

CONNECTED COURSES AT VIRGINIA COMMONWEALTH UNIVERSITY

Designing digitally-forward learning experiences
that promote student success in a networked
world

Laura Gogia, MD, PhD – gogialp@vcu.edu
Division of Learning Innovation & Student Success
Virginia Commonwealth University
April, 2016

Introduction

In its quest to become a national premier urban research institution, Virginia Commonwealth University (VCU) is asserting itself as a global and community presence through distinctive research, innovative design, and data-driven approaches to student success. In 2014, the VCU Quality Enhancement Plan (QEP)¹ was revised to better align with the commitment made in the university's strategic plan to "learning that matters:" a blend of experiential, authentic, and personally relevant learning experiences for students who strive to be the professional and civic leaders of the future. In our rapidly changing and globalizing society, students must develop unprecedented capacity for collaboration, creativity, communication, and self-directed learning to be successful. Thus, the revised QEP interprets the university's goals through the lens of our digital age: To support students' learning in their current and future lives, VCU must facilitate the development of dispositions and skills for digital fluency and integrative thinking across and throughout all pedagogical activity, regardless of their area discipline-driven study.

To support this endeavor, VCU established RamPages, an open campus-wide digital publishing platform.² Named after the university mascot, this public WordPress installation offers students, faculty, and staff the opportunity to develop individual, social, and formal academic websites. Because it is a public platform, RamPages also allows for the easy integration of student and faculty work into the larger World Wide Web, which increases opportunities for connectivity, authentic audiences, and community and scholarly partnerships. Ideally, as the VCU community interacts on this digital platform, the content of their websites will become networked to form a rich virtual learning environment layered onto and extending beyond the physical VCU campus.

Since its inception in 2014, RamPages has expanded to more than 16,000 websites and continues to grow rapidly. Increasingly, it is being used to support formal academic course websites,

Connected course experiences incorporate elements of academic inclusivity, experiential and active learning, and student agency – all of which have been connected to student engagement, retention, and success. They are theoretically sound approaches to promoting digital fluency and integrative thinking among university students and faculty, but their efficacy has not been documented in part because they are still being defined and the necessary faculty development is still underway.

¹ <http://sacs.vcu.edu/quality-enhancement-plan/>

² <http://rampages.us/>

KEY TERMS

Connected Course: Formal, academic credit-bearing courses offered by the university as part of graduate or undergraduate programs of study. While not necessarily fully online, a public course website that aggregates learning resources & products is central to their course design. The course also reflects an intention to promote openly networked connected learning, connectivity, and integrative thinking.

Course website: A course website is an official, university designated digital space that aggregates at least some or all course documents, learning resources, and student learning products.

RamPages: The public WordPress installation supported by VCU since 2014 and available for use by all students, faculty, and staff. Currently, it includes more than 16,000 websites. All of the course websites reviewed for this report are housed on RamPages.

which this report defines as institutionally designated digital spaces dedicated to aggregating some or all course documents, learning resources, and student learning products. Over time, it has become clear that some of these course websites are supporting a special type of course, which has become known as the “connected course.” Although connected courses are not isolated to specific degree programs, disciplines, or content areas, they share certain underlying pedagogical purposes and design strategies. These courses are not necessarily fully online, but they are defined through the following components: learning goals that include (but are not necessarily limited to) connectivity, digital fluency, and/or integrative thinking; a course design that integrates openness, networked participation, and student agency; and a learning space that includes a public course website that aggregates learning resources and products.

Connected course experiences incorporate elements of inclusivity, experiential and active learning, and student agency – all of which have been shown to enhance student engagement, retention, and success. They are theoretically sound approaches to promoting digital fluency and integrative thinking among university students and faculty. However, their efficacy has not been documented in part because they are still being defined and the necessary faculty development is still underway. The purpose of this report is to assist in the process of describing connected courses in the VCU context, while assessing current course offerings and suggesting strategies towards furthering faculty development, so that quality course design can be ensured and student impact can be studied with accuracy.

Theoretical Framework for Connected Courses

Conceptually, connected courses draw on the documented qualities of digitally networked participatory culture.³ When designed and implemented well, they demonstrate a fully integrated digital-forward strategy towards teaching and learning even if they are not taught as fully online courses. This section reflects on what is meant by “digital-forward,” in terms of connected learning goals, open learning spaces, and networked course design before offering criteria for evaluating connected course design.

Learning through Connection

The purpose of this report is to assist in the process of describing VCU connected courses while assessing current course offerings and suggesting strategies towards furthering faculty development in the area of creating connected course experiences. RamPages websites that meet initial criteria were analyzed based on stated criteria. Those that meet full criteria are showcased and those that do not are analyzed for commonalities that might point towards next steps in faculty development needs.

