# Integrating Metaliteracy into the Design of a Collaborative Online International Learning (COIL) Course in Digital Storytelling

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## ABSTRACT

This paper explores the redesign of a course in *Digital Storytelling* that integrates metaliteracy to advance Collaborative Online International Learning (COIL). Students from the United States and Prague, Czech Republic are active participants in this fully online global course as they learn to produce digital stories. The metaliteracy framework encourages metacognitive reflection and the active participation in social information environments. A collaborative teaching team from the United States and Europe redesigned this course to integrate metaliteracy into the learning activities and self-assessments. As students learn to become digital storytellers, they self-identify with specific metaliterate learner roles (producer, collaborator, researcher, etc.), assess their learning through four domains of metaliterate learning (affective, behavioural, cognitive, and metacognitive), and lastly reflect on their work in the course through the metaliteracy characteristics (collaborative, open, reflective, civic-minded, etc.). The internationalization of education in this COIL course is enhanced by the novel combination of metaliteracy and digital storytelling.

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This paper was presented at the *ICDE Virtual Global Conference Week 2021: Upskilling and upscaling for quality Open, Flexible and Distance Learning (OFDL)* during the week of 25–29 October 2021, and the contribution was preselected for publication in *Open Praxis*.

## INTRODUCTION

This paper describes the redesign of *Digital Storytelling* as a Collaborative Online International Learning (COIL) course that was taught in fall 2020 and spring 2021 at SUNY Empire State College. Metaliteracy is integrated into the learning design of this fully online course to enhance the virtual international experience. This pedagogical model encourages metacognitive reflection and the production of digital narratives as individuals and in collaboration with peers. The development of this COIL course is reinforced by open educational resources (OER) available at the Metaliteracy.org blog (https://metaliteracy.org/).

As a COIL course, *Digital Storytelling* is developed and taught by a faculty member from the Department of Arts and Media in the United States and a European Program Director and faculty member in Prague, Czech Republic. Both colleagues are from SUNY Empire State College and are experienced in International Education and online learning at the same institution. This partnership led to the merging of digital storytelling and metaliteracy in practice for international and online students. It advances collaborative learning by uniting SUNY Empire State College students primarily from the United States and Prague, Czech Republic. This innovative course experience allows for virtual interaction, communication, and collaboration among students from the same institution who would not usually study together. While students in International Education may take online courses with students from the U.S., most of their study takes place at the location in Prague, Czech Republic. The *Digital Storytelling* COIL course was revised to bring together U.S and international learners throughout the learning experience and has also included students from Canada and Tirana, Albania.

As part of this collaborative teaching experience, metaliteracy is fully embedded into the course design and informs several of the digital storytelling assignments and self-assessments. This faculty partnership identified a compelling theoretical connection between digital storytelling and metaliteracy that reinforces learners as ethical and collaborative producers of digital content. Through this course revision, students are asked to envision themselves as both digital storytellers and metaliterate learners by identifying with specific roles (producer, researcher, communicator, translator, etc.). They develop individual and collaborative digital stories by using original and/or openly licensed materials through such resources as Creative Commons. They complete a mid-term self-assessment of their learning in the course by including the four domains of metaliterate learning (affective, behavioural, cognitive, metacognitive) in their analysis. As part of a final self-assessment, students evaluate their learning based on the metaliteracy characteristics (collaborative, productive, informed, etc.).

Although limited in scope, this paper discusses the redesign of this online course to prepare for future research that further investigates this novel approach and the impact it has on learners.

## LITERATURE REVIEW

This review of the literature explores the theory and practice of both digital storytelling and metaliteracy.  The interrelated focus of each approach on developing learners as producers of digital information inspired the redesign of this COIL course to incorporate metaliteracy in practice. This redesign of the online class encourages students to envision themselves as both digital storytellers and metaliterate learners and is supported by the application of metaliteracy open educational resources (OER).

