

ABSTRACT

STANCIL, STEPHANIE KIRCHNER. Exploring Working Graduate Students' Experiences with Reusable Assignments (Under the direction of Dr. Michelle Bartlett).

Working graduate students must attend to numerous roles and responsibilities.

Congruence between their course of study and their employment can increase saliency of topic and the resulting course-based assignments may be leveraged as both evidence of learning, as well as, products to be used at work. This study investigates the ways in which working graduate students engage with reusable assignments, what benefits may be obtained, and how their use and re-use impacts understanding of course content.

The theoretical framework guiding this inquiry is andragogy theory. Overarching research objectives include: (1) investigating working graduate students' perceptions of the impact reusable assignments have on their understanding of course content, and (2) examining how working graduate students apply reusable assignments on the job. The organization of this study is a three-article manuscript format, each discrete inquiry guided by its own set of research questions: (1) What does the extant literature report about student benefits of reusable assignments? (2) What does the extant literature report about the benefits others receive as a result of the use of reusable assignments? (3) How do working graduate students perceive reusable assignments impact their understanding of course content? and (4) How do working graduate students apply reusable assignments on the job?

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Exploring Working Graduate Students' Experiences with Reusable Assignments

By

Stephanie Kirchner Stancil

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APPROVED BY:

Dr. Michelle Bartlett
Committee Chair

Dr. Diane Chapman

Dr. James Bartlett

Dr. Donna Petherbridge

DEDICATION

To Marty, thank you for your support and encouragement.

To my kids, I love you. I hope you are inspired to follow your dreams.

BIOGRAPHY

Stephanie K. Stancil worked in Learning, Training & Organizational Development in the public sector for many years. Completing her master's degree, a second graduate certificate and $\frac{3}{4}$ of her doctoral studies while working full-time, and raising a family, has inspired Stephanie to uncover how working graduate students, and specifically parents, balance their multiple roles and responsibilities. Often pressed for time, Stephanie exploited every opportunity to leverage course work in the workplace.

Stephanie is the proud mother of four wild and wonderful children.

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CHAPTER 1: INTRODUCTION

“What is the sum total of the human energy available in the system? What proportion of this energy is now being used? Where is the unused energy located? Why is it not being tapped?” (Knowles, Holton & Swanson, 2010, pp.261-262)

Introduction

Wiley (2013) suggests that the reusable assignment can increase student engagement above and beyond that which is likely when learning evaluation takes the form of a disposable assignment. Reusable assignments are, by their very nature, meaningfully designed for reuse outside of a single evaluation of learning. These assignments can be leveraged outside of class, by contributing to a student’s portfolio or by supplementing the instructor-made material in the next course iteration.

An example of a Reusable Assignment is the opportunity to create an instructional presentation module from a previous semester’s student-created final presentation on a specific topic. An exceptional student presentation can be repackaged as an online lecture or as a video tutorial to support subsequent courses. Instead of curating exemplars to present as examples for future students, instructors can harvest model work for deployment as curricular content. In this way, an instructor may leverage student work to improve future iterations of a course.

In addition, student work can be improved and refined through multiple iterations and feedback from multiple sources. Frequently, learning outcomes can be assessed in new and innovative ways and these products can subsequently be used by the student in their own academic or professional career. Research suggests that graduates may not have all the skills and competencies needed in today’s economy (Association of the American Colleges and Universities, 2015; Evans & Richardson, 2017; Moore & Morton, 2017). Working students

have a unique opportunity to apply the concepts learned, and tools developed in the classroom, in real-world settings. Reusable Assignments may take the form of wiki or online textbook creation (e.g. Azzam et al., 2017; Farzan & Kraut, 2013; Jhangiani, 2015), tangible objects (Frohock, Winterrowd & Gallardo-Williams, 2018) or student portfolios (Bonica, Judge, Bernard & Murphy, 2018; Wakimoto & Lewis, 2019).

Instructors and faculty have many innovative approaches to adult learning at their disposal such as problem based learning (Brownell & Jameson, 2004), practical application learning such as case studies (Cook, 2018) and experiential learning opportunities (Evans & Richardson, 2017; Munukutla, McHenry, Darveaux, & Govindasamy, 2005). If compelling evidence exists for teaching in a way that is more conducive to the eventual work environment where the student will be expected to perform, is it not reasonable to assume that the student may also need to transfer the tools they have accessed or created in class, and not just the skills? Assignments can consist of much more than a point in time assessment of learning. If constructed carefully, and an eye towards reuse, the assignment can create impact outside of the classroom, in the form of workplace memos or published papers.

Reusable assignments are sometimes called non-disposable assignments, highlighting the juxtaposition of this type of assignment and that of a traditional one. For the purpose of this study, the definition assigned to non-disposable assignments by Seraphin et al. will be applied to aid in the understanding of the reusable assignment. Their definition reads that a reusable (non-disposable) assignment is:

“...any activity that: (a) students are asked to engage in as part of an organized course; (b) promotes student learning through the completion of the assignment; (c)

affords assessment of students' learning of course objectives; and (d) provides impact or value outside of the traditional student–teacher dyad” (Seraphin, et al., 2019, p.85).