Emerging digital pedagogies such as open education, networked learning, and connected learning share an emphasis on framing learning through acts of connection, or connectivity. Connectivity is the ability for an individual to connect their thoughts or work across disciplines, contexts, time, and communities of people. The idea of learning through connection is neither new nor particularly revolutionary. Social learning theories inform us that people learn through social interaction⁴; cognitivists state that learning occurs when new ideas are connected with previous knowledge⁵; and knowledge transfer research provides evidence that students will remember and learn more creatively and expertly when relationships (or connections) are emphasized and concepts are encountered across disciplines or contexts.⁶ Connectivity can be seen through the lens of the Kolb model for experiential learning: learners document and reflect on their connections, explore them for larger meaning or purpose, consider how that meaning might inform next steps, and use that information to take further steps towards their learning goals.⁷

Digital fluency has been defined as a form of connectivity: a multi-layered (e.g. technical, relational, analytical, and creative) approach to skills, knowledge, and dispositions related to self-expression and networked communication in the digital world. Individuals who

³ Jenkins (2009) defines digitally networked participatory cultures as those with: “...relatively low barriers to artistic expression and civic engagement, strong support for creating and sharing one’s creations, and some type of informal mentorship whereby what is known by the most experienced is passed along to novices. A participatory culture is also one in which members believe their contributions matter and feel some degree of social connection with one another....” (p. 3)

⁴ Bandura, (1971); Bruner (1966); Vygotsky (1980).

⁵ Ausubel, 1968; Novak & Canas (2008).

⁶ Bransford, Brown, & Cocking, (2000).

⁷ Kolb, (2014).

possess digital fluency are able to leverage their knowledge of digital processes and platforms to develop productive, meaningful, and flexible workflows within and across digital networks of people, resources, and information. Integrative thinking is also a form of connectivity although not necessarily situated solely in digital space. Integrative thinkers recognize and leverage the patterns they find across disciplines and contexts, value multiple perspectives and experience in terms of transdisciplinary and cross-contextual knowledge, and possess the dispositions and skills necessary to collaborate across disciplines and contexts.

Connected Course Space and Design

Ultimately, students control whether or not they learn, but educators and instructional designers can design learning environments that may increase opportunities for authentic tasks, creative participation, and serendipitous learning. The ability to orchestrate potential connections depends on the designer's understanding of the "affordances" of a learning space: the conditions in the environment that influence the range of possible actions taken by the student within that environment. The space and design of connected courses will be discussed in a digital context: Course "space" is a course website, and learning "design" refers to digital learning activities.

OPEN SPACES. Openness relates to the nature of the digital structure or platform of the space. "Open" learning spaces are visible and accessible the Internet beyond the official boundaries of the course space. Openness denotes multi-way engagement; just as students are provided with opportunities to learn "beyond the classroom" in open learning spaces, the public or non-student communities have an opportunity to study or participate. Openness is important because it increases opportunities to expose students to different perspectives, make academic relevance explicit, and provide resources for interest-driven learning. It can also provide avenues for community engagement. In the context of VCU connected courses, the concept of "open" can be explored through the bridging qualities and digital presence of the course.

KEY TERMS

Connectivity: The ability for an individual to connect their ideas or work across disciplines, contexts, time, and other people.

Digital fluency: A form of connectivity; also a multi-level (e.g. technical, relational, analytical, and creative) approach to skills, knowledge, and dispositions related to self-expression and networked communication in the digital world.

Integrative learning: A form of connectivity, though not necessarily situated in digital space. Integrative thinkers recognize and leverage patterns found across disciplines and contexts, value multiple perspectives and experience in terms of interdisciplinary and cross-contextual knowledge, and possess the dispositions and skills necessary to collaborate across disciplines and contexts.

- **Bridging.** The potential for a connected course to afford “beyond the classroom” experiences for enrolled students is its capacity for bridging: the ability to juxtapose groups of people or contexts that would not normally meet in traditional classroom settings. Bridging can be considered in terms of bringing together *groups of students* (e.g. course sections, courses, programs, campuses, universities); *communities or contexts* (e.g. study abroad courses, community-centered courses, or service learning); or *academic disciplines or fields* (e.g. interdisciplinary or cross-listed courses).
- **Presence.** The potential for a connected course to facilitate community engagement can be considered in terms of its digital presence and the qualities of participation it facilitates. Depending on the course design and the completeness and clarity of the website, members of the public who happen upon the site may serve as an *audience* for student learning; engage in self-directed *parallel* learning; or engage in *full participation* within the course learning community. Completeness of the available course materials, contextualizing information, and teaching presence, visibility of the learning process, and mechanisms in place to allow community participation impact the “presence” of the course. Not every connected course must offer non-students the opportunity to fully engage in course activities. However, all public course websites should reflect that instructors are aware of their potential audience.

