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Embedding Metaliteracy in the Design of a Post-Truth MOOC: Building Communities of Trust

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Abstract

Metaliteracy is examined as a comprehensive framework to develop learners as informed consumers and active producers of information in collaborative communities of trust. In today's post-truth society, personal and political beliefs have often diminished the meaning and impact of truth and objective reasoning. Metaliteracy prepares reflective learners to responsibly consume and ethically produce information in participatory social environments. As civic-minded citizens, metaliterate learners take control of their learning while mindfully participating in cooperative and productive communities. The innovative Massive Open Online Course (MOOC), *Empowering Yourself in a Post-Truth World*, is analyzed as part of this pedagogical strategy to prepare learners for the challenges of a post-truth society.

Keywords: metaliteracy, post-truth, MOOC, 2019 International Conference on Information Literacy

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Embedding Metaliteracy in the Design of a Post-Truth MOOC: Building Communities of Trust

Metaliteracy is a pedagogical framework to engage students in the evaluation, production, and sharing of truthful and trusted information. This descriptive analysis of the Massive Open Online Course (MOOC) *Empowering Yourself in a Post-Truth World* (State University of New York, 2019) explores how metaliteracy is applied to this innovative learning environment. Metaliteracy is embedded in this Coursera MOOC to support metacognitive reflection and to create a better understanding of affective responses to information. This model empowers learners to envision themselves in active roles for producing meaningful content and to effectively participate online. Metaliteracy informs learning scenarios and activities in the MOOC for evaluating news and information sources, appreciating the value of expertise, producing ethical content, and studying the proprietary nature of social media. This descriptive analysis of the post-truth MOOC will show how the learning outcomes in this course align with the core components of metaliteracy, including the goals and learning objectives, learner roles, four domains of learning, and learner characteristics.

One of the key themes explored in the *Empowering Yourself in a Post-Truth World* Coursera MOOC is the idea of building trusted communities as a response to a divided information environment. While the concept of a community of trust has been examined in social and cultural settings (Alfano, 2016; Jabareen & Carmon, 2010; Lyytinen, 2017), it has not been discussed in relation to the design of an online course about post-truth issues. Faculty and librarians interested in applying metaliteracy in their teaching will benefit from this focus on the production and sharing of truthful information in trusted communities. The open nature of the MOOC provides a model for embedding metaliteracy in teaching practices and offers adaptable resources that are ready-made for this purpose. This course illustrates how the comprehensive approaches afforded by the metaliteracy framework support the development of responsible information producers.

The Post-Truth World

Developing pedagogical strategies for the informed consumption and ethical production of information requires an understanding of post-truth issues in society. Steve Tesich (1992) foretold the post-truth environment when he wrote that “[i]n a very fundamental way we, as a free people, have freely decided that we want to live in some post-truth world” (p. 13).

The author argued that even during a time of government scandals and national turmoil, individuals are willing to accept the erosion of truth by political leaders. The term *post-truth* is defined as: “relating to or denoting circumstances in which objective facts are less influential in shaping public opinion than appeals to emotion and personal belief” (Oxford University Press, 2016). In this context, people are influenced by information based on their deeply held personal and political beliefs rather than objective and scientific reasoning. Confirmation bias reinforces these predispositions when individuals seek out information that only aligns with their existing views. Tali Sharot (2017) argued that these “established beliefs can be extremely resistant to change, even when scientific evidence is provided to undermine those beliefs” (p. 15). As part of this post-truth dynamic, damaging mis- and disinformation are accepted by uncritical consumers who appear to believe content, accurate or not, that aligns with their subjective opinions.

Concerns about the meaning of truth and trust have been intensified by commercial platforms that program algorithms to commodify user interests while collecting data on those users. The Project Information Literacy (PIL) report *Information Literacy in the Age of Algorithms* examined the cynicism of students related to news and information sources and argued that “trust is dead for many students, and skepticism lives” (Head et al., 2020, p. 19). According to this report, students were aware of the influence algorithms have on their experience with social media and search engines, but they were ambivalent about the platforms that employ this approach. The same report also found that the topic rarely came up in courses, requiring students to learn about algorithms on their own or from family and friends.

