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EPortfolios, Google Drive, and Cognitive Process Theory

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EPORTFOLIOS, GOOGLE DRIVE, AND COGNITIVE PROCESS

THEORY

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ABSTRACT

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ePortfolios have gained popularity in higher education to document learning, assessing, and career showcasing. This thesis discusses how ePortfolios can be used in first-year writing classrooms to show writing processes using *Google Drive*, a non-ePortfolio platform and its connection to Linda Flower and John Hayes' cognitive process theory. The thesis shows how a professor could use *Google Drive* as an ePortfolio platform through assignments.

This thesis is dedicated to Bryan Scott Carl, my best friend and husband, who stood by me during every step of my English MA program. I also want to recognize my family and friends, near and far, who insisted I never give up and to keep chasing my dreams.

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CHAPTER I

INTRODUCTION

In this chapter I discuss scholarship on ePortfolios, which predominantly stems from the fields of rhetoric, composition, and education. While briefly focusing on the history of ePortfolios, this literature review also covers the technology, benefits, types, purposes, and digital identity of ePortfolios. This chapter addresses many technologies for students to select from to collect and display work. There are three most common types of ePortfolios used in research: learning, career/showcase, and assessment. These types usually overlap each other in multiple ways. For example, learning ePortfolios includes revision and reflection to show evidence of learning.

The chapter merges into the origins of ePortfolio scholarship and rhetoric and composition field inclusion. ePortfolio research is highly recognized in the education field for its multiple benefits, but portfolios actually began in the English discipline, where rhetoric and composition has been placed in the University. The connections to my field show that portfolios are part of the English department's pedagogy of revision and reflection. It will concentrate on composition theory "writing is a process." This chapter follows the aim of my thesis to show evidence of learning by providing ePortfolio background to readers.

Lastly, the chapter discusses digital identity in ePortfolios which is important for institutions to be aware of. By creating an ePortfolio, a professional digital identity is formed; students need to learn about keeping their social online accounts clean in order to foster their professional digital identity online.

Due to the broad concept of the word, an ePortfolio can be considered many things, such as digital scrapbooks, a scanned collection of work from pre-kindergarten to twelfth grade, files

organized into folders on hard drives, social media websites, professional and personal websites, and "all about me" e-books, etc. Over the last ten years, ePortfolios have gained importance in higher education in an attempt to concentrate on multiple modes of learning, and are favored due to their ability to facilitate process and provide an all-in-one product for showcasing learning. ePortfolios' modes of learning show that students can be creative, concentrate on goals and pursuits, and show connections to learning through reflections of coursework, as well as their past, present, and future selves. ePortfolios, a digital technology that replaces exit exams, shows skills, can be assessed based on university categories such as learning outcomes, and can be used after graduation for continued lifelong learning. Since ePortfolios can be used for various projects in higher education, it would be best to define and contextualize what an ePortfolio is in order to better discuss the varying technologies, typologies, and purposes of the genre.

ePortfolios Defined

What is an ePortfolio? Many scholars have characterized an ePortfolio, explained it should contain, how it should be used, and the purpose of including it in the classroom, but have difficulty defining it because it is such a new word and it differs in meaning to everyone. Mhairi McAlpine (2005), a project manager in the Computer Assisted Assessment Team in the Scottish Qualifications Authority (SQA) states that ePortfolios share five characteristics: "an organized collection, comprised of digitized art[i]facts, seeking to provide an authentic record, related to an individual's status, particularly associated with learning, although may cover over areas" (p. 378). The author declares an artifact as an ePortfolio if it shares one of the five characteristics listed above; however, she goes on to state how "these variations tend to be more related to uses and purposes than to essential features" (p. 378).

Helen Barrett, (2001) an internationally known researcher of ePortfolios and establisher

for REAL (Reflection, Engagement, and Assessment *for* Learning): ePortfolio Academy for K-

12 Teachers, defines an ePortfolio as ". . . a reflective tool that demonstrates growth over time"

(Barrett, *Educational Technology*). Barrett's definition focuses on growth, instead of the

common word in ePortfolio definitions: learning. This may be due to her research on digital

storytelling. Barrett defines digital storytelling as a process of creating one's own digital

narrative: "[a] digital story [that] is a 2-to-4 minute digital video clip, most often told in first

person narrative, recorded with your own voice, illustrated mostly with still images, and with an

optional music track to add emotional tone. Digital narratives can be powerful tools for

reflection, told by students or programs" (Barrett, *Digital Storytelling*). This is similar to

appendix F discussion on visual memory and the ways in which digital archiving creates a space

for reminiscence and commemoration of the self. In 2006, Barrett's definition of ePortfolios

changes and expands to include "a purposeful collection of work that demonstrates effort,

progress and achievement over time, stored in an electronic container (CD, DVD, WWW)"

(Barrett, *Digital Stories in ePortfolios: Multiple Purposes and Tools*).

In addition to various researcher based definitions for ePortfolios, the definition is also

reliant on historical contexts and available technologies. For example, English professors, Brian

Huot and Michael Williamson in their publication "Rethinking Portfolios for Evaluating Writing

Issues of Assessment and Power" (1997) declare that there is not a unanimous definition for

portfolios (Huot, *Kent State University*) (Williamson, *Indiana University of Pennsylvania*) (p.

54). That being said, Huot and Williamson then go on to state that paper portfolios should be a

"collection of student work but also the process of how the writing got to be included in the

portfolio" (p. 54). They also conclude that portfolios can contain the "reflective work students do

as they prepare a body of their work not only to be evaluated but to represent them as writers" (p. 54).

Huot and Williamson focus on the process of written work in their definition of portfolios, while this can be due to a lack of technological advancement historically, it should also be taken into consideration that they are writing and researching from the composition discipline. Christopher Guder, on the other hand, an instructional technology scholar, and reference and instructional librarian with the College of Education at Ohio University, has a different take on ePortfolios (Guder, *Ohio University Libraries*). Guder (2013) defines an ePortfolio as "a web page or series of web pages that list accomplishments, goals, education or anything else the author deems fit to publish" in the article "The ePortfolio: A Tool for Professional Development, Engagement, and Lifelong Learning" (p. 239). Education scholar, Emanuel Soare (2014) argues the ePortfolio is a "digitalized reflection of student learning situations, processes and results" (Soare, *ResearchGate*) (p. 462). The definitions for both Soare and Guder involve digital technology, but are both different in what they consider ePortfolios. Soare's definition is similar to that of Huot and Williamson's definition because it involves reflection and process. Kathleen Yancey (2013) believes an ePortfolio is "a composition operating inside multiple networks" (p. 3). While Yancey's definition is abstract compared to the other definitions so far, it matches her composition studies field focus. The composition would be the content of the ePortfolio and the work connects to other pieces of writing and learning.

Lastly, ePortfolio scholar and coordinator for Europortfolio: a European Network of ePortfolio Experts and Practitioner, Igor Balaban et al (2013) defined an ePortfolio as:

> a personal digital record that supports formal, informal[,] and non-formal learning and
>
> contains evidence about one's accomplishments in the form of artifacts and reflection on

learning which can be provided to whomever the owner has chosen to grant permission (Balaban, Europortfolio) (Balaban et al. 2013, p. 397).

Defining an ePortfolio to each of these scholars is different because of how they are utilizing them in the classroom. This is the challenge for students, administrators, and teachers. ePortfolios are versatile in form, meaning that there is no concrete way of archiving knowledge; this is why many definitions are similar, yet different.

Origins of ePortfolio Scholarship

Now that we have defined many definitions of ePortfolios, it would be imperative to descend into the history of ePortfolio scholarship over the last thirty-five years. The idea and use of a "portfolio" originally began in art classes to carry students' art work. Nittaya Campbell (2002), scholar of business communication and professional and public relations writing (Campbell, *Victoria University of Wellington, New Zealand*), discusses the word portfolio from past research as "samples of an artist's work assembled to gain entrance into an art school or to secure a commission" (p. 43). The print portfolio was a "bound volume, large envelope, or dossiers filled with documents" (Light et al., 2012, Preface ix). The beauty of the portfolio was that it was portable and the purpose was to show past and present documents. Students would submit their drafts, final paper, and a reflection on how the paper had changed throughout a semester in a folder. The reflection paper acted as the future document to show where the student hopes to develop in his or her writing. Campbell (2002) explains the print portfolio as "a compilation of papers that represent the quality of one's work" (p. 43). The portfolio was used to "[exhibit] the student's efforts, progress, and achievements in one or more areas" (Campbell, 2002, p. 43). Susan Kahn (2014) argues that the purpose of print portfolios "[is] meant to cultivate habits of metacognition, reflective practice, and self-critique among students" (p. 1).

This means that the portfolios are used to demonstrate self-awareness and memory enforcement, look at the past and how the writing has changed over time, and look at one's own documents and see how one's self as a writer has evolved.

In the 1980's, print portfolios were introduced into the writing classroom to show how "writing [is] a process, not [a] product" and is developed through numerous drafts, feedback, and revisions (Murray, 1972, p. 1). The researchers did not believe the traditional take on writing as a "linear process" following the "plan-write-revise sequence" (Perl, 2008, p. 141). Instead, researchers thought of writing as a recursive process (p. 141). Sondra Perl, (2008) English professor in composition and rhetoric studies, (Perl, *The Graduate Center: City University of New York*), describes this process in the article "Understanding Composing":

> throughout the process of writing, writers return to substrands of the overall process, or subroutine; writers use these to keep the process moving forward. In other words, recursiveness in writing implies that there is a forward-moving action that exists by virtue of a backward-moving action (Perl, p. 141).

From Perl's scholarship in rhetoric and composition, student writing was seen as a progression through time, paving the way for ePortfolios to be introduced into writing classrooms as a way to assess progressive learning rather than timed, impromptu writing exams. Writing exams that focus on one piece of writing were considered "untrustworthy" due to the writing "sample [being] skewed by the genre, the prompt, the student's mood, health, and so on" (Elbow & Belanoff, 1997, p. 25). Compositionists Peter Elbow (Elbow, *University of Massachusetts Amherst*), and Pat Belanoff (Belanoff, *English Undergraduate Bulletin, Stony Brook University*), believe that a writer's ability is not "trustworthy" unless there are various samples of writing at different periods of time (p. 25).

In the 1990's, Leon F. Paulson and Perl R. Paulson (1994) developed the "Cognitive Model for Assessing Portfolios (CMAP), as a lens to view, think about, and make decisions about portfolio projects" (Abstract, p. 1). Their work describes two models of assessment originally created by Yvonna S. Lincoln and Egon G. Guba: constructivist and positivist. A positivist perspective portfolio:

> assess[es] learning outcomes and those outcomes are, generally, defined externally. Positivism assumes that meaning is constant across users, contexts, and purposes (making it reasonable, for example, to think about national and even "worldclass" standards). The portfolio is a receptacle for examples of student work used to infer what and how much learning has occurred. (Paulson & Paulson, 1994, p. 8).

The positivist perspective of a portfolio is oriented towards assessment of learning outcomes as discussed in Linda Cooper's article, "Electronic Portfolios to Support the Growth of Digital Identity in the School Library" (p. 5). People with this perspective for portfolios are interested in seeing if learning outcomes can be assessed in portfolios and if students are achieving these set standards (Cooper, 2014, p. 5). In contrast, Paulson and Paulson define a constructivist perspective portfolio as:

> a learning environment in which the learner constructs meaning. It assumes that meaning varies across individuals, over time, and with purpose. The portfolio represents process, a record of the processes associated with the learning itself and that a summation of individual portfolios would be too complex for normative description. (Paulson & Paulson, 1994, p. 7-8).

Cooper's interpretation of the constructivist perspective for "implementing the ePortfolio for student learning may be thought to support the development of digital identity" (p. 6). Digital

identity is built in constructivist perspective portfolios because students would have the opportunity to see how their learning is developed over time and how they grow and change with an online presence. Their reflective learning would foster their digital identity. While these portfolio perspectives are opposites, ePortfolios can have both features (p. 6). For example, the combination of both perspectives are located in *Google Drive*. *Google Drive* is used for learning, assessment, and showcase. The combination of perspectives in *Google Drive* will be discussed in chapter three. Due to the advancement of technology, ePortfolios have transitioned to incorporate digital platforms and multimedia forms.

ePortfolio Technology

Towards the beginning of the 2000's, paper portfolios transitioned to ePortfolios due to the millennial generation of students entering the classroom, and schools using computers and the Internet in courses (Light et al., 2012, Preface ix). ePortfolios began as digital folders holding files such as *Microsoft Word* documents and submitting them through email or academic sites. They created a way to submit work digitally by creating a digital folder of drafts and reflection versus the printed out paper copy. The digital portfolio symbolized a storage or repository of a student's work. Juliana Chau, a project leader for developing web-based English language exit portfolios for undergraduate students (Chau, *The Hong Kong Polytechnic University*), and Gary Cheng, an assistant professor of Mathematics and Information Technology at the Hong Kong Institute of Education (Cheng, *The Education University of Hong Kong*) view ePortfolios as "digital containers capable of storing visual and auditory content" (Chau and Cheng, 2010, p. 470). The Association for Authentic, Experiential and Evidence-Based Learning's (AAEEBL) president, Trent Batson, (2002) discusses the inclusion of the term 'Webfolio' within the field of composition studies, explaining that "webfolios are static websites where functionality derive

from HTML links" (p. 2). Susan Kahn, in her 2014 publication "E-Portfolios: A Look at Where We've Been, Where We Are Now, and Where We're (Possibly) Going" discusses how digital portfolios took off from the invention of the Internet in the 1990's, "and the growing influence of the assessment movement . . . for direct evidence of student learning . . . in disciplines subject to specialized accreditation" (p.1). Academic sites such as *Moodle*, an open-source learning platform, and *Blackboard*, a web-based learning management system changed the way portfolios were being submitted. Students would submit their work, providing faculty members with timestamps and "attempts" of work submitted.

Many institutions decided they wanted a platform for students to use in order to create a universal ePortfolio system. Some institutions developed their own platforms, for example, the University of Georgia developed Electronic, Markup, and Management Application (<emma>) (Desmet et al., 2008, p. 17). <emma> is an open-source word processor and database of documents (p. 17). Institutional creation of ePortfolios drove corporate companies to develop ePortfolio technologies such as *Digication*, *Canvas*, *Open Source Portfolio*, and *Mahara* for institutions to purchase (EPAC/Evolving List of ePortfolio-related Tools). Visual technology such as ePortfolio software and websites helped students to "connect different elements of their learning, bringing together curricular, co-curricular and experiential learning; and to share their contextualized learning with students, faculty, and other authentic audiences" (Eynon, 2014, p.108). Students and faculty can visually see the reflections and connections to learning when multimedia is embedded into their ePortfolio. Paper portfolios did not have the capability to visually link together different types of learning.

The visual aesthetic of ePortfolios grabs the viewer's attention. Students can choose font, size, organization, color, and media to design their ePortfolio. It also shows audience viewers the

ePortfolio creator has multiple skillsets such as technology, and written and visual communication. ePortfolios allow for multiple pieces of work to be documented online. Students can work in their ePortfolios and can transition them into professional ePortfolios to add to resumes for employment.

Benefits of ePortfolios

ePortfolios provide many benefits and purposes that make them marketable. They create fulfillment in collecting and archiving materials, as well as motivates students to complete their undergraduate career by constantly being reminded they are developing an archive of their education. As Christopher Guder (2013) posits, the ePortfolio is capable of housing numerous amounts of information and it ". . . quickly and efficiently demonstrate[s] . . . the achievements and competencies of the student in specific areas" (p. 239). Similarly, employers find ePortfolios useful because it provides them with "better proofs as regards the graduates' competences" (Soare, 2014, p. 463). Florence Bacabac, associate professor of professional and technical writing at Dixie State University finds that ePortfolios "encourage [students] to have a sense of ownership (Stefani, Mason, & Pegler, 2007)" (Bacabac, My Professional ePortfolio) (Bacabac, p. 94). These benefits show that ePortfolios are effective for multiple audiences.

Many institutions use ePortfolios primarily to gauge student learning. ePortfolio programs have provided educational institutions with "improved achievement, retention, and graduation, deeper engagement and learning, and enhanced capacities to think integratively across learning experiences and disciplinary boundaries" (Kahn, 2014, p. 2). Karen Ramsay Johnson, former Associate Professor of English at Indiana University-Purdue University Indianapolis, and Susan Kahn propose that ePortfolios manifest these benefits by "help[ing] [students] develop a sense of accomplishment and take a broader perspective on their learning"

(Ramsay, IUPUI Faculty) (Johnson & Kahn, 2013, p. 85). ePortfolios afford students to "self-assess, think critically, as well as articulate experiences, demonstrate learning, and technological achievements over time" (Chau and Cheng, 2010, p. 466). These benefits show how ePortfolios are an effective tool for students and educational institutions: to improve student learning, while also providing institutions with effective results to continue using ePortfolios. To define an ePortfolio by discussing its technologies and benefits helps situate the purposes of each type of ePortfolio.

Typology of ePortfolios

Susan Kahn (2014) highlights three common types of ePortfolios: "learning, assessment, and career showcase" (p. 2). For example, Florence Bacabac (2013) argues that career/professional portfolios are used for "job-search purposes" whereas the "academic portfolio [is used] for assessment" (p. 92). The conflicting problem with categorizing typologies is that not all ePortfolios are a set type. Kahn posits that ". . . other [researchers] argue that a given portfolio may serve multiple aims simultaneously (e.g., Cambridge 2010)," for example, most technologies used for ePortfolios were not designed for that purpose (p. 2). *Google Drive* is an example of this; it was not designed as an ePortfolio, but it can be used as such, which provides evidence that ePortfolios can be used for more than one motive. ePortfolios have been used for many things such as documenting learning, assessing course projects, archiving, creating websites, and showing links between reflections and course outcomes. Many universities are using ePortfolios as an all-around online portfolio that documents learning (Wozniak, 2012, p. 213), creates reflections, and helps build a career focus by including professional documents such as a resume (Kruger, Holtzman, & Dagavarian, 2013, p. 49-52). Other researchers find the purpose of ePortfolios is to "serve as a valuable pedagogical tool,

[and] . . . contribute to the establishment of a deeper and perhaps durable scholarly and professional identity, or what Ittelson (2001) calls an 'e-dentity'" (Middlebrook & Chih-Yuan Sun, 2013, p. 128). Some universities are using the ePortfolio as a medium for students to tell their digital story to connect experiences (Graves & Epstein, 2011, p. 344-345). The ePortfolio allows students to connect, narrate, reflect, and articulate their identity on their past, present, and future academic life (Nguyen, 2013, p. 141-146). Throughout the research, the common link all ePortfolios share is their usage to present and foster learning. In the following discussion, the three typologies of ePortfolios that Kahn points to will be further unpacked to illustrate the ways in which the genre has evolved over time.

ePortfolios for Learning

ePortfolios for learning are digital portfolios that students utilize to learn about themselves, and to trace their growth and development over the duration of their undergraduate career. These portfolios provide visible evidence to prove that learning is developed over time, meaning that students can view their four years of undergraduate work to make reflections regarding how they learn, write, think, etc. Cynthia Landis et al (2015) provides an example of this when they discuss research findings regarding reflection in ePortfolios used for "supporting learners in making connections among learning experiences or for enabling authentic assessment of learning within programs" (p. 107). Many of the interviewees from the research believed that reflection was meant for personal expression, and not a graded assignment (p. 117). This shows that ePortfolios are used to help learners when writing reflections because students can look back at what they have accomplished in four years.

ePortfolios dedicated to learning developed from the popular print portfolios used in the 1980's and 1990's (Batson 2002; Yancey 2001; Kahn 2014). This type of portfolio is considered

"private," meaning the ePortfolio contents are not published online and that they include the student's learning experiences. These experiences are personal to the student because they show how the learning process has developed over time. They are also personal because students get to choose the content and how they want to organize (Reynolds and Davis, 2014, p. 5-6). Learning ePortfolios are used to show learning processes in multiple entities due to keeping the ePortfolio private.

Similar to a Pulitzer-prize winning journalist, teacher, and author of several books on the art of writing, (Ahearn-Pierce, 2010) Don Murray's theoretical approach that "writing is [taught] as a process not product" learning ePortfolios store students' work throughout stages in time (1972, p. 1). Murray refers to this process as "discovery through language" and breaks this process down into three stages: prewriting, writing, and rewriting (Newkirk and Miller, 2009, p. 2). Nedra Reynolds and Elizabeth Davis, both professors of writing and rhetoric, explain in their text, *Portfolio Teaching: A Guide for Instructors* that:

> Learning portfolios are sometimes called *process portfolios*: most learning portfolios focus on the learning process more so than the product of learning (although you may want students to combine elements of both in their portfolios). Learning or process portfolios specifically intended for a writing course ask portfolio keepers to collect and present evidence of their writing and thinking processes. Process rather than product counts most, and reflective elements are crucial in conveying the writer's decisions as well as the evolution of each artifact (2014, p. 6).

While Nedra Reynolds and Elizabeth Davis refer to learning ePortfolios as "process portfolios" they can also be referred to as what Dawn Kirby, a professor of English and English Education at Kennesaw State University, where she directs the Kennesaw Mountain Writing

Project, (2013) describes as palimpsest, "any work that reveals its history through an examination of the layers of other works beneath the currently visible layer" (Kirby, *Heinemann*) (p. 92). This is due to learning ePortfolios' ability to represent both personal histories and collective future[s] (Klein, 2013, p. 59). Students' course work from freshman year will most likely improve by senior year and the work between these years are the layers of dedication and hard work students put towards the visible layer of where they are today. These layers of dedication are students' memories, and these memories are shown in their ePortfolios through pictures, videos, and school work.

The ePortfolio is used to set goals and progress throughout a student's college career (Buyarski and Landis, 2014, p. 50). Goals are an important part of research on ePortfolios. Most research has focused on the type of goal or the "relationship of goal orientation and student achievement within the ePortfolio context" (Cheng and Chau, 2013, p. 52). Cheng and Chau (2013) examined mastery and performance goal orientations according to students' ePortfolios and explained:

> mastery goals were characterized by student's desire to learn, understand and develop competence, with a focus on self-improvement. By contrast, performance goals brought to the fore students' concern about demonstrating high ability relative to peers, with an emphasis on outperforming others (Cheng and Chau, 2013, p. 52).

When students write goals down they can categorize their goals to separate their learning from their abilities.

ePortfolios are used by students to concentrate and reflect on their next milestone to accomplish their goals. ePortfolios allow students to work on their reflections while they are completing their work (Guder, 2013, p. 239-240). Guder finds that to do this requires the

"practice of recording accomplishments into an exercise of goal setting and reflection" (p. 240). According to Guder, "this act of reflection . . . turns into a learning experience and a vehicle for professional development" (p. 240).

Instead of writing down a Curriculum Vitae (CV) line every time one achieves something, the student should document it in the ePortfolio. Jeff Huang et al. (2011) would agree that "record[ing] students' learning experiences and archives" is the purpose of ePortfolios (p. 104). Huang et al. believes that these experiences "can be reflected upon as [students] adjust their learning strategies and goals, and . . . provide a concrete direction for their future development plan" (Huang et al., 2011, p. 104). This shows that students have revised what they plan to do after they graduate. By making connections and setting goals in the ePortfolio, a person is showing more effort and visible documentation of learning. Guder believes that "reflection is one of the key components of turning a portfolio into a learning experience . . . [and] an exercise . . . of personal growth and lifelong learning" (p. 240- 244). Rich Rice (2013) also acknowledges that ePortfolios are used to reflect "in order to improve individual performance . . ." (p. 38). All of these scholars indicate that reflection is an important part of ePortfolios. Even though these scholars are from different backgrounds, they agree that reflection is a necessary feature of ePortfolios.