These components also adhere strongly to the principles of Open Educational Practices (OEP), sometimes called Open Educational Pedagogy. Therefore, the reusable assignment is often considered a component of, or sometimes viewed as a direct application of, OEP in practice. Proponents of OEP (e.g. Jhangiani & Biswas-Diener, 2017; Littlejohn & Hood, 2017; Wiley, 2013) often view the course assignment as a unique opportunity to leverage student work to create Open Educational Resources (OER). The idealized OER adheres to Wiley’s 5Rs of openness: retain, reuse, revise, remix, and redistribute (Wiley, 2014). These dimensions empower the student-user to also fulfill the role of co-producer of knowledge products. As such, students engage with and create innovative content that can be modified and adapted both for their own, and others, continued use. Examples of course based creation of OER include the authoring of online textbooks (e.g. Randall, Johnson, West & Wiley, 2013), Wikipedia entries (e.g. Azzam et al., 2017; Farzan & Kraut, 2013) and the creation of learning objects or course aids (e.g. Baran & AlZoubi, 2019; Nichols, Brown & Wood, 2018; Rosen & Smale, 2015)

While the product of a reusable assignment could also be the creation of an OER, to do so is not required. Many reusable assignments result in a non-public product, providing value and purpose outside of the submission for grading, but not applying the 5Rs. As such, a reusable assignment may or may not meet the criteria required for inclusion in the paradigm of OEP, and its product may or may not meet the requirements for consideration as an OER. Whether through the incorporation of reusable assignments, OER, or some other innovative means of assessment, instructors are experimenting with new forms of learning evaluation.

Statement of the Problem

A 2015 report from Georgetown University suggests that 76 percent of graduate students work at least 30 hours a week (Carnevale, 2015). If a large portion of graduate students are studying and working simultaneously, it would be logical that their studies would and should inform their work. The use of renewable assignments needs to be investigated to see how students are using (and reusing) the knowledge and tools created in the classroom on the job. This practical application may lessen the gap between what students learn in the classroom and the skills needed on the job. In addition, the use of reusable assignments respects the students' time, work, and intellectual property; this conversation reframes the way in which class assignments can contribute to student learning beyond a single point in time evaluation of learning.

Purpose of the Study

The purpose of this inquiry is to explore the use and reuse of reusable assignments by graduate students who are also employed. An emphasis will be placed on the transfer of tools into the workplace, and the way in which this transfer impacts their learning. This qualitative study aims to further the understanding and practicality around the use and re-use of learning assignments outside the classroom setting with the goal of impacting institutional and organizational course design and by providing guidance to graduate faculty.

Research Objectives

This researcher seeks to understand the ways in which reusable assignments contribute to student learning in class, as well as, how they support the students' work at their place of employment. Accordingly, two overarching research objectives have been developed. The

findings and conclusions of this research will be presented in a series of article manuscripts. The overarching research objectives guiding the three articles are:

Research Objective #1: Investigating working graduate students' perceptions of the impact reusable assignments have on their understanding of course content.

Research Objective #2: Examining how working graduate students apply reusable assignments on the job.

Theoretical Framework

Malcolm Knowles has written extensively on the theory of andragogy (Knowles, 1975, 1984, 1990). That is, the idea that adults learn in different ways that children do. Moreover, an adult will likely have different motivations for learning than a child, and thus, as Knowles argues, a pedagogical approach is not appropriate when teaching adults (Knowles, 1990). In *The Adult Learner: A Neglected Species* (1990), Knowles argues for situating learning in the real world and explicitly demonstrating to students the potential for real application. He writes:

“when I think of all the courses I have taken in school or college, I can think of very few in which I understood the need to know what the teacher was teaching me; I was taking the courses to get credits toward a diploma or degree” (p.58)

Furthermore, Knowles posits that adult learners require both relevancy of topic and respect of their unique experiences in order to effectively contextualize their learning needs and to increase topic saliency. Adult learners need to know *why* they are learning something.