Safiya Umoja Noble (2018) described *algorithmic oppressions* as fundamentally racist and sexist (p. 4). Noble’s research exposed the damaging impact of monopolized commercial platforms and the related algorithms that reinforce both racism and sexism. She argued for a “decoupling of advertising and commercial interests from the ability to access high-quality information on the Internet” (Noble, 2018, p. 179). As Noble pointed out, this approach requires an expanded public conversation about these issues to raise critical questions about the design and function of proprietary platforms for Web searching (p. 203). As part of this critical inquiry, we also need to discuss the ethical responsibilities of producing and sharing user-generated content in these commercial systems that rely so extensively on algorithms.

In many ways, the culmination of a post-truth era has been evident during the COVID-19 global pandemic. The term “infodemic” describes damaging mis- and disinformation that

undermines efforts to effectively address the crisis (World Health Organization, 2020). The problem is exacerbated by responses to the pandemic that often fall along party lines. Researchers at the Pew Research Center, for instance, identified “a growing divide among partisans about coronavirus-related restrictions and safety measures” including different views on mask-wearing (van Kessel & Quinn, 2020). The coronavirus pandemic demonstrates the need for reliable information that is critical for the protection of public health. This crisis also shows how accurate scientific information is interpreted differently based on personal, political, or ideological differences. These circumstances reinforce the need to investigate issues that prevent a shared understanding of truth and trust in a connected society.

Brendan Nyhan (2020) argued against declarations about a “post-truth society” because it was “not empirically supported and should not be used to support interventions that threaten democratic values” (p. 222). His research has focused on *misperceptions*, which he has defined as “belief in claims that can be shown to be false” and that lack persuasive evidence (Nyhan, 2020, p. 222). From Nyhan’s perspective, post-truth assertions have been problematic because false information, misperceptions, and conspiracy theories have always been a part of the human experience and did not emerge after an imagined era of truth and reason. Avoiding the hyperbole of post-truth terminology is a crucial consideration, especially when the pursuit of objective and scientific reasoning is a shared pedagogical goal. As a thematic or theoretical frame for teaching and learning, the exploration of a post-truth world offers a way to engage learners about the meaning of truth and trust, but this process must be research based. In the post-truth MOOC, for instance, this conceptual approach allows for the investigation of multiple concerns related to the meaning of expertise and authority, the context of confirmation bias, the influence of constructed media, and the lack of trust online. Metaliteracy provides a reflective form of critical inquiry to examine these issues and then discuss strategies for building truthful and trusted communities.

Community of Trust

Several definitions of the term *community of trust* are based on research that investigates social and cultural environments. Jabareen and Carmon (2010) defined the term as “[a] socio-spatial setting in which substantial relationships of trust among people exist, and in which people feel sheltered and safe because they do not perceive other community members as posing them risk” (pp. 447-448). The authors applied their framework to urban

planning in Gaza City and concluded that trust is the foundation for cultures and communities worldwide, including those that are heterogenous (Jabareen & Carmon, 2010, pp. 447-448). Another perspective was provided by Lyytinen (2017), who applied the framework for communities of trust introduced by Jabareen and Carmon to conduct research about Congolese refugees in Kampala, Uganda. Through this work, Lyytinen (2017) argued that the framework “can be analytically enhanced by focusing on the diverse dimensions of trust” (p. 1004). Alfano (2016) recognized that there are downsides to communities of trust, especially when they are isolated and distrustful of groups that are dissimilar from their own.

