

2-16-2019

From Research Aesthetics to Habits of Mind: Student Publishing as a Core Competency

Bebe S. Chang

Nova Southeastern University, bebe.chang@nova.edu

Follow this and additional works at: https://nsuworks.nova.edu/asl_staffpres

 Part of the [Curriculum and Instruction Commons](#), [Educational Methods Commons](#), [Educational Technology Commons](#), [Higher Education Commons](#), [Information Literacy Commons](#), [Scholarly Communication Commons](#), and the [Scholarly Publishing Commons](#)

NSUWorks Citation

Chang, Bebe S., "From Research Aesthetics to Habits of Mind: Student Publishing as a Core Competency" (2019). *Alvin Sherman Library Staff Presentations, Proceedings, Lectures, and Symposia*. 30.
https://nsuworks.nova.edu/asl_staffpres/30

This Conference Presentation is brought to you for free and open access by the Alvin Sherman Library, Research, and Information Technology Center at NSUWorks. It has been accepted for inclusion in Alvin Sherman Library Staff Presentations, Proceedings, Lectures, and Symposia by an authorized administrator of NSUWorks. For more information, please contact nsuworks@nova.edu.

From Research Aesthetics to Habits of Mind: Student Publishing as a Core Competency

DIGITAL CURRICULUM CONFERENCE

Going Deeply Digital: Promises and Challenges of the Digital
Curriculum in Higher Education

Nova Southeastern University

Bebe S. Chang
Archives & Digital Librarian
NSU Alvin Sherman Library
2019-02-16

Reader from:  Banguero, Isabela, Philippines

Cyber Bullying: A Quantitative Study on the Perceptions and Experiences of Female Emira...

Michael R. Brochu

Department of Conflict Resolution Studies Theses and Dissertations



52,312
Total Papers

3,892,067
Total Downloads

1,523,038
Downloads in the past year

Browse Research and Scholarship

- [NSU Colleges, Schools, Centers, Departments](#)
- [All Theses, Dissertations and Capstones](#)
- [NSU Faculty SelectedWorks Profiles](#)
- [NSU Faculty Experts Database](#)



Enter search terms:

in this repository ▾

[Advanced Search](#)

Notify me via email or [RSS](#)

Browse

- [Collections](#)
- [Disciplines](#)
- [Authors](#)

Author Corner

- [Author FAQ](#)
- [Copyright Statement](#)
- [Submit Research](#)

Links

- [NSU Libraries](#)
- [Contact Us](#)

Connect with NSU



***Harnessing the Institutional
Repository (2:30 p.m.)***

**Gena Meroth
Jaime Goldman
Keri Baker**

Submissions from 2017

 [PDF](#) [The Organizational Handbook to Promote Critical Think and Ruth Jayson-Polk](#)

 [PDF](#) [GEMS: Goals, Expectations, Measurements and Ruth Jayson-Polk, Allen, Garla L. Connor, and Cesar](#)

 [PDF](#) [Handbook for Success](#)

 [PDF](#) [Think, Collaborate, Develop](#)
Howard, and Jamez Wilk

 [PDF](#) [J.E.D. Academy: Where the](#)
Similen, and Joshua Wimble

 [PDF](#) [Critical Thinking and Decision Making](#)

 [PDF](#) [Broward LPS Foundation, Richard Louis, Richard Pulid](#)

 [PDF](#) [Critical Thinking, Decision Making and Mindfulness, Lor](#)

Submissions from 2016

 [PDF](#) [Effective Communication Central to Enrollment Convers](#)

Submissions from 2017

 [PDF](#) [Top 5 Benefits of LinkedIn, Richard Hudnett and Nicole](#)

Submissions from 2016

 [PDF](#) [Creating a Job Search Plan, Richard Hudnett](#)

[FDLA Conference](#)

[FDLA Journal](#)

[Fischler College of Education: Departmental Publications](#)

[Fischler College of Education: Faculty Articles](#)

[Fischler College of Education: Faculty Books and Book Chapters](#)

[Fischler College of Education: Faculty Presentations](#)

[Fischler College of Education: Student Articles](#)

[Fischler College of Education: Student Presentations](#)

[Fischler College of Education: Theses and Dissertations](#)

[Innovate: Journal of Online Education](#)

[School of Criminal Justice](#)

[Teaching and Learning at a Distance, 6th Edition](#)

[Transformations](#)

3 Global Elements

1. Information Literacy (IL)
2. International Education / Librarianship
3. Workplace Literacy

1. Information Literacy (IL)

- UNESCO
 - High-Level Colloquium on Information Literacy and Lifelong Learning, Alexandria, Egypt, November 7, 2005
 - *The Alexandria Proclamation on Information Literacy and Lifelong Learning*
 - **“Information Literacy and lifelong learning are the beacons of the Information Society, illuminating the courses to development, prosperity and freedom.”**
(Meeting Report, p. 3)



