Becoming Literate Digitally in a Digitally Literate Environment of Their Own

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A Domain of One's Own can empower teachers and students to engage in digital literacies while maintaining ownership over their digital identities.

With the advent of new and mobile technologies, educators are using a variety of digital spaces and tools to create and curate their digital identities. Professors have personal webpages linked to their university's website. Social media tools are used to tweet, blog, and post about research, teaching, and important events in the field. Digital platforms such as Google Classroom and PBworks are used to store and distribute teaching materials. This network of platforms and tools is interconnected to scholarly and personal spaces, which provides opportunities to build and maintain digital identities that complement offline versions of identity. Challenges and questions certainly arise as teachers engage in these literacy practices; yet, there is the potential to utilize these varied platforms and connections that exist in the online collaborative space to act as networked, social scholars and practitioners (Wise & O'Byrne, 2015).

There is also a need for students to engage in these practices with online texts as they develop and modify their identities. Specifically, learners from pre-K up through higher education need places online where they can create, build, and modify digital artifacts that represent their identities as learners. To this end, we propose that students need to develop and maintain a domain of their own, one address online that students build up from pre-K through higher education that archives and documents their learning over time. Students can use it to read, write, participate, build, edit, revise, and iterate as if it were a digital portfolio. We believe that this direction is necessary, as it builds aspects of ownership, agency, and empowerment of learners in online and hybrid spaces (O'Byrne & Pytash, 2015). Furthermore, we contend that if we really want students to be digitally literate, they need to have a personalized learning space online that provides more than just a snapshot of their participation in one class or one school year.

In this piece, we examine A Domain of One's Own and how educators and schools can implement this initiative. We contend that the building and developing of A Domain of One's Own showcases the ways that schools can engage students in complex and meaningful literacy practices. We conduct this examination by looking at the challenges and opportunities of providing each student with a domain of his or her own in elementary school, middle grades, high school, and higher education.

Such an initiative raises key questions for literacy educators and students about tools, privacy, security, and hegemony in the current system. As educators explore the changes that technology is enacting on literacy practices (Leu, 1997), we need to prepare for future changes. We hope this piece will spark these discussions now and in the future as we encourage our colleagues in the field to push for a more informed, longitudinal use of new and digital literacies across the lifespan of learners.

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Challenges With the Current Learning Management System

Educators in K–12 and higher education settings are increasingly using online learning management systems (LMSs). In secondary or higher education classrooms, teachers often employ Edmodo, Google Classroom, or Google Apps for Education. Materials such as readings, course discussion boards, and assignments are made freely available for students and educators by the school or university. Learners and instructors log in to these spaces, which are maintained and monitored by the system administrators. The reason for this influx of tools and platforms is that it makes it easier for software developers and companies to provide spaces that are considered safe, secure, and easy to use by individuals.

There are many challenges with these systems. The first is that they are rarely open access or open source. *Open access* refers to content or learning materials that are free of all restrictions on access or use. *Open source* refers to the computer software being used and the ability to study, change, or distribute the content or platform for any purpose. However, the learning and content is placed behind a wall, which is a challenge because learners are not provided with opportunities to openly build, share, and revise their digital identity. Therefore, the digital residue of student learning, consisting of student interactions, content, work product, and assessments, is created within the learning space and remains behind the wall of the LMS. When the class is over, students lose access to the content and any data or learning materials. This learning architecture is not conducive to the literacies that individuals will need on the Web. Furthermore, it leaves students with the incorrect supposition that learning is conducted in stages or steps that are separated from one another and should not be connected.

This problem is compounded when the learner or educator leaves the school and is thus removed from the learning environment. Students lose access to their work from class to class, or school to school. Certain systems allow learners to export their content (e.g., Google Apps). Some individuals may be industrious enough to save their documents and learning artifacts over time on hard drives and computer backups, but much of the challenge in this is that many individuals may not have the expertise, time, or ambition to make this a reality. Given the connections that exist between the development of literacy practices and identity (Lewis & del Valle, 2009), it seems problematic to view the development of either as occurring in segmented silos as created by these versions of the LMS.