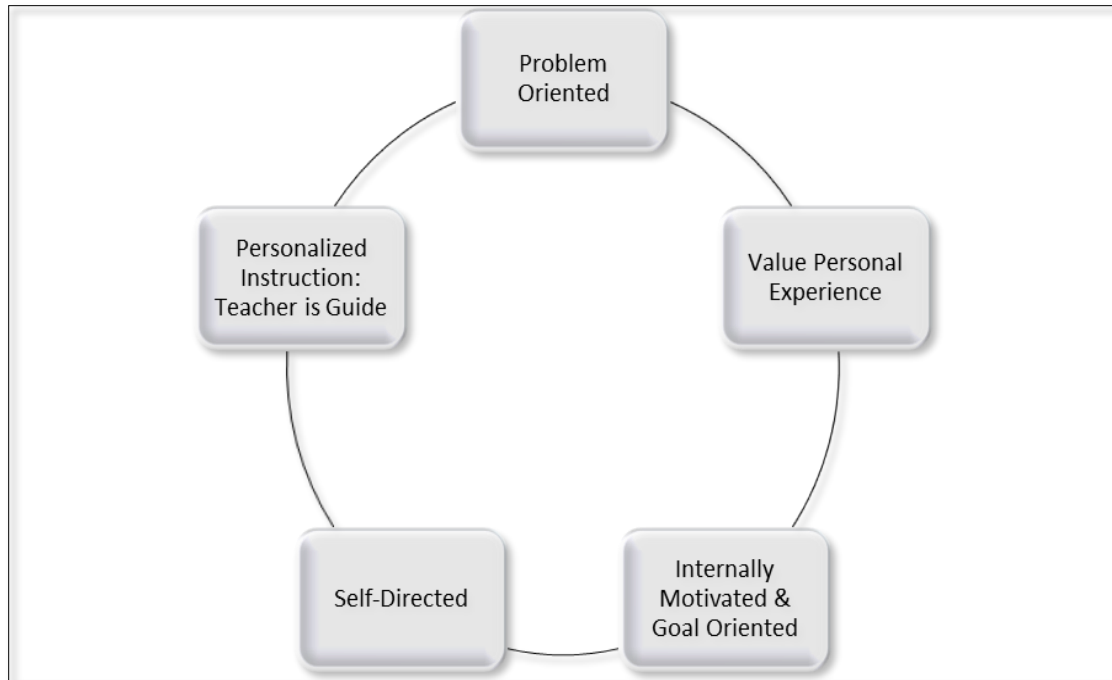


Figure 1.1 Knowles' Theory of Andragogy

The Reusable Assignment firmly situates itself within the context of Knowles' andragogy theory in that the end product is often personalized, self-directed and problem or goal oriented. The reusable assignment both values, and contributes to, the student's individual experience. Many instructors aim to incorporate relevant and authentic assessments of learning (see Fook & Sidhu, 2010; Herrington & Herrington, 2006; Wiggins, 1990). However, to fully respect the student's time and intellectual property, an assessment should contain components or tools that can be transferred and reused for additional impact beyond the point in time assessment. By extending the concept that adults need to know why they are learning a topic, we can conclude that adults also need to know why they are doing a specific assignment. "For a grade" is not a sufficient response. The use of reusable assignments is supported by Knowles' tenants of andragogy: the assignment is problem oriented and personalized. Likely, the student will seek to solve a problem in their work setting and thus, personal experience is both relevant and increased

as a result of the assignment. By seeking to apply their work, the student is both intrinsically motivated and oriented towards a goal, beyond that of a course grade. By using workplace problems to inform learning, and by transferring the tools created out of that knowledge acquisition back into the workplace, students are creating a continuous improvement loop.

Conceptual Framework

The conceptual framework for this study includes the variables of understanding of course content and use on the job as ways in which we can understand the concept and implications of reusable assignments. This model is presented in Figure 1.2.

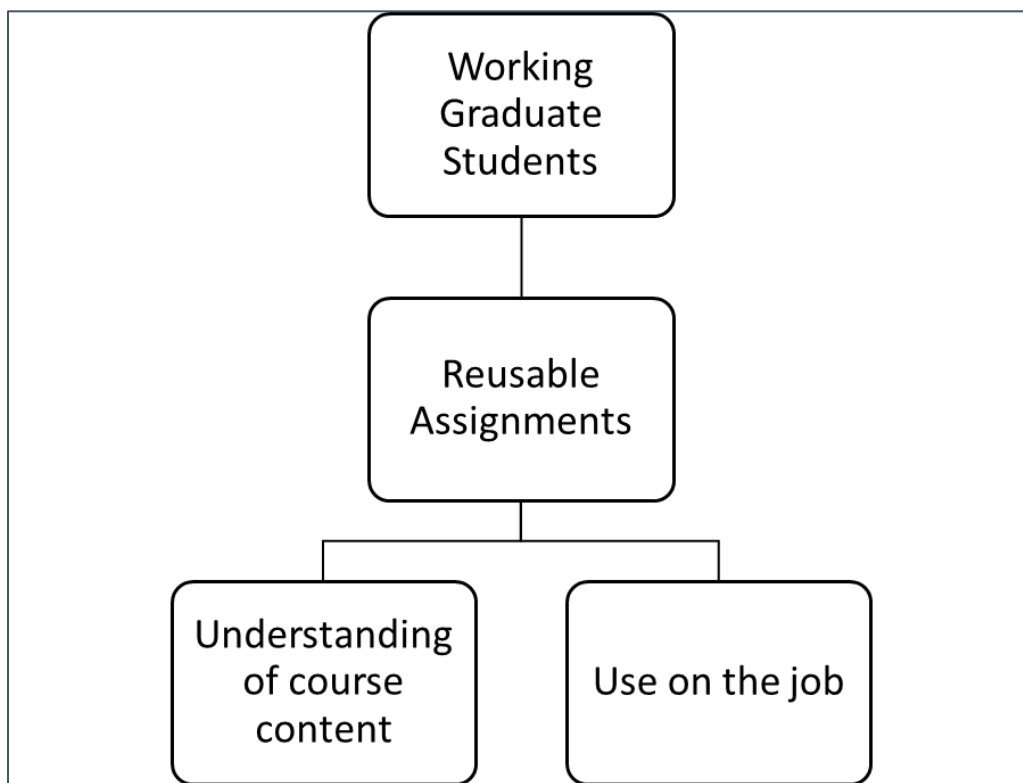


Figure 1.2 Conceptual Framework for the Study

The first research objective seeks to understand how student understanding of the course content is affected by the incorporation of reusable assignments. The purpose of the second research objective is to understand how and in what context, working graduate students bring their course created content into the workplace.