Reflection and revision are key pedagogical concepts in the field of composition studies. Writing teachers and scholars want students to reflect back on how their writing has changed over time. They strive for students to become better writers through revision. The ePortfolio provides a digital space for students to reflect on how their writing has enhanced. Since their writing is being published online, students think more deeply about their audience. In paper portfolios, the main audience viewer was the teacher and a few occasional classmates through

peer review. This exchange of readership in paper portfolios, writing was more private. When writing is published on the web students have to be more mindful of their work because their audience viewer has changed to the entire world. Reflection and revision will be covered in more detail in chapter two.

The ePortfolio is used as a spatial environment for students to write their reflections. For example, the students in the technical communication program at Arizona State University "select and use examples of their work as evidence for claims made in a persuasive cover statement to demonstrate their learning and growth in the context of program outcomes" (D'Angelo & Maid, 2013, p. 79). This exemplifies the benefits of the reflection students create in ePortfolios. Students create hyperlinks to evidence whether it is in their ePortfolio or on a website in their reflections to statements they are making. Karen Ramsay Johnson and Susan Kahn (2013) explain that their ePortfolios require students to "collect artifacts, save and revise reflective commentary, and create a storehouse for their potential webfolio materials" (p. 90). Kahn states in the article, "E-Portfolios: a Look at Where We've Been, Where We are Now, and Where We're (Possibly) Going" that the "artifacts and reflections [produce a vast amount] of multimodal information on what students are learning and how they are experiencing our curricula, programs, and institutions" (2014, p. 2). Students are making meaningful reflections in their ePortfolios to document their learning, but they are also providing institutions information regarding their view on programs, research and experiential learning connections, and what they deem important to audience viewers.

Educators have found strategies they find useful when introducing ePortfolios into the classroom. For example, Heidi Johnsen (2012), English department faculty member of

LaGuardia Community College, specializing in rhetoric and composition (Johnsen, LaGuardia

Faculty), provides four helpful steps in order to make and use ePortfolios in the classroom:

>(1.) Have a clear purpose for their ePortfolio[s] [sic] that students can achieve in one
>
>semester, in this case documenting learning so they realize how much they have
>
>progressed in just three months (2.) Have the language to describe and reflect on learning
>
>(3.) Can clearly demonstrate in the ePortfolio a holistic view of their learning, meaning
>
>the connection between what they learn both in and out of the classroom must be clear to
>
>the audience (4.) Have access to technology that allows them to focus on the content of
>
>the ePortfolio instead of its construction (p. 147).

Johnsen claims that "with the right technology coupled with the right pedagogy, the learning

students can represent in ePortfolios is not only visible: it is dazzling" (2012, p. 147). Linda

Cooper (2014), professor and graduate advisor for Library Media Specialist & Coordinator of

Library Media Specialist Programs of Queens College, City University of New York (2016,

Cooper, *Queens College, CUNY*) believes that the library can be the ideal location for students to

create ePortfolios because it is "an environment that provides the guidance of a teacher librarian,

if necessary, and the intellectual freedom to explore one's own interests in a safe environment"

(p. 10). The library acts as a resource hub for the students because it offers unlimited access to

digital technologies, while also giving students an opportunity to develop their own digital

identities through the construction of their ePortfolios (p.10). Taking all of this into account, one

can see how learning ePortfolios help students with their thinking processes and aid in making

their learning visible in a private and personal way, whereas ePortfolios for assessment are

geared towards publically making learning visible.

ePortfolios for Assessment

　　While ePortfolios are used as a learning tool in the classroom, they can also be used as an assessment tool to promote an institution as unique by documenting learning based on institutionally mandated learning outcomes. A common trend among institutions is to incorporate ePortfolios as a way to assess students. For example, Thomas College uses ePortfolios to "bridge the gap between mission and student achievement [to] offer [their] students and the public a . . . compelling picture of who [they] are and what [they] do" (Edwards & Burnham, 2009, p. 89). Thomas Edwards, Thomas College provost, (Edwards, *Thomas College*) and former information resource specialist, Colleen Burnham (Burnham CV, *Schoolstreetwest*) believe that ePortfolios give the institution an opportunity to assess student learning, rather than combatting using the "traditional measure of student learning in higher education, the stand-alone course" (Edwards & Burnham, p. 89-90). By moving from traditional course grades to using the ePortfolio as an integrative tool, institutions are making themselves distinctive from one another (Edwards & Burnham, 2009, p. 90). By using this as an integrative tool, students can see their ePortfolio contents as a display of their work (Edwards & Burnham, 2009, p. 90).

　　By using ePortfolios as an assessment tool, institutions benefit from displaying student showcase ePortfolios on websites, which indicates the institution is proud of their students' ePortfolio efforts. At Thomas College they exhibit ePortfolios that have already been viewed and assessed as either "proficient" or "exemplary" to demonstrate students' "participat[ion] in an integrated educational experience in pursuit of principles of the college's mission" (Day, 2009, p. 85). This implies that institutions are valuing the final and best productions of students' work over the process work. Yancey et al. (2013) suggest that a successful portfolio is one that "showcas[es] ability to anticipate and satisfy multiple audience needs" (p. 23). For assessment

purposes, one way to view an ePortfolio asks for all audiences to access the ePortfolio and click the links or navigational path that is set for them. Many institutions prefer ePortfolios as a way to track and document students' learning through student reflections.

Researchers have assessed ePortfolios on categories connected to learning outcomes or on connections students should be making during their college careers. If researchers can show colleges and universities that ePortfolios are proof that students are learning, then ePortfolios can replace other forms of assessment such as a senior exit exam. This is a way students can document their learning from their college experiences, whether in or outside of the classroom in their ePortfolios. Using an exit exam is a way to test a student's knowledge, but only over a short period of time. For example, it does not show experiential learning such as an internship or the student's research abilities. An ePortfolio on the other hand, shows connections to different learning outcomes and is documented from day one to graduation. Each college and university will need to make an executive decision of whether an ePortfolio is a credible assessment tool. The decision will be factored by the size and type of institution, and how it will affect its students and faculty. It will also be based on the institution's mission and values as to whether ePortfolios would be good fit for the institution.

ePortfolios are being incorporated into university curriculums for multiple things: to teach, to . . . assess, to evoke and [to] represent a new set of relationships (Yancey et al., 2013. p. 25). As the previous section indicates, ePortfolios for learning allow instructors to gauge student learning over a specified period of time. These portfolios are private, personal, and show the process work involved in personal, academic, and professional growth. When ePortfolios are incorporated into teaching and pedagogical practices, faculty members are creating their own ePortfolios to mimic similar processes as their students. ePortfolios for assessment provide a

space in which faculty and assessment administrators are able to visually show accreditation stakeholders proof of this learning and growth.

Yancey et al. believes before one can assess ePortfolios, they should follow these activities: "(1) viewing/reading; (2) mapping representations; and (3) spatial, embodied, and collective pin-up reading" (2013, p. 26). "Viewing/reading" involves looking at the screen, taking notes while glancing, and clicking through links to other screens (Yancey et al., 2013, p. 9). "Mapping representations" involves drawing a map of the site and branching out the structure, a process similar to concept and mind mapping (Yancey et al., p. 11). For "pin-up reading," Yancey et al. suggest printing out each screen and pinning it to a wall in order to see "(1) all the components in the portfolio; (2) the arrangement connecting them; and (3) the way the portfolio looked as an entire entity," much like a tactile *Pinterest* board (p. 12). Since ePortfolios are a relatively new tool being used at universities, there has not been an official way to assess them, only suggestions. By using these "new vocabulary [words] and . . . set of practices (Yancey et al, 2013, p. 25)" universities are aided in developing ePortfolio-based assessment mechanisms, as well as allowing scholars to look at ePortfolios in a contemporary way.

The push for ePortfolios in higher education has expanded resources and research due to ePortfolios becoming more prevalent in institutions. For example, the Association for Authentic, Experiential, and Evidence-Based Learning (AAEEBL) organization founded in 2009, provides regional and annual conferences on ePortfolio learning and assessment. Also, the peer-reviewed, *International Journal of ePortfolio (IJeP),* founded in 2011, offers a place for researchers to publish their work on ePortfolios (Kahn, p. 1). Campuses that are just beginning an ePortfolio initiative can use many of the resources available, such as Valid Assessment of Learning in

Undergraduate Education (VALUE) rubrics, the Connect To Learning (C2L) program, and the

Catalyst for Learning: ePortfolio Resources and Research (Eynon et al., 2014, p. 95); these offer

resources, campus stories, and support for ePortfolio initiatives (Kahn, 2014, p. 3). Bret Eynon,

member of the editorial board for the *International Journal of ePortfolio*, (*Reinvent*), Laura

Gambino, research coordinator for the Connect To Learning grant (Gambino, *Guttman*

Community College, CUNY), and Judit Torok, director of Teaching and Learning Commons at

Berkeley College (Torok, *Berkeley College*) (2014) reaffirm that the C2L program "can help

colleges and universities address the Completion Agenda while, at the same time, deepen[ing]

the quality of student, faculty and institutional learning" (p. 96). According to the C2L project,

ePortfolios can produce change in higher education by "providing a mechanism for integrative

learning; . . . a means for integrating institutional measures of learning; . . . and a means for

clarifying and affirming localized institutional value" (Bass, p. 1-2). C2L uses ten strategies to

scale their initiatives:

> 1. Developing an effective campus ePortfolio team. 2. Connecting to programs. 3.
>
> Connecting to High Impact Practices. 4. Engaging students. 5. Advancing through
>
> professional development. 6. Building strategic connections to outcome assessment. 7.
>
> Making use of evidence. 8. Leveraging resources. 9. Aligning with institutional planning.
>
> 10. Building a culture of learning (Eynon et al., 2014).

 This resource helps institutions provide evidence as to why they should include and accredit

ePortfolios on their campuses.

Many higher education institutions are implementing ePortfolios in courses for

assessment purposes. For example, communication and instructional technology specialist,

(*Bellarmine University*) Shawn Apostel (2015) discusses in his article, "Addressing Social Media

Presence: Shifting from Place to Space in Career/Transfer ePortfolios" how to set up a course using ePortfolios. He uses an audience strategy to get his students enthusiastic about creating ePortfolios. Apostel believes that student-created ePortfolios have two audiences: the teacher and the employer, which "helps students stay motivated . . . [and] assist[s] [them] in obtaining their ideal job" (p. 63). By having a second audience, students are more motivated to work in-depth with the portfolio (p. 63).

Shawn Apostel developed a "social media background check" assignment, which required students to revamp their social media profiles by deleting old posts that did not create the professional essence they were looking for (p. 63). The assignment also prompted students to make or revise a *LinkedIn* account, and tweet posts that focused on what they are interested in doing or studying in the future (p. 63-65). Apostel argues that ePortfolios "must offer a visual representation of student ethos that is constructed for the workplace" (p. 64). Instructors play a role in helping students "design" their ePortfolio and conduct a social media check to help "build connections and to ensure that the student's *online persona reflects* the quality and skill level that potential employers are seeking in a new hire" (p. 64). This is helpful to students who are interested in how the course relates to the workplace, and how to transition from academia to the real world (p. 64). Apostel believes that giving a "facelift" to social media websites will "refresh their online presence" and hopes that by doing this ". . . employers will overlook middle school posts" (p. 65). Another assignment requires students to use *Twitter* and to think about "self-promotion" and "authentic[ity]" (p. 66). These words allow students to critically think about how they would want to show this on *Twitter* (p. 66). The students learn by viewing successful people in their discipline's *Twitter* accounts to see how they post to "share stories and projects by

mentioning others who were a part of the project" (p. 66). This promotes the person and their mentee, while making their post realistic.

ePortfolios are also beginning to be integrated into institutions on a wide-scale. In a case study titled "Class Syllabi, General Education, and ePortfolios," authors Jeffrey Appling, Jessica Gancar, Shiree Hughes, and Alex Saad showcase Clemson University as an example of an institution that has implemented ePortfolios for assessment campus-wide (Appling et al., 2012, p. 199-200). By discussing Clemson University's use of ePortfolios for assessment, this shows how an institution uses ePortfolios to "collect data on student work" (p. 200). The university requires students to have an ePortfolio, but gives them the option of using any platform they choose, such as *Weebly*, *Wix*, *Google Sites*, or the university's allotted server space (p. 200). Appling et al. believe that the "use of platforms like [*Google*] is encouraged so that students can have transportability of their work beyond graduation, and so that they may control access to external viewers" (p. 200). Students are assessed on how the "tagged" artifacts in their ePortfolio, and their written "rationale statement[s]" link to and showcase advanced understandings of the "general education competencies" outlined by Clemson University (p. 200). The ePortfolios are scored with rubrics by "faculty and trained student assessors" until graduation allowing students to submit artifacts again for a better score. (p. 200). The problem with this type of assessment is if students do not meet their ePortfolio standards, they are not allowed to graduate (p. 200). Faculty use the graduated students' ePortfolios "to revise General Education requirements and to provide programmatic feedback to departments teaching the Gen Ed courses" (p. 200). This shows that Clemson University is using ePortfolios to improve general education outcomes and observe how students match these outcomes with representative artifacts. While many institutions use student ePortfolios for assessment as a way to locate connections to learning

outcomes from artifacts, institutions also use the ePortfolio as a way to publicly display the student's work and "show off" student learning as evidence of integrated learning outcomes. Much of these ePortfolios that are used to display student learning are called career showcase ePortfolios.

ePortfolios for Career Showcasing

Career showcase ePortfolios are published online for anyone to see and used to show students' future employers their work in order to obtain employment and internships. These ePortfolios emphasize the final product of work and are glamorized with effects through website creators. Yancey et al (2013) describes these as "web sensible" portfolios:

> One that through text boxes, hyperlinking, visuals, audio texts, and design elements not only inhabits the digital space and is distributed electronically but also exploits the medium. In other words, this model may include print texts, but it will include as well images and visuals, internal links from one text to another, external links that provide multiple contexts, and commentary and connections to the world outside the immediate portfolio. The medium, then, is *media* (p. 23).

The ePortfolio platform capability to display the final work digitally with visual effects enhances the work and shows the future employer that students not only have the skills they are looking for shown through their final products, but that they also have digital technical skills such as website building that can be highly used in their workplace (Kryder, 2011, p. 339). For example, LeeAnne Kryder, director of the business communication track of the professional writing minor (Kryder, *UCSB Writing Program*), explains that students at University of California at Santa Barbara include their URL link to their ePortfolio on business cards and resumes, which gives them a better chance at a job interview compared to other applicants due to the employer being

able to visually see the student's work beforehand (Kryder, 2011, p. 334- 335). Karen

Bonsignore (2013) project director of ePortfolios at New York City College of Technology

(Bonsignore, *New York City College of Technology*), explains that the career ePortfolio "enables

students to store their work, document what they have learned in college, and demonstrate how

college has prepared them for a career" (p. 107). Many universities and colleges are using the

ePortfolio for professional lifelong learning to promote a "digital presence" with professional

URL's for the job market (Kryder, 2011, p. 339; Dubinsky, 2003, p. 96-97; Zhang et al., 2007, p.

210). They allow students to demonstrate technology skills and gives them a way to promote

themselves to a future employer (Bonsignore, 2013, p.108-109). Jim Dubinsky, associate English

professor at Virginia Tech (Dubinsky, *Virginia Tech*) describes how Virginia Tech is using

ePortfolios to encourage lifelong learning amongst their students (Dubinsky, 2003, p. 96-97).

This involves students utilizing ePortfolios to see how their courses and extracurricular activities

are part of their learning; it is then carried on into their personal and professional post-graduate

lives through self-motivation and ongoing voluntary development.

Most showcase ePortfolios are created using templates from web applications such as

DreamWeaver. Using templates gives students the opportunity to incorporate document design

features such as font and color. Universities began buying websites such as *Digication* and

Weebly for students to utilize templates to make showcase portfolios. This type of application

shows students that ePortfolios are decorative websites. The problem with this is that ePortfolios

are used differently based on the institution; students do not learn coding language to design their

own website, and mandated platforms to support ePortfolio contents do not necessarily foster

ePortfolio creation. Randy Bass, (2014) English professor and vice Provost of Education at

Georgetown University (Bass, *Georgetown University*) concurs that "e-Portfolios are practices

more than technologies [which] means there is no plug and play 'total ePortfolio solution' to be purchased or licensed" (p. 1). Today, many institutions are now trying to incorporate free websites builders such as *WordPress* and *Wix*. Even though institutions are still trying to use website builders, the desire for ePortfolios today does not always focus on the production of work, instead it is centered on multiple purpose ePortfolios.

Students began creating career and professional ePortfolios to show skills that would be practical in job markets such as writing and communicating effectively. This is similar to how Florence Bacabac, associate professor at Dixie State University (2013) believes ePortfolios should be used to ". . . help students develop multiple literacies as they transition into the job market" (p. 91). By showing employers that students have multiple written and digital communication skills, career showcase ePortfolios therefore help the students better prepare for the workforce. Bacabac (2013) believes that ePortfolios ". . . allow [students] to make preliminary rhetorical choices that showcase the best samples of their academic and professional work from a prospective employer's point of view" (93-94). In order to create the ePortfolio, Bacabac proposes using four assignments to create a "professional ePortfolio: (a) proposal, (b) design document, (c) script, and (d) professional eportfolio" (p. 92-93). She uses these four assignments to demonstrate "multiple literacies" for "job market" preparation (p. 93). These assignments create the content pieces of the career showcase ePortfolio. From the aforementioned typologies, institutions are combining all three types of ePortfolio in order to exhibit skills, professionalize one's digital identity, and foster a unique accreditation system to show how students learn. The following section is an example of an institution incorporating all three typologies into their ePortfolios.

Case Study of ePortfolio Implementation for Learning, Assessment, and Showcasing at

Guttman

Stella and Charles Guttman Community College is an example of an institution that has

put ePortfolios into effect to "serve multiple aims simultaneously (e.g., Cambridge 2010)"

(Kahn, 2014, p. 2). The institution executes this by using ePortfolios for learning, assessing, and

showcasing student work. Guttman is also the "first college in the country to be built with e-

portfolio[s] as the centerpiece of learning, connecting curricular, cocurricular, and institutional

structures" (Gambino, 2014, p.1). The community college follows and utilizes the "C2L's

Catalyst for Learning framework (Catalyst 2014)" and "ePortfolio practices" resources to form

and build their ePortfolio system (p. 2). The purpose of using ePortfolios according to Guttman

is to "increase student engagement, success, retention, and graduation rates," and to change the

"traditional model of community college" (Gambino, 2014, p. 1).

Students begin creating their learning ePortfolios in the summer mandatory bridge

program using *Digication* (Gambino, p. 2). During the program, the students write a "'Who Am

I' essay" and "customize their ePortfolio" (p. 2). The ePortfolios are also aimed at assessment by

". . . using authentic student work to create a culture of learning and continuous improvement"

(p. 1). For example, at the end of the program, the students "submit their e-Portfolios to . . . serve

as a baseline measure of . . . Guttman learning outcomes (GLO)-the college's five institutional

core competencies" (p. 2-3). The assessment is carried out through "mid and end" semester

checks of ePortfolios to view student work and reflections (p. 4). Eventually, the college will

conduct a:

> three-year inquiry, reflection, and integration cycle, examining snapshots of student e-
>
> portfolios collected at various milestones . . . these snapshots will allow [the college] to

look longitudinally at how students are learning and growing in relation to the GLOs,

identify any needed curricular improvements, and implement changes (Gambino, p. 4).

The three-year span will show how the ePortfolio can be wielded for multiple purposes.

During the first year, the ePortfolio is viewed as a "connective space for learning"

(Gambino, p. 3). Laura Gambino, professor and faculty scholar for teaching, learning, and

assessment at Guttman Community College further explains this notion by expressing that

"students can see their own growth and learning over time; e-Portfolios facilitate their ability to

grasp how each individual component fits into a holistic integrative learning experience" (p. 3).

The students' learning is shown through their "experiences" and captured in their course

"reflection letters" (p. 3). Guttman's goal is for the students to "become reflective practitioners

with an understanding of the learning process and who they are as learners" (p. 3). In their

second year, students develop showcase ePortfolios (p. 3). While Gambino states this is what the

students begin in their sophomore year, there is no further explanation of how they begin this or

what is designed for a showcase ePortfolio.

Guttman has "scaled up" their ePortfolio initiative to expand ePortfolio practice through

an "E-portfolio and the Arts and E-portfolio Peer Mentor/Grad Coordinator Bootcamp

workshops" in order for new faculty to learn and apply ePortfolios in the classroom (Gambino, p.

5). Gambino points out that faculty started creating ePortfolios and using them for professional

development and to share "syllabi, assignments, videos, or other instructional materials . . . [for]

students" (p. 5). While Guttman Community College is a prime example of an institution using

ePortfolios, they also show students, faculty, and ePortfolio researchers that it is possible to

foster ePortfolios in courses, and at a university level for more than one purpose. In the following

section, digital identity will be explicitly discussed in showcase and learning ePortfolios as a way for students to create their professional online presence.

Digital Identity in Showcase and Learning ePortfolios

Showcase ePortfolios exploded as a way for students to distinguish themselves from other job candidates while also creating a professional digital identity. These portfolios are similar to social media sites such as *Facebook* and *Twitter* that house informational identities. For example, creating a *Facebook* account is like filling out paperwork at a doctor's visit; both contexts need to know everything about you in order to create a social or patient profile. *Facebook* allows users to create historical archives of the self that shift and change over time. This is similar to learning ePortfolios; one's identity changes over time. The professional digital identity is also a factor that plays into websites such as *LinkedIn* and *Academia.edu.* Each site is designed to create a professionalized brand for the user.

Students begin crafting their professional digital identity in learning ePortfolios by transferring the skills they have developed through social media to their ePortfolios. They then polish their ePortfolios to showcase their growth, skills, and developed abilities. Mhairi McApline, learning technologist at the University of Glasgow (2005) (McApline, *Academia.edu*) views the ePortfolio as a 'story' which "suggests a self-constructed identity portrayed through the e-portfolio" (p. 382). The identity of a narrative is created through "three phases of construction: action, emplotment and reflection, bound in a linear temporal framework forming a hermeneutic" (p. 383). The action involves the creation of documents or artifacts; emplotment refers to the gathering of these artifacts, the unorganized plot points of one's narrative identity, which is then followed by reflection through peer review and feedback. These three phases are similar to the ePortfolio phrasing of "collect, select, reflect," which refers to the process by

which ePortfolios are created. McAlpine's distinction of phases acknowledges the presence of individual identity and narrative within the process of ePortfolio creation. This narrative identity is expanded through the use and development of one's social media activity. By creating and using social media outlets, students continue to build upon and polish their personal, academic, and professional personas within a digital public sphere.

A person can develop their digital identity by creating an ePortfolio. Lauren Klein, assistant professor and director of Digital Humanities Lab at Georgia Institute of Technology (2013) claims that using "the new social context" as a framework for assignments creates a space where "students become more inclined to express themselves in their own voices rather than in the register of 'clarity' they believe is required of them in the academy" (p. 56). This is true for ePortfolios as well; students are more inclined to write and digitally express themselves without having to think about how someone will critique their writing.

Building a professional digital identity online will help students see and understand the relative permanence of social media postings and one's own digital imprint. Linda Cooper of Queens College, City University of New York (2014) argues that "building [a] digital identity using multimedia enables the creator to employ multiple means of expression beyond merely words" (p. 5). Most students have been building their digital identity through social media for years without considering the long term effects of their actions. The students' digital identities have already been established regardless of whether social media sites were created for professionalization or not. While many social media outlets such as *Facebook* and *Twitter* provide an atmosphere for relaxed social conversation and involvement, within the last ten years or so there has been a surge of attention placed upon outlets dedicated to building and preserving one's professional identity. One such outlet, *LinkedIn*, provides a space that enables users to

highlight their research, professional accomplishments, previous employment, and other points of pride in their professional lives.