1. Information Literacy, con't.

- AbdelAziz Abid, UNESCO senior programme specialist

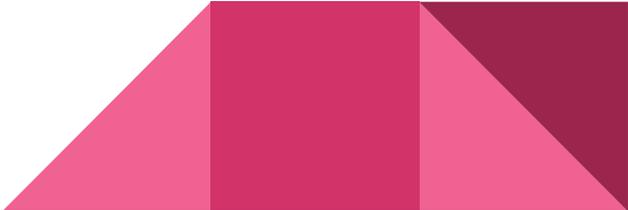
*Information literacy forms the basis for **lifelong learning**. It is common to **all disciplines**, to **all learning environments** and to **all levels of education**, while recognizing the disparities in **learning styles** and in the nature and development of literacy in **different countries**.*

- **IL delivery: formal and informal education**
- **Information sources and formats**
- **Education: human right / public good**
- **ICTs: from teacher- to learner-centered environment**

(Meeting Report, pp. 21-22)

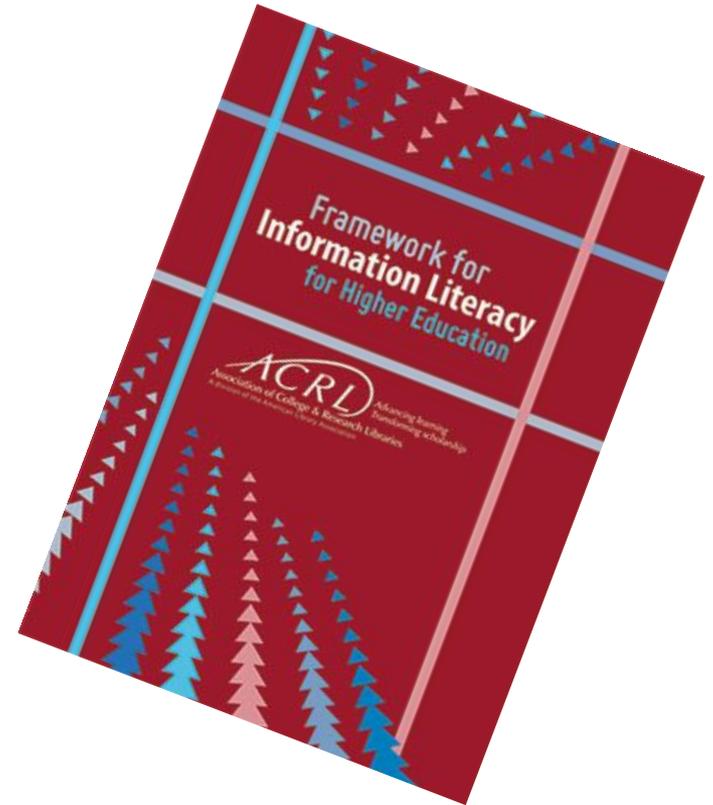


2. International Education / Librarianship

- UN's 17 Sustainable Development Goals: Goal 4
 - Quality Education: "Ensure **inclusive and equitable quality** education and promote lifelong learning opportunities for all."
 - NSU's Quality Enhancement Plan (QEP): *Write from the Start*
 - "Student Learning Outcomes: locate, evaluate, and properly integrate primary and secondary research sources. (**critical thinking, reading, and composing**)."
 - NSU Experiential Education and Learning (ExEL)
 - "... **hands-on opportunities** that enrich your academic life while helping you reach your professional and personal goals."
- 

2. International Education / Librarianship

- 2016 ACRL Framework on IL core concepts
 - **Authority Is Constructed and Contextual**
 - Define with an open mind
 - **Information Creation as a Process**
 - View as dynamic
 - **Information Has Value**
 - Attribute others' ideas
 - **Research as Inquiry**
 - Develop complex questioning
 - **Scholarship as Conversation**
 - Contribute to discussion
 - **Searching as Strategic Exploration**
 - Refine needs and searching