Significance of the Study

Transfer of training is a highly studied concept (Baldwin & Ford, 1988; Blume, Ford, Baldwin & Huang, 2010; Grossman & Salas, 2011). However, empirical evidence is lacking regarding the transfer of tools into the workplace. In addition to contributing to the body of literature regarding working adult learners, and best practices for teaching this population, this study aims to provide guidance for graduate faculty. By better understanding how students can transfer the tools of their coursework into the workplace, faculty can work to bridge the skills gap that exists.

Abbreviations and Definitions

To understand and clarify the terms used in this study, the following have been defined:

Reusable Assignment or Non-Disposable Assignment: “any activity that: (a) students are asked to engage in as part of an organized course; (b) promotes student learning through the completion of the assignment; (c) affords assessment of students’ learning of course objectives; and (d) provides impact or value outside of the traditional student–teacher dyad” (Seraphin et al., 2019, p.85).

Open Educational Resource (OER): “are teaching, learning and research materials in any medium – digital or otherwise – that reside in the public domain or have been released under an open license that permits no-cost access, use, adaptation and redistribution by others with no or limited restrictions” (William & Flora Hewlett Foundation, n.d.).

Open Educational Practices or Open Educational Pedagogy (OEP): “collaborative practices which include the creation, use and reuse of OER, as well as pedagogical practices employing participatory technologies and social networks” (Cronin, 2017, p.4).

Delimitations

A delimitation of this study is the scope. This research is limited to exploring the use and reuse of course assignments by working graduate students whose work is closely aligned to their program of study. Whether graduate students who do not work in closely aligned fields reuse course created content is not within the scope of this study. Certainly, the use of reusable assignments could be studied in a variety of settings; however this research will focus on its use and potential reuse by graduate students in a particular program at a specific higher education institution in the American Southeast. The study is bound in that investigation will be limited to working graduate students.

Conclusion

A large percentage of graduate students are also working full or part-time. These students are likely experienced professionals who have undertaken graduate studies. Their time, experience, knowledge, and intellectual property can be respected by the incorporation of reusable assignments. These assignments are intentionally designed for students to use in real world settings. When work completed in the classroom is highly congruent with the work the student is doing at the job site, opportunities exist for generalization of knowledge and for the transfer of not only skill, but also of specific tools. This study seeks to understand how working graduate students engage with and perceive reusable assignments inside and outside of the classroom.

Chapter Summary

In this chapter, the concept of reusable assignments and its relationship with OER and OEP was introduced. This chapter also provides a statement of the overarching research objectives that will guide the three-article investigation, the purpose of this inquiry, an overview of the theoretical framework, and of the conceptual framework used to guide the studies.

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CHAPTER 2: AN INTEGRATIVE LITERATURE REVIEW OF NON-DISPOSABLE AND REUSABLE ASSIGNMENTS

Abstract

Reusable, or non-disposable, assignments are becoming increasingly popular with the proliferation of Open Education Practices. However, a clear nomenclature and taxonomy does not exist in the literature, resulting in a nebulous and arduous environment in which to investigate these types of assignments. This article explores the various names and conceptualizations under which non-disposable assignments exist in the extant literature. Building upon the definition and three-part framework proposed by Seraphin et al. (2019), this article proposes an additional typology and sub-designations of the various types of assignments that can provide value beyond a single point-in-time evaluation of learning,

Introduction

The application and benefits of reusable assignments are somewhat nebulous due to inconsistent naming and conceptualization. Sometimes called renewable, or non-disposable, these types of assignments are designed to provide impact beyond a single point-in-time evaluation of learning. However, these assignments are also related to, and sometimes included in, the concepts of authentic assessment, open educational resources (OER), and open educational pedagogy (OEP). Because there is not a generally understood and agreed upon nomenclature and framework, these types of assignments are implemented in numerous ways, resulting in both digital and tangible products (e.g. Azzam et al., 2017; Baran & AlZoubi, 2019; Bonica, Judge, Bernard, & Murphy, 2018; Nichols, Brown, & Wood, 2018). This article investigates the various names and definitions ascribed to the construct of reusable assignments, as well as, the perceived benefits of renewable assignments, as recorded in the extant literature.