One of the key components of ePortfolios that makes them so useful for building one's digital identity is the genre's ability to help younger people find their digital identity (Cooper, 2014, p. 10). In Cooper's review of literature, she cites Sandra Weber and Claudia Mitchell's argument (2008) that the "formation of identity in youth share the aspect of constant change" (2014, p. 3). Youth grow up in a fast-paced ever changing technological world, whereas earlier generations slowly observed technology change. Due to the aforementioned, this does not allow time for youth to think of their online identity as a professional identity, due to their millennial generational experiences with social media presence compared to that of older generations. Shawn Apostel (2015) argues "students are voracious consumers of media, but the composition of their online identity is one that many approach with trepidation or even apathy" (p. 66). Since current students' consumption of media and posting on social media networks have been the way of their generation, the idea of an ePortfolio can be used to show them that digital identity can be more than posting comedic videos on *Facebook*. John Suler (1996), cited in Mahairi McAlpine (2005)'s article, "E-Portfolios and Digital Identity: some issues for discussion" discusses how self-presentation is an act that lies in the sole power of the user, which gives teenagers the idea that "cyberspace [is] a safe environment to explore issues with their identity and self-perception" (p. 380). Students learn that their digital identity is crafted through social networking instead of creating a professional online presence for future employers.

The problem with this is that they believe the web is so safe that they dump their inappropriate postings or "deviant behavior" which shows up in their historical postings (McAlpine, 2005, p. 380-381). The issue with this is that students will not learn from their past

mistakes and how to change it in the future if they are expected to have a professional digital

identity from the start. Making mistakes is part of the learning process; one's thought process

changes as he or she grows and learns. For example, many believe the postings we created five

years ago on social media outlets were important, but as we look back on our posts, many people

find themselves astonished at some of their postings. This is emblematic to students maturing

and gaining a sense about what should be posted in online forums. That being said, ePortfolios

offer many benefits for students, faculty, and institutions, but as with everything there is always a

risk factor. Many systems encourage public sharing of information and this could include using

"portfolio evidence" for assessment (McAlpine, p. 381). While McAlpine believes ePortfolios

are part of a "safe domain" due to being part of a "school virtual learning environment (VLE)

system," there are potential risks with sharing information that could include publishing or

accessing information that could cause an "accidental identity exposure" (p. 381). This possible

exposure is due to the information being shared with too many users (p. 381). McAlpine

discusses the five risks associated with ePortfolios as identified by scholar, Lee Shulman (1998):

". . . it becomes a self-advertisement; that unnecessary additional work is generated; that it

becomes a general repository; that only 'best work' is included; and that the evidence may

become objectified" (p. 380). The potential risk exists in connecting one's private, learning

ePortfolio with their public selves in the digital sphere. While the learning ePortfolios are one

part of their overall digital identity, it is, in theory, supposed to remain private from public

viewing.

    Risk aside, the ePortfolio genre provides students with a digital space for "play," giving

the students a chance to privately think about their work before it is posted on the Internet. This

space is what many educators use to assess their students, and where many begin building their

digital identities. Kathleen Yancey points out the "representations" of students that educators invite or permit are based in the "rhetorical situation":

> (1) because they are immediate, direct, and substantive—composing, as they do, the material of our teaching lives and those of our students'—and (2) because they perform a double function—providing grist for the twin mills of identity and assessment (2013, p. 16).

The ePortfolio fosters this rhetorical situation in its use of digital space, and the educational and technological skills developed to create digital portfolios.

Showcase ePortfolios hide the true, unedited identities of the developers, only providing a look at the best artifacts that they want published online. This is shown in the site architecture, which is a ". . . type of choice architecture which may produce different results in terms of self-presentation and behaviour, with some users deliberately choosing to create an 'idealised' version of themselves according to current cultural norms" (Binns, 2014, p. 73). When students develop showcase ePortfolios they are presenting their best versions of their work. Amy Binns (2014), a senior lecturer in journalism at University of Central Lancashire (Binns, *University of Central Lancashire*) confirms that ". . . the site's tools and capabilities also influence the way users behave and the identities they develop within the site" (p. 71). Since students can recreate a digital persona of themselves online using web tools for showcase ePortfolios, their identity may also change. Now that ePortfolios have been discussed in depth in so far as defining the genre, its varying typologies, as well as the historical scholarship, this chapter looks to turn to the pinpointed inclusion of ePortfolios within the field of rhetoric and composition.

ePortfolios in Rhetoric and Composition

In the history of rhetoric and composition, there have been two ways portfolios have been used. George Pullman, an English faculty member at Georgia State University who specializes in rhetoric and composition theory (Pullman, *Georgia State University*), outlines how portfolios are used for "writing-assessment method" and "writing pedagogy" (Pullman, 2002, p. 151). George Pullman believes that using the portfolio is more effective than requiring "a one-time essay or in-class writing" (p. 151). Pullman claims that portfolios "encourage students to see writing as an ongoing process, as a public act of communication, and as an opportunity to create meaning and identity through sharing and collaboration" (p. 151). Using the portfolio in composition studies has decreased misconceptions of using writing to earn a grade, as well as something that you are intrinsically good at doing (p. 152). Writing is something taught in grade school and beyond, that one has to practice it in order to get better; it is not something that is learned overnight. Writing as a practice constantly follows the recursive process of reflection and revision. The electronic portfolio has advanced the writing portfolio to "include creative projects in sound, images, movies, and hypertexts" (p. 152). It allows for portability, while also having students use the digital hyperlinking to their work as a way of "thinking" and connecting to items in the ePortfolio (p. 152). Overall, the move from paper portfolios to ePortfolios in rhetoric and composition allows for students to continue peer review, reflection, and revision, while also creating a more technological way of moving into the twenty-first century.

J. S. Dunn Jr. et al. (2013), an assistant professor of composition at Eastern Michigan University (2016, Dunn Jr., *Eastern Michigan University*), discusses the reasons many scholars are using portfolios. These reasons include "portfolio assessment can support literacy learning, . . . prompting students to write more, make informed self-assessment of writing quality, and reflect

consciously about their composing processes and development as writers" (p. 62). Universities and colleges make the decision if they want to incorporate ePortfolios into their curriculum. Many higher education institutions value exams as product and learning as process. ePortfolios can be both process and product oriented at higher institutions, which is essentially why they are incorporated into college curriculums. When a student creates an ePortfolio, he or she combines product and process. The product comes from the showcasing of the ePortfolio, whereas the process goes into reflection and gathering material to add to the ePortfolio. The combination shows that learning is visible in ePortfolios from students making connections to their academic, personal, and professional selves digitally. Pullman adds that portfolios provide the chance to "assess the writing process" and the option for "reflection, revision, and collaboration" (p. 152). John Ulrich (2013), associate professor of English at Mansfield University of Pennsylvania (Ulrich, *Ohio University Press*), uses portfolios as an assessment tool in the English department to see how well student learning connects to program outcomes (2012, p. 5). Ulrich alludes to the utilization of the portfolio to make adjustments to the curriculum at his home institution, as well as other "small, non-elite public universities" (p. 3-5). The portfolio itself consists of "collect[ing] and stor[ing] electronically key assignments that all majors must complete within their core courses" (p. 5). Their English program includes two similar essays as artifacts to show "beginning and end points" of the curriculum (p. 5). The portfolio also contains an original essay and a revised essay (p. 5).

Erin Herberg (2005), in her article "Can a Metamorphosis be Quantified?: Reflecting on Portfolio Assessment," invokes Peter Elbow's belief "that no one can make a trustworthy judgment about a student's skill or ability in writing without seeing multiple pieces of writing . . . and writing that emerged from a process" (p. 71). Within composition studies scholarship, there

has been little proof that portfolios work (Herberg, 2005, p. 73). Portfolios were "accepted primarily on faith: the evidence has been theoretical, anecdotal, and often based on feeling" (p. 73). There was hardly any quantitative data to prove that portfolios can be used as an assessment tool to replace exit exams at universities and colleges (p. 73). This is similar to appendix F discussion of ODU's push for ePortfolios over exit examinations even though there is a lack of assessment data to prove that portfolios would be a better fit than exams.

From Erin Herberg's article, the Writing Studies department decided to implement portfolios at Rowan University in order to see if it would work as an assessment tool (p. 69). After incorporating the portfolios, many faculty members discovered that portfolio assessment "fostered improved writing pedagogy" (Herberg, p. 81). The department found that many faculty preferred portfolios due to their focus on revision, because "revision results in better writing, and, thus, better grades" (Herberg, 2005, p. 84). Christy Desmet et al. (2008), professor of English and Director of the First-year Composition Program/UGA Writing Center at the University of Georgia (Desmet, *University of Georgia*) discusses revision as "writing is rewriting" and a benefit for portfolio assessment compared to others (p. 16). The scholars believe that portfolios provide students with "time, practice, and a second chance to demonstrate their skill" (2008, p. 16). They also claim that ePortfolios "support revision" by providing a space for students to make changes and upload documents, while also providing teachers ease and "efficiency" to "read and evaluat[e] ePortfolios" (p. 16). The institution supported portfolio assessment to follow "process pedagogy in the field of rhetoric and composition" (p. 18). According to the scholars, they are using portfolios to engage with the theory that "writing is a process" and using revision to support it (p. 18). By combining concepts of revision with

reflection, this adds to the theory of "writing as a process" by creating a "stronger theoretical link" (p. 18). Desmet et al. believe that portfolios:

> Increase the writer's agency in assessment; . . . the student persuades his or her reader rather than passively awaiting the teacher's grade. Second, portfolios complicate and render more recursive the writing process by encouraging further revision of graded papers for inclusion in the portfolio and by asking students to reflect on and demonstrate formally their revision process. Third, the portfolio articulates an explicit relationship between process and product through the relation of other exhibits . . . Finally, portfolios encourage a heightened awareness of audience . . . (Desmet et al, 2008, p. 19).

While previous results regarding the usability of ePortfolios to replace exams were inconclusive, the results from Desmet et al.'s research findings of ePortfolios at University of Georgia found that "revision [within] . . . ePortfolio assessment, improves student writing" (p. 25). Scholars within rhetoric and composition use portfolios to improve student writing through revision.

ePortfolios have been used to serve multiple purposes and audiences, including those within the rhetoric and composition field. The genre itself gained significant popularity in institutions as an educational tool for learning, assessing, and showcasing student work in many different fields. For example, my experiences with ePortfolios at ODU have been used for learning and showcasing through the use of *Google Drive,* which can be very effective to collect, archive, and display work. *Google Drive* can visibly show student's evidence of learning through its features and applications.

That being said, the following chapter will provide an analysis of *Google Drive* and its features, as well as explain how it can be used as an effective ePortfolio. Chapter three will also explain how *Google Drive* is useful for students and teachers through its many features such as

commenting and revision history. Since ePortfolios use different technologies I believe it is important to discuss a technology that is not necessarily designed for ePortfolio usage, but works effectively to demonstrate a place for students to create a learning ePortfolio before displaying their work online.

CHAPTER II

GOOGLE DRIVE AS EPORTFOLIO

In this chapter, I argue that *Google Drive* is an effective ePortfolio technology for writing classrooms. The theoretical concept of "writing [as] a process" will be further discussed to explain revision and reflection in composition writing as it connects to ePortfolios. The chapter will discuss *Google Drive* as a combination of positive and constructivist perspectives. My argument for this chapter is that even though *Google Drive* is not a flashy ePortfolio technology like other websites and platforms, it can aid composition classrooms through the features of *Google Docs* and elements to support successful writing pedagogy.

While the history of *Google Drive* will be explained, the discussion will be concentrated on how *Google Drive's* applications and features can help composition classrooms. The chapter is set up to follow Linda Flower and John Hayes' four points to cognitive process theory to provide an analysis of *Google Drive,* and to show how it can be an effective ePortfolio platform for composition professors and students in the classroom. The chapter will explain how *Google Drive* affords writing classrooms for revision and reflection, as well as beginning a discussion on how the features help with collaboration in and outside of the classroom. Reflection is an important part of ePortfolios, because it allows students to look back at their work and discuss how their work has changed or developed. Another key factor of *Google Drive* is having a discussion with the class about security and ownership of their work. Lastly, while *Google Drive* is an effective ePortfolio technology, it is imperative that students learn about *Google's* Terms of Service policy to encourage them to read through other policies before making accounts.

The *Google* Corporation and *Google Apps* Suites

In 1998, Sergey Brin and Larry Page founded the *Google* Corporation, which launched the widely popular search engine www.google.com (Hosch, p. 1). Soon following, in 2004, the *Google* corporation launched their premier email service, www.gmail.com, the first of what would become a collection of web-based applications under the blanket title of *Google Apps* (Rutledge and Gunter, 2016, p. 42). *Google Apps* is a "cloud-based office suite that helps people to connect and to get things done" (Rutledge and Gunter, 2016, p. 3). It began in 2006 with *Google Apps Premier Edition* and *Google Apps for Your Domain* (Google Company History). With the continued success of these technologies, a few months later *Google* expanded its reach with launching *Apps for Education*, a "suite of free productivity tools for classroom collaboration" that included apps such as *Docs* and *Sheets* (Google Company History; Google for Education). The suite provided a "professional-grade Google account for [an] entire school to share" (Google for Education). Other *Google* inventions include *Google Maps, Google Earth, and Google Chrome*, its own web browser (Hosch, p. 3). Six years after *Google Apps* and *Apps for Education* was released, *Google* launched *Google Drive* in 2012 as an application (Google Company History).

***Google Drive*: Applications and Features**

Google Drive is a "file storage and synchronization service that gives you a place to keep all of your files, rather like a virtual hard drive" (Rutledge and Gunter, 2016, p. 102). *Google Drive* began as "a place where you can create, share, collaborate, and keep all of your stuff," offering 15 GB of free file storage (Google Drive Help; *Google Official Blog*, 2016). *Google Drive* is "integrated with Google Docs, Sheets, and Slides" to make it easier to work and create material in *Drive* (Rutledge and Gunter, 2016, p. 103).

Google Drive (shown in figure one) provides writing teachers with a viable platform for ePortfolios in the writing classroom, despite its rather stark, technical, and non-showy appearance. While *Google Drive* was not explicitly designed to be a learning ePortfolio platform— Rutledge and Gunter state that it is an online storage facility aimed at "businesses, schools and organizations" audiences—it can be used as such in the writing classroom by using the features associated with it (Rutledge and Gunter, 2016, p. 3).
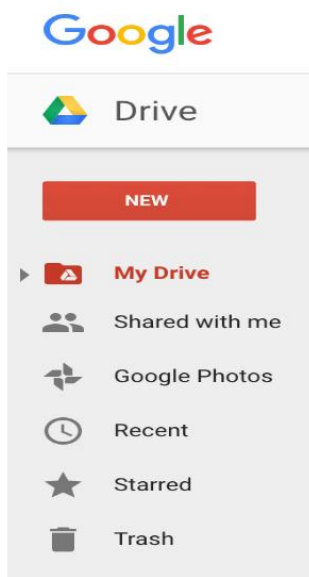
Figure 1: Google Drive

For my research methodology, I am analyzing *Google Drive's* features through its applications and their inclusion in composition classroom by following Linda Flower and John Hayes' cognitive process theory of writing. Flower and Hayes (1981) discuss four points to cognitive process theory that, when unpacked can fit within ePortfolio and writing scholarship. Following a brief overview of Flower and Hayes' theory, this chapter will apply their four points of cognitive process theory to *Google Drive* and its application features in an effort to prove that

this online storage application helps educators better assist their students in writing and creating an ePortfolio.

Cognitive Process Theory Overview

Linda Flower and John Hayes' (1981) cognitive process theory is based on the claim that the composing process is a series of decisions and choices (p. 365). Flower and Hayes use four points to describe a theory of the thinking processes in writing (p. 366). The cognitive process theory is a "working hypothesis" based on their past five years of work with protocol analysis (p. 366). The theory uses four points to address the thinking processes in writing:

1. The process of writing is best understood as a set of distinctive thinking processes which writers orchestrate or organize during the act of composing.

2. These processes have a hierarchical, highly embedded organization in which any given process can be embedded within any other.

3. The act of composing itself is a goal-directed thinking process, guided by the writer's own growing network of goals.

4. Writers create their own goals in two key ways: by generating both high-level goals and supporting sub-goals which embody the writer's developing sense of purpose, and then, at times, by changing major goals or even establishing entirely new ones based on what has been learned in the act of writing.

The first point to the theory shows that writing is not a set of stages, but rather multiple processes. The second point emphasizes that while these processes do not follow a strict order per se, that they themselves are still planted within a hierarchal system that allows larger cognitive systems to integrate smaller systems into them. Flower and Hayes continue onto their third point which discusses that writers follow their own goal-directed processes, which can have

a continual flow of goals within the process. Lastly, their fourth point discusses that when writers compose they create high-level goals, which develop sub-goals that inevitably act as revised regenerations of the predetermined high-level goals. Flower and Hayes conclude their theory by stating their belief that the writer is the one who has the creativity, inventing, and thinking process to compose. From the discussed overview, point one will be discussed in depth by analyzing *Google Drive*'s integrated application, *Google Docs*.

Distinctive Thinking Processes, the Act of Composing, and *Google Docs*

  Google Drive affords students the opportunity to plan, write, and rewrite continuously without following the "stage process model" described "as a linear series of stages, separated in time, and characterized by the gradual development of the written product" (Flower and Hayes, 1981, p. 366-367). Flower and Hayes find that this model does not show the processes of the person producing it (p. 367). Instead they describe writing in their first point of cognitive process theory as: "The process of writing is best understood as a set of distinctive thinking processes which writers orchestrate or organize during the act of composing" (p. 366). Students can plan their writing as they write with *Google Docs*. Many features of *Google Drive* help teachers to see students' "inner process" of producing documents (p. 367). For example, *Google Drive's* uploading feature allows students to upload documents such as scanned handwritten outlines, notes, and scratch paper pointing to student planning. Students' writing continues when they comment on these documents about where their writing will make a turn. This shows that writing is not organized in order from beginning to end as Flower and Hayes discuss in point two. As such, *Google Docs* shows itself to be a simple technology that can be used to enhance writing pedagogy.

Google Docs

     Google Docs began in 2006 as a "reworking" of *Writely*, "an online word processing service" (Google Company History & *InformationWeek*), and is currently integrated into Google Drive as a "word processing application" (Rutledge and Gunter, 2016, p. 131). *Google Docs,* illustrated in figure two, makes writing more effective for students and faculty due to its many capabilities in *Drive*, such as the ability to comment, revision history, and real-time collaborative document editing. Students and teachers can create a new *Google Doc* by logging into their accounts and going to *Drive*. The application is easy to use and does not require the user to have a high level of computer literacy. Next, they can click the red 'New' button in the left upper corner to get started. From there users can choose to create or upload a file or folder. *Google Docs* also has the capability of converting an uploaded *Microsoft Word* document into a *Google Doc*, which is useful for students and professors who have used *Microsoft Word* in the past and do not want to change over to a different technology.
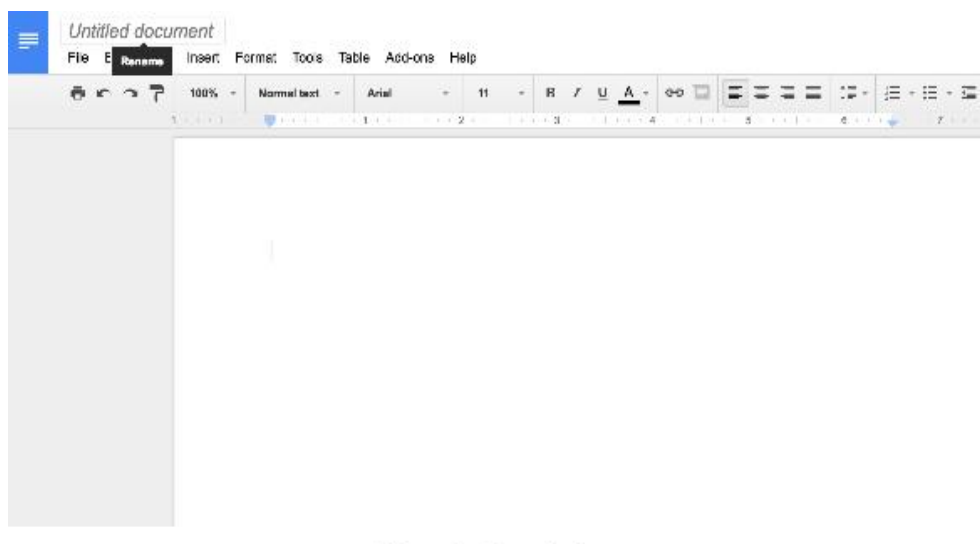
Figure 2: Google Docs

While *Google Docs* is still a practical tool, there has been a gap in the portfolio literature for rhetoric and composition to use *Google Drive* as the "new" way to access *Google Docs* since *Google Docs* was its own application before it was integrated into *Drive*. This gap in literature could be due to *Google* not launching *Drive* until six years after *Google Docs*. During the time of *Google Docs* original release, its features were useful, but they were not as fully developed as they are today. For example, Deidra Moitzheim, an eighth grade Language Arts teacher uses *Google Drive* in her classroom and claims that *Google Docs* "is like an online version of the Microsoft Word suite, but it's free and has real-time sharing and collaborating abilities" (2015, p. 13). Moitzheim claims that her students enjoy using *Google Drive* "because it's technology of their generation: simple and easy to use" (13). While she does not use *Google Drive* as an ePortfolio for her students, she does use it to save important documents and to share those documents with her students in order to help with their writing (p. 13). In their classroom, students write their ". . . rough drafts [using] Docs" (13). Moitzheim says that the rubric, resources, and a checklist are ". . . saved to drive [for] students [to] refer to it at anytime" (p. 13). Moitzheim believes that it saves time and "support[s] students writing process" (13). This illustrates Flower and Hayes first point of cognitive process theory, that composing is a constant process, not a set of rigid stages.

Google Drive affords this point by allowing students to freewrite within *Google Docs* without having to follow a progression of stages as they type; the students can get the words on a page without thinking about the stages of writing: pre-writing, writing, and re-writing (Flower and Hayes, 1981, p. 367). *Google Drive* helps students with freewriting by using the process model, described as "the major units of analysis are elementary mental processes: such as the process of generating ideas. And these processes have a hierarchical structure" (p. 367). Students

can use their "cognitive processes or thinking skills" to type their ideas in *Google Docs* without worrying about having to stop or pause to save their work (Flower and Hayes, p. 367). It does this through its automatic saving feature, meaning it saves as one types. While working within *Google Docs* students are able to successfully work through the three major elements of Flower and Hayes' writing process model, which will be further discussed below.

Elements of the Writing Process Model

Educators can use Flower and Hayes' three major elements of the writing process model: "the task environment, the writer's long-term memory, and the writing processes" to show how writing occurs organically (p. 369). These elements do not follow an order or pattern; they occur when one composes (p. 369).

Task Environment

A prime example of this would be to look at a student's learning ePortfolio. The writing ePortfolio would be the student's task environment. According to Flower and Hayes, the task environment "includes all those things outside the writer's skin, starting with the rhetorical problem or assignment and eventually including the growing text itself" (p. 369). The work that students develop would be included in the task environment. For example, the professor would assign *Google Drive* as the writing ePortfolio platform because it is a private place for students to collect all of their thoughts in order to feel comfortable about writing.

The rhetorical problem would be the assignments that would be collected in the ePortfolio. Flower and Hayes describe the rhetorical problem as "the writers attempt[ing] to 'solve' or respond to this rhetorical problem by writing something" (p. 369). The assignment sheets or rhetorical problem would include the topic, audience, and exigency. The students would try to solve for these by creating a written text. For example, if the assignment was to

write a biography about the student for the ePortfolio, the topic would be the student, his or herself. The topic would also be included in the professor's instructions for the assignment. The audience of the document would be classmates and the professor, but depending on the assignment the professor may have the students publish their writing online through a website builder such as *WordPress*. The audience would then be anyone on the Internet including future employers, and college and university committees for graduate school. Lastly, the exigency would be to explain who they are by providing a biography to tell the audience about themselves. The task environment also holds the document being written, known as the written text (p. 371).