2. Int'l Education / Librarianship, con't.

Enrollment Trends

INTERNATIONAL STUDENT DATA
FROM THE 2018 OPEN DOORS® REPORT



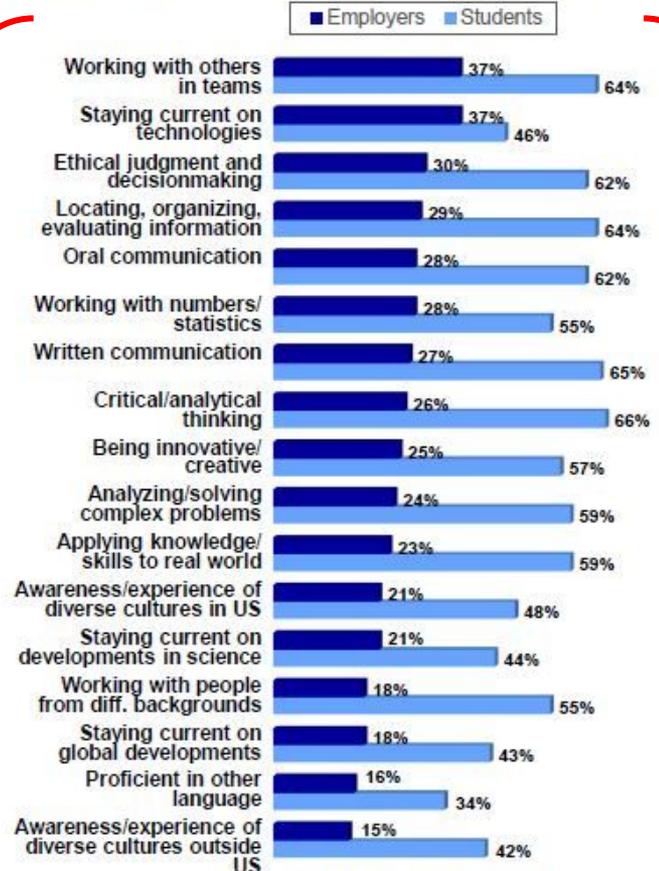
Year	Enrolled Int'l Students	OPT	Total Int'l Students	Total U.S. Enrollment*	% Int'l	Annual % Change
2017/18	891,330	203,462	1,094,792	19,831,000	5.5	1.5
2016/17	903,127	175,695	1,078,822	20,185,000	5.3	3.4
2015/16	896,341	147,498	1,043,839	20,264,000	5.2	7.1
2014/15	854,639	120,287	974,926	20,300,000	4.8	10.0
2013/14	780,055	105,997	886,052	21,216,000	4.2	8.1
2012/13	724,725	94,919	819,644	21,253,000	3.9	7.2

3. Workplace Literacy

- Association of American Colleges and Universities (AACU) 2014 survey
 - 613 students at public and private 2- and 4-year colleges
 - 400 employer respondents
 - Mismatches between employer-graduate preparation in key areas
 - Applying knowledge and skills in real-world settings
 - General education and a curriculum that extends beyond job training

Employers give college graduates low scores for preparedness across learning outcomes; students think they are better prepared.

*Proportions saying they/recent college graduates are well prepared in each area**



*8-10 ratings on zero-to-ten scale

Literature Review

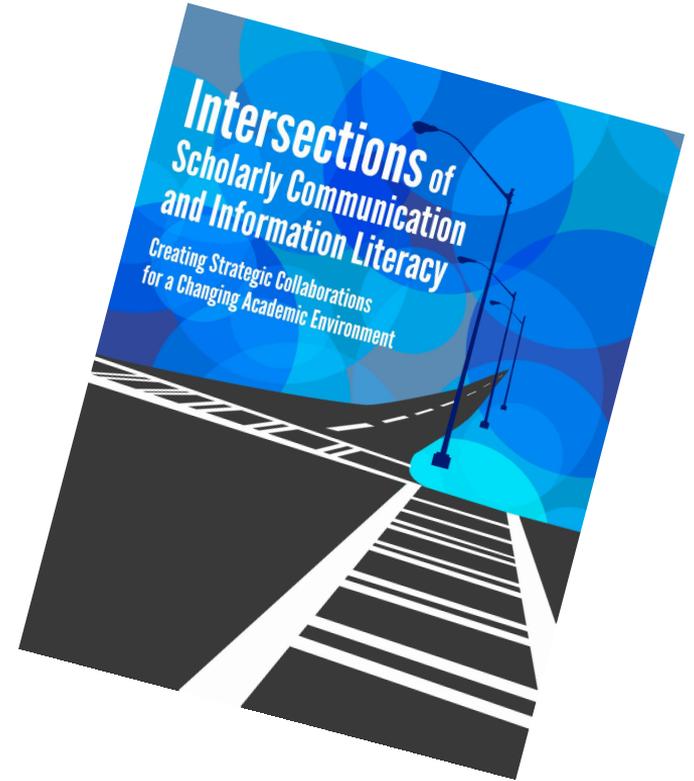
Moving from Product-based
to
Process-based Learning

'banking concept', Paulo Freire

- *Pedagogy of the Oppressed*, 1993
 - “**Education** thus becomes **an act of depositing**, in which the students are the depositories and the teacher is the depositor. Instead of communicating, the teacher issues communiqués and makes deposits which the students patiently receive, memorize, and repeat. This is the “**banking' concept of education**, in which the scope of action allowed to the students extends only as far as **receiving, filing, and storing** the deposits. They do, it is true, have the opportunity to become collectors or cataloguers of the things they store.”

