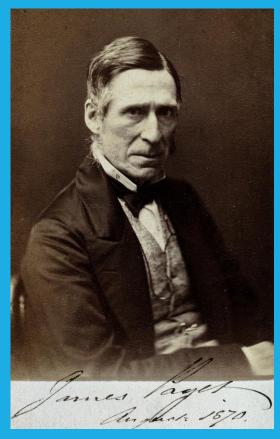
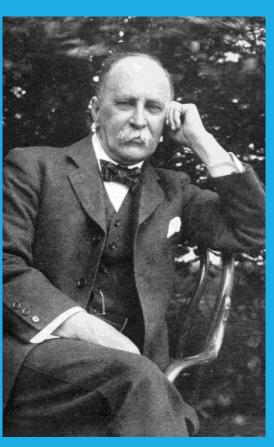


Dr. Jingjing Lin

Assistant professor, Center for IT-based Education, Toyohashi University of Technology



Sir James Paget



Sir William Osler

A group of individuals who meet regularly to critically evaluate recent articles in the academic literature. Usually organized around a defined subject in basic or applied research.

2

Research literacy

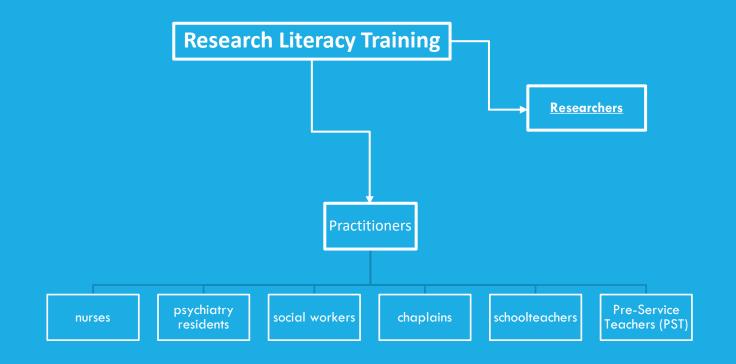
Domains

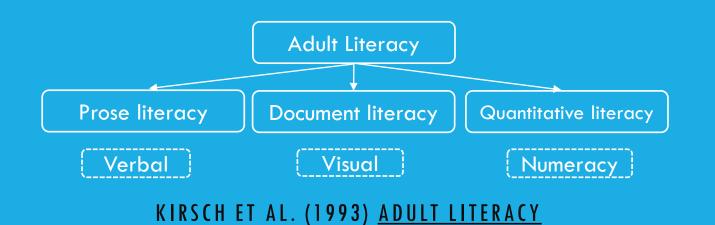
Education sciences

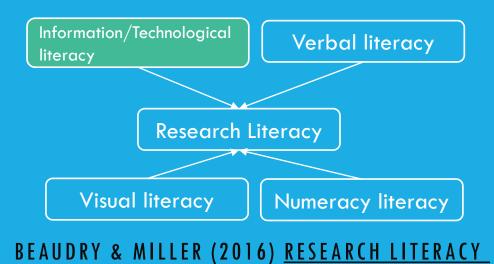
Medicine, nursing, health sciences

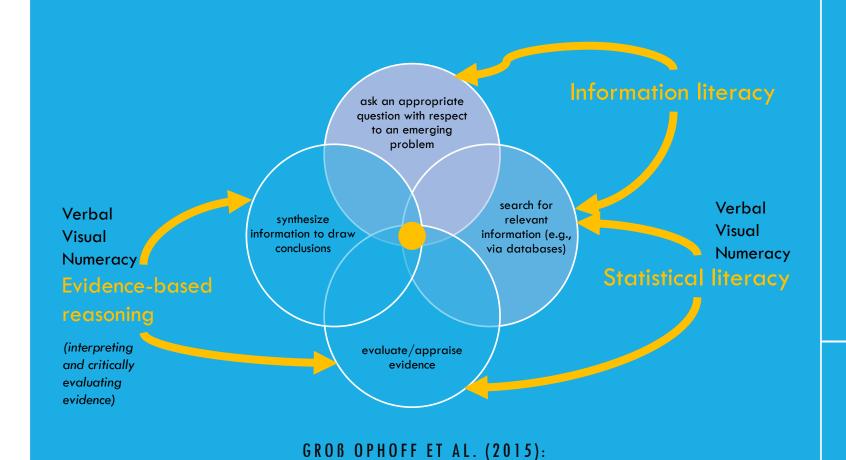
Other domains

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EDUCATIONAL RESEARCH LITERACY (ERL)

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Research literacy is the ability to locate, understand, discuss, and evaluate different types of research; to communicate accurately about them; and to use findings for academic and professional purposes.