While the student is creating the biography, they are producing a written text, the second portion of the task environment (p. 371). This is the product that is being created from the rhetorical problem. The text is part of the composing process because it trying to do two tasks at once: the student is recovering information stored in his or her long-term memory while also trying to organize their thoughts and plan what to write next to address the rhetorical problem (p. 371).

Long-term Memory

The second element of Flower and Hayes' process model is the writer's long-term memory, where the "writer has stored knowledge, not only of the topic, but of the audience and of various writing plans" (p. 369). The ePortfolio is a perfect entity to collect memories and information for student writing. Since *Google Docs* saves everything as one types it collects all of the starting and stopping points of writing in the revision history. Students can look through their revision history or comments in order to jog their memory. By reading a word or phrase students can trace back to an image in their memories in order to use this information to reorganize their thoughts and use it to address the assignment or rhetorical problem, known as

the discovery process (p. 371-372). The discovery process can be used as an "ah-ha" moment, when the lightbulb goes off and students have an idea about what to write; this instantly starts the writing processes of planning, translating, and reviewing (p. 369).

Writing Processes

The last element of the process model is the writing processes themselves. Flower and Hayes refer to these as the "basic processes of planning, translating, and reviewing, which are under the control of a monitor" (p. 369). Monitoring is an overall thing that happens when writers compose, they review how far they have progressed in their writing and think about the process they are on (p. 374). Flower and Hayes explain that the monitor "functions as a writing strategist which determines when . . . writer[s] moves from one process to the next" (p. 374). While students are monitoring their writing process, they are also planning their writing.

While students are using the ePortfolio as a place to write freely, they are also following the planning process of the process model. Flower and Hayes describe this as "the act of building this internal representation, involv[ing] a number of sub-processes. The most obvious is the act of generating ideas, which includes retrieving relevant information from long-term memory" (p. 372). Students can plan in *Google Docs* through the outline feature, comment, jot notes in a document, and create lists. Many features of *Google Drive* help faculty to see students' "inner process" of producing documents (p. 367).

While *Google Drive* provides the option for students to compose in *Google Docs*, it also gives students the option to work in other applications such as *Google Drawing,* to think about their paper. Students can digitally illustrate what their paper is about, which allows the writer to think about their paper in a visual sense instead of simply writing about it in the traditional way. When students write, a thinking process occurs without notice. They plan and rewrite their ideas

to create prose in no specific order (p. 375-377). *Google Drawing* (shown in figure three) is a useful application for students to show visuals of their stories. The drawing represents the "structure of ideas," and the writer uses the "sub-process of organizing" to create meaning from the picture in order to enhance their writing ideas. These visuals can be embedded into *Google Docs* to show visual connections. By adding visuals to writing, students are enhancing their ePortfolio, as well as their understanding of their own writing processes.
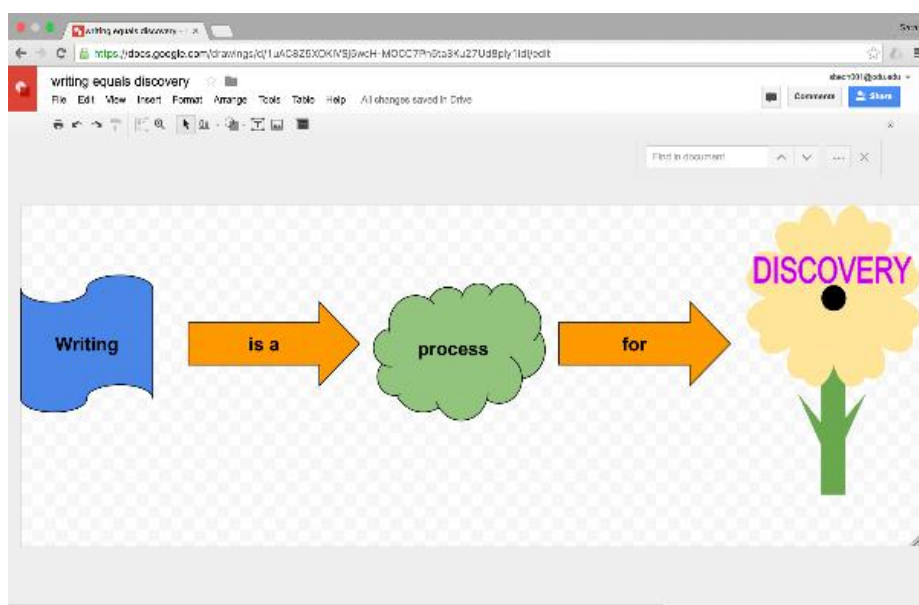
Figure 3: Google Drawings

Flower and Hayes refer to the second process as translating, which means "putting ideas into visible language" (p. 373). By using the long-term memory to plan out documents, the student is translating everything they created in their ePortfolio for the assignment such as the outline, pictures, phrases, and comments from *Google Docs* and *Drawings* into prose. This can be difficult because the process of translating requires the writer to make meaning out of ideas,

while also remembering to pay attention to syntactic and lexical items of standard American English (p. 373). The process of translating focuses more on getting the ideas on paper without worrying too much on grammar and mechanics, otherwise Flower and Hayes believe this would interrupt the "global process of planning what one wants to say" (p. 373).

The third process, reviewing, uses two sub-processes: evaluating and revising when looking at the document as a whole (p. 374). This process happens at any time when the writer reads what they have previously written and decides to change the document in order to make it better (p. 374). *Google Docs* helps with the evaluating and revising process because of its revision history feature, ability to comment, and being able to suggest edits. These features help the author keep track of the document's revision process, a process that will be focused on more when Flower and Hayes' third point of cognitive process theory is discussed.

Hierarchical Systems and Embedded Organization Processes in Collaborative Writing

Scholars have researched *Google Docs* as a useful pedagogical tool for writing classrooms, and it has been the go-to tool for collaboration. *Google Drive* makes it easy for students to collaborate together on projects at their leisure from any location with an Internet connection. Flower and Hayes' second point of cognitive process theory discusses how the aforementioned processes in their first point "have a hierarchical, highly embedded organization in which any given process can be embedded within any other" (p. 366). As such, collaboration is possible within *Google Drive* through synchronous and asynchronous commenting, revisions, and feedback. These writing processes may only be viewable to the individual student, student collaborators, and professor, since the processes are housed privately in the ePortfolio platform, *Google Drive*.

Synchronous & Asynchronous Collaboration

Google Drive fosters the ability for students to collaborate in synchronous real-time within the document by visually seeing who is present with them, giving all collaborators the ability to watch one another type, and make suggestions at the same time. Indicators of this are the icons or collaborator pictures that appear in *Google Docs* at the top right corner and the color of the cursors as the students' type. This is an effective feature for professors to see who is participating in the classroom. For example, the professor could be doing an in-class assignment by having the entire class working in one document at the same time. Each student could be answering questions and replying to classmates. This gives the professor the option to check for in-class participation without going around the classroom to view screens and to assign participation points to students at a later time due to *Google Doc's* automatic saving capabilities and revision history feature. Another feature that students can use in synchronous real-time is the embedded chat feature within all of *Google Drive's* suite applications. Students can talk to each other through the use of instant messaging about their document. This helps students to stay focused on their document and the tasks he or she needs to complete. The chat feature is also helpful to have a discussion with collaborators in order to ask questions and discuss the assignment in real-time. Similarly, students can asynchronously collaborate in a document through *Google Drive's* email notification system for commenting and chat messages. While one student can leave a series of comments or suggestions within the document, another will receive an email notifying them of the comments. In the same vain, as comments and suggestions are accepted or reconciled, all collaborators will in turn receive email notifications regarding those as well. Instructors can then check the comments tab, as well as the revision history for student involvement within the document. This allows them to see any and all comments, replies,

suggestions (accepted or denied), and revisions in a color-coded fashion that visually shows which students were working at which times.

In the second point of cognitive process theory, Flower and Hayes discuss how composing is a hierarchical process where other processes are embedded within each other, also known as recursion (p. 375). While students are typing, they have multiple thought processes such as planning, translating, and reviewing their work as they type in the document (Flower and Hayes, 1981, p. 376). The writing processes are "not fixed in a rigid order," instead, they are recursive (Flower and Hayes, p. 375). Sondra Perl (2008), a contemporary composition theorist to Flower and Hayes, also agrees with the idea that the writing process is recursive, meaning that "writers return to substrands of the overall process, or subroutines (short successions of steps that yield results on which the writer draws in taking the next set of steps)" (p. 141). This means that even (circa) thirty years after Flower and Hayes began a discussion surrounding recursive writing practices, that recursion still means the same to compositionist theorists today as it did then, and that this writing process theory is still trying to be proved. Recursion occurs within collaboration when students attempt to freewrite together in a document by writing for periods of a time, eventually pausing and returning to reread what they wrote. This shows the students using processes of evaluating and reviewing within each other in an embedded system (Flower and Hayes, 1981, p. 374-375).

Commenting and Responding

Collaboration is also easier for classmate interaction through *Google Drive's* commenting and responding features. Figure four shows what the comment button looks like in *Google Drive*, which can be found next to the blue, share button. Writing teachers often assign peer review, revision, and conferences to help students to become better writers. Peer review helps with the

recursiveness of writing and aids in the "embedding" of processes (Perl, 2008, p. 142; Flower

and Hayes, p. 366). Flower and Hayes define embedding as "a basic, omni-present feature of the

writing process even though we may not be fully conscious of doing it" (p. 376). Students

perform this when they write by thinking about how they should change something, or what their

topic should be about. For example, the comments from the peer review help students to make

decisions and reread their documents. This shows the planning and reviewing processes in this

example (Flower and Hayes, p. 376). *Google Docs* is useful for embedding during peer review

because students can read each other's drafts and offer feedback through comments. This allows

students to provide suggestions on their peers' drafts without criticism of handwriting, having to

print out the document, or time constraints of reading the document in class. *Google Drive* also

houses *Google Forms* which aids in peer review as well. *Google Forms* will be discussed later in

this chapter.
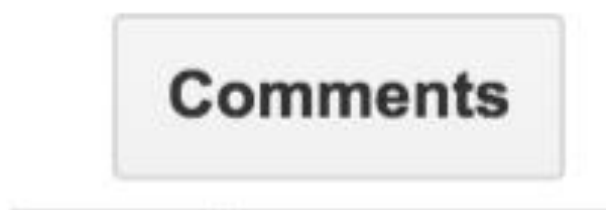
Figure 4: Commenting

The commenting feature also helps students to communicate with the professor and

"improves the efficiency of their communication" (Ishtaiwa and Aburezeq, 2015, p. 93). Deputy

Dean of the College of Education, Fawzi Ishtaiwa and Dean of Scientific Research and Graduate

Studies, Ibtehal Aburezeq at Al Aim University of Science and Technology, (2015) discuss a

case study on the impact of collaboration in *Google Docs* in their article, "The Impact of Google

Docs on Student Collaboration: A UAE Case Study" (p. 85). They argue that *Google Docs* affords "students to construct knowledge and create quality learning materials" (p. 88). Ishtaiwa and Aburezeq found that the while *Google Docs* provided ample collaborative features for their students, that the delay in technological learning on their students' part made it difficult to use (p. 94). Ishtaiwa and Aburezeq conclude in their article that *Google Docs* helped with:

> collaborative learning behaviors, such as acquiring knowledge and skills in an exciting way, comparing their work with others and learning from them, ease of giving and receiving feedback, sharing information, and being more connected with others (Ishtaiwa and Aburezq, 2015, p. 92).

These learning behaviors show that using *Google Docs* helps support students' writing processes in composition classrooms. Faculty can provide encouraging feedback through the comments and explain what they mean. The document is easier to read with typed comments that are found by clicking on the highlighted text.

Another way professors can provide feedback to students includes writing directly on the document by deleting text or making suggestions while in 'suggesting' mode. The professor's suggestions and comments are indicated through a different color and students receive an email notification from *Google* about the document. To indicate the suggestion, *Google Docs* shows a green box around the edit (Rutledge and Gunter, p. 160). The student can accept the suggested edit or reject it (Rutledge and Gunter p. 159). The suggestions, like recommendations, do not necessarily tell the student what to do like a comment does, but shows it visually through the use of different colors and markings like a strikethrough. Deidra Moitzheim likes that she can comment directly on student papers without using red pen and send it back to the student through email notification (p. 14). Moitzheim believes it helps with saving class time (2015, p. 14). This

also shows the fast efficiency of communication as discussed by Ishtaiwa and Aburezq (2015, p. 93). The email lets the student know they can open the document and read through the feedback and make the necessary changes. The student can review the comments and revise their paper.

Students can respond to comments with more questions or phrases that indicate they understand how to go forward; these responses start a digital conversation within the document (Rutledge and Gunter, 2016, p. 161). Since the comments are digital, the complaint of illegible teacher handwriting is no longer an issue. The comment also tells the user who commented at what time with a picture, name, and dated timestamp. This is very useful when a course has specific due dates. When students respond to comments they are acting on the "embedded sub-processes" as discussed by Flower and Hayes (p. 376). They do this without thinking by returning to some of the writing processes taught in English courses such as planning, translating, and reviewing (Flower and Hayes p. 376). Once the student has revised or corrected the paper and resolves the comment, an email notification is sent to the professor or peer reviewer notating the resolved comment. This shows the instructor or peer reviewer that the student read the comment and worked on the document instead of ignoring the comment. While collaboration features like commenting and responding in *Google Drive* helps keep the sub-processes of writing constantly flowing through recursion, students need to be able to share their work with their professor in order to receive feedback. This feedback allows for students to revise their document. Revision will be further discussed when Flower and Hayes' third point of cognitive process theory is explored later on.

Sharing

The process of sharing is one that is intrinsic in collaborative practices. The sharing capabilities of *Google Drive* allows students and faculty to effortlessly communicate feedback,

questions, and concerns regarding whatever document has been submitted or shared. This extends to ePortfolios as well. If the ePortfolio is shared with the professor, then the professor has access to all of the documents within. This helps faculty during student conferences; instructors can access the shared document(s) on one screen and discuss them. Students can share their document by clicking the blue 'share' button located in the top right corner (as seen in figure five). *Google* then shares the document with whom the user indicates via inputting email addresses. Students enter their peer or professor's email address in the share bar and *Google* sends the user an email about the document with an embedded link. The student can add a message and check to send a copy of the email to him or herself to archive the message. The sharing feature gives the professor access to the document online and allows them to store the document in their 'shared with me' tab in *Google Drive*. One of the added benefits to sharing a document via *Google Drive* lies within the ease and quickness by which feedback can be given to students by their instructors. By sharing a document through *Google Drive*, instructors can easily open, comment, and fully grade a document without having to use multiple applications, download a document, or send an email.

Figure 5: Share button

Google Drive offers three types of sharing capabilities: viewing, editing, and commenting (Rutledge and Gunter, 2016, p. 119). These three types of sharing give the student the option of

how much flexibility in the writing process they want other collaborators to be able to have (Flower and Hayes, 1981, p. 375). The viewing feature allows the student to send the document, but only allows the collaborator to open it up and view its contents. This is useful, if the student does not want the collaborator to view their revision history. The editing feature allows the collaborator "full access" to open the document up, make and respond to comments, type on the document, and make changes (Rutledge and Gunter, p. 119). The collaborator can view the revision history and revert to previous changes, which is helpful if a past revision was needed. The commenting feature gives the collaborator a chance to make comments and to view the document, however it does not allow the collaborator to make direct edits (Rutledge and Gunter, p. 119). This is important in the composing process, because the comments can help the recursion process (Flower and Hayes, p. 375). The students can read a collaborator's comments and be able to generate their own ideas into prose (Flower and Hayes, p. 376). These types of sharing are important when students share their work with peers and faculty. The students in Deidra Moitzheim's course also use the sharing feature to comment on each other's work for revision purposes (2015, p. 13). Students may not want to give another student access to change their work. If the student was given commenting access, the student could view and comment on the document where the written work needs help. This also helps professors encourage academic accountability, ensuring students do their own work rather than having a classmate edit or copy their document.

This connects to Flower and Hayes' second point in that the collaborative features of *Google Drive* which allows for students to reconfigure the way in which they work through varying embedded writing practices. For instance, the 'shareable link' feature in *Google Drive* allows users to send a link via emailing, social networking, instant messaging, etc. When

'sharable link' is turned on, the owner or collaborator can send a link to the document to anyone, maintaining complete control over the documents' sharing capabilities. This is useful for teachers if they are sending an assignment prompt to the entire class. They can select if the link is to edit, view, or make suggestions. Instead of individually sharing the assignment prompt with the entire class, the professor can copy and paste the link into a class email and share it with everyone. Once students open the link, they can add the document to their ePortfolio to refer to later. This shows the student saving the document in their ePortfolio to refer back to when thinking about the rhetorical problem (Flower and Hayes, 1981, p. 370). By saving the assignment sheet, students can look back at it in order to jog their memory of their first "hierarchical working system" in order to follow other basic writing processes such as planning, translating, and reviewing the document thus far to create new ideas, resulting in a better document (Flower and Hayes, p. 370-374).

Other ways to share documents with faculty and students include the ability to email collaborators, email as attachment, download, and publish to web. Instead of using the 'share' button, the owner of the document can email the document as an attachment and also email the collaborators information regarding the document. Collaborators can download the document to print or save to one's computer. This is useful for students if they do not have access to Internet at home. Students can still mark on the document using a pen to make comments and edits. These markings will help the students create the edits in the document later on. They can also save their evaluation process of the document by scanning it into their ePortfolio (Flower and Hayes, 1981, p. 376). This way they can keep their revision process in their ePortfolio and refer to it when making changes to the document (Flower and Hayes, p. 376). *Google Docs* also gives the owner and/or collaborator(s) the ability to download the document in multiple formats such

as *Microsoft Word* and *PDF*. This is helpful for students if the location of the class does not have Wi-Fi; students can bring paper copies of their work. In the following section, the revision process will be discussed.

Goal-Directed Processes & Revision Practices Using *Google Drive*

The third point to Flower and Hayes' cognitive process theory posits the following: "Writing is a goal-directed process. In the act of composing, writers create a hierarchical network of goals and these in turn guide the writing process" (1981, p. 377). As such, using this third point the revision process will be analyzed using *Google Docs*. Faculty can view students' writing goals in *Google Docs*' comment thread and revision history tool to see how they write, and the "goal-directed thinking" process the student goes through when writing (Flower and Hayes, p. 379). Flower and Hayes define goal-directed thinking as: "describing one's starting point... laying out a plan for reaching a goal... or evaluating one's success" (p. 378). Edward White (2007), a retired emeritus, English professor from California State University (White, Professor Edward White webpage) states that "during revision, we move paragraphs about, insert new pages, discard whole chunks of prose, reorganize, and come up with new ideas" (2007, p. 41). The revision history and comment thread feature is effective for this. For example, one of ODU's adjunct instructors believes the tool helps her return digital papers to students with comments (ODU adjunct instructor). Students can return the same document with the revisions made, and the adjunct instructor can go into the revision history to check that the student actually revised a document instead of clicking resolve on all of the comments. This is effective when showing the student's goal-directed thinking processes in the revision history and comment thread tools. While writing is an act of discovery, when people are writing they tend to forget

how they got from one 'working goal' to the next (p. 377). Flower and Hayes claim that these goals are in two categories: process and content goals.

Process and Content Goals

Revision centers on content and process goals to assist students with writing. Flower and Hayes state that process goals are "the instructions people give themselves about how to carry out the process of writing" (p. 377). This occurs when students make comments on their own documents or write a list of tasks they need to complete on the draft. It also refers to the decisions writers make when they are thinking about or working on their writing at the time (p. 377). Flower and Hayes explain from their research experience that "good writers often give themselves many . . . instructions and seem to have greater conscious control over their own process than the poorer writers we have studied" (p. 377). *Google Drive* as an ePortfolio tool helps with process goals, and can include all artifacts of writing such as student notes, list of ideas, and outlines. These artifacts can show how the student has developed in their writing over time. Content goals and plans "specify all things the writer wants to say or do to an audience" (p. 377). Goals can be small short steps that show the writer is thinking throughout the entire process. These goals can be connected to sub-goals, which can be reflected on to describe the writer's overall goals for the piece they are concentrated on, thus showing the cognitive thought process (Flower and Hayes, p. 377). Flower and Hayes describe this as "the writer's own set of self-made goals [, which] guide composing . . ." (p. 379). When students go throughout their day and think about what they should write about, they are making goals even if they are "abstract or detailed, simple or sophisticated" (p. 379). If students are away from their computers, they can use their mobile devices to write down goals in the *Google Drive* app. They can access their documents in the app to write down what they intend to do. These cognitive writing goals are

thought about through reflection. Reflection will be discussed later in point four of Flower and Hayes. The network goals in content goals have three important features that enhance the purpose of writing.

First Feature: Network Goals

A *Google Doc* tool that is available for students and professors is the 'make a copy' feature. This tool is useful in Flower and Hayes' first feature of network goals, "created as people compose, throughout the entire process. This means that they do not emerge full-blown as the result of 'pre-writing.' Rather, they are created in close interaction with ongoing exploration and the growing text" (p. 378). Students can make copies of their drafts to keep the comments from professor feedback or to have a clean document when a classmate reviews it. The 'make a copy' feature copies the entire document and opens it into a new tab. This helps students collect different draft versions of their writing for their ePortfolios. Each draft will show when the last edit was made, which will help professors to see how their students' writing has improved from each date. This shows the network of goals on each document. Flower and Hayes believe that "people forget many of their own local working goals once those goals have been satisfied" (p. 377). Making copies of the same document shows the student how their "hierarchical network of goals" from draft one have helped them ". . . with the ongoing exploration and the growing text" by the time they reach draft seven (Flower and Hayes, p. 377-378). This shows how their revision and network goals for each draft has helped improve their writing.

Second Feature: Goal-Directed Thinking

Revision is key for writers and writing professors to create a "'new vision' of what is being said, responding to internal as well as external demands" (White, 2007, p. 54). The "new vision" is important for composition and portfolio pedagogy to help students improve their work

over time (p. 54). Nancy Sommers, an education lecturer known for her revision study, which found out strategies used by students and by experienced adult writers (Sommers, 2008, p. 195), believes that "students need to seek the dissonance of discovery, utilizing in their writing, as the experienced writers do, the very difference between writing and speech—the possibility of revision" (p. 205). This discovery experience occurs in Flower and Hayes' second feature of network goals: each goal that is created during the composing process is part of the student's "goal-directed thinking," which links their writing goals to the next (p. 379). These goals can be anything that informs the student what to do next in their writing, and helps move the composing process forward (1981, p. 379).

Students' thinking processes change as they write, which creates goals along the way. The ePortfolio captures these goals through the use of saving in the revision history and pane. (p. 366). For example, the student could be writing about the introduction and then all of sudden write a phrase that causes them to start writing the body of the essay, returning to the introduction later. *Google Doc*'s revision history records the username, time, date of edits, and changes made to the document. This helps students to remember what they were thinking about by looking back at the changes and timestamps to see when they paused in their writing. The revision history pane also gives the student or professor the option of reverting back to "prior versions of [the] document and restor[ing]" them (Rutledge and Gunter p. 156). These features enhance the writing ePortfolio because they show how student writing is developed over time in a highly visual way.