NETWORKED PARTICIPATION. Networked refers to the type of participation supported by the learning activities that take place in the learning space. The term emphasizes the impact and experience of decentralized or distributed information sources in the digital world, focusing attention on the importance of interpersonal connection between learners and their peers, instructors, and other people. The goal of networked educators is to create digital learning communities that promote collaborative and cooperative learning. By definition, networked participation supports connectivity and digital fluency; future research could indicate an additional connection to integrative thinking.

- **Concept Connectivity.** Concept connectivity is the act of making connections between current thoughts and experience with those from other contexts, disciplines, and times. It may take place anywhere that student create content (e.g. blog posts, tweets, wikispaces, google docs, etc.).
- **Social Connectivity.** Social connectivity is the act of making connections with people over ideas for the purpose of sharing information or resources; brokering learning opportunities; giving or receiving feedback; and collaborating or co-constructing knowledge. Research suggests that diverse social interactions open more opportunities for learning, as students are more likely to encounter different perspectives or experiences than their own. Social connectivity may take place anywhere students interact online (e.g. discussion forums, blog post comment sections, social annotation platforms, Twitter, etc.).

- **Digital Fluency.** Digital fluency is the ability to work within and across digital platforms and through diverse forms of expression (i.e. multimodality). This occurs when students are encouraged or required to work on multiple digital platforms or engage in multimodal expression. While connected courses may or may not use formal class time to instruct students in how to use these platforms or forms of expression, they should provide additional resources and examples of potential use.

STUDENT AGENCY. Connected learning designs indicate a dedication to student agency, in terms of providing students with the mentorship, scaffolding, and opportunity to navigate and drive their own “learning life,” interest-driven projects, and, sometimes, formalized or scaffolded exercises in self-evaluation. Levels of student agency that can be offered in a connected course fall on a documentable spectrum from least to greatest:

- **Member.** Students are considered part of a learning community with identified co-constructed products. Because connected courses take place on public facing websites, students have access to these co-constructed learning products after the course is completed.
- **Contributor.** Students not only co-construct learning products, but were asked to contribute actively to the learning materials used during the course. Examples include crowdsourcing web-resources on a social bookmarking site or developing tutorials for classmates. Students not only have access to their learning products, but also these learning resources they developed for each other.
- **Designer.** Students construct learning products, materials, and design their own learning paths or “interest-drive” assignments.
- **Evaluator.** All of the above, but also students are engaged in formalized, systematic self- and peer-evaluation.

KEY TERMS

Openness: The quality of classroom boundaries. An open course website has “leaky boundaries” allowing for intermingling of information and discourse between students and non-students and between students and learning materials.

Networked: The nature of the learning activities that take place to support student learning. These digital activities are inherently active and participatory, encouraging students to filter, organize, remix and -create, and disseminate digital information individually and collaboratively.

Agency: The ethical stance of connected courses. These courses scaffold and enable students to drive their own interest-driven learning and, when possible, engage in formalized self- or peer-assessment as part of the learning assessment process.

CONNECTED COURSE EXPERIENCE CRITERIA

	INDICATOR	OPERATIONALIZATION
OPENNESS	Bridge	<ul style="list-style-type: none"> • Does course website or syllabus provide evidence of bridging: <ul style="list-style-type: none"> • Groups of students OR • Context or communities OR • Academic disciplines or fields
	Presence	<ul style="list-style-type: none"> • Does the course website provide evidence of recognition of public presence: <ul style="list-style-type: none"> • Contextualizing course information • Teaching presence • Completeness of course materials • Who can contribute information to the website (includes comments on aggregated blog posts)? <ul style="list-style-type: none"> • Faculty • Registered students enrolled in the course • VCU community • General public • Could a member of the public encountering the course website act as: <ul style="list-style-type: none"> • An audience for student work • Self-directed learners working parallel but separate to enrolled students • Full participants integrated with enrolled students
NETWORKED PARTICIPATION	Concept Connectivity	<ul style="list-style-type: none"> • Are there sites for <u>student creation</u> (such as): <ul style="list-style-type: none"> • Blog posts • Annotation platforms • Collaborative writing spaces (Google Docs) • Wikispaces • Other social media (e.g. Twitter, Instagram, Pinterest) • Other content crowdsourcing specific to the course website (web documents, photographs)
	Social Connectivity	<ul style="list-style-type: none"> • Are there sites for <u>social interaction</u> (such as): <ul style="list-style-type: none"> • Blog posts comments • Annotation platforms • Collaborative writing spaces (Google Docs) • Wikispaces • Other social media (e.g. Twitter, Instagram, Pinterest) • Discussion Forums
	Digital Fluency	<ul style="list-style-type: none"> • Are students required to operate in more than one digital platform? • Is digital activity and multimodal expression scaffolded?
AGENCY	Quality of Agency	<ul style="list-style-type: none"> • Are students treated as: <ul style="list-style-type: none"> • Member • Contributor • Designer • Evaluator