6

Groß Ophoff et al. (2015)

two test sets (avoid testing effect)

to measure: information literacy,

LeScEd booklet

statistical literacy, ethical reasoning forced-choice tasks
40-minute test time (30% tasks were left out on average; it is fine)
Tested and validated using

Pretest-posttest control group or cross-sectional/longitudinal surveys

large samples of PST students (e.g., 2,113 in one study and 1,655 in another study)

Gutman and Genser (2017)

Research Literacy Inventory

18 self-report statements, based on the work by Shank & Brown (2013) five-point Likert scale Tested and validated using

Pre-test and post-test with control group

62 PST students

Veilleux and Chapman (2017b)

<u>Psychological Research Inventory</u> <u>of Concepts (PRIC)</u>

20-item vignette-based multiple choice measure

to measure: research methodology and statistics knowledge

either yes/no or mostly open-ended

responses to the questions 30 minutes per test

Tested and validated using

cross-sectional and longitudinal surveys

971 participants of both psychology and non-psychology backgrounds

Han and Schuurmans-Stekhoven (2017)

Research literacy survey

15-item self-report survey

to measure: source/literature search (SLS) and research integration methods (RIM)

Tested and validated using

Pre-test and post-test with control group

48 PST students

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Research literacy is the ability to locate, understand, discuss, and evaluate different types of research; to communicate accurately about them; and to use findings for academic and professional purposes.

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Long-term evidence suggests that <u>self-regulated asynchronous</u> <u>learning</u> benefits students' retention of RL skills more than synchronous learning (Gutman & Genser, 2017).

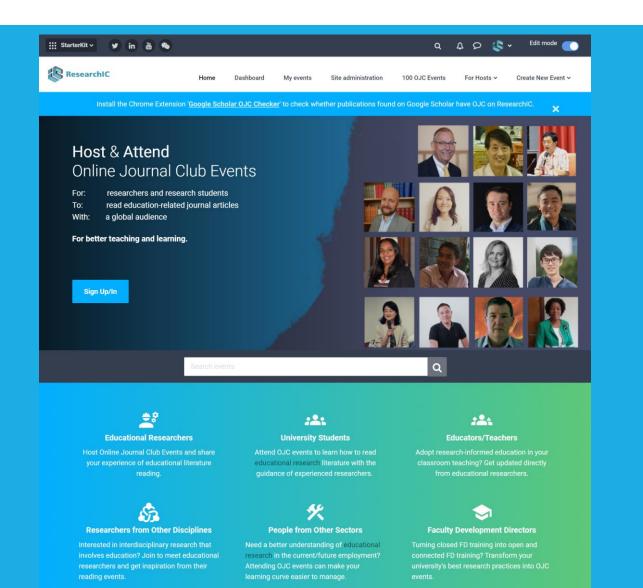
"Short-term intensive training may have provided theoretical knowledge of what information to process and how to process it, but it <u>is insufficient</u> for students to fully comprehend its application in their own practice" (Han & Schuurmans-Stekhoven, 2017, p. 38).

The most validated instruments is **LeScEd booklet**.

The interventions were mostly for <u>PST students</u> in education science. The interventions were often <u>general research education</u>, introducing research process and methods as a general experience.

Online journal club is not a common training intervention format in ERL training interventions; How to read scientific literature was not a focus for any of the examined eight interventions.

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ResearchIC uses Moodle as an event management system to organize asynchronous online journal club events to train postgraduate research students' research literacy at a global scale.



LITERATURE REVIEW

2022-2023

To develop Educational Research Literature Reading Test (ERLRT) to measure a person's capability of reading educational research literature.



INTERVIEWS

2022-2023

Elucidate the literature locating, reading, and organizing strategies of experienced educational researchers using video interviews.



SURVEYS

2023-2024

To run ERLRT tests among all participants of OJC events on the ResearchIC platform.



EXPERIMENTS

2023-2024

Organize a series of OJC events with educational researchers as hosts and research students as attendees between 2023 and 2024

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ResearchIC is funded by JSPS Grant-in-Aid for Early-Career Scientists (22K13755) to conduct R&D between April 2022 and March 2025.