Research Lifecycle: ACRL White Paper...

“...students need to know the **whole cycle** of scholarly communication, and issues such as **copyright, author rights, use and reuse of digital information objects**, etc., [which] need to be more fully **integrated into [the] information literacy program curriculum.**” (2013)



RESEARCH LIFECYCLE

Reuse

Research, Data Collection & Analysis

Authoring

Discovery & Dissemination

Publication

Peer Review



Information Economics, Warren & Duckett, 2010

- “Why Does Google Scholar Sometimes Ask for Money?” Engaging Science Students in Scholarly Communication and the Economics of Information, 2010
 - “Who **creates** the information I find?”
 - In what ways has this information been built on **prior knowledge** and how does it point toward the creation of **future knowledge**?
 - How has this information been **debated** and **vetted** by a particular community before making its appearance in the article, journal, database, catalog, or Web site where it was found?
 - **What economic and technological forces shape how information is constructed and then discovered, shared, stored, and accessed?”**

Ethics of Openness, Sarah Crissinger

- **The Time is Now: Scholarly Communication and Undergraduates, 2016**
 - **“...undergraduate students are legitimate creators of information *now*. They will be the faculty members, scholars, and **citizens of the future**. Right now, we meticulously train them to use **resources they’ll lose days after they graduate**. We’re doing them—and ourselves—a great disservice by not **introducing them to the complex, ethical questions surrounding openness**.”**

Experiential Learning, David Gooblar

- **Your Students Learn by Doing, Not by Listening, 2018**
 - **“Students are most successful** in our courses **when they learn for themselves...** The trick for all of us in academe is designing courses that help students do that.”
 - “We have to **go beyond** the idea that **the perfect presentation** of the relevant facts will be enough to help the majority of our students learn...” ...for most students, **we need to shift our focus from what it is we say to what it is they do.**
 - “Often, I tell my students, **the only thing that can change our minds is going through something ourselves, and learning the hard way.**”
 - **“It’s not enough to tell our students to eat fewer calories; we need to put them in the kitchen and get them cooking.”**

Learning is Social, Alison Hicks

- Participation as pedagogy: Student and librarian experiences of an Open Access publishing assignment, 2017
 - Grounded in the work of Vygotsky (1978), **sociocultural theories are constructed upon the idea that dialog forms the basis for the organization of social reality** (Limberg, Sundin & Talja, 2012). Centering attention on the **complex and ongoing formation of meaning, these understandings establish knowledge as situated, or connected to a specific practice** (Limberg et al., 2012) and as social, or realized through and in relation to a community's negotiated practices. The importance that is placed upon the idea of **social context further re-situates learning at the heart of the community, or upon the notion of interaction and the sharing of group cultures** (Rogoff, 2003).

Research in Context, Allison Hosier

- **Research Is an Activity and a Subject of Study: A Proposed Metaconcept and Its Practical Application, 2019**
 - “Similar to the work of some professionals who study research, **students could closely examine the types of sources used and think about the roles those sources play in the author’s research**. They might also **study the way the author gives credit to those sources**, perhaps noticing that, in some research contexts, credit is given through formal citation while in others it is done through contextual links, quotes from interview subjects, or some other way. By doing this, **students would learn how the conventions of research change from context to context**. They may **begin to develop a more realistic view of how much more there is to learn beyond the skills they already have** and why it is worth learning.”

