

## **Dr. Watcharee Ketpichainarong**

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**CURRENT EMPLOYMENT:** Assistant Professor

**INSTITUTION:** Institute for Innovative Learning, Mahidol University  
999 Phuttamonthon 4 Road, Salaya, Nakhon Pathom, 73170 Thailand

### **ACADEMIC QUALIFICATIONS:**

2009 Ph.D. (Science and Technology Education), Mahidol University, Thailand  
2004 Diploma (Teaching Profession) Mahidol University, Thailand  
2003 B.Sc. (Biology), Mahidol University, Thailand

### **PROFESSIONAL MEMBERSHIPS:**

The Thai Teacher Council

### **ACADEMIC APPOINTMENT AND TEACHING:**

2013 - Present Assistant Professor, Science and Technology Education Program, Mahidol University  
(March 29, 2013)  
2009 - 2013 Instructor, Science and Technology Education Program, Mahidol University

### **RESEARCH EXPERIENCES:**

2012 - Present **Pohpanpunya Project** (Investigator)  
Granted by The Thailand Research Fund and Kasikornbank Public Company Limited  
2013 - 2014 **Teacher Coaching Project** (Investigator)  
Granted by The Thailand Research Fund and Office of the Basic Education  
Commission  
2007 – 2008 Science education research at Centre for Science and Technology Education Research,  
University of Waikato, Hamilton, New Zealand.

### **SCHOLARSHIP and WARDS:**

2015 Outstanding Poster Presentation Award from the 2nd International Conference on  
Innovation in Education  
1999 - 2009 the Project for Promotion of Science and Mathematics Talented Teachers (PSMT) of  
the Institute for the Promotion of Teaching Science and Technology (IPST), Thailand

### **AREA OF INTEREST:**

- 1) Instructional materials and approaches for interdisciplinary teaching
- 2) Multimedia for teaching and learning (biology/life science)
- 3) Science teacher professional development
- 4) Active learning (inquiry, problem-based learning, project-based learning, research-based learning, game-based learning etc.)
- 5) Technology enhanced learning

## SELECTED PUBLICATIONS:

### 1. *International Papers*

- 1) Choopan, W., Liewrian, W., **Ketpichainarong, W.**, & Panijpan, B. (2016). A demonstration device to simulate the radial velocity method for exoplanet detection. *Physics Education*, 51(4), 044001 (7pp)
- 2) Noyudom, A., & **Ketpichainarong, W.\*** (2015). Using game activities as assessment tools for evaluating nursing students' understanding on tracheostomy care. *The International Journal of Assessment and Evaluation*, 21(3-4), 9-23.
- 3) Sopita Jansri, S., Tippins, D.J., & **Ketpichainarong, W.** (2014). The development of a mini-celestial sphere model to enhance high school students conceptual understanding of astronomical phenomena. *Journal and Review of Astronomy Education and Outreach*, 1(2), A41- 65.
- 4) Jeenjenkit, U.\*, Ruenwongsa, P., Jittam, P., **Ketpichainarong, W.**, & Panijpan, B. (2011). A Guided-inquiry learning unit on the Dushman reaction for determining iodate in salt. *Journal of Srinakharinwirot University*, 3(1), 327-331.
- 5) Pewnim, K., **Ketpichainarong, W.**, Panijpan, B & Ruenwongsa, P. (2011). Creating young scientists through community science projects. *Procedia Social and Behavioral Science*, 15, 2956-2962.
- 6) Choopan, W., **Ketpichainarong, W.**, Laosinchai, P. & **Panijpan, B. (2011).** A Demonstration Set-up to Simulate Detection of Planets outside the Solar System. *Physics Education*, 46(5), 554-558.
- 7) Pewnim, K., **Ketpichainarong, W.**, Panijpan, B, & Ruenwongsa, P. (2011). Biocontrol of insect pests in the rice field: A learning unit about environmental problems for secondary school students. *The International Journal of Learning*, 18(2), 219-223.
- 8) Pewnim, K., **Ketpichainarong, W.**, Panijpan, B, & Ruenwongsa, P. (2011). Biocontrol of insect pests in the rice field: A learning unit about environmental problems for secondary school students. *The International Journal of Learning*, 18(2), 219-223
- 9) Nuangsaeng, B., **Ketpichainarong, W.**, Ruenwongsa, P., Panijpan, B, & Niemi, K.J. (2011). Promoting inquiry-based teaching practices through an aquatic toxicology laboratory. *The International Journal of Learning*, 17(12), 161-180.
- 10) Piyayodilokchai H., Ruenwongsa, P., **Ketpichainarong W.**, Laosinchai, P., Panjaburee, P\*. (August, 2010). Promoting students' understanding of SQL in a database management course: A learning cycle approach. *The International Journal of Learning*, 17(11), 325-337
- 11) Wannawichitra, C., Ruenwongsa, P., **Ketpichainarong, W.**, & Jittam, P.\* (2010). Development of an integrated learning unit for enhancing awareness and conceptual understanding of global warming in secondary students. *The International Journal of Learning*, 17(11), 399-415
- 12) To-im, J., Tianchai, C., Tianchai, N., **Ketpichainarong, W.**, Jittam, P., Sriwattanarohtai, N., & Ruenwongsa, P. (2010). Using a Local Water Problem as Case-based Scenario to Encourage Thai Grade 8 Students' Learning of Science. *The International Journal of Learning*, 17(6), 157-163.
- 13) Pewnim, K., **Ketpichainarong, W.\***, & Ruenwongsa, P. (2010) Bringing science to community: A STS-based learning unit on biocontrol for secondary school students. *The International Journal of Learning*, 17(4), 29-44
- 14) **Ketpichainarong, W.**, Jittam, P\*, Ruenwongsa, P., & Panijpan, B. (2010). Addressing widespread iodine deficiency disorders: A serious health problem in Thailand and beyond. *Journal of Chemical Education*, 87(7), 662-664.
- 15) **Ketpichainarong, W.**, Ruenwongsa, P., & Panijpan, B. (2009). Enhanced learning of biotechnology students by an inquiry based cellulase laboratory. *International Journal of Environmental and Science Education*, 5(2), 169-187.
- 16) **Ketpichainarong, W.**, Ruenwongsa, P.\*, & Panijpan, B. (2009). Enhancing student conceptualization of enzyme activity using a cellulose digesting enzyme. *International Journal of Learning*, 16(2), 17-31.