Methods

Only when connected courses are fully understood, designed, and implemented in ways that are consistent with the underlying educational philosophies and strategies of digitally networked participatory cultures can the connected course model be evaluated for its effectiveness in terms of meeting intended learning goals, enhancing student engagement, and improving student success.

As previously stated, this report aims to describe VCU connected courses while assessing current course offerings and suggesting strategies towards furthering faculty development in the area of creating connected course experiences. The search for connected courses was conducted through RamPages, as one of the major criteria for a VCU connected course includes a public facing course website. Websites that met initial screening criteria were analyzed based the criteria for connected courses outlined on page 8. Those that met full criteria are showcased; those that did not were analyzed for commonalities that might point towards next steps in faculty development needs.

This descriptive study focuses on elements of course design rather than the documentation of the types or quality of learning occurring within these spaces. The approach was taken because of the need to establish intervention fidelity; only when connected courses are fully understood, designed, and implemented in ways that are consistent with the underlying

educational philosophies and strategies of digitally networked participatory cultures can the connected course model be evaluated for its effectiveness in terms of meeting intended learning goals, enhancing student engagement, and improving student success.

The course website, the anchor of a connected course experience, served as the unit of analysis. To be included in the analysis, course websites had to meet the following **screening criteria:**

- Published and maintained on RamPages between July 2014 and December 2015.
- Identifiable as the whole or part of a formal, academic credit-bearing course at Virginia Commonwealth University. Indicators included a combination of the following:
 - An official course designation in the site title or web url address;
 - Explanatory content that designated the site as a VCU course (such as that commonly found on the home or “about” page);
 - Contact information for faculty of record;
 - Syllabus or other course documents (e.g. schedule, assignment details).
- All or most content accessible for review (e.g. not password protected or deleted).
- At least some content aggregated via an RSS feed.⁸

⁸ By definition, connected courses have a networked course design requiring the aggregation of some learning materials or products; therefore, first level data cleaning involved isolating sites with RSS feeds.

Exemplar Connected Courses

Of the almost 160 course websites that met the screening criteria, five course experiences consisting of 41 course sections met all criteria laid out below. Of the courses that met full connected course criteria, all but one were developed and offered through the VCU University College. These, along with a connected course originating from the Division of Community Engagement (“Collaborative Curiosity,” CMST 691), offer exemplars of the connected courses experience.

EXEMPLAR CONNECTED COURSES OVERVIEW

	UNIV 200: Inquiry and the Craft of Argument	UNIV 291: Great Bike Race Book	UNIV 200: The Agora	UNIV 200: Science Of Happiness	CMST 691: Collaborative Curiosity
Number of sections	6	25	6	1	1
Number of faculty	6	25	2	12	2 and Community Facilitators
How were students networked or how were boundaries bridged?	Sections Faculty Community	Sections Faculty Disciplines Community	Sections Faculty	Faculty Disciplines	Community
How did the course website leverage its public presence?	Integrated public participation encouraged	Public could potentially learn in parallel / as audience	Public could potentially learning in parallel / as audience	Public could potentially learning in parallel / as audience	Integrated public participation encouraged
Were there opportunities for concept & social connectivity?	Students engaged in document curation, blogging & other non-blogging social media. These activities were networked, juxtaposed, aggregated, and displayed on the course website.				
How did instructors scaffold or provide opportunities for students to improve digital fluency?	Tutorials for engaging on required digital platforms. Multimodal expression required. Digital workflow across platforms encouraged.	Tutorials for engaging on required digital platforms. Multimodal expression and digital workflow required.	Tutorials for engaging in multimodal expression and on required digital platforms. Multimodal expression and digital workflow encouraged.	Tutorials for engaging in multimodal expression and on required digital platforms. Multimodal expression and digital workflow encouraged.	Tutorials for engaging on required digital platforms. Multimodal expression required. Digital workflow across platforms encouraged.
What level of student agency did course design support?	Evaluator	Designer	Evaluator	Evaluator	Evaluator

UNIV 200: Inquiry and the Craft of Argument

Better known as “Thoughtvectors,” (www.thoughtvectors.net), UNIV 200: Inquiry and the Craft of Argument was the first connected course piloted at VCU. Repeated in fall 2015 and scheduled for fall 2016, Thoughtvectors is a fully online course that engages students in reading, blogging, tweeting, commenting, collaborating and creating around the works of Internet pioneers. In some cases, students engaged directly with the Internet pioneers themselves through the use of open video conferencing platforms. Students create their own websites, which are networked together at the levels of their designated section (“clubhouses”) and then the main course website. By aggregating student, faculty, and open participant work at the level of the main course website, students see, comment on, and connect across all six sections and to the open participants beyond the classroom.

