)

Werklund School of Education writing group members' manuscripts

NIE Office of Education Research's call for proposals/Colleagues' proposals/manuscripts/presentations

Participation in research projects, Werklund School of Education, University of Calgary (2014-present)

Mentor at the first Startup Weekend EDU, Calgary (2014)

Discussion facilitation/resource person for Rocky View Schools/Calgary Science School workshop (2013)

Organizing International Advisor's Visit to NIE/LSL, NIE (2011)

Facilitator, Professional development on learning and reflective teaching for Sunday School teachers, Korean Catholic Community at the Cathedral of Good Shepherd, Singapore (2009)

Meeting with/presenting for NIE visitors (MOE, A\*Star, various universities and research centers from other countries, prospective employees, etc.), NIE (2007-2010)

Hosting visitors from Hanyang University, NIE (2009)

Helping students in their research on educational games (Catholic Junior College), NIE (2008)

Helping with the faculty's organizing study trip to Korea (Zhonghua Secondary School), NIE (2008)

Studio workshops for Macromedia Fireworks, UGA (1999-2000)

Hosting BK21 Team's visit to UGA from Hanyang University, Korea (Spring 2002)

Studio comprehensive exam panelist, Instructional Technology, UGA (Spring & Fall 2002, Spring 2003)

Faculty Search Committee, Instructional Technology, UGA (Fall 2001-Spring 2002)

Webmaster for the Instructional Technology Student Association, UGA (Fall 2000- Spring 2001)

Web Developer, ITSA book exchange section, UGA (Fall 2000)

### **Volunteer to Local Community**

Choir member, St. Anne's Catholic Church, Calgary, Canada (2012-Present)

Volunteer to Drop-in Centre, Calgary, Canada (2013)

Choir member, treasurer, & substitute organist, Cathedral of Good Shepherd, Singapore (2006-2012)

Committee Member, Catholic Research Centre (School Family Education Program), Singapore (2007-2009)

Lay counselor, Family Life Society, Singapore (2007-2009)

Volunteer, Junior League of Wheeling, West Virginia (2005-2006)

Monitor, Reading For the Blind and Dyslexic, UGA (2002-2003)

Co-Chair, Korean Catholic Community, UGA (2001)

Editor, Newsletter for Korean Catholic Community, UGA (1999-2000)

Web developer, Korean Language Program, UGA (Fall 1998)

Monitor, Children's Cartoon Movies, YMCA Korea (1997)

### **PROFESSIONAL MEMBERSHIP**

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The Canadian Society for the Study of Education (CSSE)	2014-Present
International Society of the Learning Sciences (ISLS)	2002-Present
Asia-Pacific Society for Computers in Education (APSCE)	2006-Present
American Educational Research Association (AERA)	1999-Present
European Association for Research on Learning and Instruction (EARLI)	2007-2009
International Visual Literacy Association (IVLA)	2005-2006
Association for the Advancement of Computing in Education (AACE)	2002-2003
Association for Educational Communications and Technology (AECT)	1999-2006