As individuals develop and maintain their personal cyberinfrastructure (Campbell, 2009), decisions need to be made about what is shared online and what remains private. This is an important element that should be documented and archived as learners create and curate their digital identity. This documentation of learning over time is too important to be left to gather digital dust until the system administrators delete it.

This raises questions about who owns teaching materials and evidence of student learning. The current model is increasingly problematic, as educators entrust student data and privacy to school districts and system administrators. To get a better sense of the challenges in this, we ask that you conduct a quick thought experiment as you read this piece. Spend a couple minutes thinking of the individual or system administrator in charge of your digital materials within your organization. Do you know the name of the person or group in charge of administering these materials and their settings? Can you contact them if you need to access, edit, or remove this content? What is the likelihood it will be the same person in five or 10 years? Will you be able to contact that person? These and many more questions should be presented as we examine the structure and format of the LMS (Groom & Lamb, 2014). By owning and maintaining a domain of their own, teachers, students, and parents have the opportunity to control, audit, and revise materials and information shared on digital spaces. A considerable amount of learning needs to occur to help individuals understand what to do with these spaces, and dialogue is needed to not only identify present possibilities but also identify the steps and objectives needed to create the literate future that our students need.

A Possible Alternative to the Current System

Educators, students, and parents need to be empowered to better identify and develop digital texts and tools. In this piece, we identify several opportunities for integrating A Domain of One's Own in school districts and institutions of education using open-source tools and platforms. Please be advised that this is only one such possibility. It is the responsibility of individuals at the local educational level to identify the best course of actions and tools for this purpose. The steps that we identify will require a reexamination of the literacy practices in digital spaces, as well as individual acceptable-use policies for digital spaces.

What Is A Domain of One's Own?

The initiative A Domain of One's Own was first imagined at a meeting at the MIT Media Lab as Kin Lane, Jim Groom, and Audrey Watters considered the possibilities of educating individuals about their data and digital identities (Udell, 2012). The thinking was considered as a contemporary version of Virginia Woolf's 1929 extended essay titled *A Room of One's Own*, in which she demanded a personal place to write. This early work became a pilot program that started at the University of Mary Washington and then traveled across numerous other institutions of higher education and beyond. For more information and examples about A Domain of One's Own, see O'Byrne (2016).

The initiative helps students, faculty, and staff register a domain name of their own and associate this with hosting space managed by the school. This domain and the hosting space can be used to create and maintain a website of the individual's choosing using WordPress and other open-source software. The use of open-source software is important, as it allows the individual to adapt and modify content using free tools and support that are freely available online. These Web spaces can be used for projects ranging from personal blogs to professional portfolios. Most importantly, the materials created are portable. Open-source publishing software, such as WordPress or Moodle, allows users to move their content easily from one hosting provider to another if and when they leave an institution.

Developing a Domain of One's Own From Pre-K Through Higher Education

Although a domain of one's own would cross multiple content areas and academic disciplines, we believe that there are specific implications related to youths' literacy practices. In the following examples of A Domain of One's Own across multiple grade and developmental levels, we highlight the specific examples of what it may look like as schools and institutions provide opportunities for students to build a domain of their own. We recognize that although some learners might construct multiple identities in different contexts, particularly in online environments, we contend that this process identifies opportunities for students to demonstrate and document development of literacy and learning over time. Students need opportunities to develop agency and ownership in learning, and we believe that this is one way that all students can highlight their particular talents, abilities, and interests.

Elementary School. We believe that the best option would be to provide learners with a domain and a website as early as possible. As students enter pre-K or pindergarten, they should be assigned a domain. As the student moves from grade to grade in elementary school, the new teacher is given permission to add, edit, and revise the student's domain, and the previous educator loses permission to access or revise it.