Thoughtvectors demonstrates the original conceptualization of the openly networked course design. It networks (i.e. creates bridges between) student websites at section- and course levels. It also leverages its public presence by inviting public participation in course activities. Instructors actively reach out to public participants through Twitter, and the course website provides detailed sign-up instructions for any member of the public who wishes to link their blog to the course blog feed.

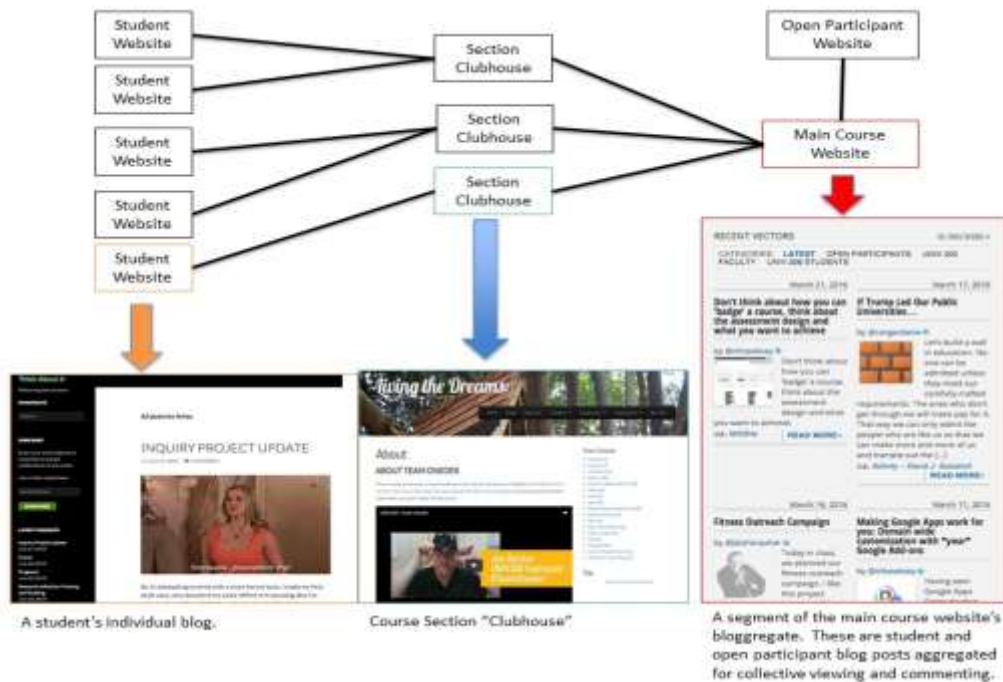


Figure 1. A map of the Thoughtvectors course structure: an example of an openly networked learning space.

UNIV 291: The Great Bike Race Book



Figure 2. Students participating in these courses chose from 25 sections of UNIV 291, each of which used a different transdisciplinary lens to capture the bike race. When students encountered this course information webpage (above), they could use filters at the top of the page to narrow their choices by general area categories. (<http://rampages.us/bikerace/courses/index.html>)

This collection of one-credit, pass/fail elective courses were designed to engage VCU students in connected learning surrounding the UCI (Union Cycliste Internationale) Road World Championships, an international sporting event hosted in Richmond in October, 2015. Twenty five participating faculty designed complementary but unique course sections addressing such transdisciplinary topics as films and cycling, cycling safety, bike race poetry, and the anthropology of crowds. Like Thoughtvectors, this connected course featured an openly networked course design in which student websites were linked to course section-level websites and a main course (or “book”) site, which aggregated all the data. Students attended and documented the bike race through the lens of their sections, aggregating various forms of data into a single, curated digital “book.”

The Great Bike Race Book takes the concept of transdisciplinary study and leveraging authentic learning opportunities (in this case, a community-hosted sporting event) to new levels.

Students worked in the field using a variety of digital media, work which was then aggregated to provide a multifaceted digital representation of the event. The task required students to develop workflows across digital platforms in ways that surpass the other courses that were evaluated.