Faculty and students can also use the revision history for group work. They can access the revision history by clicking 'All changes saved in Drive' or under the file tab 'see revision history.' The professor can see who worked on the document, what content was contributed, and

what time the collaboration took place. For example, Deidra Moitzheim uses the 'revision history' feature to find out who the student worked with, what they said, and when it occurred (p. 13). This is useful for professors because they can check the revision history to find out who participated in the group work and give credit to those individuals. In the past, most professors found it difficult to distribute credit to group members evenly because there was no record of what each student had accomplished. Students find the 'revision history pane' useful as well because they can show proof if a group member never participates.

Another way in which students and instructors can focus on goal-directed thinking is through *Google Docs'* 'voice typing' feature, which lets the writer speak aloud what is on their mind without having to physically type it. This feature is a new addition to *Google Drive* applications and is currently only available to users on the *Google Chrome* web browser. The 'voice typing' feature helps the student verbally work through their goal-directed thinking processes, while also allowing for hands-free typing and freewriting. The 'voice typing' feature is found under tools and is indicated by a microphone icon (as illustrated in figure six). By clicking the 'voice typing' tool the user is able to access the computer's microphone for speech-to-text typing functionality. This feature allows students to type, edit, and correct mistakes through the utilization of voice commands (Google, 2016, *Docs Editors Help*). This tool is helpful for students with fine motor skill disabilities, as well as supporting ninety different languages and dialects. Students with disabilities and non-native speakers in various international locales will no longer need to have assistance in digitally composing a document. While this is not the same as Flower and Hayes' protocol analysis research study, a study that included the use of tape recorders to analyze verbalized writing processes, the function still allows students to work through their own writing process in an audible way (p. 368).
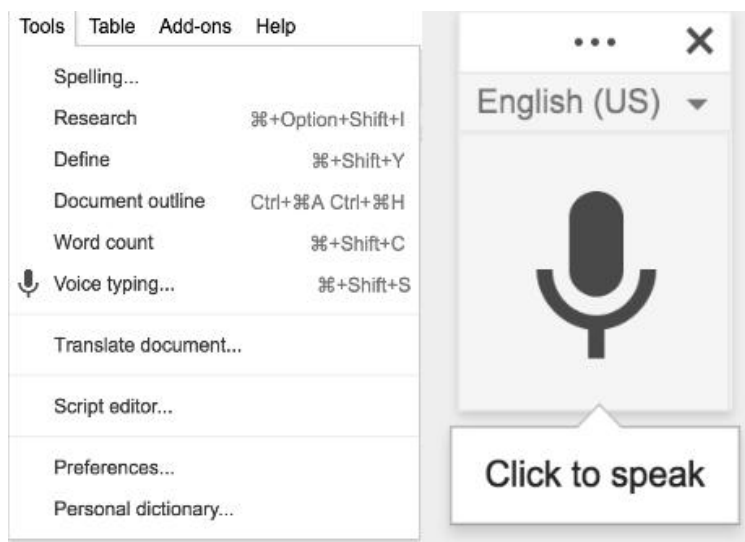
Figure 6: Tools menu showing 'voice typing' & microphone icon representing 'voice typing' function in action

Flower and Hayes' "thinking aloud protocols capture a detailed record of what is going on in the writer's mind during the act of composing itself" (p. 368). By using the 'voice typing' function, students are able to compose a document without the same kind of interruptions one has when physically typing a document; things like pausing to delete or editing one's work (Flower and Hayes, p. 368). Instead *Google Docs'* 'voice typing' provides a stream of consciousness form of writing. The goal-directed thinking processes of speaking the words are not interrupted as they are when one types (Flower and Hayes, p. 379). Flower and Hayes describe this interruption as the processes of "generate and evaluate" due to the "new knowledge and/or some feature of the current" document being written (p. 380). Typing causes the student to pause and think about what they are writing whereas speaking gives the student a chance to keep talking without thinking about what they need to address in a formal academic essay. This shows the professor and student that even if a student's goals are all over the place throughout

their writing "they provide the 'logic' that moves the composing process forward" (Flower and Hayes, p. 379). These goals that "give direction and coherence to their next move" can be viewed through revision as content and process goals (p. 379). In the next section, the goals created from the goal-directed thinking will be discussed in order to help the student return to the main goal of the paper.

Third Feature: Hierarchical Network of Guiding Goals

The third feature of Flower and Hayes' network goals states that "writers not only create hierarchical network of guiding goals, but, as they compose, they continually return or 'pop' back up to their higher-level goals. And these higher-level goals give direction and coherence to their next move" (p. 379). This can been seen in *Google Drive*'s revision history feature, which allows the student to review their changes. When students review the changes they make in a document, they return to the top of the document or the paragraph before to reread their initial content goal or purpose for the prose (Flower and Hayes, p. 379). Sondra Perl describes this as the "third backward movement in writing, one that is not so easy to document" (2008, p. 142). By reviewing the revision history pane in *Google Drive*, one can see the documented history of changes that allows the student to read their goal-directed thinking over time, which helps the student return to the their first hierarchical network goal (p. 379). Flower and Hayes refer to the importance of returning to hierarchical network of established goals in a few ways: "the frequency with which writers refer back to their goals; the fact that writers behave consistently with goals they have already stated; and the fact that they evaluate text in response to the criteria specified in their goals" (p. 380). These three signs provide the reasons that help the writer produce a hierarchical network of goals in order to create purposeful writing, thus one of the reasons why documenting the writing process is so important in showing student learning over

time (p. 381). By documenting learning, it is helpful for students to reflect on their learning in order to think about how their writing has changed, which can be found in their writing ePortfolio.

Creating Goals Through Writing for Reflection

Writing portfolios in rhetoric and composition often incorporate a reflection portion that gives the student a chance to look back at their work. Reflection involves discussion of writing goals, ideas, thoughts, and revision. Flower and Hayes' fourth point to cognitive process theory states:

> Writers create their own goals in two key ways: by generating both high-level goals and supporting sub-goals which embody the writer's developing sense of purpose, and then, at times, by changing major goals or even establishing entirely new ones based on what has been learned in the act of writing (1981, p. 366).

By using *Google Drive* as an ePortfolio platform students can save their goals digitally, which will help the students in the future in their revision and reflection practices. Flower and Hayes discuss two basic processes that writers carry out as they compose a document: creat[e] sub-goals and regenerat[e] goals (p. 382)

Writers develop sub-goals that connect back to the original goals while they are writing. These sub-goals help with "revis[ing] or regenerat[ing] new, more complex goals" (Flower and Hayes, p. 386). This occurs in collaborative acts such as peer review and one-on-one conferences. *Google Drive* is useful for both of these activities through the use of such applications like *Google Docs*' commenting and suggesting features, which were discussed previously in this thesis, as well as *Google Forms*. *Google Drive* houses *Google Forms* (seen in figure seven), which allows instructors to create a questionnaire for peer reviewers to fill out

when reading over a classmate's work. These goals can be "regenerated," which helps the

student "replace or revise major goals in light of what they learned through writing" (Flower and

Hayes, p. 382). These types of goal processes can be viewed through *Google Drives'*

applications in the following three patterns: "explore and consolidate," "state and develop," and

"write and regenerate" (p. 382).
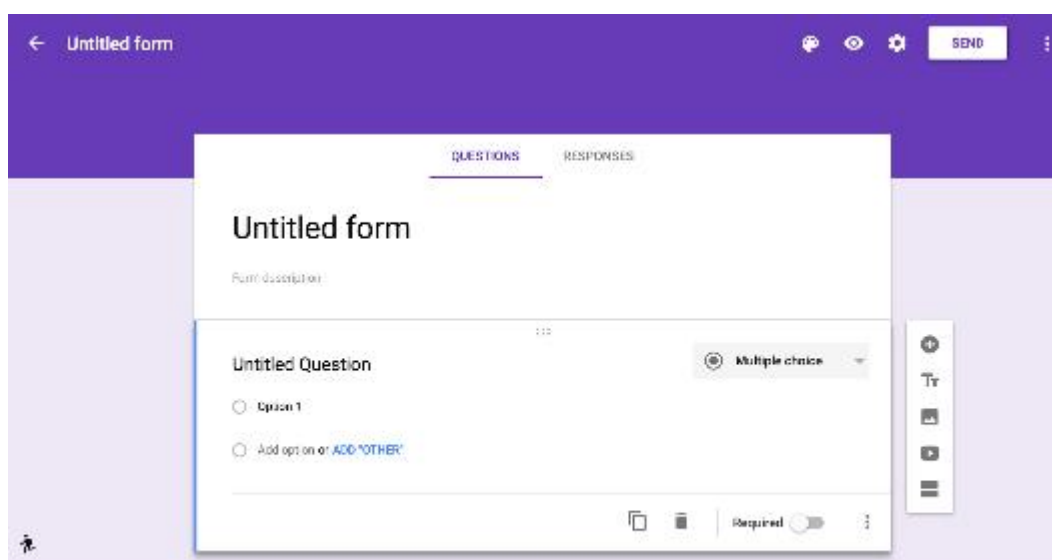
Figure 7: Google Forms

"Explore and Consolidate" Pattern through Google Forms

Through peer review sessions, students can revise their work through their peers'

feedback. This peer review session occurs in the "explore and consolidate" pattern. While this

mostly occurs in the beginning of the composing session, it can happen at anytime (p. 382).

Flower and Hayes describe the concept of "explore" as "think[ing] the topic over, to jot[ting]

ideas down, or just start[ing] writing to see what they have to say. At other times the plan to

explore is subordinate to a very specific goal" (p. 382). When students are reading their peers'

essays for the first time it gives them an opportunity to see a piece of work with new eyes. This gives the student a chance to read through the essay and to provide suggestions to improve the prose.

For the peer review session, professors can create peer review questionnaires through *Google Forms* for students to answer about their classmate. The student can read the peer's essay and provide their feedback through *Forms*. While there are multiple ways to do peer reviews such as assigning identified in-class partners, instructors can also conduct anonymous peer reviews as well. To do this, the professor would erase the name on the student's document and individually number the essays, informing each student which number is theirs privately, so as to keep the process as anonymous and unbiased as possible. The instructor would also tell the students which numbers to read. This way each student gets his/her essay read and receives feedback. The professor can allow students to access copies of numbered student essays in a shared course folder. Once they have read the essay number assigned to them in class, they can use *Google Forms* by including which essay number they are reading, to submit their responses without the owner of the document knowing who each reviewer is. This is a way for peers to provide feedback without using the commenting feature, which allows their feedback to be anonymous. This helps peer reviewers to provide accurate responses to reading their writing, while also giving the owner feedback without knowing which response is whose. This feedback can be accessed through a *Google Sheet* or spreadsheet, which houses autonomous responses from the peer reviewers about their work. The spreadsheet can be used as another artifact to show students' writing process for the ePortfolio. Since it organizes feedback into columns based on the *Forms'* format, the feedback is essentially following what Flower and Hayes consider the "consolidat[ion]" pattern of goal processes, where "the writer sets up a new goal which replaces

the goal of explore and directs the subsequent episode of composing" (p. 382). Students can read the feedback and create further writing goals from it. This occurs in pattern three of goal processes, "write and regenerate," which will be discussed later in this point. (Flower and Hayes, p. 385). The feedback is important for students to refer back to in their ePortfolio for revision and reflection of one's goals, which gets created in the next goal pattern, "state and develop" (p. 384).

"State and Develop" Pattern through Google Drawing

Once the students have read the feedback provided from the peer review, they can begin creating new goals, while building more sub-goals in the "state and develop" pattern (Flower and Hayes, p. 384). Flowers and Hayes explain that "these goals will often be so basic that they won't even be consciously considered or expressed" (p. 381). For example, students can begin a list of goals through *Google Docs* of how they begin a paper, and points they want to make from their suggestions in the feedback. Flower and Hayes believe "the relationship between creating goals and finding ideas is clearly reciprocal: it was an initial exploration of the writer's ideas which produced these goals" (p. 385). The feedback from the peer review is the student's starting point to creating high-level goals. These goals help the student consolidate their next goals for their draft in order to revise it.

One way students can use *Google Drive* to illustrate this point is through *Google Drawing*. By using this application and its varying features, students are able to create a visual mapping of their goals, which helps students make visual connections between their writing goals. While these goals may or may not be concretely written down, they are shown through the collection of artifacts the student chooses to include in their ePortfolio. The drafts in the collection can be compared to observe when students are making progress in their writing. For

example, a student could begin with an introduction for draft one and have two body paragraphs in the next draft. If the end goal was to create a paper, they have made cognitive goals to create an introduction and can begin the main points of the essay.

"Write and Regenerate" Pattern through Linking Reflections in Google Docs

In the third pattern of Flower and Hayes' goals process, "write and regenerate," "the writer is producing prose" (p. 385). Through this process, students can use *Google Docs'* linking function to connect their integrative learning to their goals (1981, p. 385). In the reflection document, also known as the "reflective letter or cover letter" (White, 2007, p. 168), students discuss the artifacts in their ePortfolio, how they have developed as a writer, or how their artifacts connect to the course or department's program goals (p. 168-169). The reflective letter gives students a chance to:

> take responsibility for the quality of work, the choices that were involved in the writing, and the learning that has occurred—or not occurred. It is a powerful metacognitive act— thinking about thinking—that no other assessment device includes (White, p. 168).

In *Google Drive*, students can use *Google Docs* to write their reflections as part of their ePortfolio. Students can visually see their writing process through the collection of drafts from different time periods in their ePortfolio. This gives students a chance to finish a course with a reflection piece, which allows them to discover how their writing has changed over a period of time. As cited by Kathleen Yancey (1996), John Dewey (1933) defined reflection in *How We Think: A Restatement of the Relation of Reflective Thinking to the Educative Process* as "goal-directed and sequential, controlled by the learner because he or she wants to learn something, to solve a real problem, to resolve an ambiguous situation, or to address a dilemma (p. 14)" (Yancey, p. 88). Students can reflect how they have changed as a writer, how their goals have

evolved, and how their writing has developed throughout the duration of a course. The ePortfolio encapsulates the students' work by including drafts, free writing, teacher comments, homework, and peer review feedback throughout the semester, which provides the student with a collection of their work and shows how they have grown into better writers over time. These types of goals in turn relate to what Yancey refers to as reflection:

> A dialogic process by which we develop and achieve specific goals for learning, strategies for reaching those goals, and means of determining whether or not we have met those goals or other goals (1996, p. 85).

Many students have writing goals that come from memory and are "well-learned" (Flower and Hayes, 1981, p. 381). These goals help students to start papers and ease the student into knowing what to write when he or she begins writing.

Within the reflection, students can use *Google Docs'* link function to create the 'links' to make connections to internal and external evidence of their learning. For example, they could create an internal link to a draft they improved on which shows they have made progress in their writing skills. Students can create links by right clicking and selecting 'link' or clicking on the insert tab and then selecting 'link.' When inserting the link, students can copy and paste the URL from the external website, or type 'keywords into the text box' and *Google Docs* will search for it (Rutledge and Gunter, p. 146). The link function makes the student's writing look more professional and visually appealing because it rids the document of long URL links. Rutledge and Gunter state, "Google Docs underlines your link to alert readers that they can click it to go to the link destination" (p. 146). This helps professors figure out the connections students are making without having to guess what the link looks like.

When students create links internally in the ePortfolio, they are showing connections to their writing or artifacts of their writing process. As stated by Flower and Hayes, the student also "sees why the process of revising and clarifying goals has such a broad effect, since it is through setting these new goals that the fruits of discovery come back to inform the continuing process of writing" (p. 386). This applies to looking back at one's work or reflection. Kathleen Yancey says:

> When we reflect, we thus project and review, often putting the projections and the reviews in dialogue with each other as we seek to *discover* what we have learned, what we are learning, and what we might learn (1996, p. 85).

When students make external links they are connecting to websites or things outside of their ePortfolio to show evidence of their learning. For example, students can discuss an organization they are involved in and make a link to the organization's website, or they can find connections in their writing to what they are learning in other courses. White describes this as an "argument—in the rhetorical sense, using the materials in the portfolio to show to what extent the student has in fact met the course goals" (p. 169). Using *Google Docs'* link function, students can link to drafts where they felt their writing was weak or to websites that may have helped them become better writers, providing evidence of learning which is a key factor in ePortfolios. This shows the students have written prose, made goals of how they would change their writing, and ". . . consolidated these ideas and [used] them to revise or regenerate new, more complex goals" (Flower and Hayes, 1981, p. 386). For example, English professor J. Elizabeth Clark of LaGuardia Community College "reviewed eportfolio systems currently being used by educational communities in higher education" that had the following results:

Preliminary findings suggest that institutions are looking to ePortfolios to support the

documentation of learning in general education and disciplines[,] and viewing the

ePortfolios as an alternative to standardized tests that may result in more authentic

evidence to support integrative and interdisciplinary learning (Light et al., 2012, p. 124).

Scholars and researchers want to show authentic evidence of learning, and ePortfolios are used to

do this because they can show cognitive learning processes in a visual way. Using the reflection

portion of the ePortfolio adds to this authentic evidence of learning because it informs the viewer

of the decisions the student has made and the cognitive processes he or she experienced while

compiling the contents of their ePortfolio.

From the aforementioned discussion on Flower and Hayes' four points to cognitive

process theory, *Google Drive* and its applications can be seen as an effective ePortfolio tool for

faculty and students to use in the writing classroom. The ePortfolio tool helps writing professors

see the students' cognitive processes over time through the process model: task environment,

long-term memory, and writing processes, which is shown in a collection of documents in

Google Drive (p. 369). Another way for students to see their writing process over time is to use

Google Drawing to visually draw out their paper in a nonlinear way. Students can collaborate in

Google Docs through the use of commenting/suggesting, chatting, and sharing. These features

can highlight the embedded hierarchical goals of student writing processes. These embedded

goals in turn help the student revise their paper, which can be done through *Google Docs*'

revision history pane and comment thread features illustrated in point three. Students can then

revise their paper from the feedback submitted in a collaborative peer review session using

Google Forms as a questionnaire. Lastly, these goals help the student look back at their writing

to revise their work which can make connections outside of the course, allowing them to use the

linking feature in *Google Docs* as a way of linking to other content in their ePortfolio for reflection purposes. *Google Drive's* many features and applications makes it easy to develop a learning ePortfolio because it has capabilities for collaboration, revision, peer review, and reflection.

In the third chapter, I will be arguing that using *Google Drive* as a learning ePortfolio platform is effective for first-year writing courses because it aids in showing process over product. While chapter three described in detail the ways in which an instructor, as well as students, can use *Google Drive's* applications for identifying cognitive processes, this chapter will provide a more hands on practical approach to applying those processes through introductory composition assignment prompts. The course projects I have developed are based on scholar recommendations and my own experiences using and analyzing ePortfolios for learning. *Google Drive* will be used to exemplify how the course can implement learning ePortfolios through a non-showcase platform. In doing this I will be applying concepts of cognitive rhetoric as discussed by Linda Flower and James Berlin.

CHAPTER III

INTRODUCTION TO COGNITIVE RHETORIC

In this chapter, I will be discussing assignment prompts for a first-year composition course using cognitive rhetoric concepts to incorporate a learning ePortfolio project using *Google Drive*. Utilizing *Google Drive* as the learning ePortfolio platform will be how the students work and submit all of their work. As part of ePortfolio research, reflection is an important piece. For the proposed writing course, the students will first write a reflective cover letter using *Google Docs*. The introductory reflective cover letter assignment is the students' introductions to the class and what they hope to accomplish. Secondly, the students will use *Google Drawing* to visually map/plan how they are setting up their papers. The third assignment submitted is the peer review session using *Google Forms*. The peer review is incorporated to build the student's collaboration and to learn how to use some of *Google Drive's* features such as commenting. The last assignment for the learning ePortfolio is the second reflective cover letter using *Google Docs*. The second letter discusses how the student has changed as a writer and what assignments helped with the writing skills. These projects will help faculty implement *Google Drive* as a learning ePortfolio platform, to see their students writing develop over time, while also showing how these assignments use cognitive rhetoric ideas.

The field of rhetoric and composition acknowledges ePortfolios as a valuable pedagogical tool. Flower and Hayes' four points to cognitive process theory are derived from what James Berlin and Linda Flower describe as a "cognitive rhetoric" approach to writing (Berlin, 2007, 121; Flower, 1993, 171). *Google Drive* as an ePortfolio platform can show cognitive rhetoric through its technological features. I will begin a dialogue between cognitive

theorist James Berlin and several of his contemporaries, highlighting Linda Flower's

conceptualization of cognitive rhetoric as a more apt and reader-friendly theory to follow.

James Berlin

In James Berlin's (1987) *Rhetoric and Reality: Writing Instruction in American Colleges,*

*1900-198*5, Berlin references many pioneers of cognitive psychology such as Jerome Bruner and

Jean Piaget, which led to the cognitive approaches to rhetoric (p. 16). According to Berlin, "the

rhetoric of cognitive psychology focuses on the psychology of the individual, it is indeed a

transactional approach" (1987, p. 159). From cognitive psychology, Berlin uses cognitive

rhetoric in reference to writing. He states, "learning to write requires the cultivation of the

appropriate cognitive structures so that the structures of reality, the audience, and language can

be understood" (p. 159). Berlin believes cognitive rhetoric "has been the strongest proponents of

addressing the "process" rather than the "product" of writing in the classroom . . ." (2008, p.

122). Throughout his text, Berlin focuses on many people who have approached cognitive

psychology, but he lacks in explaining his own reasoning for focusing on cognitive rhetoric or

what it actually means.

In Berlin's (1987) "Rhetoric and Ideology in the Writing Class" article, an introductory

essay in T.R. Johnson's *Teaching College Composition*, Berlin describes three theories:

cognitive rhetoric, expressionistic rhetoric, and social-epistemic rhetoric (p. 119). Once again in

this introductory essay, Berlin does not provide a definition to cognitive rhetoric, but

descriptions of the rhetoric of cognitive psychology. Karen Scriven comments that Berlin does

not define the difference between "cognitive rhetoric," "cognitive psychology," and "the rhetoric

of cognitive psychology" (1989, p. 764). Scriven refers to Flower and Hayes, Emig, and Larson

as those who focus on cognitive psychology relating to writing (p. 764). Berlin responds to

Scriven that the purpose of his article was to show that "cognitive rhetoric . . . regard[s] itself as

an objective, disinterested scientific enterprise, isolated from the conflicts of politics and

ideology" (1989, p. 771). Berlin believes that cognitive psychology cannot be separated from

cognitive rhetoric, that they have the same ideology (p. 770-771). He references Flower and

Hayes as the proprietors of cognitive rhetoric. For example, Berlin discusses Flower and Hayes'

description of the mental processes of writing as three stages: planning, translating, and

reviewing (1987, p. 122). The planning stage involves creating, organizing, and goal setting,

which leads to the translating stage, by putting thoughts or ideas into words, and lastly the

reviewing stage, involving evaluating and revising the work (p. 122). These stages are further

broken down through Flower and Hayes' goal-based approach. The concentration on the process

is what learning ePortfolios strive for, and what *Google Drive* is efficient in showing through it's

features.

Linda Flower also responds to Berlin's article, stating that Berlin does not have any

evidence from cognitive rhetoric to back up his claims, and would show the "thinking processes

that support, and the goals that drive, this rhetoric of reflection" (p. 768). Berlin responds to

Flower by stating that "cognitive rhetoric contains no procedures for analyzing, evaluating, and,

when necessary, rejecting the problem that is presented for the solution" (p. 772). Berlin uses

Flower and Hayes' task environment to provide evidence to his claims, once again using Flower

and Hayes' scholarly work, but never making his own point of view regarding cognitive rhetoric

(p. 772-773). For the purposes of this chapter, Linda Flower will be discussed to show how the

writing prompts using *Google Drive's* applications and features foster cognitive rhetoric ideas

Linda Flower

In Linda Flower's chapter "Cognitive Rhetoric: Inquiry Into the Art of Inquiry" in

Theresa Enos and Stuart Brown's (1993) *Defining the New Rhetorics*, Flower defines cognitive

rhetoric as "*a set of questions and a repertoire of interdisciplinary methods for trying to answer*

them--it is a scaffold for inquiry" (p. 174). Flower believes that cognitive rhetoric works out of

assumptions and claims that do not necessarily need evidence, but "fine-grained analyses of how

thinking is linked to texts, contexts, intentions, and actions" (p. 174). This is due to trying to find

a place for cognitive rhetoric to be within the "'new' epistemic rhetorics as . . . *a form of inquiry*

into the art of inquiry--to note how it operates, alongside other forms, an investigation into the

nature of rhetoric as a communicative, persuasive, and meaning-making practice" (p. 174).