Background

Proponents of the Open Education movement cite increased access as one of the primary drivers. Increasingly, institutions and individual instructors seek to implement open textbooks and OER into their curriculum. This may be driven by a desire to reduce costs for students (e.g. Hilton, 2016; Kermanshachi & Nipa, 2018; Woodward, Lloyd & Kimmons, 2017), a willingness to innovate in the classroom (Bonica, Judge, Bernard & Murphy, 2018), and/or a desire to maintain high levels of instruction (Abri & Dabbagh, 2019; Cronin & MacLaren, 2018). Studies have investigated the use of OER (e.g. Abri & Dabbagh, 2019; Hilton, 2016; Kermanshachi & Nipa, 2018; Woodward, Lloyd & Kimmons, 2017) and how their use may mediate or moderate student learning and perceived satisfaction for the course. However, in the majority of these studies, the content used in class is either an open sourced (CC BY-NC licensed) item or perhaps even instructor created. Rarely does the literature examine the potential benefit of student-created material. Student-created content may or may not fall into the defined constructs of OER or renewable assignments. Additionally, the student-created artifact may or may not provide value and meaning outside of the classroom walls. Many student-created works can be incorporated into subsequent course iterations, thereby becoming OER (if openly available) and supplementing future instruction. Student-created content, however, can also exist and provide value outside the classroom setting, whether as a personally beneficial product or as a contribution to the common good.

Problem Statement

Wiley, Webb, Weston and Tonks (2017) conservatively estimate that students spend approximately 2 billion hours a semester on schoolwork, creating products that for the most part, are discarded and forgotten once graded. If we do not understand the potential benefits of

incorporating reusable assignments into coursework, then we cannot determine whether this type of assignment should be used. Many instructors aim to incorporate innovative means of assessing learning (e.g. Bennett & Watson, 2006; Cross & Palese, 2015; Farquharson, 1984; Fook & Sidhu, 2010; Nichols, Brown & Wood, 2018; Stevens, 2018; Wiggins, 1990), however, the benefits of this particular type of assignment have not been holistically examined. The concept of reusable assignments is a fairly mature topic; however, it lacks a consistent nomenclature and framework.

Research Questions

This article seeks to explore the definitions and potential benefits reported in the literature. The research questions guiding this review of the literature are:

Research Question #1: How does the literature define ‘reusable assignment’?

Research Question #2: What student benefits of reusable assignments are reported in the extant literature?

Research Question #3: What benefits do others receive as a result of the use of reusable assignments, as reported in the extant literature?

When discussing the traditional (disposable) assignment, Bennett and Watson (2006) state: “Often these projects are discarded at the end of the semester because they create little or no real-world value. That is, systems are produced in a closed loop where no regard is given to what came before or what will come after” (p.289). This integrative literature review aims to analyze peer-reviewed articles that discuss an alternative phenomenon: a reusable assignment that does, indeed, provide impact and value in the real world, beyond a single point-in-time evaluation of learning. Recent work by Paskevicius, Veletsianos, and Kimmons (2018) indicates that, at least on Twitter, the conversation around Open Education tends to revolve more on

content than on practice. This article attempts to examine a specific piece of practice...one that is not necessarily constrained to practitioners of OEP, and that can be employed within multiple styles of instruction.

Method

An integrative literature review was identified as the appropriate methodology to examine the disparate names and theoretical underpinnings of the various forms of reusable assignments. Torraco (2005) states that integrative literature reviews are sophisticated forms of research that can yield new understanding of a topic through a thorough investigation and synthesis of extant literature. Literature reviews, Torraco contends, are appropriate when research emerges in different fields and when findings may be contradictory. This is certainly the case when investigating reusable assignments, which have been implemented in disparate fields such as medicine (e.g. Azzam et al., 2017), business (e.g. Fichter, 2005), and higher education (e.g. Farzan & Kraut, 2013; Nichols, Brown, & Wood, 2018; Rosen & Smale, 2015). The end product of this literature review is a conceptual classification of constructs, which Torraco suggests is one of the four forms of synthesis of the literature (2005).

Data Collection and Analysis

A search was conducted for peer-reviewed articles via the ProQuest and ERIC (EBSCO) databases using the *a priori* keywords of non-disposable assignment, renewable assignment, reusable assignments, open pedagogy, and OER-enabled pedagogy. Search parameters were not narrowed by date, however peer-reviewed and English language filters were applied. All articles returned were read in their entirety and sorted or discarded based on their alignment to the concept of reusable assignments. Only 16 articles discussed this concept. Thus, a second search was conducted using additional keywords identified in the extant literature. This search, also via

ProQuest and ERIC employed the following keywords: learner generated content, student generated content, student created content, student created OER, learner generated OER, student generated OER, and learner created OER. In total, 68 articles were retained for alignment to the construct, read in their entirety, and synthesized.

Findings

In practice, as well as in the extant literature, the concept of a reusable assignment is nebulous and vague. The reusable assignment, as conceptualized in this article, exists throughout the extant literature of OER and OEP, sometimes called OER, OER-enabled pedagogy or viewed as an artifact of Open Education Practices. In addition, the reusable assignment may be called constructionist assignments, or more rarely, constructivist assignments, as well as, non-disposable or renewable assignments.