### DIGITAL STORYTELLING

According to Bryan Alexander, "Digital stories are narratives built from the stuff of cyberculture" (Alexander, 2017, p.3). As the author suggests, the intersection of digital technologies and narrative forms are realized through the interactive and participatory nature of a connected world. Alexander says that: "Digital stories are currently created using nearly every digital device in an ever- growing toolbox. They are experienced by a large population. Their creators are sometimes professionals, and amateurs." (Alexander, 2017, p.4). Digital storytelling is a

narrative form that is open to everyone with access to digital technologies for producing and sharing their productions online. It is a creative form of artistic expression that is developed by not only professionals in the field but also those interested learners who may be new to the craft. The application of digital technologies to tell stories is described by the Educause Learning Initiative (ELI): "Digital storytelling is the practice of combining narrative with digital content, including images, sound, and video, to create a short movie, typically with a strong emotional component" (Educause Learning Initiative, 2007, January). This approach requires the ability to engage with digital technology for content creation while also understanding the affective impact of telling a story.

Joe Lambert is co-founder of StoryCenter (https://www.storycenter.org/) which provides resources for digital storytelling including educational programs. Lambert describes the production of digital narratives as a reflective process that is empowering for the storyteller. He argues that "I have come to believe that the process of writing and speaking your words, then editing that mix of your own voice and images that perhaps carry their own powerful meaning, makes digital storytelling a form of reflective practice" (Lambert & Hessler, 2018 p. 143). As noted by the author, it is the combination of these narrative processes that constitute the digital story and provide opportunities for student reflection on learning itself. This understanding of digital storytelling as a reflective practice aligns with the metacognitive dimension of the metaliteracy model as central to student learning. It supports the rationale of this course revision to strengthen metacognition in practice through metaliterate learning activities.

## METALITERACY

According to Mackey & Jacobson (2011), "metaliteracy moves beyond an exclusively skills-based approach to information and emphasizes collaboration in the development and distribution of original content in synchronous and asynchronous online environments" (Mackey & Jacobson, 2011, p. 76). Metaliteracy prepares individuals to reflect on their learning as they produce and share new media in these participatory settings. The metaliteracy model (Figure 1) places the learner at the centre of several interrelated components. For instance, metaliterate learners gain an awareness of the four learning domains that include the affective, behavioural, cognitive, and metacognitive (Mackey & Jacobson, 2014, p. 91). The four domains are visualized by the inner ring of the metaliteracy model (Figure 1).
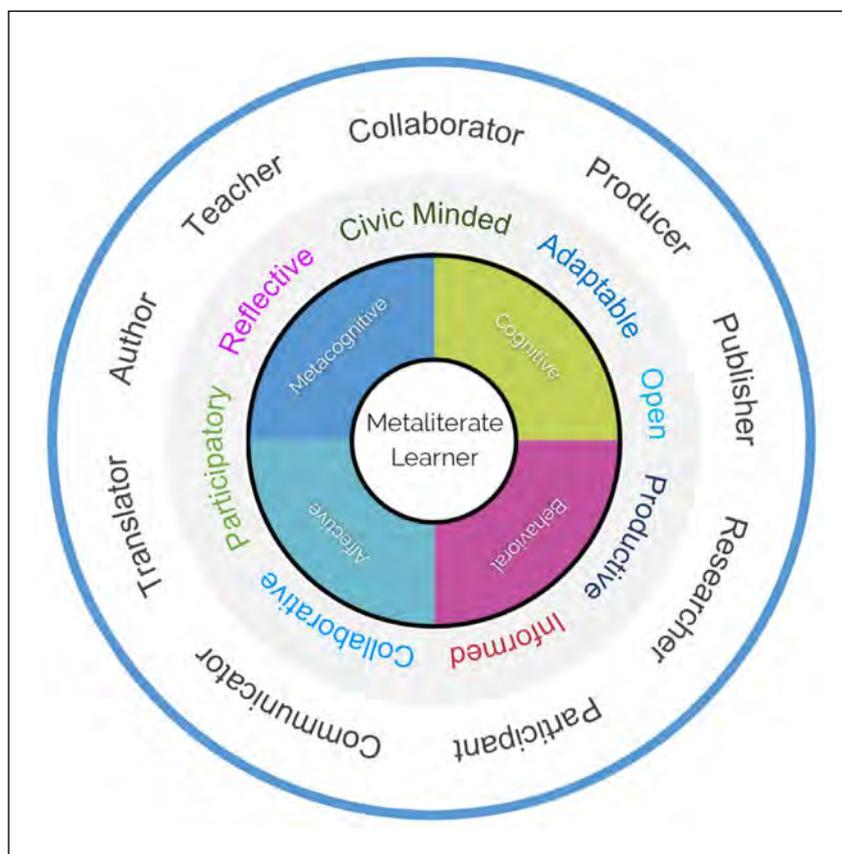
Through this approach, individuals apply metacognitive reflection, within the context of how they feel about their learning (affective), the skills they develop in learning situations (behavioural), and the knowledge they gain (cognitive). As shown in the outer ring of this diagram, metaliterate learners play several interrelated roles that relate in one way or another to the production and sharing of information in social settings (Mackey & Jacobson, 2014, p. 91–92). They strive to be participants, authors, researchers, and communicators as they produce original and remixed content. Through this approach, learners reflect on existing roles while reaching toward new responsibilities. The middle ring of this diagram (Figure 1) features several metaliteracy characteristics (reflective, adaptable, informed, open, etc.) that align closely with the learner roles as individuals gain knowledge as information producers in collaborative environments (Mackey, 2018, p. 16–23).