UNIV 200: The Agora



Figure 3. The Agora course website (<http://rampages.us/agora>), features a collective Twitter feed, aggregated student blogs, detailed map of the site, and customized instructions to students that scaffold digital and multimedia expression.

Designed by Dr. Jason Coates and Ryan Cales, the UNIV 200: The Agora (<http://rampages.us/agora>) brings together six sections of students engaged in two different faculty interpretations of the course theme, “Communication, Society, and Change.” Like all course sections of UNIV 200, the Agora sections offer scaffolded opportunities for improving digital skills, multimodal expression, peer- and self-evaluation.

However, the Agora (<http://rampages.us/agora>) distinguishes itself from other UNIV 200 offerings in several ways. First, the instructors actively encourage students to engage on Twitter as well as in RamPages. Second, by maintaining their own perspectives and implementation of the course

themes and blending the work of their students in the same space, the faculty members increase the potential for heterogeneity within the course blog and twitter feeds. Finally, the course website stands out from others by providing clear, organized, and explicit instructions for navigating the site. Both instructors provide students with a very clear teaching presence: they link their own blog sites, they offer extensive explanatory text, and they tweet in the course Twitter timeline. Their expectations for their students’ digital engagement and participation are easy to access and interpret.

UNIV 200: The Science of Happiness

Although the Science of Happiness (<http://rampages.us/scienceofhappiness/>) consists of only one course section, course directors Dr. Danielle Dick and Dr. Bela Sood organized a team of ten course instructors to create an interdisciplinary perspective on mental and behavioral health. The instructors intentionally introduce students to different research approaches and make themselves available as resources or potential research mentors for students in the future. Students also blog and contribute to information dissemination through Twitter.

The Agora and The Science of Happiness distinguish themselves from other UNIV 200 offerings because they provide unique networking opportunities for students (“bridging”) and encourage (or require) students to work across multiple digital platforms including Twitter and RamPages.

CMST 691: Collaborative Curiosity

Collaborative Curiosity: Designing Community Engaged Research (CMST 691; <http://rampages.us/communityengagedresearch>) was an eight-week, fully-online graduate course that sought to introduce the purpose, design, and practice of community engaged research to graduate students and interested, non-academic community members. Each week, participants engaged with community research experts via open video conferencing platforms, participated in synchronous, Twitter-based discussions of assigned readings; wrote community engaged research proposals in a series of blog posts; blogged reflectively on differences between community engaged research and other forms of research; and created digital “makes” around important questions in community engaged research.

Getting Started

In this course, there are many ways we will virtually engage for discussions, activities and assignments. The online tools we will be using in this course are: **email**, **diigo** (online library), **google hangouts**, **twitter**, and **blogs**.

Choose how involved you want to be in the course. You can...

- “Lurk” by subscribing to the course blog, perusing and commenting on other people’s blogs, and/or by following the course on twitter.
- Pick which readings to read, activities & assignments to do, and which ‘google hangout’ you want to be involved in.
- Complete some activities or assignments in “realtime” (i.e., follow course syllabus timeline) or when the mood strikes you.
- Do everything within the time frame indicated on the course syllabus for course credit or just because you want to.

Here’s a visual to further explain the ways you can participate & the online tools you will need.

Complete All Activities & Assignments

Blog with Us

Tweet with Us

Google Hangouts

Diigo Library

Subscribe to Website

How to Get Started

1. Subscribe to the Course website by emailing CErR@vcu.edu with your email and subject line “#CuriousCoLab/subscribe.”
2. Determine which tools you need based on the way you want to participate (see figure above)
3. Go to the Online Toolkit
4. Set up the tools you want
5. Do the 1st blog activity (see directions in Online Toolkit)

Collaborative Curiosity shared the openly networked course design demonstrated in the University College offerings; students created their own blogs, which were then networked through aggregation feeds to the main course site. They also communicated across multiple digital platforms and engaged in multimodal expression. Students wrote their research proposals on the topic of their choice (typically aligned with their primary area of study) and instructors structured weekly self-assessment into the course design.

The Collaborative Curiosity website is designed specifically to support community participation and to exist as a community resource after the end of the course. Of all the connected courses, it provides the most contextualized and explicit instructions for non-student participation.

Figure 4. The Collaborative Curiosity website provides non-student participants with specialized suggestions on how they might choose to participate.

Outside the Exemplar Connected Courses

Course websites that met initial criteria for evaluation but did not meet criteria for a connected course fell into three general categories: auxiliary sites, traditional models, and “almost” connected courses.

Auxiliary Sites

Some course websites found on RamPages met initial criteria for evaluation but on closer investigation appeared to serve as an auxiliary site rather than the primary learning hub for the course. These websites originated from a diverse programs and schools within the university. Typically, they functioned as docking stations for downloadable course forms or learning materials; collaborative learning materials or products meant to be shared with a public audience (but with no context on why or how those materials were created); or comment feeds for other websites.

