

# Journal of Information and Learning

Volume 31 Issue 3 September-December 2020

■ ISSN 2697-6587 ■ E-ISSN 2730-2202

## ■ Aims and Scope

Journal of Information and Learning [JIL] is a scholarly journal that addresses the following themes: library and information science, information management and knowledge management, library and information center management, information technology and information system, instructional systems design, educational technology, instructional media and innovations, learning environment and resource administration, and other related fields.

## ■ Publication Frequency

Issue 1 January-April  
Issue 2 May-August  
Issue 3 September-December

## ■ Sources of Support

Office of Academic Resources,  
Prince of Songkla University, Pattani Campus

## ■ Publisher

Division of Technology and Learning Innovation,  
Office of Academic Resources,  
Prince of Songkla University, Pattani Campus

## ■ Mailing Address

Journal of Information and Learning, Office of Academic Resources, Prince of Songkla University, Pattani Campus  
181 Charoenpradit Road, Rusamilae Subdistrict, Mueang District, Pattani Province 94000, Thailand

## Submission ■

<https://so04.tci-thaijo.org/index.php/jil>

## Peer Review Process ■

Any manuscript to be accepted for publication must have been reviewed and approved by at least two peer reviewers in that particular field or related fields. The journal has a double-blind peer review policy which means that neither the peer reviewer nor the author knows the identity of each other.

## Types of articles ■

Research Article  
Review Article  
Book Review

## Languages for Publication ■

English and Thai

## Publication Fee ■

The author must pay the publication fee of 3,000 baht per published article.

## Open Access Policy ■

This journal provides immediate open access to its content on the principle that making research freely available to the public supports a greater global exchange of knowledge.

## ■ Copyright Notice

The Journal of Information and Learning is operated by the Office of Academic Resources, Prince of Songkla University. All articles published in the journal are protected by Thailand copyright law. This copyright covers the exclusive rights to share, reproduce and distribute the article, including in electronic forms, reprints, translations, photographic reproductions, or similar. Authors own copyrights in the works they have created as well as the Office of Academic Resources. The Journal reserves the right to edit the language of papers accepted for publication for clarity and correctness, as well as to make formal changes to ensure compliance with the journal's guidelines. All authors must take public responsibility for the content of their paper.



## Editorial Board

Journal of Information and Learning

### ■ Adviser

Prof.Sanit Aksornkoe, Ph.D.  
Chairman of the National Economics and Social Development Council of Thailand

Asst.Prof.Montira Leelakriangsak, Ph.D.  
Vice President for Academic Affairs, Prince of Songkla University, Thailand

Asst.Prof.Somporn Chuai-aree, Ph.D.  
Director of Office of Academic Resources, Prince of Songkla University, Thailand

### ■ Editor

Assoc.Prof.Imjit Lerttongsonbat  
Prince of Songkla University, Thailand

### ■ Editorial Team

Prof.Chutima Sacchanand, Ph.D.  
School of Liberal Arts, Sukhothai Thammathirat Open University, Thailand

Prof.Farok Bin Zakaria, Ph.D.  
College of Islamic Studies, Prince of Songkla University, Thailand

Prof.Kulthida Tuamsuk, Ph.D.  
Faculty of Humanities and Social Sciences, Khon Kaen University, Thailand

Prof.Prachyanun Nilsook, Ph.D.  
Faculty of Technical Education, King Mongkut's University of Technology North Bangkok, Thailand

Jane L. Howland, Ph.D.  
University of Missouri, Columbia

Assoc.Prof.Anirut Satiman, Ph.D.  
Faculty of Education, Silpakorn University, Thailand

Assoc.Prof.Jaitip Nasongkhla, Ph.D.  
Faculty of Education, Chulalongkorn University, Thailand

Assoc.Prof.Jantima Kheokao, Ph.D.  
School of Communication Arts, University of the Thai Chamber of Commerce, Thailand

Assoc.Prof.Jittavee Khlaisang, Ph.D.  
Faculty of Education, Chulalongkorn University, Thailand

Assoc.Prof.Lampang Manmart, Ph.D.  
Faculty of Humanities and Social Sciences, Khon Kaen University, Thailand

Assoc.Prof.Namtip Wipawin, Ph.D.  
School of Liberal Arts, Sukhothai Thammathirat Open University, Thailand

Assoc.Prof.Nattaphon Rampai, Ph.D.  
Faculty of Education, Kasetsart University, Thailand

Assoc.Prof.Panyarak Ngamsritragul  
Faculty of Engineering, Prince of Songkla University, Thailand

Assoc.Prof.Sumalee Chaijaroen, Ph.D.  
Faculty of Education, Khon Kaen University, Thailand

Assoc.Prof.Wichai Napapongs, Ph.D.  
Faculty of Education, Prince of Songkla University, Thailand

Asst.Prof.Denpong Soodphakdee, Ph.D.  
Faculty of Engineering, Khon Kaen University, Thailand

Asst.Prof.Pimrumpai Premsmi, Ph.D.  
Faculty of Arts, Chulalongkorn University, Thailand

Supoet Srinutapong, Ph.D.  
Microsoft Thailand, Thailand

### Academic Section ■

Asst.Prof.Salang Musikasuwan, Ph.D.  
Faculty of Science and Technology,  
Prince of Songkla University, Thailand

Chanuwan Phetkla, Ph.D.  
Faculty of Humanities and Social Sciences,  
Prince of Songkla University, Thailand

### Journal Manager ■

Khanitsorn Rakjitr  
Office of Academic Resources,  
Prince of Songkla University, Thailand

### Management Section ■

Amornpan Pattaro  
Kulwadee Saraporn  
Jutarat Panphadung  
Nichada Nualla-ong  
Nusra Tokse  
Patt Emmawat  
Raweewon Khampol  
Salisa Leamsuwan  
Vitchayaporn Fuengfukajorn  
Office of Academic Resources,  
Prince of Songkla University, Thailand



## Table of Contents

Volume 31, Issue 3, September-December, 2020

Research  
Article

- The Development of Web-Based Thai Teaching Training Course by Using Tales for Teachers of Office of the Basic Education Commission 1 ■

*Teerat Doungjino and Sunchai Pattanasith*

- Effects of Using Augmented Reality for Improving Learning Achievement on Arabic Consonant Pronunciation of Grade 3 Students 11 ■

*Rusdee Waenasae, Wichai Napapongs, Ophat Kaosaiyaporn, and Ibrahim Tehhae*

- Development of 5E Flipped Learning Model with Infographic Design Process to Enhance Science Process Skills and Visual Literacy of Lower Secondary School Students 25 ■

*Pantira Khanhachai and Jinta-vee Khlaisang*

- QR Code for Equipment Online Database Application of the Faculty of Public Health, Naresuan University 37 ■

*Jessada Paojeen and Rujroad Kaewurai*

■ The Concepts of Challenge Based Learning and Creativity Based Learning in the 21st Century	47 ■
<i>Chamaiporn Inkaew and Wichai Napapongs</i>	

■ An Instructional Approach to Encourage Systems Thinking with Microsoft Office 365 Education Tools	56 ■
<i>Thanin Intharawiset, Kittipong Phumpuang, Rujroad Kaewurai, and Supanees Sengsri</i>	