Collectively, these core components of the metaliteracy model provide individuals with new insights about their learning within a flexible framework that is adaptable to different learning experiences. These elements are both conceptual and practical and are reinforced through the Metaliteracy Goals and Learning Objectives that are transferable to learning scenarios in academic settings and throughout one's lifetime (Jacobson, et al., 2018). Mackey & Jacobson (2014) analysed an earlier version of this *Digital Storytelling* course through the lens of metaliteracy and concluded that "the design of this course, with a focus on clearly defined objectives and effective technology use, promotes an empowering approach to learning consistent with metaliteracy" (Mackey & Jacobson, 2014, p. 205). At the same time, however, this previous version of the class did not include an international component, the metaliteracy goals and learning objectives were later revised in 2018, and the course itself has been revised extensively. While a connection between digital storytelling and metaliteracy had been established, continued research is needed to see how this theoretical alignment develops in practice, especially through virtual international education.

## COURSE DESIGN

This exploration of the course design focuses specifically on the ways that the metaliteracy model was integrated into the learning activities. A description of the course is provided and includes the existing learning outcomes that were not changed as part of the redesign. The *Digital Storytelling* learning activities are discussed in relation to the metaliteracy components and learning goals that inform the revised assignments.

### INTEGRATING METALITERACY INTO DIGITAL STORYTELLING

Digital Storytelling is a step-by-step approach to developing the skills of producing digital narratives while encouraging learners to understand who they are and where they fit into the process of producing digital media. Throughout the course, students learn how to write effective scripts, create visual storyboards, and then analyse and select digital tools to produce their narratives. Rather than require the use of specific proprietary tools, the course introduces students to a range of open digital resources for producing and hosting media projects. Students learn to evaluate the effectiveness of these technologies and platforms that are best suited for each individual and group project. They share their knowledge about these applications when they describe their projects in dialogue with peers and troubleshoot technical problems in the open space of the online Student Cafe'. The course structure is designed to scaffold learning from individual digital stories to a culminating group project for students to plan, produce, and share a collaborative digital narrative to advocate for a specific social cause.