Social information environments exemplify similar tensions between the advantages and disadvantages of likeminded communities that share common interests and beliefs but do not consider different perspectives. The *Empowering Yourself in a Post-Truth World* Coursera MOOC explores these divisions and how to foster active dialogue across partisan and ideological boundaries. The idea of building communities of trust is a way to investigate these rifts while considering collaborative strategies to restore truth and trust in a connected society. Metaliteracy integrates metacognitive reflection to spark insights about how learners feel and act in these spaces, while supporting them in taking charge of their learning as engaged participants. A review of the metaliteracy framework and its core components will provide an overview of the pedagogical theory that informs the metaliterate learning scenarios and activities in this Coursera MOOC.

Metaliteracy

Metaliteracy is a pedagogical framework for preparing learners to mindfully produce and share knowledge in participatory environments (Mackey & Jacobson, 2011; Mackey & Jacobson, 2014). The metaliteracy model was initially developed to reimagine the outdated Association of College and Research Libraries (ACRL, 2000) *Information Literacy Competency Standards for Higher Education* and to reframe the American Library Association (ALA) definition of information literacy. Metaliteracy moves beyond the traditional skill set for accessing, retrieving, and evaluating information, that was core to the original information literacy standards, to advance the active production and sharing of knowledge.

Metacognition is central to this process because it provides individuals with insights about their thinking while reinforcing the ability to self-regulate or control their learning (Flavell, 1979). Metaliteracy was proposed as a comprehensive framework to influence conversations in the field of Library and Information Science (LIS) to transform the ACRL definition of

information literacy (Jacobson & Mackey, 2013). This model did impact the ACRL (2015) *Framework for Information Literacy for Higher Education*, especially as demonstrated in the revised definition of information literacy that emphasizes the learner as a reflective producer of information. Metacognition was ultimately diminished in the final draft of the ACRL *Framework*, although it is central to the metaliteracy model (Fulkerson et al., 2017).

As a comprehensive framework, metaliteracy includes four core components: learner roles, learning domains, characteristics, and the goals and learning objectives. Through this unified approach, individuals are encouraged to envision themselves in active metaliterate learner roles, such as producer, collaborator, publisher, and teacher. These responsibilities are strengthened by the four domains of learning: affective (emotions and attitudes), behavioral (competencies and actions), cognitive (thinking and knowing), and metacognitive (reflecting and self-regulating) (Jacobson et al., 2018). For instance, rather than work toward an outcome that lacks a particular role or context, metaliterate learners “see [themselves] as producers of information,” which is reinforced by the affective and metacognitive domains (Jacobson et al., 2018). In this example, learners are encouraged to reflect on their attitudes toward the responsibilities of an information producer. As individuals identify and strive toward these active roles, they engage with the metaliteracy goals and learning objectives. The four overarching goals include the following:

1. Actively evaluate content while also evaluating one’s own biases
 2. Engage with all intellectual property ethically and responsibly
 3. Produce and share information in collaborative and participatory environments
 4. Develop learning strategies to meet lifelong personal and professional goals
- (Jacobson et al., 2018)

Each of the four goals includes several associated learning objectives that advance metacognitive reflection, the critical evaluation of content, and the ability to adapt to new technologies as informed consumers and ethical producers of information (Jacobson et al., 2018). The goals and learning objectives work together to develop competencies related to evaluating bias, verifying expertise, participating ethically in social spaces, and producing information responsibly.

The metaliteracy framework includes specific characteristics that align with the metaliterate learner roles and are driven by the goals and objectives. The characteristics include being

informed, collaborative, participatory, reflective, civic-minded, adaptable, open, and productive (Mackey, 2019). These qualities reinforce the active roles that learners play or aspire to in a complex and oftentimes deceptive information environment. For instance, being collaborative is especially relevant and useful to effective participation in social media and online communities. In another example, the reflective characteristic emphasizes the ability to reexamine one's own biases and to consider different points of view that are outside like-minded communities. As part of this process, the civic-minded characteristic supports effective collaboration and participation while emphasizing responsible involvement in communities. The productive characteristic promotes the ethical creation of information by individuals who are mindful of the contributions they make in social settings. This requires being informed about content through critical evaluation and adaptable to emerging technologies. Metaliterate learners are open to new experiences and viewpoints while gaining an understanding about what it means to be participatory in these environments.