Source types

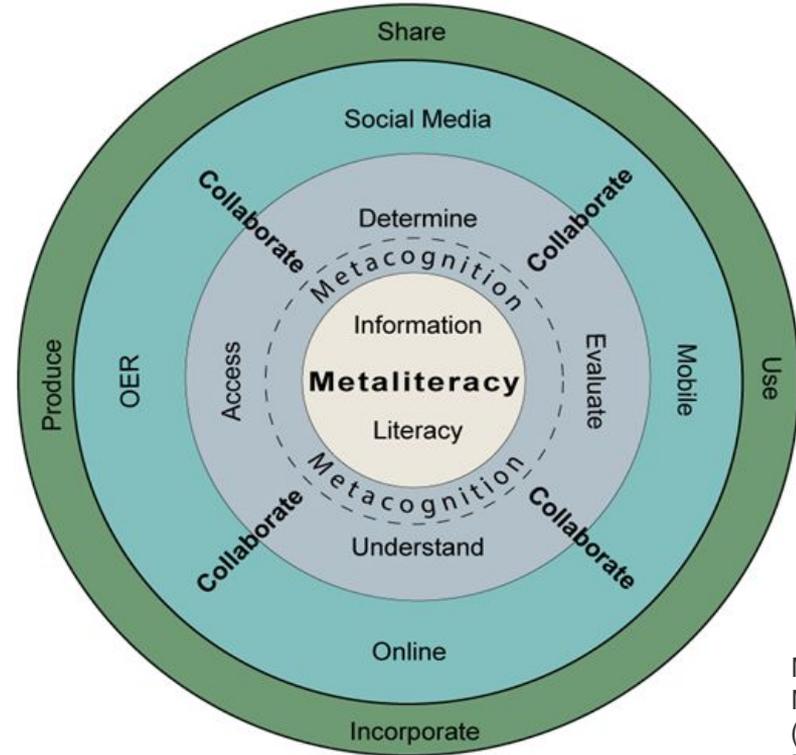
Audio CD
Article
Article Review
Book
Book Chapter
Book Display
Book Review
Commencement Program
Conference Proceeding
Conference Presentation
Congress
Dataset
Dissertation
DVD
Editorial
Intellectual Conversation
Lecture
Letter to the Editor
Magazine

News Article
Newsletter
Newspaper
Other
Panel Discussion
Podcast
Poster
Pre-Conference Presentation
Report
Response or Comment
Seminar
Symposium
Training/Workshop
Transcript
Video
Working Paper
Workshop

Metaliteracy, Tom Mackey & Trudi Jacobson

Reframing Information Literacy as a Metaliteracy, 2011

“...promotes **critical thinking** and **collaboration** in a digital age, providing a **comprehensive framework** to effectively participate in social media and online communities. It is a **unified construct** that supports the **acquisition, production, and sharing of knowledge in collaborative online communities.**”



Metaliteracy
Model
(created by
Roger Lipera)

Case Studies

From Product- to
Process-Based Pedagogy

Teaching & Learning with IRs

NSU Faculty Testimonial

- ***The things that I find beneficial about [NSUWorks] is that I can... help [my students] understand about how to write articles, structure them... have an idea of what it's like to build up their CV, and having their works shown to their peers as well as outside the university.***

David. B. Ross
NSU Abraham S. Fischler College of Education
Source: *NSUWorks*, 2017-02-22

“So, how about we turn your final papers into an open access book?” - Alison Hicks

- LIS 4330 Library Instruction class at the University of Denver (Graduate)

“... it frustrated me to see how much effort, passion and expertise students brought to their final assignments, only to find these same essays languishing in a empty printer paper box in a professor’s office a couple of weeks later.”

The screenshot shows the Digital Commons @ DU website interface. At the top, there is a navigation bar with links for HOME, ABOUT, FAQ, and MY ACCOUNT. Below this, the main content area features a collection titled "LIBRARY AND INFORMATION SCIENCE: STUDENT PROJECTS, PRESENTATIONS, AND PUBLICATIONS". A sidebar on the left contains navigation options like "Browse" (Collections, Disciplines, Authors) and "Search" (Enter search terms, in this series, Advanced Search, Notify me via email or RSS). The main content area lists several authors with their names and affiliations, such as Alison Hicks, Cyndi Landis, Saleh Aljalalahmah, Brittiny Tirapelle, Meghan Damour, Chelsea Heinbach, Joanna Stankiewicz, Renate Robey, Meghan Ecklund, Andrea Copland, Michael Bovee, Paul Worrell, Kate Wimer, and Cortnye Rusch. A "Follow" button is visible next to the list. On the right side, there is a "Download" button and a statistics box showing "510 DOWNLOADS" since April 14, 2012. There is also a "SHARE" section with social media icons for Facebook, Twitter, LinkedIn, and Google+.

Cognitive Constructivism: Negotiating Meaning

- Anthony Lorschach & Ken Tobin, Constructivism as a Referent for Science Teaching, 1992

“Students need to be given opportunities to make sense of what is learned by **negotiating meaning**; comparing what is **known to new experiences**, and **resolving discrepancies** between what is **known to new** experiences, and resolving discrepancies between **what is known and what seems** to be implied by new experience.”