Traditional Models

Approximately a quarter of the course websites found on RamPages fell into a “traditional model” of online courses. Many originated from the School of Education and the College of Humanities and Sciences, and none were affiliated with University College. These courses met initial criteria for analysis; they included course titles and designations, syllabi, details of learning activities, and course schedules. While many included aggregated student blogs (or at least hyperlinked lists of student blogsites), some blogging communities were password protected. All failed to meet key connected course design criteria. For example, they lacked interdisciplinary or “bridging” qualities, failed to engage students on more than one digital platform or encourage multimodal expression, and did not facilitate interest-driven activities or formalized self- or peer-assessment.

“Almost” Connected Courses

The remaining course websites fell into a category of “almost” connected courses: Those which met some criteria for connected courses but failed to rise to the levels described in the exemplar courses. The ways in which these courses almost met criteria differed significantly depending on whether they originated inside or outside University College.

Outside University College. Of the course sites that almost achieved connected course status, approximately a dozen originated outside the University College, emerging from the School of the Arts, School of Allied Health, and College of Humanities and Sciences. These sites almost met criteria through their strong dedication to the concept of interdisciplinary or bridging learning experiences. For example, “Bollywood Film: Indian Visual Culture and Aesthetics” (ARTH 391; <http://rampages.us/arthbollywood>) brought students from the VCUQatar and the Richmond campuses together on one course website to study Indian film. “The City of the Dead” (<http://rampages.us/cityofthedead/>) brought VCU and University of Richmond students together in a course that required them to study and document various aspects of local cemeteries. Finally, the course website for “Vienna” (ARTS 391/WRLD 391; <http://rampages.us/vienna>) combined the work of students

whose main learning foci are street photography, Viennese culture, and the German language, respectively.

However, these courses and others like them failed to optimize or scaffold the connected learning opportunities they offered for their students. Few instructors modeled digital composition or developed a strong digital presence related to the course site. Although some (not all) included instructions for students on how to link their blog to the course website, few encouraged their students to comment on each other's blog posts. Even fewer provided additional learning materials on multimodal expression. Furthermore, most course designs did not require students to engage on multiple digital platforms or invite them to network their learning activities across multiple platforms. Finally, few course syllabi offered any evidence that students were engaging in self- or peer- evaluation.

Inside University College. Most of the “almost” connected courses emerged from Focused Inquiry programming (UNIV 111, 112, 200) of University College. This finding can be explained in part by the natural alignment between connected course experiences and the University College's mission: to provide first- and second-year students with a solid foundation of communication, reflection, and critical reasoning skills through inclusive and engaging education. Student agency, in terms of interest-driven projects and formalized peer- and self-assessment, are already core components of the college's design culture. In their close proximity to the Quality Enhancement Plan (QEP) and General Education, the University College has also adopted more systematic approaches to helping student increase their digital fluency and have begun to incorporate multimodal expression into their collective understanding of communication skills that most students need to have. Therefore, the “almost” connected courses originating from University College possess many connected course elements that the others did not.

When courses within University College failed to reach connected course status, they did so for one or more of the following reasons:

- **Failure to network or provide bridging opportunities.** Most University College faculty teach more than one section of their course per semester. Although some instructors networked their sections together on one website, many did not. There were also no opportunities for students to engage with students or faculty from other courses or programs or the public in terms of aggregated blog posts or learning products.
- **Failure to model or introduce an explicit discussion why bridging or connection is important for learning.** While University College course sites consistently provided instructions on how to blog (including resources on embedding images and videos and making animated .gifs), they failed to provide information on the importance of making and documenting connections, in terms of engaging with peer work or using hyperlinks to document connected learning.
- **Failure to introduce more than one digital platform into the course design.** While all courses required students to blog, few of the “almost” connected courses required students to engage with each other systematically on other digital

- platforms, such as Twitter, Diigo, or Hypothes.is. Therefore, students were not provided the opportunity to develop workflow patterns across digital platforms.
- **Failure to leverage public presence.** All University College course websites included links to the course syllabus, course documents, and course schedule. However, some were lacking context or teaching presence in ways that suggested faculty were not designing their sites for an audience beyond a group of students who knew them in other contexts. Furthermore, some failed to model best practices in digital publishing. For example, some instructors failed to include their names or contact information on the website. In many cases, the “sample page” that automatically comes with the website template (similar to a sample picture in a store-bought picture frame) was still visible on the course website.