Educators from a range of disciplines have applied metaliteracy in both theory and practice to advance metaliterate learning. Metaliteracy has informed teaching and learning strategies for social media communication (Witek & Grettano, 2016), the development of open and collaborative library instruction (Scull, 2016), and the analysis of digital identity in a participatory culture (McGarrity, 2016). Metaliterate learning has been described as a response to the post-truth world (Mackey & Jacobson, 2019), with a particular emphasis on learner empowerment (Mackey, 2019). It has been discussed in relation to the documentation of ethical content creation (Kosciejew, 2019a; Kosciejew 2019b) and the synergistic relationship between word and image (Palmer, 2019). Cooke (2017) argued for a metaliteracy approach to support the critical consumption of information in an age of misinformation and disinformation. Additionally, Cooke and Magee (2019) emphasized the responsibilities of information professionals within the LIS field and aligned metaliteracy with the ACRL *Framework* to prepare metaliterate learners.

Metaliteracy and the ACRL *Framework* have been explored as complementary models to advance metaliterate learning through a culminating project in the original Open EdX version of the post-truth MOOC (Mackey, 2020; SUNY Albany & Empire State College, 2019). This model also informed the design of three prior MOOCs in the connectivist and xMOOC formats (O'Brien et al., 2017) as well as a competency-based digital badging system (O'Brien, 2018). Further, the metaliteracy goals and learning objectives were analyzed as

part of a study that examined a non-credit online course designed for doctoral students (Atkinson, 2020).

Descriptive Analysis of the Post-Truth MOOC

Metaliteracy was applied to the *Empowering Yourself in a Post-Truth World* Coursera MOOC to develop learners as informed consumers and ethical producers of information. The MOOC was created as part of a State University of New York (SUNY) Innovative Instruction Technology Grant (IITG) (Mackey et al., 2018). The learning environment explores several interrelated themes that address the history and theory of post-truth circumstances, the role of experts and expertise in society, and breaches of trust in social media environments. The course content examines such topics as misrepresentation through constructed media, building collaborative communities of trust, and participation in social information environments. Learners explore these issues through video content, as well as readings and resources, interactive quizzes, dynamic learning objects, and online discussions. The course culminates in a final project that requires learners to create their own digital artifact based on a post-truth topic or theme that resonates with them the most. This last assignment places the learner in the active role of responsible information producer. As part of this process, learners conduct additional research on the topic and identify openly available digital technologies to create the artifact.

The learning objectives for each week align with the metaliteracy goals and learning objectives, learning domains, learner roles, and related characteristics. This descriptive analysis compares the MOOC learning objectives for each week to the most salient elements of metaliteracy.

Empowering Yourself for the Post-Truth World

In the first week of the course, learners are challenged to define key terms, reflect on their own experience, and consider the metaliterate learner roles. The learning objectives for this module inform the readings and resources about the origins of the post-truth era and explore metaliteracy as a way to address the associated concerns. The first video for this module, “Are You Living in a Post-Truth World?” introduces learners to post-truth definitions, the term fake news, the concept of metaliteracy, and the related metaliteracy learning goals. Two additional videos introduce learners to the four domains of metaliterate learning and the metaliterate learner roles. The first discussion asks learners to share their

experiences with post-truth issues, and a second conversation encourages participants to reflect on the metaliterate learner roles they identify with the most and the least.

The learning objectives in the first week of the course are informed by the first metaliteracy goal of evaluating content and bias and an associated cognitive objective of identifying predispositions in oneself and in information sources. The learning activities underpin metaliteracy learning objectives that are behavioral, cognitive, and metacognitive. For example, as learners adapt to the MOOC environment, they are asked to reflect on the final project requirements and to think about how they will produce their own digital artifact. They are encouraged to see themselves in active metaliterate learner roles such as information producer, author, and researcher. This exploration of metaliteracy in the first module aligns with the fourth overarching goal of the framework to develop effective strategies for lifelong learning.