Research Question 1 Findings

The first research question guiding this inquiry is: How does the literature define ‘reusable assignment’?

In order to fully explore the range of definitions assigned to this construct, we must also examine the numerous terms and varied terminology employed when discussing its use. More often than not, the types of assignments that could be considered as reusable are not wholly defined. Wiley, Webb, Weston & Tonks (2017) employ the definition of OER created by the William and Flora Hewlett Foundation, which previously read:

“teaching, learning, and research resources that reside in the public domain or have been released under an intellectual property license that permits their free use and re-purposing by others. Open educational resources include full courses, course materials, modules, textbooks, streaming videos, tests, software, and any other tools, materials, or techniques

used to support access to knowledge.” (Hewlett, 2016, para. 7 as cited in Wiley, Webb, Weston & Tonks, 2017, para. 1), adding of course, Wiley’s 5Rs of openness: retain, reuse, revise, remix, and redistribute (Wiley, 2014) to define the usage of the OER or OER-enabled pedagogy.

Other researchers (e.g. Blomgren, 2018; Lin, 2019) employ UNESCO’s definition of OER: “teaching, learning and research materials in any medium – digital or otherwise – that reside in the public domain or have been released under an open license that permits no-cost access, use, adaptation and redistribution by others with no or limited restrictions” (UNESCO, n.d.). At the time of this writing, the Hewlett Foundation has updated their definition to match that provided by UNESCO.

In addition, many authors (e.g. Bonica, Judge, Bernard, & Murphy, 2018; Paskevicius & Irvine, 2019; Seraphin et al., 2019) view these types of assignments as part and parcel of the Open Education movement and the creation of artifacts as evidence of the use of an open pedagogy.

However, by and large, the majority of the extant literature examined did not firmly and fully define the practice of learning assessment via the creation of a product that provides additional meaning and impact beyond a single point-in-time evaluation of learning. Indeed, many researchers often alluded to the theoretical underpinnings of their novel classroom-based assignments as some variation of authentic knowledge production and co-construction of content in a collaborative, and constructivist manner. Doubleday and Wille (2014) provide an example of this: “This concept moves away from the traditional model of learners as content consumers and puts them into the role of content creators.” (p.362). Matthew, Felvegi, & Callaway (2009) expand upon this: “In constructivist classrooms, students have opportunities to learn through

social, collaborative activities that occur in a meaningful context and allow them to make connections between their prior experiences and their new experience” (p.54). In these, and many other examples, the student-created work product is not formally licensed, and often does not reside within the public domain. In many cases, the work product, therefore, cannot be considered OER, as it does not meet all the requirements of “openness”.

Extending the framework

Seraphin et al (2019) have created a most useful definition of a non-disposable assignment, one that was used to measure alignment of extant literature for this review. They define the non-disposable assignment as:

“...any activity that: (a) students are asked to engage in as part of an organized course; (b) promotes student learning through the completion of the assignment; (c) affords assessment of students’ learning of course objectives; and (d) provides impact or value outside of the traditional student–teacher dyad. Further, in the context of this discussion, we conceptualize this final component as being fundamentally open, and thus as a type of OEP” (p.85).

In addition, they offer the three-part framework of *time*, *space*, and *gravity* as a method of measurement of the various forms that assignments may take. After reviewing the extant literature and various definitions and applications of ‘non-disposable’ assignments, the paper humbly submits an addition to their conceptualization. While this recent work, and in particular the three-part framework, does much to extent the understanding and use of non-disposable assignments, it does little to solidify a bounding nomenclature and taxonomy. As such, this article conceptualizes fundamental differences between the previously ill-defined and interchangeable terms of non-disposable, renewable, reusable, OER-enabled and OEP assignments.

By applying Seraphin et al.'s conceptualization of student created work, as well as the three-part framework, we arrive at the underlying construct of a non-disposable assignment, that is to say, an opportunity for the assessment of a student's knowledge, that provides value and impact beyond a single point-in-time evaluation of learning. Numerous activities that share and co-create knowledge beyond the student-teach dyad would be considered as non-disposable, even if they do not meet the criteria of OER in that they do not reside in the public domain, nor are they openly licensed. These activities, such as class presentations, online discussion forums, creation of internal (classroom and semester usage only) wikis, blogs, and multiple-choice question (MCQ) banks, provide an opportunity to share and co-construct knowledge with the entire class, as compared to a quiz or paper, which is submitted to the instructor only. To aid in the conceptualization of this typology, these types of assignments can be considered as *shared knowledge assignments*, wherein the students share their work and learning with fellow peers.

These same artifacts can continue to provide value beyond the semester in which they were created. By extending the time and space boundaries, we may also increase the gravity of said assignment. The class presentations could be recorded and uploaded; now accessible for viewing by future students. Wikis, blogs and MCQ banks can be extended and iteratively reviewed, revised and improved. This is the premise of a *renewable assignment*, as described by Wiley, Webb, Weston and Tonks: "To contrast disposable assignments, we define renewable assignments as those which both provide a learning benefit to the student and result in OER that provide a lasting benefit to the broader community" (2017, p.62). In order to meet the criteria of a renewable assignment, the content should meet Wiley's 5R criteria of openness: retain, reuse, revise, remix, and redistribute (Wiley, 2014).