Metaliteracy's focus on learners as active and informed content creators in new media environments supports the individual and collaborative process of digital storytelling. This pedagogical model is a comprehensive approach to learning that expands beyond skills development to reinforce the meaning and purpose of producing digital narratives online. Integrating the metaliteracy framework into the course, through readings, OER, and learning activities, allows students to reflect on who they are as a learner while gaining new insights about their classmates as well. Students investigate the metaliterate learner roles that support their emerging responsibilities as digital storytellers. They gain knowledge through scaffolded learning, producing information and applying it to the construction of digital narratives based on their life experience.

## LEARNING ACTIVITIES AND METALITERACY COMPONENTS

The COIL course includes several learning activities for students to plan and build digital narratives as individuals and in collaboration with peers. Each of the individual storytelling assignments includes a peer review component that requires students to provide constructive feedback to their classmates. This collaborative aspect of the course culminates in a final team-based project that addresses a specific social cause identified and researched by students on the team. Featured stories and open course materials are available through the Global Stories Blog (https://digital-stories.org/).

Each of the learning activities reinforces the course learning objectives, which include the following:

1. Apply digital storytelling theory and techniques to write, produce, and publish digital stories, including autobiographical narratives, mobile stories, and a collaborative digital story.
2. Create story ideas and create narrative structures for digital stories in selected genres, and provide scripts and scene descriptions.
3. Integrate images, text, video, and audio to create digital stories, and acquire competency in the use of digital media applications.
4. Apply digital storytelling theory and techniques to write, produce (Digital Storytelling, SUNY Empire State College, 2021).

These objectives define the skills and knowledge that students will gain by the end of the course and include both theoretical and practical aspects of learning. In support of these overall course goals, metaliteracy is infused in the learning activities as shown in Table 1 that outlines learning activities with metaliteracy components and goals.

| LEARNING ACTIVITY | METALITERACY COMPONENT(S) | METALITERACY GOAL(S) |
|---|---|---|
| Selfie & Metaliteracy Video | Learner Roles (producer, collaborator, researcher, translator, etc.) | Goal 2: Engage with all intellectual property ethically and responsibly<br>Goal 3: Produce and share information in collaborative and participatory environments |
| Metaliterate Learner Self-Assessment | Learner Domains (affective, behavioural, cognitive, metacognitive)<br><br>Characteristics (informed, collaborative, adaptable, open, etc.) | Goal 4: Develop learning strategies to meet lifelong personal and professional goals |
| Readings Discussion: Collaborating as Metaliterate Learners | Learner Roles (Collaborator) | Goal 1: Actively evaluate content while also evaluating one's own biases<br>Goal 3: Produce and share information in collaborative and participatory environments |
| Digital Storytelling Project: Collaborating for a Cause | Learner Roles (producer, collaborator, researcher, translator, etc.)<br><br>Characteristics (informed, collaborative, adaptable, open, etc.) | Goal 2: Engage with all intellectual property ethically and responsibly<br>Goal 4: Develop learning strategies to meet lifelong personal and professional goals |
| Final Selfie & Metaliteracy Video | Characteristics (informed, collaborative, adaptable, open, etc.) | Goal 3: Produce and share information in collaborative and participatory environments<br>Goal 4: Develop learning strategies to meet lifelong personal and professional goals |

**Table 1** Learning Activities and Metaliteracy Components.

This table establishes that several of the essential *Digital Storytelling* assignments align with the core components of the metaliteracy model and the four main goals of metaliteracy. This COIL course combines metaliteracy and digital storytelling in practice through digital media projects and self-assessments. As part of these assignments, students complete open readings about metaliteracy, engage with an interactive metaliteracy model, and watch videos about the core components of metaliteracy available through the metaliteracy.org blog. The first Selfie & Metaliteracy video asks students to envision the metaliterate learner roles they

identify with the most.  As content producers for this assignment, learners reach toward two of the metaliteracy goals related to their knowledge of intellectual property and the ethical production of information. The Metaliterate Learner Self-Assessment assignment encourages students to reflect on their work in the course and the knowledge they gain through the lens of the four learning domains and the metaliteracy characteristics. This analysis supports students as they strive toward the fourth goal of metaliteracy to develop lifelong learning strategies as metaliterate learners.