Who Are the Experts?

The second week of the course emphasizes the ability to analyze the role of experts and expertise in information environments, evaluate authoritative sources, and to define confirmation bias. Two videos for this module feature interviews with educators and community leaders who discuss their insights about expertise in society. A narrated video in this module examines knowledge and authority within the context of misinformation in a post-truth world. This week provides a comprehensive analysis of confirmation bias and asks learners to analyze the concept of expertise based on the perspectives featured in the videos. The learning objectives for this module address the first goal of metaliteracy: to evaluate content and examine individual bias. This week is informed by a related metaliteracy objective to substantiate expertise while acknowledging the existence of experts in society. By reflecting on their own biases, learners consider how their predispositions impact individual responses to information. As part of this process, learners apply the cognitive objective that acknowledges the existence of bias in information sources while understanding that information is not always created for legitimate purposes. In addition, learners employ another affective and metacognitive objective by reflecting on their emotional responses to information and related environments while considering multiple viewpoints.

Can We Build Trust Online?

This third part of the course promotes the ability to assess the risks in producing and sharing information and encourages learners to identify their own role in building a

community of trust. The readings and video explore specific breaches of trust in social media environments, including the Cambridge Analytica scandal and the circulation of false information online. In the video “Can We Build Trust Online?” the term *community of trust* is defined as a place where differences are valued, and people work together as part of a respectful and productive dialogue. This approach discourages isolated communities and instead supports diverse perspectives. In the discussion, learners describe ways to foster a community of trust and analyze the social media platforms that they trust the most and the least. The two learning objectives in this module relate to the second goal of metaliteracy: being ethical and responsible when engaging with intellectual property. In addition, this week is informed by the cognitive objective that requires differentiating between personal and public information while making ethical decisions when sharing information. The course objectives for this week address the third goal of metaliteracy that encourages the production and sharing of information. Two associated objectives encompass the behavioral and cognitive domains to reinforce conscientious participation and to be proactive in protecting one’s own privacy and in securing online information.

False Representations in Constructed Media

The next module requires learners to explore how meaning is altered through different media formats and to recognize bias in dynamic information sources. The two videos in this section feature a news editor, who teaches journalism, and an educator, who has a background in broadcast news, who discuss content creation in media environments. Learners complete an interactive quiz by playing the role of news editor who must make objective decisions about a news story. They also participate in a discussion about ways to unite people in a community that represents different points of view. The three learning objectives in this week’s module relate to the first metaliteracy goal about active content evaluation. This goal reinforces a cognitive objective to determine the value of formal and informal sources and a metacognitive objective to reflect on the information context to gain multiple perspectives. This week’s focus on content creation through constructed media connects to the second goal of metaliteracy about the responsibilities associated with intellectual property. This goal is supported by the attendant cognitive objective about ethical decision-making when sharing information. During this module, learners gain insights about visual and textual information in a news media context, play an active role in editorial decision-making, and are reflective about the responsibilities of being an information producer.

Raising and Sharing Our Voices

During the fifth week of the course, learners distinguish between the connected world and the post-truth world, while recognizing their responsibilities as information producers. The first video for this week, entitled “Reclaiming the Promise of the Connected World,” provides an overview of these contrasting perspectives and describes how to practice metaliterate learning through the metaliteracy characteristics. The second video “What is Your Responsibility as an Information Creator?” features experts from the community and educational settings to explore the role of the information producer. During the online discussion, learners describe their roles as content creators and analyze how the metaliteracy characteristics support this responsibility. The main theme for this week encourages empowered voices in a connected world and relates most directly to the third goal of metaliteracy: to produce and share information in participatory environments. This goal aligns with the affective and metacognitive objective to actually see oneself as both a consumer and producer of information. The activities in this module require participants to consider such roles as being researchers, collaborators, producers, and authors of information. Most importantly, learners assess their own metaliterate characteristics and identify those that require further development.