A great deal of work has already identified opportunities to embed new and digital literacies in elementary schools (Labbo & Noguerón-Liu, 2013; Peppler & Kafai, 2007). An example of this includes art teachers taking digital photos of student work and posting it online for parents to review. This also might include students creating stop-motion animation movies in class and posting these videos on the classroom's YouTube channel. By starting with a domain and space to create and document learning process and product, this portfolio would become an archive of work conducted over time. With the amount of work product that students create and bring home from school, it can be a challenge to negotiate this deluge of content and figure out what is the best; however, through a digital portfolio, teachers and students can work together to identify, annotate, and highlight the work that is transcendent. This process allows younger students opportunities to become reflective learners.

Middle Grades. As students enter middle school, the work included in their digital portfolio on their domain would follow them as they advance across grades. Students and educators can review the work completed up to this point and identify specific personal learning goals and pathways. Work product and artifacts included on the student domain can be revised and republished for newer assignments and reflections. This reflection and revision, or versioning, of work is an important skill as students build up their metacognitive awareness. Versioning is the creation, revising, and management of multiple releases of a product or piece of work.

Archiving work saved across the academic career of a student allows him or her to view the work as a collective whole and obtain formative guidance while reviewing and refining the digital portfolio. A richer, more granular set of data can be used to document student learning longitudinally if this learning ledger is used, revised, and commented on over time. Furthermore, grades, formative assessments, and digital badges can be used to show growth and stagnation of learning on a more regular basis (O'Byrne, Schenke, Willis, & Hickey, 2015). Educators and students can select work products

and reflections from common shared learning experiences across classes and grades. These artifacts would be included on the student's domain and begin to compile a rich digital portfolio. As students advance across grades, they are able to build up a complex profile that would connect with grades, awards, certificates, and digital badges to form a powerful learning ledger. Because students are given ownership and choice over their artifacts, all students have the opportunity to demonstrate their learning over time, as well as to be reflective about their work.

High School. As students enter high school, the domain and digital portfolio should follow them into a new environment and continue to evolve. The domain at this point will consist of assessments, reflections, and credentials that document student achievement and growth. Students in high school should continue to add and modify their portfolio content to best evidence their learning goals and objectives. In this process, they review and modify their learning pathways to make the most use of their stated goals and objectives. Students may also begin the process of deciding which elements of the portfolio they want to foreground and which elements they want to archive or delete from the portfolio. This reflective, metacognitive process engages them with the totality of their work completed over their time in the district. Students meet with mentors, peers, and teachers to discuss their work and the identity that they're representing with the assembled work. Any learner identities that are not represented could be solidified by including coursework, assessments, or credentials such as badges to provide evidence. For example, a student who wants to pursue a career in culinary arts could enroll in nutrition science classes in the high school or volunteer at local soup kitchens and restaurants to strengthen this background.

Students would be able to modify the privacy settings of pages in their portfolio with guidance from adults and peers. In this process of slowly opening up the privacy and visibility of the portfolio to ever-increasing members of the school community, educators are scaffolding students as they make decisions about their digital identity in their private lives. While in the junior and senior years, under teacher supervision, students would begin to open up pages of their domain to the public. In this activity, students can start to use their domain as a space to engage and connect their learning ledger and portfolio with members of the outside community. Students entering college and careers can use their domain as a website to list references and credentials. Students seeking higher educational opportunities can use the domain and associated materials as supplemental materials in college and career applications.

Postsecondary Education. When a student prepares to leave the K–12 environment, we believe that this is the perfect time to extend this learning arc and support students as they leave this environment and begin the next stage of their lives. We would like to see a future model in which school districts would advise students to enter into an agreement with the school district so it will continue to host their domain (i.e., keep it publicly online) for a predetermined period of time. This means that students would have already built and revised their domain and learning ledger to present the materials in the format that best suits their goals. The school district would host the individual student websites for a predetermined set of years. After that period of time, students can choose to obtain a copy of their data or move their domain over to a hosting company that they pay for. This means that students could obtain a disk or USB thumb drive that contains all of the materials of their portfolio and domain for no charge. Alternatively, if the school has used an open-source publishing platform (e.g., WordPress) for the student domains, the student can find and pay for hosting and export their website to the new hosting company. Now they each have a robust portfolio and can continue on with a domain of their own as they further their education and begin their careers.