The next two assignments, Readings Discussion: Collaborating as Metaliterate Learners, and the final *Digital Storytelling* Project: Collaborating for a Cause, are interrelated. The online discussion engages students in a conversation about the ways that the collaborator role influences the effectiveness of teamwork. This conversation is pivotal to the teamwork required for the final digital story about a social cause. It supports the first and third goals of metaliteracy to reflect on individual preconceptions and to be open to multiple viewpoints while producing information collaboratively. As part of the final project, the small groups identify and assign different team roles, and work to embrace the metaliteracy characteristics (collaborative, open, and civic-minded). As a culminating activity, this teamwork aligns with the goals of metaliteracy regarding the ethical responsibilities of producing information and developing lifelong learning strategies. At the end of the course, students complete one last self-assessment as part of a Final Selfie & Metaliteracy Video. This reflective video requires students to identify and describe the metaliteracy characteristics that are applicable to their learning in the course. Through this analysis, the students revisit the goals of metaliteracy related to the production of digital content and the design of self-directed learning strategies.

## LESSONS LEARNED

Teaching this course collaboratively provided the instructors with valuable lessons learned that continue to inform their ongoing work together. Based on the assessment of assignments in the course, it was clear to the instructors that the students identified with the metaliteracy concepts, and this approach supported their digital stories and reflections about learning. Collaborative teaching provided mutual support throughout the course experience and provided insights about grading, formative assessment, problem-solving, and responding to student teams. It offered multiple opportunities to assess the learning design together and to make changes in the next iteration of the course. Co-teaching generated new insights about the use of digital technology for content creation, selection of OER, assignment revisions, the design of rubrics, and the integration of metaliteracy throughout the course.

The instructors found that it was necessary to guide and impress upon students to review all the digital storytelling resources and tools available to them in the course. It was also determined that students needed to be involved in the group project earlier and to define clear milestones and due dates for team-based deliverables. The individual projects required a stronger emphasis on the planning process, including additional instruction about writing the script, and developing a visual storyboard. Overall, it was necessary to consider how to build effective assignments and resources that scaffold learning through each digital storytelling production.

## RECOMMENDATIONS AND IMPLICATIONS

Through this collaborative teaching experience, the instructors identify a strong alignment between the theory and practice of digital storytelling and metaliteracy. Students relate to both concepts and discuss this synergy in response to course assignments, including online discussions, self-assessments, and digital storytelling projects. Revising this course to include OER made it possible to teach all learners, from every location, about these ideas with the same quality content. The interactive metaliteracy diagrams and dynamic videos available through the Metaliteracy.org blog allowed for seamless integration into the online course environment. The assignments were scaffolded to build on learning achievements while supporting peer review and preparing students for a final team project. The availability of metaliteracy OER reinforces the integration of these concepts into this online course and illustrates the transferability of these ideas to a range of educational settings.

This collaborative course creates dialogue among international learners who support each other when providing feedback on individual projects and by working together on a team narrative. The effectiveness of this approach in a fully online COIL course demonstrates that educators need to prepare global learners as both individual and collaborative producers of digital narratives. Metaliteracy is central to this process because it encourages not only the ability to apply digital technologies but to also learn about oneself in connected environments.

## CONCLUSION

The integration of metaliteracy into this *Digital Storytelling* COIL course demonstrates the application of a holistic model for effective teaching and learning online. Metaliteracy is a flexible and adaptable framework that aligns with the goals of this international online course to prepare learners as both individual and collaborative digital storytellers. As part of this process, the students gain practical skills by learning how to use digital media but also expand upon these competencies with a deeper understanding of the learning process itself. As digital storytellers, the students produce and share new knowledge by taking charge of their life narratives and working in partnership with peers.

## COMPETING INTERESTS

The authors have no competing interests to declare.

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