Reinventing a Truthful World

The closing week features the video “Moving Beyond the Post-Truth World” and includes the culminating project for learners to produce and share a digital artifact based on a key theme from the course. As part of the final project, learners are challenged to apply metaliteracy to a post-truth issue, evaluate their own biases, and demonstrate that information can be consumed, produced, and shared in responsible ways. Learners are encouraged to complete a peer review process for their projects as well. In the discussion, learners reflect on their experience in the MOOC and describe what they learned from peers as well.

This week’s focus on the creation of a digital artifact relates to the third goal of metaliteracy: to produce and share information. This module emphasizes an associated objective that underpins the role of learners as teachers when sharing their knowledge in collaborative spaces. This objective is affective and cognitive because learners contemplate and analyze this role as a responsibility they may not have considered previously. It is also a behavioral objective because learners actively create and share their knowledge through the digital artifact. This week’s activities are informed by the fourth metaliteracy goal of developing

lifelong learning strategies. This goal advances the metacognitive objective that encourages the continuous application of metaliteracy as a lifelong practice. Through this final assignment, metaliterate learners are envisioned as teachers who share their knowledge and expertise with a wider audience.

Overall, the six interrelated modules in this MOOC are informed by weekly learning objectives that are grounded in metaliteracy theory and practice. The MOOC content is dynamic, featuring videos, readings, resources, interactive quizzes, and discussions. The videos foreground specific post-truth issues, such as confirmation bias, misinformation, and lack of trust online, while presenting metaliteracy as a framework to examine these concerns. The readings and resources are similarly focused on critical inquiry through the lens of metaliteracy. The interactive quizzes and discussions provide additional opportunities for reflective thinking.

Throughout the MOOC, post-truth issues are introduced and essential elements of the metaliteracy framework are applied to promote metaliterate learning. As an open resource, this course is available for individual lifelong learners to pursue on their own and for educators to apply in a range of instructional settings. Learners are able to complete the course for free or to pursue a Coursera certificate based on the fee structure offered by the platform. The videos from the course are available through the Metaliteracy YouTube channel, and the related diagrams and interactive learning objects are posted at the Metaliteracy.org blog. All of these dynamic resources are adaptable to different pedagogical settings as needed.

Conclusion

This descriptive analysis of the *Empowering Yourself in a Post-Truth World* MOOC shows how metaliteracy is embedded in the course to prepare learners as informed consumers and ethical producers of information. Participants gain insights about their affective responses to information by reflecting on their preconceptions and conducting research to create a digital artifact. The course-specific learning outcomes in each module are based on the metaliteracy goals and learning objectives and associated components such as the learner roles, learning domains, and characteristics. This analysis is limited because it only describes these relationships after the course was designed and does not include a quantitative analysis of user data. At the same time, however, it does provide a pathway for future research to measure the effectiveness of these outcomes.

This MOOC provides a dynamic environment for teachers and learners to apply the metaliteracy framework in practice. Unlike information literacy instruction that is often relegated by institutions to play a supporting role in student preparedness, metaliteracy is a central topic of study in this course and applies to related subjects as well. This resource is also adaptable to fit different pedagogical methods and institutional settings in which information literacy still plays a primarily reinforcing role.

Considering the challenges of mis- and disinformation in today's fractured information environment, as well as the programmed biases of algorithms in commercial platforms, a pedagogical strategy is needed to engage learners with these concerns. Faculty and librarians who teach about these oftentimes contentious issues will benefit from seeing how metaliteracy is applied in this supportive and respectful learning environment. *Empowering Yourself in a Post-Truth World* is a flexible and adaptable resource to initiate shared conversations about what it takes to build connected communities of trust.

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