## 2. *International Conference Proceedings*

- 1) Sukumanan, S., Sriwattanarothai, N., & **Ketpichainarong, W.** (2019, 1-3 April). The ant colony board game for promoting symbiotic relationship understanding. *Proceedings of 2019 International Symposium on Education and Psychology (ISEP 2019)*, Fukuoka, Japan.
- 2) Gitgetpong, L. & **Ketpichainarong, W.** (2017, November 24 -25). Exploring students' understanding on food chain, food web, animal diversity and natural impact on mangrove ecosystem and assessing students' attitude toward the developed board game activity. *Proceedings of the 3rd International Conference on Innovation in Education*, Nakhon Pathom, Thailand, pp.104-110.
- 3) Drakpa, R., Sriwattanarothai, N., **Ketpichainarong, W.**, & Jittam, P. (2016, 27-29 January). Active learning unit to promote students' understanding of endocrine system and hormones: A case study in grade 10 Bhutanese students. *Proceedings of the 5<sup>th</sup> International Conference on Learning Innovation in Science and Technology (ICLIST 2016)*, Pattaya, Thailand, pp.10-19.
- 4) Yangki, T., Jittam, P., & **Ketpichainarong, W.\*** (2015, March 2-4). Promoting students' understanding on human eye concepts through hands-on model based learning cycle unit. *Proceeding in the 9th International Technology, Education and Development Conference*, Madrid, Spain.
- 5) **Ketpichainarong, W.**, Sriwattanarothai, N., & Jittam, P. (2015, March 16-18). Teacher perceptions on adapting contemplative education concepts used in the classroom: A case study. In *Proceedings from the 2<sup>nd</sup> International Conference on Innovation in Education held at Learning Center, Mahidol University, Nakhon Pathom, Thailand*.
- 6) Jittam, P., Kaewkhong, K., Chenprakhon, P., Srisawasdi, N., **Ketpichainarong, W.**, Panijpan, B., & Ruenwongsa, P. (2006, November). A simple spectroscope for chemical and biochemical analysis. Paper presented at ICASE Asian Symposium, Singapore.
- 7) Panijpan, B., Ruenwongsa, P., Jittam, P., **Ketpichainarong, W.**, & Sachadecha, P. (2005, April). Community-based hands-on integrated science/technology projects. Paper presented at The ICASE International Workshop on Promoting Scientific and Technological Literacy Through Science Toys and Out-of-School Science Activities, Choburi province, Thailand.

## 3. *International Workshop*

- 1) **Ketpichainarong, W.**, & Sriwattanarothai, N. (2015, 17 March). Improving Thinking Skills through Active Learning Strategies. *Workshop at the 2<sup>nd</sup> International Conference on Innovation in Education (ICIE 2015)*, Nakhon Pathom, Thailand.