Still, student work can provide value beyond and outside of the walls within which it was constructed. While shared knowledge assignments and renewable assignments contribute to the learning of others, student created work can provide meaning in other ways. Thus, two additional constructs are proposed: the reusable assignment and the open assignment. *The open assignment* also employs the paradigm of constructivist and collaborative co-creation of knowledge. Its usage requires the creation of a product that provides value and meaning outside the classroom. When measuring against Seraphin et al.'s three-part framework, this product also extends the time and space of the product's impact, and therefore, likely the gravity, as well. Examples of open assignments include an open wiki or blog, created as a part of a class-based assignment but valuable and accessible after and beyond the walls of the classroom, such as the WikiHaskill Project (Duarte, Bulo, Posada & Lozano, 2012). This university course-based assignment was designed to increase understanding, not only for students of the class, but to also improve the quality and quantity of Spanish-language documentation on the WikiHaskill, serving as contribution to the greater good. The authors describe this assignment as an opportunity that: "allows the knowledge generated to extend beyond the classroom environment, since it is available anytime to the whole community interested in it" (p.261).

Client work would also meet these criteria. Morris (2019) explores an entire course built around producing written and visual content for a university division's website and social media pages. This course provided an opportunity for students to experience a journalism setting, with the instructor acting in the role of editor, and created the possibility of creating content used in real-world settings and artifacts that would make valuable additions to a student's portfolio of work. The university division received the value-add of having content created for their dissemination, while students got bylines and authentic experience. Indeed, Morris found that in

the first year, 80% of students had at least one piece published, and many had published multiple times (2019).

Lee and Wicks (2010) implemented a podcasting project wherein university students collaborated with local tourism marketing professionals to create podcasts for visitor use. For this class-based assignment, which is conceptualized as ‘cooperative learning’, students participated in hands-on learning of tour planning and tourism promotion. Students developed their knowledge and skills in these areas (making them more marketable after graduation), collaborated with the tourism industry (bringing new and innovative theory into practice), and created artifacts that can be used by the ‘general public’ to plan trips and self-guided tours. This assignment, as opposed to a disposable one in which only the learner benefits from acquisition of knowledge, is a win-win-win, creating benefits far and beyond that point-in-time evaluation of learning.