- Scott Brant, Constructivism: Teaching for Understanding of the Internet, 1997

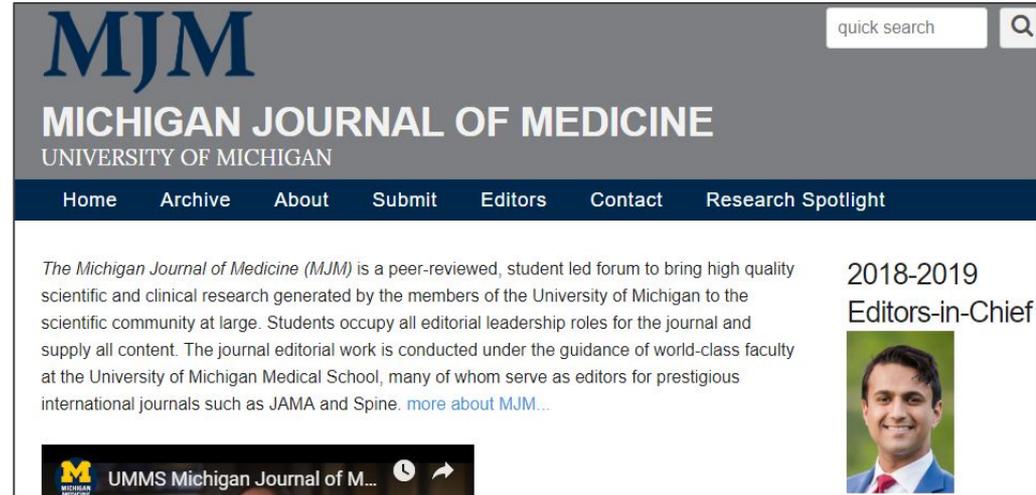
“...learners construct knowledge by making sense of experiences in terms of what is already known.”

UMich *Publishing as Pedagogy: Connecting Library Services and Technology, 2016*

- **Libraries** increasingly offer the **technological capacity and staff expertise to support student publishing**, but this activity tends to happen in isolation from other library activities.
- **Harnessing publishing as a pedagogical tool** improves student learning outcomes through **high-impact learning practices**: extensive writing, teamwork, service learning, undergraduate research, and experiential learning.
- Partnering with students to achieve their publishing ambitions **clarifies the requirements that the next generation of digital scholars may have** for library technology infrastructure designed for preservation and access.
 - 3 case studies... published 2016

Case 1: Michigan Journal of Medicine, UM, 2015

- Peer-reviewed, student-led
- Digital Library eXtension Service (DLXS)
- Impact
 - opportunity for the medical school faculty to **experiment** with their new, revamped curriculum
 - students gain **hands-on experience** with the **scholarly communications lifecycle**
 - library is developing a replicable model for how to **work closely with a school, college, or department** to establish a sustainable student journal that **positively contributes to the professionalization of its student authors and editors**



The screenshot shows the homepage of the Michigan Journal of Medicine (MJM) website. At the top left is the MJM logo. To the right is a search bar labeled "quick search". Below the logo and search bar is the text "MICHIGAN JOURNAL OF MEDICINE" and "UNIVERSITY OF MICHIGAN". A dark blue navigation bar contains the following links: Home, Archive, About, Submit, Editors, Contact, and Research Spotlight. The main content area features a paragraph describing the journal as a peer-reviewed, student-led forum. To the right of this text is a section for the "2018-2019 Editors-in-Chief" with a portrait of a man. At the bottom of the page is a dark banner with the UMMS logo and the text "UMMS Michigan Journal of M..." followed by a clock icon and a share icon.

MJM

quick search

MICHIGAN JOURNAL OF MEDICINE

UNIVERSITY OF MICHIGAN

Home Archive About Submit Editors Contact Research Spotlight

The Michigan Journal of Medicine (MJM) is a peer-reviewed, student led forum to bring high quality scientific and clinical research generated by the members of the University of Michigan to the scientific community at large. Students occupy all editorial leadership roles for the journal and supply all content. The journal editorial work is conducted under the guidance of world-class faculty at the University of Michigan Medical School, many of whom serve as editors for prestigious international journals such as JAMA and Spine. [more about MJM...](#)

2018-2019
Editors-in-Chief

UMMS Michigan Journal of M...

Case 2: *Cafe Shapiro Anthology*, UMich.

- 2010, *DEEPBLUE* repository
- Student readings / public audience
- Partnership with creative writing course
- Must sign agreement, 3 clauses
 - Grant both print and digital publishing rights
 - Warranty that the contribution is original and non-defamatory
 - 10-day deadline for return of manuscript

Café Shapiro began in February 1998 as part of the University's "Year of the Humanities and Arts" (YoHA). Originally conceived as a student coffee break, Café Shapiro takes place in the Shapiro Undergraduate Library during winter evenings in February. It features undergraduate student writers nominated by their professors, many of whom have also been nominated for various writing prizes within the University and beyond.