Conclusions

Connected courses share a common underlying course structure, which includes the following design features:

- Students work within their own digital spaces, which are networked to a larger course website via RSS feeds. These course websites are spaces of aggregation, where students are exposed to and may interact with individuals who work beyond the boundaries of their course section (i.e. interdisciplinary faculty, community-based practitioners, students in other sections, courses, or universities).
- Students create and contribute a variety of digital learning materials and products that typically exhibit qualities of crowdsourcing, collaboration, and/or multimodal expression.
- Students engage in activity on at least two digital platforms. Instructors scaffold this activity with additional instructions, resources, modeled behavior, and explicit expectations and explanations.
- Students engage in interest-driven learning and peer- or self-assessment.
- The course website models best practices in digital publishing (including proper organization and contextualization) and supports some level of community engagement, in terms of allowing the public to act as an authentic audience, parallel learners, or integrated participants in the course.

Of the almost 160 course websites identified through a search of public (i.e. not password protected) RamPages websites, 41 were identified as being part of one of five exemplar connected course experiences. Of the remaining identified course sites, more than half narrowly missed qualifying as connected courses. The remaining websites appeared to be auxiliary sites for courses that existed predominantly in other spaces or websites for traditionally-conceived courses that give limited attention to connected learning, digital fluency, or integrative thinking.

Recommendations

The following recommendations suggest a plan to engage faculty in an effort to elevate at least some “almost” connected courses to full connected course status.

- **Focus initial efforts in University College.** As previously stated, many of the underlying philosophies, learning goals, and pedagogical strategies associated with connected courses align well with current philosophies and goals of Focused Inquiry offerings. This is not to say opportunities do not exist outside University College; however, non-University College faculty may be more open to change if connected course strategies and support materials – as well as documentation of positive impact on student engagement and success – can be refined and established in the college first.
- **Within University College, focus faculty development efforts on the importance of and opportunities for bridging.** Although opportunities to create connected course experiences such as “The Great Bike Race” or “The Science of Happiness” may be limited by faculty time and resources, connected course experiences such as “The Agora,” in which two Focused Inquiry faculty networked their courses together on one courses site, take less faculty time and fewer resources. Incorporation of other open, digital collaboration platforms such as Twitter, Diigo, Hypothes.is may also open the door to opportunities to bring students, faculty, or community members into a collaborative, networked learning space.
- **Focus faculty development on the importance of bringing intentionality to connected course design.** Many faculty within University College and beyond created excellent opportunities for connected learning in terms of interdisciplinary or bridged space, but they failed to encourage students to fully explore the implications of that space. Faculty development initiatives should be developed around the purpose of connected course design and help faculty in modeling and developing explicit messaging around why students should engage in forging digital connections, exploring multimodal expression, and consider peer contributions.
- **Focus faculty development on the implications of their public presence.** RamPages is distinct from other university-supported digital platforms because it is public-facing and allows a diverse assortment of personal, organizational, and formal course websites to co-exist. However, it appears that many faculty (in University College and beyond) are not considering the public nature of their course sites – in terms of engaging the public, modeling best practices in digital publishing, or representing VCU and its courses in the best possible light. Faculty development initiatives surrounding the role of audience, website organization and design, and opportunities to engage the community in terms of bridging may be needed.

Limitations

The findings of this report are limited by the nature of data collection and analysis. Data collection took place in the context of RamPages course sites. While it is acknowledged that some faculty might employ course websites that are housed on digital platforms other than RamPages, it is felt that these courses are most likely isolated cases and would not change or contribute additional information to the report. Furthermore, analysis was limited to analysis of the websites and the course materials therein; it is possible that interviews or surveys of faculty would have influenced the reported findings.

References

- Ausubel, D. P. (1968). *Educational psychology: A cognitive view*. New York, NY: Holt, Rinehart & Winston.
- Bandura, A. (1971). *Social learning theory*. New York, NY: General Learning Press.
- Bransford, J. D., Brown, A. L., & Cocking, R. R. (2000). *How people learn*. Washington, D.C., USA: National Academies Press. Retrieved from: <http://www.nap.edu/read/9853/chapter/1>
- Bruner, J. S. (1966). *Toward a theory of instruction*, Cambridge, MA: Belkapp Press.
- Jenkins, H. (2009). *Confronting the challenges of participatory culture: Media education for the 21st century*. Cambridge, MA: MIT Press.
- Kolb, D. A. (2014). *Experiential learning: Experience as the source of learning and development*. New York, NY: Pearson Education.
- Novak, J. D., & Cañas, A. J. (2008). *The theory underlying concept maps and how to construct and use them*. Pensacola, FA: Institute for Human and Machine Cognition. Retrieved from: <http://eprint.ihmc.us/5/>