Flower argues that cognitive rhetoric involves problem-solving by using inquiry as its main

function (p. 175). She concludes in her introduction that cognitive rhetoric follows various

trajectories, such as: social and cognitive process (as seen in chapter two), "into how learning

arises from situated cognition within a discourse, into how rhetors construct and negotiate

meaning in response to readers, collaborators, and their own history" (p. 175). From this

introduction on Linda Flower's cognitive rhetoric, I will be using cognitive rhetoric

concepts/ideas from Linda Flower's article through a series of assignment prompts.

***Google Drive* in First-Year Writing Courses**

There has been significant amount of research conducted on the usefulness of ePortfolios

in the classroom, but there has hardly been any information on how to implement it, or the best

ways to accomplish it. The project I will be discussing at length in this chapter will work towards

providing instructors of first-year composition courses with a scaffold set of assignments that

fully utilize *Google Drive's* ePortfolio capabilities. Using ePortfolios in the classroom helps the

class move smoothly because it encourages organization and grants access to documents at any

time. One of the best practices involving ePortfolios in the writing classroom includes using the

Google Docs application to help save students' writing processes, rather than them using

Microsoft Word, a software program that does not save every time students type something. In

my own experience, this causes my train of thought to be lost because I have to remember to

click the save button every time, which disrupts the cognitive process. This is why *Google Drive*

and its seamless, fast-working features can be seen as the preferred platform for in-class and out-

of-class writing.

Since *Google Drive* is an application technology through *Google* corporation, it is

important to discuss this in the course. Before setting up *Google Drive* in a first-year writing

course, make sure there is a policy in the syllabus that the students have to sign that details using

Google Drive throughout the course for all work and the learning ePortfolio. It would be a sound

idea to call the policy, "Terms and Conditions." This way the student is signing in agreement to

the instructor's terms and conditions for using a digital technology in the course. Also, send the

class a survey using a *Google Form* so that the students can see that the instructor is using the

technology as well. The *Google Form* is a good way to find out the students' technology

experience, a way to see if they have access to Wi-Fi at home, and if they have made an

ePortfolio before.

Throughout the syllabus, include statements emphasizing the importance of saving

material to the students' ePortfolios which will help the students remember to keep their

ePortfolios updated with material throughout the semester. In the syllabus, include a resource list

for students to turn to in order to get help with setting up their *Google Drive* space. For example,

some of the resources could include the school's information technology (IT) help desk contact

information, *Lynda* tutorials, *YouTube* tutorials, or even the "getting started" PDF file that comes preloaded in *Drive* upon first setting one up.

During the first week of classes, the instructor will lead students in downloading a copy of *Google's* Terms of Service policy to read through and convert into a *Google Doc*. Then the instructor can direct the students to highlight the document using the highlighter tool for issues they see with the policy in order for students to become more literate as to what *Google* will be doing with their information and materials. By using their service, they are making money off of the customer through many ways, which may include using their pictures and information for advertising purposes (*Google* Terms of Service, 2014). By having the conversation about *Google's* Terms of Service students' questions regarding their usage can be answered early in the semester.

After students have gone through and understood *Google's* Terms of Service, instructors can then begin an in-class activity that would include giving an overview of *Google Drive*. Not every student is going to have experience with this tool because their previous institution may not have used it. Next, the instructor will do an in-class folder activity by having the students create their own folders, titling them, "Lastname, Firstname - UIN," and sharing them with the instructor in preparation for their learning ePortfolio project. Using *Google Drive* as the learning ePortfolio technology helps instructors and students keep their work organized throughout the semester. Instructors can teach the students how to create folders for each component of the learning ePortfolio. The instructor will then create a class folder that holds all of the students' individual folders. From the folder activity, the instructor will explain the learning ePortfolio project. To show *Google Drive* being used as an ePortfolio technology for classroom application, the students of a first-year writing program will create a learning ePortfolio.

Learning ePortfolio Project

The learning ePortfolio project is the entire collection of documents that will be worked on and submitted through *Google Drive* over the duration of the semester. This is based on the ePortfolios for learning as discussed in chapter one. Ed White states:

one of the most important tasks we can accomplish in a first-year college writing course is to insist that the first draft is the beginning of the writing process, not the end of it (p. 2).

This correlates with what Berlin describes as cognitive psychology, showing process versus product. The learning ePortfolio project is important for a first-year writing course because it focuses on the private cognitive processes that students go through when they are writing. The instructor can view these cognitive processes through the multiple essay drafts to see students working through comments and suggestions, and check the revision history pane to make sure that the students made changes from the feedback in the comments.

Through these actions, the students are using cognitive rhetoric because they are "selecting a rhetorical act or situation to study and gamble on locating a generative, important problem" (Flower, 1993, p. 177-178). Flower is essentially defining cognitive rhetoric by asking instructors and students to develop a set of questions to build a rhetorical problem (p. 174). Then, through the writer's own methodological approach, those questions are answered (p.174). In relation to ePortfolios and the writing process, this can be seen when students respond to comments in their drafts. *Google Drive's* features help the instructor to see how their students' writing skills are developing and what they may need to work on in class. This is similar to the efolio project in George Pullman's article that is located on a public server, which gives the students and teachers the ability to view the work (2002, p. 159). The significance of this is that

faculty members can view "student[s'] writing over time, to calculate the rate of maturation, and to see which skills and practices are being acquired as well as at what point and what rate they are acquired" (Pullman, 2002, p. 161). Using *Google Drive* as the platform technology for the learning ePortfolio makes showing these factors in students' writing possible.

The learning ePortfolio project will include all work throughout the semester and be graded as a pass/fail. It will be a high stakes grade, with the assignments populating the folder being a mixture of low stake and high stake deliverables. Ed White provides many points to constructing assignments. He suggests "students should be required to submit plans, outlines, drafts, bibliographies, and other components because an open assignment makes it easy for them to omit parts of the complex task" (p. 6). This is important for the learning ePortfolio because it shows evidence of the student's learning over time, as well as the collection of artifacts that make up the learning ePortfolio. The assignments that populate the ePortfolio include, but are not limited to: an introductory reflective cover letter, submission of notes, journals, planning materials like outlines, charts, bibliographies, and annotated bibliographies, rough drafts, final essays with comments, peer review assignment, and lastly, a second, end of semester reflective cover letter. The assignments are scaffolded throughout the semester to show their writing process over time and to make it easy for the students to turn in the learning ePortfolio at the end of the semester.

Using *Google Drive* as the learning ePortfolio technology helps instructors and students keep their work organized throughout the semester. Instructors can teach the students how to create folders for each component of the learning ePortfolio. In the learning ePortfolio project (Appendix A), the student is required at minimum to include the final product of all major assignments, copies of the original assignment sheets, and external documents (i.e. audio and

visuals) to encourage students to save everything. From the ongoing research on ePortfolios, many of them include more than just written text. By requiring students to include audio and visuals, such as images and video recordings, students are encouraged to integrate their learning by thinking outside of the traditional English class dynamic. This also helps improve the students' learning and their ePortfolio as a whole because it will include more than just alphabetic text, making the project unique and fun.

Introductory Reflective Cover Letter

Most ePortfolios have a reflection piece that incorporates what has changed for the student. To implement this portion, the first assignment for the learning ePortfolio would be a introductory reflective cover letter. This reflective cover letter assignment (Appendix B) helps students introduce themselves to the instructor, provides a gauge of writing skills, and includes an idea of what they know about writing. When students create a *Google Doc* for the reflection, they can begin the assignment without disrupting their cognitive process.

The reflective cover letter is an introductory assignment that gets the students thinking about writing; writing from past courses, and what they hope to learn from the course. In this assignment, students are using cognitive rhetoric by "tak[ing] action and construct[ing] meaning in specific rhetorical situations, [this] unravels ways thinking and social context are functionally intertwined" (Flower, p. 178). The instructor can see the students' writing "as a strategic process of making meaning with a logic dictated by social, cultural, and cognitive forces" (Flower, p. 178). These forces can be viewed in their biographies. The biography will explain where the students are coming from, while also showing how their social and cultural status influences their writing and cognitive processes. The assignment requires the students to include an image for each response to show writing is not always alphabetic, it also includes pictures to show

connections. The assignment informs the students to cite the photos to encourage citing other sources other than print. It also requires the students to address the letter with a date and page number to support letter format.

For part two of the reflective cover letter, the students will create links within the *Google Doc* to show evidence of each response. The links can be directed to outside websites or material already in *Google Drive*, such as websites, images, videos, etc. This way the instructor can click the link to see what the students are describing in their reflective cover letter. The links can be indicators of the discussion of artifacts throughout the reflection. The purpose of linking out to artifacts in the ePortfolio and to make connections outside of the ePortfolio is to show that reflection can take many forms: visual, audio, video, or multi-modal. The following assignment shows visual mapping using *Google Drawing*.

Visual Mapping Assignment

Planning is an important part of the writing process. For this assignment, the students are creating a visual map (Appendix C) of how they believe their future essays will appear. Students will use *Google Drawing* as their canvas to plan their document, while learning another application in *Google Drive*. Through this activity, the students employ Flower's "constructive planning strategies" to create a "rhetorical representation of the [essay]" while "generating a network of goals, plans, and criteria, for integrating those options" (1993, p. 179). The students are given a variety of options of how they would like to create their visual map. For example, they could create an outline or brainstorm ideas in the *Google Drawing*. They are visually mapping their essays by using the application to plan and think about how their writing will unfold.

Next, the students will insert their visual map into a *Google Doc* to write their reflection. The reflection is used to keep the students writing while also having them look back at how this assignment helped them in the planning process. The reflection gives the students a chance to "deal" with their essay ahead of time to "[avoid future] conflicts" in their rhetorical problem: the essay (Flower, 1993, p. 179). The students will use *Google Doc's* 'text-wrapping' feature to have the visual map as the center of their reflection to show that their thoughts are located around their main idea or topic. The reflection will include a description about the choices the students used during the assignment, an explanation as to what the students created, how they felt about planning their paper in a non-traditional way, their reactions to the assignment, and how they felt about using *Google Drawing* as a writing tool for planning. This assignment is one way students can plan their document in Flower and Hayes' process model (Flower and Hayes, 1981, p. 372). This reflection is used to show what their process goals are when they were thinking about their writing, because the students are setting up instructions for themselves in a visual way for how they are going to write their papers (Flower and Hayes, 1981, p. 377). Another assignment that uses a writing strategy to make the cognitive writing process more effective is the peer review assignment.

Peer Review Assignment

As part of the writing process, revision is incorporated to help students become better writers by making changes. Desmet et al. (2008) "Reflection, Revision, and Assessment in First-Year Composition ePortfolios" article discusses that rhetoric and composition process pedagogy values revision (p. 16). Desmet et al. argues that "portfolio assessment offers students time, practice, and a second chance to demonstrate their skill" (p. 16).

For the peer review assignment (Appendix D), students will take the current essay they are working on and make a copy of it by using *Google Docs* "make a copy…" feature and make sure they title it "Lastname: Draft 1." This way the students have the original document to refer back to during the final reflective cover letter and a draft of their own work. The students will send a copy of their essay by using the sharing button. When the students share their documents they will check to make sure the default setting is set to "can comment" this way the students can have full editing privileges since it is a copy. The partner will be able to make comments and suggestions throughout the essay. The students can make comparisons to the original draft once it is received.

As for the assignment, the students will read through the essay first to have an understanding about what the topic is and their partner's points. This will hopefully decrease the need to make a comment on every paragraph without reading all the way through. The peer reviewer will gain an understanding about what the essay is about before providing feedback. This shows that the students are using what Flower refers to as "collaborative planning[,] . . . a writing strategy (and teaching technique) in which a writer (planner) meets with a partner (supporter) to explain, explore, and develop the writers plan for his or her own paper" (1993, p. 187). The instructor will send a *Google Form* out for the students to answer ahead of time, in which the students will use the *Google Form* to answer questions about the essay they are reading. Through this collaborative peer review session, the peer reviewer is answering the instructor's questions in "purposes and key points, about the reader and reader's response, and about textual conventions that are expected in this discourse or that might help the writer achieve his or her purposes (Flower, Wallace, Norris, and Burnett, *Making Thinking Visible*)" (p. 187).

The *Google Form* is a way to get students to use another application in *Google Drive* that can benefit them in school. For example, it can help with voting in clubs and organizations, and creating surveys. The instructor will have the students fill out their names and their partners' names in order to keep track of who submitted their responses. The feedback will be delivered in a *Google Sheet* so the responses are organized in a chart based on the question. The instructor will send a copy of the responses from each group back to the partners to help them revise their essays.

For part two of the peer review, the students will send a revised copy titled, "Lastname: Revised Draft 2" based on the feedback from their peer in the *Google Form*. This gives the partners a chance to read through their peers' essays based on the feedback they provided previously. The partners will be able to see what their peers have revised and what they still need to work on. After the peers have read through the essay a second time, they will use the comment feature to provide feedback. This way the students can see exactly where and what they need to improve. The comments are more direct in providing feedback then answering the questionnaire through *Google Forms*. The comments also lead a trail of feedback for students to read through because each comment will include the time-stamped information. At this point, in the peer review assignment, there should be less comments for the students to work through since they used the overall feedback from the questionnaire.

After the students have finished critiquing their partners' draft, they will go back and read through the comments. This will help the student find out what he or she will need to revise and develop more in writing. The students are using the "collaborative planning" strategies to work through their documents and "negotiate meaning," where the writers are engaged with their documents by reading through the comments and understanding what their peer reviewers have

suggested. This is known as "interpreting rhetorical situations" (Flower, p. 189). The students will respond to their peers' comments in order to start a conversation about their work by clicking the reply button. This helps the writers work through their comments and may help clarify a comment if a student does not understand it. In "negotiating meaning" through their comments they are responding to "a circle of goals, givens, options, constraints, other voices, and other people, and in *reflecting* on their own understanding and decisions (Flower, Negotiated Meaning)" (Flower, p. 189). The comments also have the ability to allow students to link to helpful resources such as *Purdue Owl MLA* citations and to revise their essay again based on the feedback from the comments and responses.

Each draft of the essay shows how the student's writing process is growing over time. This assignment is useful for instructors because they can go through the student's ePortfolio to see how the writing has progressed throughout the course. They can assess the peer review assignment by looking at the responses from the *Google Form* and the feedback throughout the comments. Since the assignment is located in the ePortfolio, it is saved and stored for them to refer to later on in their reflective cover letter. According to the study in Desmet et al.'s article, "Reflection, Revision, and Assessment in First-Year Composition ePortfolios" using ". . . revision . . . within the context of ePortfolio assessment, improves student writing" (p. 25). The assignment shows that revision is important for students to improve their work in the writing classroom. It also teaches students that polished essays do not come out of the first draft of an assignment.

Final Reflective Cover Letter

The final reflective cover letter (Appendix E) is a wrap-up of the course and an end of semester assignment that shows the instructor the student has gained something from the course.

Flower refers to this as the "moments when writers are recognizing and interpreting their own experience as writers and thinkers and when strategies are embedded in the larger strategic knowledge of goals, strategies, and awareness" (1993, p. 189). The reflective cover letter requires the student to reread their introductory cover letter to see how their writing has improved, and if their thoughts about writing have changed or stayed the same. By rereading their introductory cover letter the students are seeing the original goals they created for themselves as writers, and their actual ideas about writing. This shows that the students are using cognitive rhetoric because they are "see[ing] the goals behind [this] intellectual move" (Flower, 1993, p. 188). They are "sett[ing] the goals for themselves" in the reflection, while also realizing what "their assumptions, options, and . . . implications of their actions" were throughout the semester based on rereading their first reflection. The questions in the assignment ask the students to describe what they have learned from the course, what they hope to take with them once they complete it, to discuss an assignment where they felt their writing process has broadened, and how the students see the course content intersecting with other courses, their fields, and future careers. The last question relates back to the first question in the introductory reflective cover letter, where the students are asked to describe who they are now, and what they hope to accomplish as they mature.

The final reflective cover letter brings the entire course to a close. It also requires the students to include an image for each response and to format the document like a traditional letter. The linking in part two of the assignment should be easier for the students because they have all of their materials in their learning ePortfolio to make connections to, and they have the added benefit of having gone through a semester of first-year writing. They can also make connections to other courses they have taken that semester to show evidence of their learning.

This reflection brings the learning ePortfolio full-circle, which leads to the conclusion of the composition course. From the learning ePortfolio, one can see how *Google Drive* is an effective pedagogical tool to show students' cognitive processes at work in the classroom.

CHAPTER IV

CONCLUSION

Google Drive is an effective ePortfolio platform because it shows students' cognitive writing processes over time through the use of its features. Students and instructors can create, save, and store documents online in *Google Drive*. When they write their final reflective cover letter, they can look back at the revision history in their ePortfolio to see how their work has changed. *Google Drive* also aids in their collaboration: they can share, comment, and suggest feedback to improve their writing skills.

In rhetoric and composition, portfolios have been an ongoing pedagogical tool for thirty years. ePortfolios have moved their way into composition classrooms due to their digital capacity and features. Old Dominion University (Appendix F) is on its way to integrating ePortfolios at the university level, but is moving towards this in small increments. For example, this past 2015-2016 academic year, they have been using ePortfolio workshops to teach faculty from all different disciplines how to use ePortfolios in their classrooms. The faculty is being taught how to use *Google Drive*, and more showcase oriented platforms (such as *Wix*) in order to integrate ePortfolios in their syllabi. In order to get used to the technology, the faculty is encouraged to start small, and implement ePortfolios into a single, low enrollment course. Using *Google Drive* as an ePortfolio platform in the writing classroom adds to the rhetoric and composition field and hones in on the cognitive process of the writing. Due to *Google Drive's* many features such as the commenting and revision history, it helps instructors and students to engage more in the writing classroom in an efficient and effective way.

Google Drive as an ePortfolio platform also complicates the field because instructors have to think about how they are introducing learning ePortfolios in the classroom, and if they

want to further this by having the students create a showcase ePortfolio. If they do proceed, instructors will need to discuss what professional digital identities are, and what a professional audience may be looking for when viewing their site. The instructor will need to have a conversation with students regarding how they are situating their identity within the online world. For example, when picking out templates, an English major may want a template to be of books in order to craft a literary background, whereas a chemistry major may want to use a periodic table template. Students may also need to clean up their social media accounts to ensure they are keeping professional online identities in all aspects of the online world. This shows the showcase ePortfolio will be different for everyone.

Since ePortfolios have entered higher education about fifteen years ago, they have truly improved with new technologies each year. My advice to those who choose to use ePortfolios in the writing classroom is to start small, think about the advantages of moving towards this type of learning, and how it will aid your students. If you are helping your students, then truly, you are helping yourself. Lifelong learning is what ePortfolios are all about; the ability to keep learning new things, but at the same time being able to save and reflect on the past.

For future work, I would like to do a research study on ePortfolios in the writing classroom. I believe this would add to my overall research on ePortfolios because it would include professor and student interviews. I would like to find out how they are using *Google Drive* in the writing classroom as an online ePortfolio, what the benefits are, and what they dislike about it. I would also try to find out if it aids in their learning.

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APPENDICES

APPENDIX A

LEARNING EPORTFOLIO PROJECT

Learning ePortfolio (Pass/Fail)
Throughout the semester, the student will collect all artifacts and store them in the ePortfolio housed in *Google Drive*. The student will create a folder in *Google Drive* titled "Last Name, First Name - UIN." The student will share the ePortfolio with the instructor. The instructor will go over in class how to share a folder. The learning ePortfolio will be graded and include the following artifacts:
- Introductory reflective cover letter (15%)
- Class notes (5%)
- Journal assignment (5%)
- Planning materials (5%)
- Drafts of essays and final essays with comments (25%)
- Visual mapping via *Google Drawing* assignment (15%)
- Peer review via *Google Forms* assignment (30%)
- Final reflective cover letter (15%)

The ePortfolio will be organized by folders for each artifact. Each artifact folder will include at least one copy of the assignment sheet and final product. For each artifact, the breakdown of point values will be included on the assignment sheet. Each week students are encouraged to update their ePortfolio with the material from the previous week.

Grading: The learning ePortfolio will be graded based on the student's ability to complete and include all artifacts in the ePortfolio. The assignments will be scaffolded throughout the semester making it easier to submit everything in the ePortfolio on time. Submitting the ePortfolio is a pass/fail requirement for this course. If students do not submit their ePortfolios to the instructor by the last class, students will not pass the course.

Instructor Notes: Students can use *Google Apps* (*Forms, Slides, Docs, Sheets,* and *Drawing*) for material format. They must also use audio, images, and video recordings to show connections for each artifact. Please, feel free to contact the instructor via email for any additional questions.

APPENDIX B

INTRODUCTORY REFLECTIVE COVER LETTER

Introductory Reflective Cover Letter: 15%

Part I: Reflecting

In a *Google Doc*, write a reflective cover letter addressed to the instructor. It should focus on the following components:

- Tell me about yourself (Describe what you like to do for fun and What are your plans for the future and why?).
- What is writing to you?
- What have you learned about writing in past courses?
- What do you hope to learn from this course?
- The reflective cover letter assignment requires you to think and reflect on who you are, how you conceptualize the act of writing, your past experiences with writing, and what you hope to accomplish in this course.

For each of these components, include an image that best represents each response. Remember to cite the pictures in your reflective cover letter using MLA guidelines. Make sure the document is formatted in Times New Roman, 12 pt. font, and is double-spaced. The document will also need to be formatted as a letter: include the date in the top right corner, a page number in bottom center of the page, and a salutation (greeting) and valediction (closing). The reflective cover letter must be between three to five pages.

Part II: Linking

In the same *Google Doc*, create links that connect to external material in *Google Drive* or to websites that show evidence of who you are. We will go over how to create a link in class.

Grading: The reflective cover letter will be graded on the following:

- Answering all of the component questions (60 points)
- Inclusion of pictures for each response (15 points)
- Inclusion of links to evidence (15 points)
- Formatting, inclusion of citations, and following MLA guidelines (10 points)

Instructor Notes: The instructor will discuss this assignment in further detail during class. Make sure to include the assignment, project instruction sheet, and any planning for this assignment in your ePortfolio. Lastly, make sure to create a reflective cover letter folder in your ePortfolio to keep your work organized. Please, feel free to contact the instructor via email for any additional questions.

APPENDIX C

VISUAL MAPPING VIA *GOOGLE DRAWING*

Visual Mapping via *Google Drawing* Assignment: 15%
Part I: Creation
In *Google Drawing* create a visual map of how you view your paper. There are many options for this assignment such as:

- Creating an outline
- Drawing pictures
- Using it to make a timeline for everything you need for your paper
- Brainstorming ideas
- Inserting pictures from the Internet (collage)
- Other: ask instructor about another idea you have in mind

Once you have decided what you would like to do for this assignment, go ahead and start using the application to create your visual map.

Part II: Document Reflection
In a *Google Doc* insert the *Google Drawing*; make sure to turn 'text-wrapping' on to eliminate any whitespace around the image. Next, write a reflection about the choices you made while creating the visual map. The reflection will focus on the following components:

- What did you create? Tell the instructor about the option you chose for the assignment.
- What were your goals for this assignment?
- What choices did you make when creating the visual map? For example: Did you use any application features?
- How did you feel about planning your paper? Was it easier to view your upcoming paper by outlining it first? How so?
- Now that you have made the visual map, what did it help you do for your paper?
- What were your initial reactions to this assignment? What are they now?
- How would you use *Google Drawing* in the future?