Recent Deposits

[Café Shapiro Anthology, Selected Poems and Short Stories from the 21st Annual Café Shapiro](#)

Adams, Paulina; Alberta, Chloe; Bentley, Sydney, et. al. (2018)

 (12.1MB)

[Café Shapiro Anthology, Selected Poems and Short Stories from the 20th Annual Café Shapiro](#)

Alberta, Chloe; Arrington, Sidney; Aulepp, Alexis, et. al. (2017-02)

 (12MB)

[Café Shapiro Anthology, Selected Poems and Short Stories from the 19th Annual Café Shapiro](#)

Bernard, Alex; Bernstein, Jordyn; Bishel, Ashley, et. al. (Michigan Publishing, 2017)

 (10.2MB)



Case 3: Learning in Real Life: Stories of Impact through Engagement, UMich, 2015

- Poster symposia, 2015
- graduates/undergraduates
- Student readings / public audience
- Partnership with creative writing course
- Must sign agreement, 3 clauses
 - Grant both print and digital publishing rights
 - Warranty that the contribution is original and non-defamatory
 - 10-day deadline for return of manuscript



"I learned the difficulties and challenges faced when not only working in a new culture, but in attempting to navigate a fragile atmosphere while trying to be the least intrusive as possible. I learned how to practice patience and how to adapt to situations when they did not go as we expected. I learned how to work with students of different backgrounds and with different work ethics than myself. I was challenged mentally both by the actual work we were completing and adjusting to a new lifestyle."



Alison Climes, Karen Schumann, and Lydia Su with students from the University of Ghana.

Recommendations

Pledging Our Commitment to
Deeply Learning...

Curriculum Committee Members

2018-2019 Roster

DEPARTMENT OF CURRICULUM & INSTRUCTION

Dr. Dana Fredebaugh	Term: August 2018 - August 2020	(954) 262-8632	danaf@nova.edu
Dr. Victor Lopez	Term: August 2017 - August 2019	(954) 262-8288	vl79@nova.edu
Dr. Zandra Stino	Term: August 2017 - August 2019		stino@nova.edu
Dr. Angie Su	Term: August 2018 - August 2020	(954) 262-8865	shuifang@nova.edu

DEPARTMENT OF HIGHER EDUCATION LEADERSHIP & INSTRUCTIONAL TECHNOLOGY

Dr. Georgina Arguello	Term: August 2017 - August 2019	(305) 275-2620	deheredi@nova.edu
Dr. Silvia Orta	Term: August 2017 - August 2019	(954) 262-5086	ortas@nova.edu
Dr. Gina Peyton	Term: August 2018 - August 2020	(407) 264-5633	peyton@nova.edu

EX OFFICIO MEMBERS

Dr. Marcelo Castro	Associate Dean, School of Criminal Justice	(954) 262-7808	castrom@nova.edu
Dr. Judith Coughlin	Chair, Department of Curriculum & Instruction	(954) 262-7943	jcoughlin@nova.edu
Dr. Wayne Driscoll	Chair, Department of Higher Education Leadership & Instructional Technology	(954) 262-8640	driscoll@nova.edu
Dr. Kenneth Rockensies	Associate Dean for Academic Affairs	(954) 262-8518	rockensi@nova.edu
Dr. Angela Yehl	Director of Academic & Clinical Programs	(954) 262-8299	yehl@nova.edu

Curriculum Mapping



Carnegie Mellon University

Conclusion

Information Creation as Process

Information Creation as Process Learning

- Knowledge Practices

- articulate the **capabilities and constraints** of information developed through **various creation processes**;
- assess the **fit between** an information product's **creation process** and a particular **information need**;
- recognize that **information may be perceived differently** based on the format in which it is **packaged**;
- monitor the **value** that is placed upon **different types of information products in varying contexts**;
- **develop, in their own creation processes, an understanding that their choices impact the purposes for which the information product will be used and the message it conveys.**

- Dispositions

- accept that the **creation of information** may begin initially through communicating **in a range of formats or modes**;
- accept the **ambiguity** surrounding the potential value of information creation expressed in **emerging formats or modes**;
- **resist the tendency to equate format with the underlying creation process**;
- understand that **different methods of information dissemination with different purposes are available for their use.**



Thank you for your attention.