As learners move into their careers beyond K–12 schooling, regardless of their career path, they can continue adding to their digital portfolio. Through the addition of degrees, certificates, and digital badges, they can identify and maximize elements of their learning pathways. Following the same steps established in elementary, middle, and high school, the individuals can continue to review and modify their knowledge, skills, and dispositions as evidenced on their domain and learning ledger. This may also involve participating in a massively open online class to build up knowledge and experience in an area. If they want to enter a career in the technology sector, they might choose to enroll in a coding camp. If they would like to enter an institution for preservice teacher preparation, they could review their ledger and then spend time volunteering at a youth camp to build more experience in working with children.

The skills and credentials identified on the learning ledger and contained on the individual's domain could obviously be contained in a resumé or accessed through e-mails and phone calls with references. The use of a public domain and this digital portfolio make

transparent the knowledge, skills, and dispositions that individuals have garnered within and outside of school placements. These materials are presented in a manner that is accessible and transparent to provide a clearer picture of the skills and capabilities of the individual.

Conclusion

In this piece, we unpack trends in theory, research, and digital tools. We try to identify possible next steps for educational institutions, their teachers, and their learners. Within the confines of this written piece, there are only so many avenues that we can explore, and there are also still many more larger questions or assumptions that need to be tested if we are to assist learners in creating a domain of their own. Some of these questions include the practical: What domains and names of domains are possible? Who gets to choose the names and domains being used? What skills and strategies are necessary to create and curate these spaces? These questions may also test assumptions about literacy and education. These assumptions include, but are not limited to, the following items: Who owns evidence of student learning? Who owns teacher-created lesson plans and supplemental materials used in the classroom? In what ways can we support authentic assessment of student and educator growth over time? Do open-source platforms have sustainability concerns? Who is best served by the LMS services and contracts?

The paradox of the vision that we detail in this piece is that the creation of tools and spaces that support school learning (i.e., portfolios, badges, learning artifacts) are still operating within school spaces. Alternatively, in combining school learning with spaces that students "own" but that aren't necessarily driven by school learning, students are no longer in school but are in some sense acting on their own.

Initiatives that blur the lines between in-school and out-of-school include Youth Voices (youthvoices.net) and the MOUSE outreach program (O'Byrne et al., 2015). Additionally, DS106 (ds106.us) started as a class on digital storytelling at the University of Mary Washington and includes the Assignment Bank, in which students are able to work openly online and submit their own assignments and work to the course assignments (Rheingold, 2014). Even though these initiatives are developed by educators, students still drive the discussion of issues and the development of content that may or may not be tied to some school content and expectations.

Although challenges may exist in helping key school personnel understand the importance of this work, teachers and students may have needs when trying to make A Domain of One's Own a reality in their school. Many teachers are already doing great work to provide students with access to digital tools and quality literacy instruction to help them develop as critical and engaged learners. However, we believe that teachers can benefit from professional development opportunities that are sustainable to understand how a domain of one's own is relevant to their particular teaching needs, classrooms, and students. In addition, teachers need professional development to help them develop their own digital identities.

The model proposed in this piece may provide innovative new communication channels among home, school, and community. This model may provide opportunities to document literacy practices that exist across the different spaces in which the student lives and learns. This domain of their own may become a real-time resumé that acts as a formative assessment as students document learning and growth over time.

The world is now interconnected in a global network in which anyone with access to the Internet is exposed to unprecedented literacy and learning opportunities. Information is plentiful, and experts are, literally, at our fingertips. With the advent of new digital texts and tools, the promise and peril of this access to everyone is tangible. Research over the last two decades has shown that reading and writing in digital spaces may require a more complex application of literacy skills than print-based reading and writing. Yet, most formal institutions of education still cling to traditional definitions of literacy and pedagogical approaches, focusing on print-based literacy and teacher-centered pedagogy. In these institutions, students are often not empowered to learn, nor are they connected to the world outside their classroom walls. To prepare students to be literate digitally, we need to prepare them in a digitally literate environment of their own.

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