The visual mapping assignment requires you to plan your future essay using a digital technology that is apart of *Google Drive*. In completing this exercise, students get to learn a new application while also beginning to think about your upcoming essay. The reflection lets you debrief about what you just created, while also informing the instructor about your goals and thoughts relating to your visual map.

Make sure the document is formatted in Times New Roman, 12 pt. font, and is double-spaced. Include the visual mapping in the center of the document by 'text-wrapping' the document

reflection around the visual mapping. Lastly, make sure to create a visual mapping folder in your ePortfolio to keep your work organized. The document reflection must be between one to two pages.

Grading: The visual mapping assignment will be graded on the following:
- Creation of visual map using *Google Drawing* (50 points)
- Inclusion of *Google Drawing* in *Google Doc* reflection using 'text-wrapping' feature (10 points)
- Answering all of the reflection component questions (30 points)
- Formatting, inclusion of citations, and following MLA guidelines (10 points)

Instructor Notes: The instructor will discuss this assignment in further detail during class. Make sure to include the assignment, project instruction sheet, and the *Google Drawing* planning for this assignment in your ePortfolio. Please, feel free to contact the instructor via email for any additional questions.

APPENDIX D

PEER REVIEW ASSIGNMENT

Peer Review Assignment (Revision through commenting and *Google Forms*): 30%
Part I: Reading and Responding (10 points)
The peer review assignment is used to help enhance your work. Students will make a *Google Doc* copy of their essay. The instructor will go over in class how to create a *Google Doc* copy. Next, send a copy of the essay titled "Lastname: Draft 1" to your partner. Read through your peer's essay without stopping and answer the following questions in the *Google Form* that will be sent out before peer review session.

1. Did the student follow the directions regarding assignment topic? If not, please explain why.
2. Did the student follow MLA guidelines to the best of your knowledge?
3. How were the grammar and mechanics handled? What could be changed?
4. What were the best features of the essay?
5. What did the essay lack?

Once you submit your responses, the peer will be able to review them to revise the essay.

Part II: Commenting (10 points)
Students will send the revised copy of their essay titled "Lastname: Revised Draft 2" based on the responses from the *Google Forms*. Peers will read the revised copy of their partner's essay. Next, they will create meaningful comments throughout the document that provide the writer with helpful feedback to improve the work.

Part III: Responding (10 points)
Students will respond to their peers' feedback in order to create an on-going conversation to revise the essay. Students can ask questions, write phrases, and include links to helpful resources. Peers will respond to the students' questions and provide suggestions. Students will use the feedback from their peers to revise their essays.

Grading: The peer review assignment will be graded based on completing the following components:
- Reading and answering questions in the *Google Form* (10 points)
- Making comments throughout the peer's essay (10 points)
- Responding to comments throughout the document (10 points)

Instructor Notes: The instructor will discuss this in further detail during class. Make sure to include this assignment prompt and all drafts in your ePortfolio. Please, feel free to contact the instructor via email for any additional questions.

APPENDIX E

FINAL REFLECTIVE COVER LETTER

Final Reflective Cover Letter: 15%
Part I: Reading and Reflecting
For the second reflective cover letter, students are to reread their first reflective cover letter from the beginning of the semester. In a *Google Doc*, write a second reflective cover letter addressed to the instructor.

The second cover letter will focus on the following components:
- Describe how you felt as a writer when you first entered the classroom compared to how you feel now.
- How do you define writing now? Has it changed or stayed the same since the beginning of the semester?
- What did you learn from this course? (What was your take-away or something memorable?)
- Describe how your writing has changed since the beginning of the course.
- Which assignment(s) helped you to see your writing process change the most and why?
- How do you see the course content intersecting with other courses, your field, and/or career goals?

The second reflective cover letter will be an overall view of the course. The reflective cover letter assignment requires you to think about how you felt as a writer when you first entered the classroom as opposed to now. Your conceptualization of writing should have changed over the duration of the semester, you should have grown as a writer, and lastly, you should be able to distinguish which assignment has helped you to improve your writing process.

For each of these components, students are to include an image that best represents each response. Remember to cite the pictures in your reflective cover letter using MLA guidelines. Make sure the document is formatted in Times New Roman, 12 pt. font, and is double-spaced. The document will also need to be formatted as a letter: include the date in the top right corner, a page number in bottom center of the page, and a salutation (greeting) and valediction (closing). The reflective cover letter must be between five to seven pages.

Part II: Linking
In the same *Google Doc*, create links that connect to material in *Google Drive* or to websites that show evidence of each component.

Grading: The second reflective cover letter will be graded on the following:
- Answering all of the components (60 points)

- Inclusion of pictures for each response (15 points)
- Inclusion of links to evidence (15 points)
- Formatting, inclusion of citations, and following MLA guidelines (10 points)

Instructor Notes: The instructor will discuss this assignment in further detail during class. Make sure to include the assignment, project instruction sheet, and any planning for this assignment in your reflective cover letter folder in your ePortfolio to keep your work organized. Please, feel free to contact the instructor via email for any additional questions.

APPENDIX F

EPORTFOLIO HISTORY AT OLD DOMINION UNIVERSITY

Introduction

Before 2010, ePortfolios were developing at Old Dominion University (ODU) in individual departments such as the Education and English departments. Since 2014, ePortfolios began in all undergraduate majors throughout the Honors College ePortfolio pilot study and support system. Today, the Honors College is still integrating ePortfolios by saving student materials, while also encouraging the students to create semester reflections. It was during the Spring of 2015 that my own involvement with ePortfolios began. During a writing research course, I looked at Honors College ePortfolios to see if the students' objective statements changed over the duration of a semester. It was from this course that I became fascinated with how ePortfolios help integrate student learning across all disciplines and showcases their learning over a period of time.

Appendix F narrates ODU's ePortfolio history from the writer's point of view, and why the University believes ePortfolios would be useful for many reasons, including improving student writing and replacing the exit examination at ODU. This appendix will provide historical and institutional context on ePortfolio implementation using informal interviews and research on ePortfolios at ODU. Through a discussion of how ePortfolios are developing in steps at ODU throughout each department by using support systems, I then explain why these ePortfolios help students integrate their learning experiences. In order to understand the ePortfolio implementation in the institution, it is important to first acknowledge and comprehend the historical and institutional contexts of ePortfolios practices at ODU.

Historical Origins of ePortfolios at Old Dominion University

The following history is based on informal discussions with Old Dominion University representatives as well as my own experiences thus far. ePortfolios have been at Old Dominion University for about ten years. (There are no exact dates as to when they began in the individual colleges.) Over the last ten years, the Southern Association of Colleges and Schools Commission on Colleges (SACSCOC), which is "the regional body for the accreditation of degree-granting higher education institutions in the Southern states" has made one of their primary goals to improve student writing (*Southern Association of Colleges and Schools Commission on Colleges*). The non-profit organization was founded in 1895 in Atlanta, Georgia, providing a standard for the quality of learning disseminated by institutions throughout the south in order to meet the needs set by and for students. SACSCOC also works to improve the effectiveness of the institutions in the association by maintaining a constantly evolving strategy plan for accreditation (SACSCOC Principles of Accreditation, 2012). In response to this SACSCOC goal, and from data collected through conversations with faculty, staff, and students, the Quality Enhancement Plan (QEP) was developed at ODU to enhance upper-division undergraduate-students' disciplinary writing (ODU Quality Enhancement Plan, 2012).

The Quality Enhancement Plan (QEP) is a document developed by the University that includes a process of how to improve disciplinary writing based on institutional assessment (ODU Quality Enhancement Plan, 2012). Disciplinary writing is writing in any discipline that indicates a process shown through research and reflection (ODU Quality Enhancement Plan, 2012). ODU chose disciplinary writing because the University believes that writing is an important skill that resides outside of being competent in writing structure, grammar, and mechanics (Quality Enhancement Plan, 2012). Instead of focusing on the aforementioned aspects

of composition, the University was more interested in students being able to effectively

communicate what they learned in their coursework (ODU Quality Enhancement Plan, 2012).

The QEP created the Improving Disciplinary Writing (IDW) program to follow through with

their goal of improving student writing. The IDW program uses faculty workshops and action

projects to accomplish their plans. The faculty workshops teach the best practices to instruct and

assess writing, while the action projects encourage academic programs to implement these

practices into disciplinary writing (ODU Quality Enhancement Plan, 2012).

   IDW was also looking for a way to track a college student's curriculum over four years,

and with ePortfolios they felt they could improve student writing. In addition to meeting these

goals, the IDW program has been working toward developing a way to assist faculty in

improving their teaching of existing student learning outcomes for writing, which began the

discussion about ePortfolios (Former Assistant Vice President of Office of Institutional

Effectiveness and Assessment (IE&A[1]))[2].

   In 2011, there were three initiatives the University needed to focus on in order to enhance

the general education requirements. They needed support from the: "1. Quality Enhancement

Plan (QEP), 2. The General Education Assessment Committee (GEAC) & State Council of

Higher Education for Virginia (SCHEV), and 3. Southern Association of Colleges and Schools

Commission on Colleges (SACSCOC)" (Office of IE&A). The Former AVP of IE&A stated that

SCHEV had been looking at the following six competencies: writing proficiency, technical /

information literacy, quantitative reasoning, scientific reasoning, oral communication, and

critical thinking since 2000 (Office of IE&A). Around this time, the Office of IE&A was the first

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[1] The Office of Institutional Effectiveness and Assessment was originally named Office of
Assessment during this time period.
[2] Throughout the rest of the thesis, Former Assistant Vice President of Office of Institutional
Effectiveness and Assessment (IE&A) will be condensed to Former AVP of IE&A.

to push and encourage the effort to adopt a unified ePortfolio across campus (Former AVP of IE&A). This new initiative required students to become proficient in the six competencies outlined by SCHEV in order for the Office of IE&A to assess their ePortfolios.

During the span of 2010-2011, the Faculty Senate Committee B came to the conclusion they wanted to replace the Exit Examination of Writing Proficiency (EEWP) that had been a staple at ODU since 1980 with something else (Office of IE&A). The EEWP was an exam for undergraduate students completing their baccalaureate degree to demonstrate satisfactory writing before receiving their degree (ODU Writing Competency Report, 2006). The committee suggested the recommendation to the full Faculty Senate during spring 2011, and it was passed (Office of IE&A). The University wanted to replace the exit exam because they discovered it was not the best measure of writing, and instead was problematic for those who did not pass (Former AVP of IE&A). Throughout my academic career, many professors with whom I have spoken find standardized exams inadequate measures of students' abilities and knowledge of subjects. Many students do not show their best writing in a few hours, instead their writing is developed over time through a process of planning, drafting, and revising (Perl, 2008, p. 141). Sondra Perl, an English professor specializing in composition theory and rhetoric (Perl, *The Graduate Center: City University of New York*), argues that writing is a recursive process, "writers return to substrands of the overall process, or subroutines (short successions of steps that yield results on which the writer draws in taking the next set of steps)" (Perl, 2008, p. 141). This, according to Perl, shows "a forward-moving action that exists by virtue of a backward-moving action" (Perl, 2008, p. 141). From the scholarship in rhetoric and composition, students writing progresses through time which shows that the exit exam was not a useful assessment tool. For example, scholar and lecturer for the department of English at the University of Ljubljana

(Sokolov, *University of Ljubljana*), Cvetka Sokolov believes that "feedback and prolonged periods of the writing process encourage the awareness of the need for revision and give students the opportunity to improve their written texts more thoroughly, thus achieving better results" (2014, p. 138). Sokolov, referencing Daker et al. states: "Whereas students only get one chance with multiple choice examinations or timed impromptu essays, portfolios allow as many chances as a student wants - and in this way they convey the positive message that continuing effort can lead to improvement (1996, p. 256)" (Sokolov, p. 138). Thus, ePortfolios became a viable option as a way for faculty to be better equipped to review student writing competency over a period of time.

During the aforementioned time of 2010-2011, the members of the General Education Assessment Committee (GEAC) and University Assessment met with members of the Faculty Senate Committee B to make a decision about how to replace the EEWP. The Former AVP of IE&A made the recommendation of using ePortfolios as a way to replace the EEWP because of the tools' ability to show students' progress in understanding learning competencies such as those previously outlined by SCHEV (Former AVP of IE&A). During the meeting, they had a discussion about possibly incorporating ePortfolios into writing intensive courses ("W" courses); this way there would be evidence of learning over the duration of a semester, eventually providing students with a portfolio of their writing. The learning ePortfolio would serve multiple purposes simultaneously, for example: the ePortfolio would be used to show learning to students and faculty, while also being assessed for its ability to show evidence of learning (Kahn, 2014, 1). The University was not entirely ready to move forward with the idea of ePortfolios. Many ODU representatives hoped that the ePortfolio would be one of the steps to replace the EEWP, but since the Office of IE&A was in ". . . the early stages of determining what it would take to

implement ePortfolios . . . it was not a viable option at that time" (Former AVP of IE&A).

Eventually in 2015, the Faculty Senate got a committee together to discuss how they would implement ePortfolios. The committee included the Associate Vice President for University Services & Chief Information Officer, who agreed to use ePortfolios, but made the decision that they "cannot be just an assessment tool."

Recently, Former AVP of IE&A formed an ePortfolio committee to "explore the use of ePortfolios." The Office of IE&A learned that they were introducing ePortfolios the wrong way by trying to identify a platform for a couple of years, this put a stop to their plans (Office of IE&A). The committee could not agree on a platform, but Information Technology Services (ITS) "agreed to support *LiveText*, *Blackboard*, and *Google*" (Office of IE&A Former AVP). For example, the Office of IE&A tried using *Blackboard's* portfolio feature and found out it was ineffective for students (Office of IE&A). Later on, *Wix* "became the preferred platform among faculty and students" (Office of IE&A Former AVP). The Former AVP of IE&A believes *WordPress* will grow in popularity since it is available to everyone at ODU as of the Fall 2015 semester.

In early 2016, the Office of IE&A started promoting integrative learning by taking faculty to professional conferences such as The Association for Authentic, Experiential, and Evidence-Based Learning (AAEEBL) and Association of American Colleges and Universities (AAC&U) to learn about ePortfolios. The Associate Vice President for University Services & Chief Information Officer has been "very supportive" about using ePortfolios (Office of IE&A Former AVP).

Types of ePortfolio Systems Used on Old Dominion University Campus

Some departments at Old Dominion University used paper portfolios as a way to document student learning and to archive their materials. These departments used paper portfolios in the past to transport student work and to assess it for final grades. The Department of Nursing in the College of Health Sciences for example began their portfolio system with printed pages, hole punched, and placed into three ring binders (Former IE&A AVP). Another instance of paper portfolio utilization was within the English department.

Portfolios were originally developed in English departments, and became popular in the 1990s for composition instructors (Murray, 2009, p. 1). When the Honors College Dean came to ODU's English Department twenty-two years ago, the department had many adjuncts, and required the use of paper portfolios to create a consistent grading policy amongst them (Honors College Dean). As paper portfolios came to be implemented in the English department, the department had an entire office with paper portfolios stacked from the floor to the ceiling on the third floor of Batten Arts and Letters (BAL) building (Honors College Dean). The English department continued to grow and the current faculty had to open the paper portfolio office to new faculty members (Honors College Dean). When the Honors College Dean was chair of the English department, portfolios were only kept from the last semester because students only had a semester to appeal their grades (Honors College Dean).

While the decision to officially use ePortfolios was not made until 2014-2015 in the Honors College, they were used on campus prior to 2011, taking root in different departments at ODU. Each department, while doing something different, is trying to include a way for students to enhance their integrative learning through the use of ePortfolios. The Former AVP of IE&A described a few electronic portfolio systems on campus. The Darden College of Education uses

LiveText as its electronic portfolio platform, and has probably been using *LiveText* for more than

ten years (Former IE&A AVP). The Darden College of Education offers the following

justification for its usage:

> This system is a vital component for managing the next [National Council for the
>
> Accreditation of Teacher Education (NCATE)] accreditation process. It is a tool for
>
> developing, assessing and measuring student learning at the individual student level by
>
> course. In addition, at this time, it provides an environment for managing and assessing
>
> portfolios and for Teacher Education Services to manage some aspects of student
>
> teaching (ODU *LiveText*).

Additionally, the College of Health and Sciences Department of Nursing decided to move

from paper portfolios to digital ePortfolios. The program has eight student learning outcomes

that have to be addressed in their digital portfolios (Former IE&A AVP). The learning outcomes

are "embedded" into the nursing courses during the two-year program (Former IE&A AVP).

While being very flexible in terms of platforms for the electronic portfolio, many of the students

use *Wix* to create their presentation-type ePortfolios (Former IE&A AVP). *Wix* is a drag-and-

drop website creation tool that the Nursing department uses to foster reflection based ePortfolios

(ODU Developing ePortfolios).

Unlike the aforementioned departments of Nursing and Education, ePortfolios were

introduced slowly by instructors in the College of Arts and Letters English Department rather

than incorporating them department-wide (Honors College Dean). Some of the reasons for this

slower shift were concerns about how to store the portfolios digitally, and if faculty would have

the time to facilitate the change (Honors College Dean). The Department of English began

incorporating ePortfolios within writing courses during 2011 with pushes from the Writing

Program Administrator (WPA) as well as the Former IE&A AVP. Eventually, over time, *Google Drive* became known as the unofficial go-to platform for ePortfolios for first-year composition students, as well as a way for the WPA to track teaching portfolios for affiliate faculty (ODU Adjunct Instructor). The ePortfolios were discussed in the General Education Assessment Committee (GEAC), as they were looking for a way to accumulate artifacts for the assessment program at ODU (Honors College Dean).

In 2016, many departments are discussing the possibility of using ePortfolios, with the Former AVP of IE&A having stated, "the effort is being led by the Center for High Impact Practices (CHIP) who are trying to coordinate the implementation of [ePortfolios] along with the provision of support for both faculty and students." The Office of IE&A is in the process of discussing what steps to take next, with current discussions including notions that if the University mandates a platform, it would cause "backlash" with faculty (IE&A Former AVP). Former AVP of IE&A states that: "However, the most important point is that we cannot mandate the use of [ePortfolios] unless [or] until we have sufficient support for all faculty and students." Although not all of the faculty members agree, some of them have had interest in using ePortfolios in their courses. The Office of IE&A would like to have all English courses and Learning Communities utilizing ePortfolios. They also want to integrate it into learning by gathering and curating the artifacts by the Fall 2016 semester (Office of IE&A). Strides made regarding ePortfolios have also made it into the strategic plan for 2015-2019 with promises of an assumed level of implementation.[3]

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[3] According to the Strategic Plan under: GOAL 2 - SUPPORT STUDENT SUCCESS: from the first point of contact through graduation and beyond, Objective 5: Maximize employment placement for degree completers to ensure that graduates obtain timely employment or go on to obtain a higher degree. [To do this:] Under Action Item iii. establish a comprehensive career counseling model, expand and enhance the cultivation of prospective employers, and improve

Currently, the Office of IE&A is collecting course materials from faculty, which they are calling the archiving stage. To mandate an ePortfolio program would most likely take another five years, and would require a fifty percent onboard approval of faculty (Office of IE&A). The Office of IE&A is looking at the ". . . digital copies of artifacts created in these courses to use for the assessment of writing" in order to reassess the learning outcomes in the next academic year (IE&A Former AVP). That being said, while ODU is under discussion about using mandated ePortfolios University-wide, the Honors College has implemented them across all disciplines as part of the 2014 pilot study.

ePortfolios in the Honors College

The Honors College decided to implement ePortfolios in 2014-2015 as part of a pilot study carried out by the Honors College Dean. With a background in rhetoric and composition, the Dean felt that "portfolios were a part of [his] pedagogical practice. [He] was, quite frankly, surprised and dismayed at how slowly centralized efforts for the ePortfolio were moving." The Dean of the Honors College wanted to implement ePortfolios for several reasons:

> 1) to support appreciative advising in the [Honors College], 2) to provide a common experience for a diverse group of students (that is, in lieu of a common course, [he] wanted there to be a common experience), 3) to enhance assessment of [Honors College] student learning, 4) to enhance mapping [Honors College] student learning (Honors College Dean).

While the drive across the University was to replace the EEWP and find a way to improve student writing, the Dean wanted to solve some problems regarding the Honors College curriculum requirements. The Dean of the Honors College believes ePortfolios can become

career opportunities for students through the use of ePortfolios and Monarch Link (ODU, Strategic Plan 2014-2019, p. 44).

centralized and placed into the QEP if the University has seventy-five percent of instructors

successfully implementing it, it can be accomplished, but there also needs to be a strong support

system in order to facilitate its progress (Honors College Dean).

The Dean pursued a co-designed education for students to think about their futures,

instead of checking off requirements (Honors College Dean). The Honors College wanted to use

ePortfolios as a way to show the different types of learning from the curriculum sheet such as

experiential learning. Susan Kahn, Director of Institutional Effectiveness and Director of the

campus's ePortfolio Initiative at Indiana University-Purdue University Indianapolis (IUPUI's) is

part of the Urban Universities Portfolio Project, which is "a six-campus national project that

produced the first generation of electronic institutional portfolios" (Kahn, IUPUI ePortfolio). The

Honors College wanted to use ePortfolios for learning, which relates to Kahn's research

consensus of the varying purposes for ePortfolios: showcase, assessment, and learning (2014, pg.

1). This is different from the focus to improve inadequate writing among the University because

it is a college trying to show evidence of learning and showcasing of achievements. Part of the

issue is that students are having trouble remembering everything they have to do and their brains

are informing them that it is unimportant (Honors College Dean). The Honors College ePortfolio

program was designed and implemented by the following decisions:

> 1) the need for supporting students and faculty, 2) the need to [reinforce] the use of the
>
> e[P]ortfolio, 3) the need to emphasis [Honors College] learning objectives, 4) (micro-
>
> decisions were made to enhance the utility of 1-3) (Honors College Dean).

The Dean wanted to create a common experience for every Honors College student without

requiring the students to take an honors seminar course (Honors College Dean). At a *Center for*

Learning and Teaching fair the Dean of the Honors College was speaking with Megan Mize, an

English doctoral candidate about ePortfolios and decided to ask for some assistance because he knew the individual had previous experience with ePortfolios and he needed a support system to carry out the pilot study. To put the ePortfolio initiative into action, the Dean asked Megan Mize to begin ePortfolios in the Honors College. The candidate began a pilot study with a former ODU professor, Rochelle Rodrigo (hired as a consultant) to create student ePortfolios in the Honors College. From the ODU Honors College ePortfolio study their project description described the ePortfolio program to:

> emphasize an archival habit of mind with multiple formative reflection opportunities. Students keep everything as organized potentialities that they can actualize in formative or summative presentation portfolios in a variety of situations from advising to applications for graduate schools and employment (Mize & Rodrigo, 2014).

To run the ePortfolio program in the Honors College, the Honors College hired Mize as an ePortfolio Learning Coordinator for a graduate assistantship. The ePortfolio Learning Coordinator was in charge of many responsibilities such as designing the ePortfolio policy and workshops, advising students on their ePortfolios, and "assessing the effectiveness of the ePortfolio program" (Mize & Rodrigo, 2014).