Questions?
Comments?
Suggestions?

bebe.chang@nova.edu

References

- Alexander, L., Colman, J., Kahn, M., Peters, A., Watkinson, C., and Welzenbach, R. (2016, January 11). Publishing as Pedagogy: Connecting Library Services and Technology. *Educause Review*. <https://er.educause.edu/articles/2016/1/publishing-as-pedagogy-connecting-library-services-and-technology>.
- American Library Association. (2015, February 9). *Framework for Information Literacy for Higher Education*. <http://www.ala.org/acrl/standards/ilframework>.
- Baker, K. and Meroth, G. (2017). "NSUWorks and Your Online CV". *Alvin Sherman Library Staff Presentations, Proceedings, Lectures, and Symposia*. 17. https://nsuworks.nova.edu/asl_staffpres/17.
- Brandt, et al. (1997). Constructivism: teaching for understanding of the Internet. *Communications of the ACM*, 40(10). <https://dl.acm.org/citation.cfm?id=262814>.
- Crissinger, S. (2016, June 28). The Time is Now: Scholarly Communication and Undergraduates. *ACRLog*. <https://acrlog.org/2016/06/28/scholcomm-undergrads/>.
- Freire, P. (1993). *Pedagogy of the oppressed*. New York: Continuum. [Chapter 2, <http://faculty.webster.edu/corbetre/philosophy/education/freire/freire-2.html>.]
- Carnegie Mellon University Eberly Center. (2016). Teaching Excellence & Educational Innovation. Curriculum Map. <https://www.cmu.edu/teaching/assessment/assessprogram/tools/index.html>.
- Garner, S. D. (2006, March). High-Level Colloquium on Information Literacy and Lifelong Learning. Report of a Meeting. <https://www.ifla.org/publications/high-level-colloquium-on-information-literacy-and-lifelong-learning>.
- Gooblar, D. (2018, May 1). Your Students Learn by Doing, Not by Listening. *The Chronicle of Higher Education*. <https://www.chronicle.com/article/Your-Students-Learn-by-Doing/243277>.
- Hart Research Associates. Forthcoming. *Falling Short? College Learning and Career Success*. Washington, DC: Association of American Colleges and Universities. <https://www.aacu.org/leap/public-opinion-research/2015-survey-falling-short>.
- Hicks, A. (Ed.). (2016). Got a minute: Instruction tune-up for time pressed librarians. *Library and Information Science: Student Projects, Presentations, and Publications*. Denver, CO: Pressbooks. https://digitalcommons.du.edu/lis_stuother/3/.
- Hicks, A. (2017). Participation as Pedagogy: Student and Librarian Experiences of an Open Access Publishing Assignment. *Journal of Education for Library and Information Science*, 58(3). <https://utpjournals.press/doi/abs/10.3138/jelis.58.3.160>.

References, con't.

- Hosier, A. (2019). Research is an Activity and a Subject of Study: A Proposed Metaconcept and Its Practical Application. *College & Research Libraries*, 80(1), 44. <https://crl.acrl.org/index.php/crl/article/view/16944/19366>.
- Institute of International Education. (2019). International Students. Enrollment. <https://www.iie.org/Research-and-Insights/Open-Doors/Data/International-Students/Enrollment>.
- Lorschbach, A.W., & Tobin, K. (1992). Constructivism as a referent for science teaching. In: F. Lorenz, K. Cochran, J. Krajcik, & P. Simpson (Eds.). *Research Matters ...to the Science Teacher*. NARST Monograph, Number Five. Manhattan, KS: National Association for Research in Science Teaching. <http://www.unhas.ac.id/hasbi/LKPP/Hasbi-KBK-SOFTSKILL-UNISTAFF-SCL/Mental%20Model/referen>.
- Mackey, T. and Jacobson, T. (2011). Reframing Information Literacy as a Metaliteracy. *College & Research Libraries*. 72(1). p. 62. <https://crl.acrl.org/index.php/crl/article/view/16132/17578>.
- Malenfant, K. (2013, March 26). "Intersections of Scholarly Communication and Information Literacy". *ACRL Insider*. <https://www.acrl.org/acrlinsider/archives/6970>.
- Nova Southeastern University. (n.d.). Experiential Education & Learning (ExEL). <https://www.nova.edu/academic-affairs/experiential-learning/index.html>.
- Nova Southeastern University (2017, April). *QEP Proposal. NSU's Quality Enhancement Plan: Write from the Start*. Southern Association of Colleges and Schools Commission on Colleges (SACSCOC). p. 11. <https://www.nova.edu/qep/index.html>.
- United Nations. (2015). Sustainable Development Goals. <https://sustainabledevelopment.un.org/sdgs>.
- Warren, S. and Duckett, K. (2010). "Why Does Google Scholar Sometimes Ask for Money?" Engaging Science Students in Scholarly Communication and the Economics of Information". *Libraries' and Librarians' Publications*. 78. <https://surface.syr.edu/sul/78>.