PUBLISHED PAPERS:

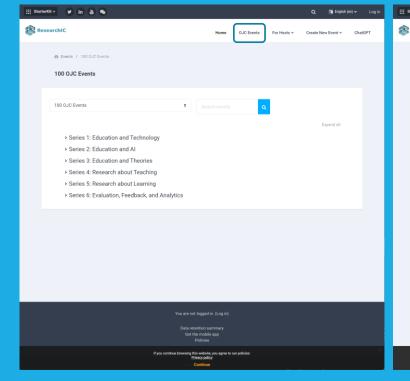
- 1. Lin, J. (2023). Use Online Journal Club Events to Train the Educational Research Literacy: Research and Development at ResearchIC. *Proceedings of annual conference of JSET 2023*. March 25-26, 2023, Tokyo, Japan.
- 2. Lin, J. (2023). Hosting Online Journal Club Events on a Global Scale using Moodle: A Report from the ResearchIC Project. *Proceedings of Moodle Moot Japan 2023*. February 15-17, 2023, Ibaraki Christian University, Japan
- 3. Lin, J. (2022). Measuring and Evaluating Research Literacy in Higher Education: A Synthesis of Mechanisms and Discoveries. *Proceedings of The 14th Asian Conference on Education* (2022). November 28–December 02, 2022, Toshi Center Hotel, Tokyo, Japan (and Online). https://papers.iafor.org/submission65228/
- 4. Lin, J. (2022). Impact of Online Journal Club On Educational Research Literacy: Introducing An Ongoing Project. Proceedings of 2022 IEEE International Conference on Engineering, Technology & Education (TALE). Dec.4-7, 2022. Hong Kong.

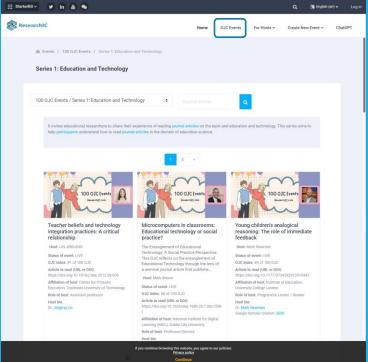
IN-PROGRESS PAPERS:

- 5. Lin, J. (Ongoing). ChatGPT and Moodle Walk into a Bar: A Demonstration of Al's Mind-blowing Impact on E-Learning. *International Journal of Artificial Intelligence in Education*. Stage: Editor assigned
- 6. Lin, J. & Gross Ophoff, J. (Ongoing). Commons and Differences between Disciplines in Research Literacy Research: A Systematic Literature Review. *Educational Research Review*. <u>Stage: Manuscript in progress.</u>
- 7. Lin, J. (Ongoing). Educational researchers reading educational research. Studies in Graduate and Postdoctoral Education. Stage: Data collection and analysis.
- 8. Lin, J. (Ongoing). Measuring educational research reading literacy: Development and validation of the ERLRT scale. *Asia-Pacific Education Researcher*. <u>Stage: Research planning</u>.

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ResearchIC project has published four conference papers as of March 2023, and has four journal articles in progress.
Research progress and outputs can be found on https://researchic.com/course/view.php?id=20