The Honors College defines an ePortfolio as "a digital collection of a student's work [that includes] artifacts (samples of the students work) and reflective components (the student's observations on the learning that occurred)," fostering a digital presence by using *Google Drive* as a way to create an ePortfolio through digital material archiving (Old Dominion University's Honors College website). Honors College students are required to use *Google Drive* in order to digitize and store their learning experiences such as uploading homework assignments, syllabi, and extracurricular activities (such as letters of recommendation, certificates, etc.). By using

Google Drive as a storage site, students are provided with a free space to build an outline of their showcase ePortfolio. Karen Bonsignore, project director of ePortfolios at New York City College of Technology, says that the ePortfolio is "easy to add artifacts … and… share" (p. 117). The Honors College also uses *Google Drive* as its digital space where students can upload and share material easily. I view the Honors College ePortfolios as Abrami and Barrett (2005) frame it, that is: as "process portfolio[s], which document[s] learning processes" due to the students archiving in their own personal folders, and creating reflective memos each semester as a way to look back on their academic career (Klein, 2013, p. 60).

To begin the ePortfolio program, students were required to create their ePortfolios in *Google Drive* during First Class, ODU's orientation for the freshmen and first day of classes by following a workshop led by the pilot study researchers. To get instructors on board with the ePortfolio program, Mize created "a series of assignment templates for instructors and students within Undergraduate Research Learning Communities, as well as programmatic material regarding curricular archive portfolios" (Mize & Rodrigo, 2014). For example, the students created a reflective cover letter at the end of their academic year. The reflective cover letter was designed for students to write a letter to the Honors College staff about their academic year achievements and things they need to still complete in *Google Docs*. The reflective cover letter included links to show evidence of their achievements in their ePortfolio, as well as to external websites. Megan Mize also ran workshops and designed a coding form to see how students were using their ePortfolios at the end of the semester (Mize & Rodrigo, 2014). The pilot study was following an archival habits of mind framework, meaning the researchers:

> emphasize the formative, scaffolding activities that students must engage in to make
>
> connections during and across an entire course, program, or degree through which they

build an ePortfolio. To help students develop archival habits of mind we will need to help them re-see the importance of keeping all of their work, not just what they have internalized as *important* or *significant*. We will be helping change their attention and archival "patterns and values that [they] have come to see as so natural that [they] really [do not] even see them anymore" (Davidson, 2011, p. 29). (Mize & Rodrigo, 2014).

In the aftermath of the Honors College ePortfolio pilot study, it was considered a success due to the small sample size of the study and its ability to cover all disciplines (Mize). The incoming freshmen of the 2014-2015 academic year began ePortfolios in the Honors College. From this point forward, the ePortfolio Learning Coordinator was able to help students create their ePortfolios, and design ePortfolio newsletters for support.

Today, the Honors College is trying to incorporate ePortfolios into advising by using a reflective component. In an attempt to get students and Honors College staff to understand the importance of ePortfolio usage, advisors would open the student's ePortfolio during the advising session to discuss it. Instead of using a reflective cover letter, the advisor would talk about the past or current semester, and provide a reflective writing prompt to be completed during the session. For example, the students could write about their goals and how the Honors College would help the students achieve them.

As the next cohort of students transition into the Honors College, ePortfolios will have folders structured to match the Honors College requirements. With this new set up, students will be provided with all of their Honors College requirements in *Google Drive*, while also being given clarification and evidence for those requirements during advising sessions. The Dean plans to continue to share individual ePortfolios for each incoming student over the summer, and to

have an Honors College First Class workshop to kick-start ePortfolios for the academic year (Honors College Dean).

After the Honors College Pilot Study

While working parallel on the pilot study for the Honors College, the three faculty members created a series of workshops designed around ePortfolios for current faculty members wishing to learn more. This initiative was referred to as eP3 (Praxis, Process, & Production) (Mize). The eP3 workshops focused on training faculty and having them implement ePortfolios in their classrooms (Mize). The workshops are arranged in a way to not only teach faculty how to implement ePortfolios into their classroom, but for faculty to in turn give workshop facilitators access to their "course materials and student portfolios so that the facilitators may assess the impact of the workshop upon the course design and student learning, using AAC&U's Integrative Learning VALUE Rubric" (ODU eP3 Implementation Reqs). Other than the materials and student portfolios, eP3 also requests workshop participants to meet or speak with the ePortfolio Support Coordinator on a monthly basis via online "Screenside Chats[4]" or other forms of communication (ODU eP3 Implementation Reqs) (Mize). The future goal for eP3 is to select one representative from each department to report back to the ePortfolio Support Coordinator, and bridge a community together across disciplines (Mize).

This is similar to the notion of cluster groups as expressed by Erin Herberg, an assistant professor and the assessment coordinator for the First-Year Writing Program in Writing Arts at Rowan University. Herberg's cluster groups serve a similar purpose to that of the eP3 workshop participants at ODU. Herberg's cluster groups work for portfolio implementation by establishing "writing expectations" to "maintain writing standards" through "providing mentoring and support to faculty" (2005, p. 77-78). Cluster groups function as a small committee with five

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[4] Screenside Chats are monthly online video chats with eP3 cohort workshop participants.

faculty members of varying experiences and positions (p. 78). Like the "Screenside Chats" held by the ePortfolio Support Coordinator at ODU, Herberg's cluster groups work to provide feedback to one another for faculty development and improvement of classroom practices (p. 78). Simply put, faculty support is key to implementing ePortfolios at an institution.

Fast Forward to Spring 2015: How I Became Involved with ePortfolios

Implementing ePortfolios thus far includes community support from the University. My support for ePortfolios at ODU started in a writing research course. One night my professor, Rochelle Rodrigo of the writing research course announced to the class we were going to code files. Coding as my professor explained meant to look at the items, and write down as many trends, common similarities, or things in common within the items we found. The next class, the Dean of the Honors College, Rochelle Rodrigo, and Megan Mize announced to the class we were viewing and coding ePortfolios. My professor provided a brief speech about the project and welcomed anyone who wanted to join the ePortfolio project.

From this class, I decided to join the project due to my fascination of how ePortfolios contain so many different items, such as drafts of essays, presentations, syllabi, and images. As a person who loves to scrapbook and build photo albums, I take pleasure in the process of creating a visual memory. Similar to my appreciation of the visual memory construction, I enjoyed looking at the ePortfolios and thinking about how these students are going to remember their experiences and skills they have developed in college. I also loved how the ePortfolio encapsulates a visible digital story of their academic and extracurricular lives. I decided to join the ePortfolio project: eP3 Praxis, Process, and Production Writing Group, and use ePortfolios as a topic for my research paper.

Over the course of the spring semester, I did as much research on ePortfolios as I could in order to learn about how they have been used at other institutes of higher learning to compare it to the Honors College pilot study project. I ended up researching how goals (personal, professional, and academic) affect the ePortfolio archiving process. For the project, I looked at first-year Honors College students' ePortfolios and researched to see if the ePortfolio process made a difference on students' objective statements (goal statements). I also looked to see if their goals had changed or remained the same. I ended up doing an online survey through *Google Forms* to ask first-year Honors College students about their goals and ePortfolio, and hosted the survey during the "Eportfolio Reflective Cover Letter Workshop." I compared the reflective cover letters to the survey results and ePortfolios. I had five participants agree to be in the research study, but only four took the survey. The findings of my research concluded that all of the participants agreed the ePortfolio helped them keep track of their goals, as well as the revising of their goals for the reflective cover letter.

Summer 2015: ePortfolio Implementation as a University

In May 2015, I became more involved with ePortfolios after being approached by faculty members of the eP3 Praxis, Process, and Production Writing Group to help facilitate an eP3 Archival Habits of Mind workshop: a workshop meant to implement ePortfolios into the classroom. This was the first pedagogically focused ePortfolio workshop at ODU. Facilitating this workshop gave me an overview of how ePortfolio implementation was beginning at ODU and it showed the faculty members that it can be done like anything else as long as there is time and commitment. Before the semester began, the faculty was taught how to use ePortfolios in the classroom as part of their course work. From this workshop, the first faculty cohort was created and used as a support system for the next workshop cohort.

During the eP3 Archivals of Mind workshop, some of the main components we trained the faculty in are *Google Drive*, *Wix*, and *WordPress*. When we taught the workshops, we showed the faculty how to build in *Google Drive*. By adding material to *Google Drive* and creating folders to organize those materials, it shows one developing what Nedra Reynolds and Elizabeth Davis would refer to as a learning ePortfolio (Reynolds and Davis, 2014, p. 5). Reynolds, Professor and Department Chair of Writing and Rhetoric at the University of Rhode Island (Reynolds, *Macmillan Learning*) and Davis, Coordinator of the interdisciplinary Writing Certificate Program at the University of Georgia, where she is a faculty member in the Department of English describe learning ePortfolios (Davis, *Macmillan Learning*) as a place to "collect or create artifacts . . . that best represent their experience and engagement with the learning process in a particular subject area" (p. 5). Faculty members were asked to continuously archive or save material on *Google Drive* to keep it in one location. Implementing *Google Drive's* folder feature is a way to organize their collected material to create an outline in order to transpose material to a professional website using *Wix* or *WordPress*. The folder outlines can be used to create menu tab names on these websites. *Wix* and *WordPress* are viewed as the presentation ePortfolios meaning they focus on the finished product or their best work (Reynolds and Davis, 2014, p. 6). By using *Google Drive*, students can store all of their materials and see their ePortfolio build as years go on. For example, a student's work is going to change from freshman to senior year based on development of scholarly learning.

After the May 2015 workshop, I ended up working over the summer for the Honors College implementing ePortfolios from my work with the research paper on student goals. I assisted the Honors College with the 2015-2016 upcoming ePortfolio implementation and advising. One of the job components included interviewing students from the 2014-2015

ePortfolio cohort with the Dean of the Honors College for ePortfolio mentor positions. The job required the students to already have built an ePortfolio in *Google Drive* and it was a preferred qualification if the student had experience with *Wix* or *WordPress*. This position was created to help support the Honors College ePortfolio efforts by being a resource to the incoming freshmen for their ePortfolios. The mentorship was meant to convey to the students that creating an ePortfolio is not necessarily challenging, but possible with time and dedication. The position correlates with an ePortfolio research recommendation to have a support system in place before one teaches ePortfolios (Eynon, 2009, p. 67). Bret Eynon, is a national faculty member for the Association of American Colleges and Universities. He serves on the editorial board of the *International Journal of ePortfolio* (Eynon, *Reinvent*) and believes that starting small allows for the support system to grow as the program expands (p. 67).

The ePortfolio mentors were also hired to assist with First Class, in order to make sure that incoming students were following along with the workshop, and to be there if they needed help. Once I sent out acceptance emails, I trained the students to become ePortfolio mentors by participating in workshops with them to design their own websites for the Honors College. This workshop was meant to provide the mentors with the knowledge to teach the new students what they can create using *WordPress*. Later on, I trained the ePortfolio mentors with the First Class facilitators on the First Class workshop and how they would be helping with the workshop.

I created individual ePortfolio folders through *Google Drive* for each incoming student in the Honors College and shared them individually. The purpose of doing this over the summer was to have the incoming students working in their ePortfolio, and to have materials in located in them before they start their first academic year. The 2014 cohort ePortfolios were made during First Class, which did not allow for time to save high school material or practice using *Google*

Drive. Every cohort's ePortfolios will be a little different each year due to the Honors College curriculum changes, technological advances, and ePortfolio researchers finding better techniques to implement them.

In each student's ePortfolio, I created two *Prezi* presentations: one explaining what an ePortfolio is, and how to get started with the *Google Drive* ePortfolio; and the other discussing materials to archive. Each *Prezi* included an audio recording of my voice to talk students through the presentations and to recognize me as an Honors College advisor for ePortfolio support later on. While I was making the two presentations, I had to picture myself as the student, anticipating what questions they may have, such as: what is an ePortfolio or how do I access *Google Drive*.

The *Prezi* presentations demonstrated what many of the students created in their high school folders: a 'how to guide to read one's ePortfolio.' The presentation I created was similar except it was a 'how to get started' guide and 'welcome introduction of what one can add to their ePortfolios.' Kathleen Yancey et al. (2013) a leader of the Inter/National Coalition on Electronic Portfolio Research (ncepr.org) (Yancey, *Florida State University English Department*) suggests three ways to view/read an ePortfolio that are important to note going forward:

> First, there's the viewing/reading of each individual text--which itself involves different reading practices for different kinds of texts--print, static screen, animated multimedia (video files, academic "papers," etc.). Second, there's the reading of the portfolio on the screen, where basically one toggles from the reading of the screens and print files and animated files to the reading of the portfolio as a composition, and where in this toggling one constructs the portfolio one is viewing/reading. And third, there's a spatial reading, which helps us understand the portfolio as a composition in practical, embodied, and theoretical ways (p. 14-15).

My way of looking at students' high school ePortfolios was using the "viewing/reading" technique (Yancey, p. 14-15). Many of the students created the guide to show viewers how to view and read their ePortfolio, which also included links for viewers to click on to see further evidence of the material. This shows the students are making connections throughout their ePortfolio and the students took the time to think about their audience. The 'how to guide' was usually incorporated into the reflection portion of the ePortfolios. This is similar to First-Year Composition ePortfolios at University of Georgia. Their students' ePortfolios include a:

> 'Reflective Introduction' that functions as the 'thesis' of the entire portfolio, guiding readers through its contents and offering a persuasive argument about the portfolios meaning and significance as an artifact demonstrating writing skills and development (Desmet et al., 2008, p. 19).

While the Honors College students created guides to read their ePortfolio and to make connections with links, not all electronic portfolio creators include this. For example, Yancey et al. looked at a college student's electronic portfolio that did not include instructions to read the ePortfolio (2013, p. 7). Thus, they had to make decisions about how to read the portfolio. To accomplish their task, Yancey et al. used many "viewing/reading" techniques to see Kristina's entire digital portfolio (2013, p. 8). The scholars ended up viewing the electronic portfolio five ways to gain a concrete readership of it (p. 8).

Towards the end of the summer, the Honors College ran a High School ePortfolio contest to encourage the incoming freshmen to add items to their ePortfolio in their high school folders, practice with *Google Drive*, write a reflection, and learn to save materials. The contest followed a rubric, judging the students' reflection and content. The students created an "About Me" page which included a *Google Doc* of a brief biography of the student and a professional picture.

Some of the students created internal and external links in the biography to show further evidence of themselves in and outside of their ePortfolio. Many students who participated in the contest found that it helped them get use to *Google Drive* rather quickly. The students also archived their high school work so it would not get discarded, which instructed them to save material. The contest showed the Honors College they were one step closer to being prepared for First Class and the 2015-2016 academic year regarding ePortfolios. The incoming students to the Honors College will be required as part of their Honors College contract to keep an updated ePortfolio by saving materials, archiving the materials in *Google Drive*, and writing a semester reflection about their goals using links to show evidence of learning. Essentially, this is similar to Nedra Reynolds and Elizabeth Davis's ideas on learning ePortfolios by collecting materials and including reflections to show what they learned (2014, p. 5-6). Students are reflecting while also using links to show connections without publicly showcasing their learning online.

On the first day of classes, also known as First Class, I ran a revised workshop with other facilitators to help the students learn more features on *Google Drive*, and focusing on archiving material. This workshop was the Honors College kick-off to the 2015-2016 ePortfolio implementation. During the workshop, we reviewed how to access *Google Drive*, instructed the students to write a reflection using *Google Docs* about their experience during Convocation, an "academic ceremony celebrat[ing] [the incoming class] into higher education and induct[ion] into a community of learners" (ODU Monarch Link Calendar), and taught the students how to use a few features on *Google Docs* such as commenting. We directed the students to pair off in partners to share each other's reflection digitally and to comment and respond on the documents using questions in order to start a digital conversation. The main purpose of the activity was to show students the benefits of collaboration within documents. We ended with an optional hash

tagging activity to show students the archiving habits they are currently using, and to encourage them to use these habits for their ePortfolios. For example, students post pictures and videos on social media networks that document their life digitally. For the activity, the facilitators told the students to take a picture with their partner using a mobile device and share it on a social media outlet such as *Twitter* using the hashtag #HCFirstClass2015. We wanted the students to save their first day of college experience in order for them to reflect back on how much they have changed once they are seniors. The students were also told to upload the picture to *Google Drive* and embed it within the Convocation reflection. Lastly, we showed the students all of the curated pictures using the hashtag on the website, http://www.hashtagr.co/. We are motivating them to use these same social media habits in their ePortfolio. At the end of the workshop, the students seemed excited about using the technology and they loved *Google Drive's* save and comment features.

Fall 2015: ePortfolio Implementation

In the fall semester, I advised students with their ePortfolios, and encouraged them to get the *Google Drive* app on their phones. I trained those who did not know how to use *Google Drive*, and instructed them on what they could include in it. I followed the six phases of advising as shown in *Appreciative Advising,* which is a process by which advisors are taught to have positive open ended conversations with students in order to help the students come up with ideas of what to archive (*Appreciative Advising*). Many students thought the ePortfolio seemed really difficult at first, however; once they started using it regularly they got used to it just like any other kind of digital technology. Inevitably, I began receiving emails from students asking if they were creating and executing their ePortfolios correctly, or if they were even archiving the right

things. I reminded them that there are many ways to create an ePortfolio, which relates back to how the University is approaching ePortfolios now.

Students can make any kind of ePortfolio, so long as they are trying to construct something that creates a digital, visual imprint. Many schools specify from the beginning what type of ePortfolio they want their students to make (Kruger et al., 2013), For example, Evonne J. Kruger, an Associate Professor of Business Studies uses a comprehensive education portfolio that concentrates on career readiness (2013, p. 46). Similarly, ODU is moving toward ePortfolios with a wider acceptance of digital technology. For the ePortfolio, the students are encouraged to archive all of their personal, academic, and professional experiences.

As a former advisor for the Honors College, I assisted students with picking out courses and made sure their Honors College requirements progress continued. The Honors College curriculum matches the contents in their ePortfolio; this is a digital way for the students to document their requirements. It also helps advisors account for curriculum requirements. The advisor can visually see the students' learning and experiences. For example, students email their Honors College campus events, any event on campus that is not an athletic event with a description of what they learned. By adding their emailed events and supported materials, such as photos to their ePortfolio, the student and advisor are able to visually see what the student experienced during the event. The student saves the campus event for several reasons: archiving a digital copy, providing evidence of the requirement, showing learning, and making a memory. When the student is a senior, he or she can look back at what they attended and the memories that were made from that event.

In past Honors College advising sessions, I have listened to students tell me many stories of their work in high school lost, forgotten, or destroyed through the unfortunate but inevitable

failures of technology. Many students voice that they find *Google Drive* effective because it keeps all of their work organized and saved in one location. They also wish that they had made an ePortfolio before college to save all of their work digitally. We all wish we had an ePortfolio to store and work on all of our scholarly work simultaneously. Most of us have work in multiple locations and some files have been lost in the past. By using *Google Drive*, there is no need to save everything to their hard drive on their computer. The excuses of computers crashing and flash drives being lost are a thing of the past.

What is Happening Now...

Since the 2015 Fall semester, positive steps have been made in incorporating ePortfolios on a University-wide scale. Today, the Center for High Impact Practices (CHIP), Megan Mize, ePortfolio Training and Support Coordinator trains faculty members in ePortfolio platforms and also designs assignments for faculty in order to follow the Integrative Learning Valid Assessment of Learning in Undergraduate Education (VALUE) rubric for the Association of American Colleges and Universities (AAC&U). Mize is looking for scaling up strategies to get ePortfolios to be a universal development at ODU. A snapshot as to what the coordinator has been doing includes repeating the eP3 workshop, working with ePortfolio assistants, designing templates, and hosting Screenside Chats in order to train and support faculty cohorts. The coordinator believes that when the ePortfolios become a University-wide initiative, the faculty will need to be well-informed and feel comfortable with the technology, once again showcasing that a support system will need to be in place in order to make this feasible (Mize).

With ePortfolios set to become a required component of all University curriculums, the need for further University representation within the planning stages of implementation has become paramount. There are several offices involved, such as the Office of Institutional

Effectiveness & Assessment, as well as the Provost Office. The ePortfolio Training and Support

Coordinator anticipates that it may take another five years to get ePortfolios implemented

University-wide at ODU, because the offices want to see data to prove that the ePortfolios will

show signs of learning, while also showcasing what ODU students are doing. For example, some

institutions like Thomas College have a gallery of ePortfolios on their websites (Edwards and

Burnham, 2009, p. 88).

The discussion now is that ODU has spent so much money on different programs (*Box*,

Google Drive, *WordPress*) they are questioning if they want to buy another program for

uniformity, ease, and less anxiety such as unifying the University with *Digication*, or if they

want to produce quality materials with *WordPress* (Mize). Building a *WordPress* to showcase

one's work takes time, effort, and dedication. It is also something that faculty and students will

need to be trained on, verses using a platform that is easier to use such as *Wix*. Another point of

contention that is being discussed regards whether or not the University should require all

departments to use one platform, even if they have already been creating ePortfolios for a long

time. That being said, discussions surrounding ePortfolios will continue at ODU, hopefully

moving towards a unified digital platform to create ePortfolios, showing that the University is

diversified and open to creativity.

From the narrative provided on ePortfolio history at ODU, one can see how ePortfolios

have developed in various physical and digital manifestations. ePortfolios gained importance and

popularity at ODU through IDW workshops to improve student writing. The ePortfolio pilot

study for the Honors College showed the University that ePortfolios are possible to foster

regardless of discipline and the eP3 faculty cohorts have increased the awareness and use of how

ePortfolios can help students show evidence of their learning. The Honors College has since

improved and expanded its program to relate more to the requirements. As previously

mentioned, the link between ePortfolios and student learning visibility can be seen in the ways in

which the Honors College utilizes advising sessions to review and discuss student ePortfolios.

My own involvement with ePortfolios began with a study on the Honors College students' goal

statements in their ePortfolios, and joining the first eP3 workshop project to teach faculty how to

implement them in the classroom.

    Now, ODU is introducing ePortfolios to faculty of all disciplines in eP3 Praxis, Process,

and Production workshops to make ePortfolios more universal. The University announcement of

WordPress at ODU in 2015 ushers in a free digital platform for students to build their

ePortfolios, another push in the right direction to create them campus-wide.

    ODU is developing its ePortfolio support system by gaining more faculty interest in

ePortfolios, and teaching them how to use it in the classroom. I believe once the ePortfolio

support infrastructure is fully built, ODU will branch out to archiving students' involvement with

experiential learning such internships, undergraduate research, and community service. No

matter what type, or how one uses an ePortfolio, it has many facets; it can be used for any

educational, scholarly, and life-long purpose. It is a capsule of stored experiences relating to

one's life journey.

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Education

Master of Arts, English, Old Dominion University
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Bachelor of Arts, English with High Honor, College of Saint Elizabeth
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Minors: Leadership and Women Studies
December 2013

Professional Experience

- Enrollment Counselor: Virginia Wesleyan College: May 2016-Present
- Honors College Advisor: Old Dominion University: May 2015-May 2016
- Facilitator for Honors College Text Anxiety Workshop: 2016
- Facilitator for Honors College *WordPress* Workshop: 2016
- Presenter for Honors College Learning Styles Workshop: 2016
- Presenter Honors College *Google Drive* & ePortfolio Workshop: 2016
- Presenter Honors College First Class ePortfolio Workshop and trained leaders and mentors: 2015
- eP3 Praxis, Process, and Production Workshop: Facilitator and Developer: 2015-2016
- Conduct Advisor Training: 2016
- Family Educational Rights and Privacy Act (FERPA) Training: 2015
- Learning-to-Learn (L2L) Essay Assessment: 2015
- Intern: Women's Institute for Leadership Development (WILD): Old Dominion University Women's Center: 2015
- Media Commons: Treasurer: 2015-2016
- Rhetoric Society Old Dominion University (RSODU): Member: 2015-2016
- English Graduate Organization (EGO): Member: 2014-2016

Certifications

- Appreciative Advising Certificate: 2016
- ODU Master Advisor Certificate: 2015
- DiversABILITY Certificate: 2015
- Graduate Teaching Assistant Institute (GTAI) Certificate: 2015
- Preparing Future Faculty (PFF) Certificate: 2015