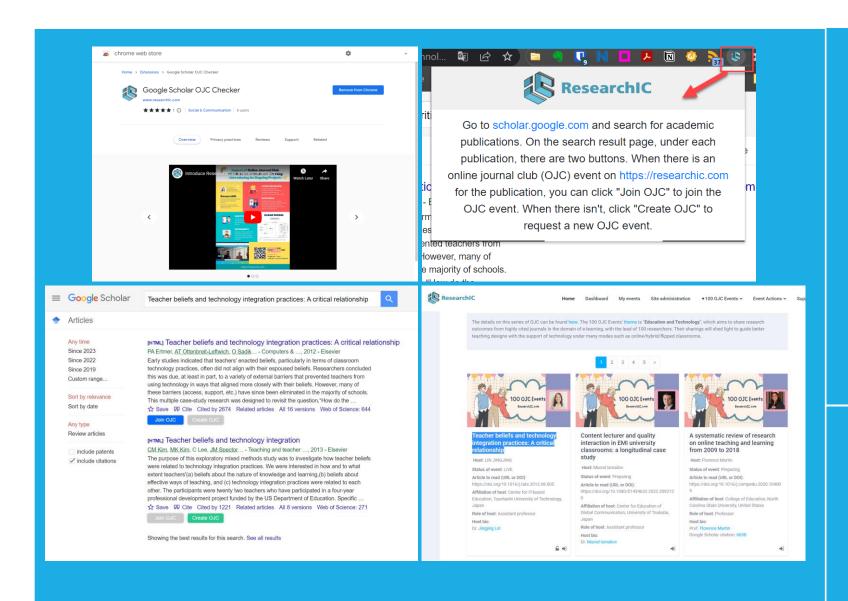




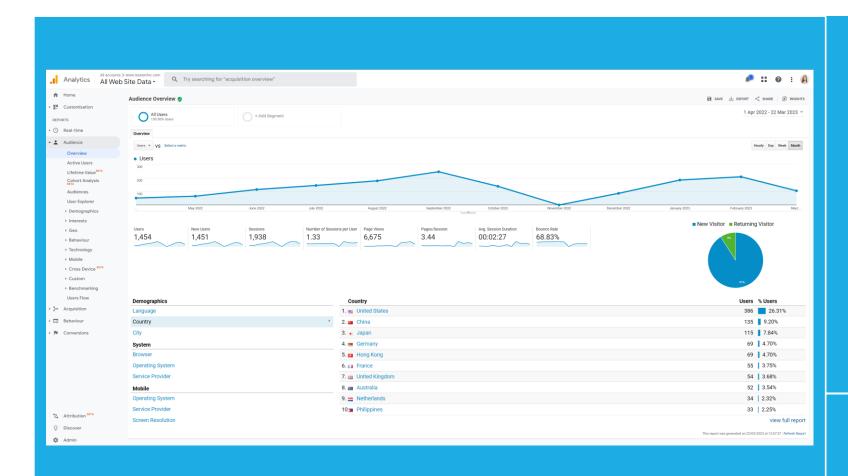
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ResearchIC has created 15 online journal club events. They generated 30 videos to share how they locate, read, and manage educational research articles.



ResearchIC project created a Chrome browser extension "Google Scholar OJC Checker", to bridge Google Scholar search results and ResearchIC event database.

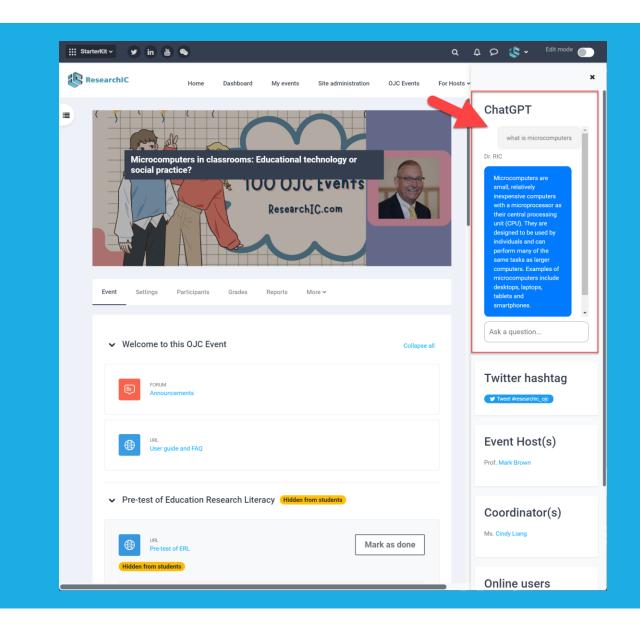


1454 visitors, 98 registered users.
Visitors mainly from United States, China, and Japan.

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ResearchIC project uses Google Analytics to track site performance.

ResearchIC



ResearchIC integrates ChatGPT into the platform in March 2023, as a collaborative agent for users.

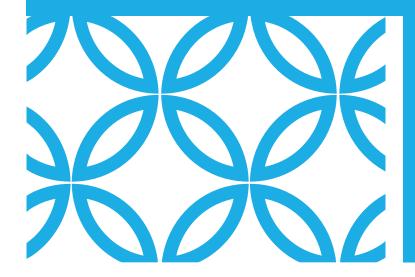
■ Table		
Table 2. Mapping AI applications for research		
Aa Al applications	■ Research-relevant functions	■ Benefits
ChatGPT	х	LLM
Semantic Scholar	Academic Search Engine	Discover hidden cor
ConnectedPapers	Find and explore academic papers	
Elicit	Find research papers	Helps with your liter
Jasper	х	Al Copywriter
Scholarcy	Scientific reading summarization	Reduce the time scr
Scite	Citation Evaluation	Let you see how ma
Trinka	Research Paper Writing	
CopyAl	х	Write better marketi
Rytr	Research Paper Writing	
Writesonic	Research Paper Writing	
GoCharlie	Research Paper Writing	
Writefull	Research Paper Writing	exclusively caters to
Notion	Note-taking, Writing	
GanttPRO	Progress tracking	
Typeset.io	Scientific reading	
Paper Digest	Scientific reading summarization.	Offering three-minu
<u>iris.ai</u>	Researcher's Al workstation	Al tools and applica
SciSpace Copilot	Paper reading and decoding	
System	Literature tree	Help you find, synth
Lex	Writing	Al-empowered edito
GitHub Copilot	Coding assistant	Al coding partner tl
<u>Vizcom</u>	Drawing's rendering	uses AI to create hig
Headline analyzer	Х	better titles for your
Penelope.ai	Check academic manuscripts using A	one of the best AI to
Paperpal	Research Paper Writing	
Galactica	Language Models that Cite	• explore the scienti
Explainpaper	Paper reading and decoding	• Upload a paper • F
· New		

ResearchIC will further explore the potential of Al applications in supporting research literacy development.



Email to:

lin@cite.tut.ac.jp



Q & A

Please consider joining ResearchIC.com as users and as OJC hosts.