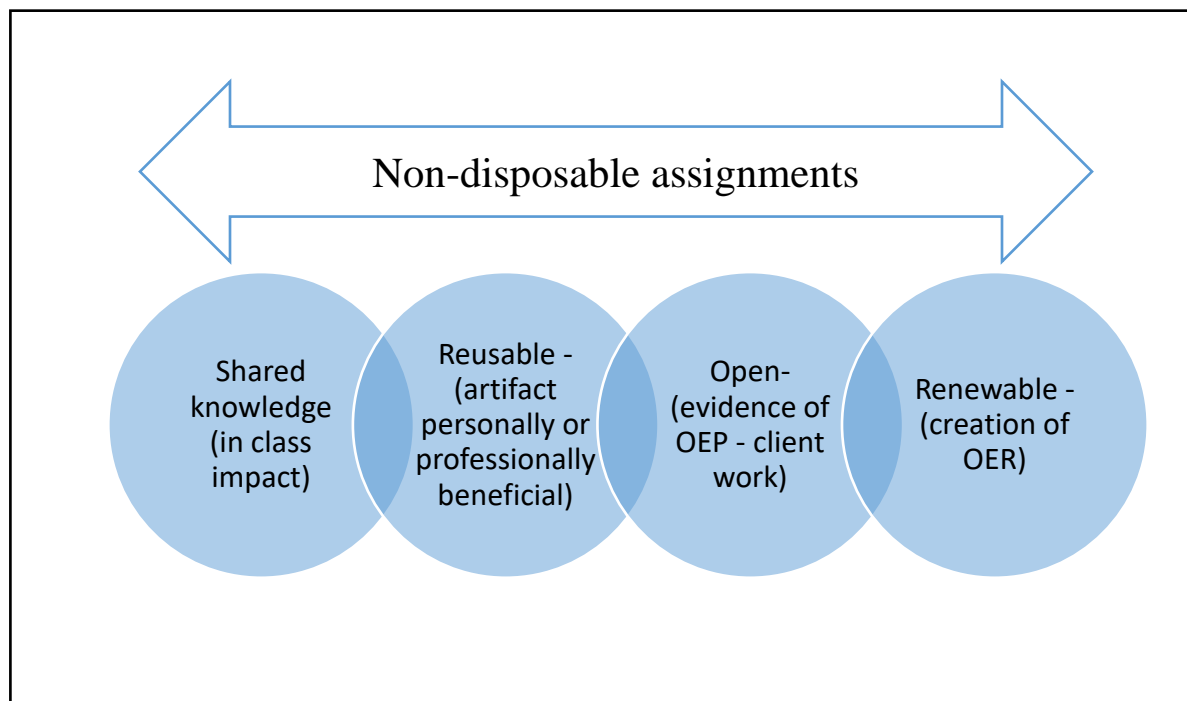


Figure 2.1 A Visual Model of the Proposed Typology of Non-Disposable Assignments

Finally, the *reusable assignment* results in the creation of a product that is meaningful and impactful to the student beyond the evaluation of learning. This artifact may be reused in a personal way (such as an addition to a portfolio) or in a professional manner (think of a doctoral student who later leverages course assigned literature reviews for their dissertation). Duran, Brunvand, Ellsworth, & Şendağ, (2011) describe a professional development course for in-service teachers. An active learning strategy, and hands-on application, was used to instruct teachers in the implementation and integration of wikis. This professional development course was designed around the concept of a student (teacher) taking what they have learned, perhaps even the entire artifact, and employing it in another setting. The product designed and built though instructor scaffolding and support, is truly meant to be implemented and used in another context. While just over a third of the teachers did not continue to use the wiki pages created during the professional development; the large majority did, by embedding their wikis into their teaching practice and using it as a tool for parent communication and the showcasing of student work (2011).

The reusable assignment, in particular contrast to disposable assignments, provides a unique opportunity for working students to leverage their studies to further their employment. An example of this might be a student learning to complete a SWOT or Needs Analysis, then creating a course deliverable by doing the analysis at their place of work. Using both course content and artifacts to solve and address work pain points is a novel concept, not often discussed nor thoroughly examined in the literature. The assignment becomes reusable when it provides value in the jobsite, value beyond that single point-in-time evaluation of learning inherent to course-based assignments. Whether through the addition of work examples to their personal portfolio, or by using the actual product created in the work setting, the reusable

assignment provides immense value within the context of employment. Any type of non-disposable assignment harbors great possibility, especially considering Wiley's estimation that some 2 billion hours of student work are potentially wasted every semester by the creation of disposable assignments (Wiley, Webb, Weston & Tonks, 2017).

Research Question 2 Findings

The second research question seeks to understand the potential benefits of reusable assignments. Findings for Research Question 2: 'What student benefits of reusable assignments are reported in the extant literature?', are reported below.

Individual benefits

Whereas a dearth exists in the literature regarding the bounding definition of these innovative assignments, many articles document the benefits of their usage within the classroom. Improved outcomes such as higher test scores (Stafford, Elgueta, & Cameron, 2014; Wiley, Webb, Weston & Tonks, 2017), and deeper learning, as perceived by students (Bartle, Longnecker & Pegrum, 2011; Dale & Povey, 2009; Hilton et al., 2019; Reyna & Meier, 2018) are described in both qualitative and quantitative inquiries. Stafford, Elgueta, & Cameron (2014) found that engagement and use of the class wiki project predicted a final exam score increase of 4-5 percentage points. Similarly, Hardy et al. (2014), found a statistical positive relationship between student engagement with their MCQ (Peerwise) intervention and final exam scores. Singh (2015) also noted a moderate increase in final scores. In particular, this study found that higher engagement (number of MCQs written in Peerwise) predicted higher final examination scores for well performing students. These correlative relationships are found throughout the literature, whether in primary/secondary education (Wiley, Webb, Weston & Tonks, 2017), undergraduate education (Liu & Taylor, 2014; O'Bannon, & Britt, 2011) or beyond.

One study found that students generally perceive non-disposable assignments (called Open Pedagogy assignments in this article) to be *as* useful (49%), or *more* useful (43%) than traditional assignments (Hilton et al., 2019). Beyond the requisite learning of the course content, these types of assignments provide additional benefits such as the development of critical thinking skills (Dale & Povey, 2009; Reyna & Meier, 2018; Wheeler, Yeomans, & Wheeler, 2008), the opportunity to improve soft skills such as communication (Croft, Duah, & Loch, 2013; Goodenough, MacTavish, & Hart, 2013; Hubbard, Jones, & Gallardo-Williams, 2019; Paskevicius & Irvine, 2019; Reyna & Meier, 2018; Thacker & Laut, 2018; Wang, 2016), professionalism (Bonica, Judge, Bernard, & Murphy, 2018), and leadership (Goodenough, MacTavish, & Hart, 2013). Students may even acquire or refine peripheral skills such as how to create digital content, or how to film a tutorial video (Croft, Duah, & Loch, 2013; Dale & Povey, 2009; Goodenough, MacTavish, & Hart, 2013; Hubbard, Jones, & Gallardo-Williams, 2019; Reyna & Meier, 2018; Wang, 2016).

Students also report increased engagement with the product. Often a degree of latitude affords the students the opportunity to personalize their product. Perhaps the opportunity to be creative or the desire to showcase their work creates the drive for excellence. In any case, students report improvement of study habits (Croft, Duah, & Loch, 2013; Donne, 2012; Hubbard, Jones, & Gallardo-Williams, 2019), and an appreciation for the visibility of their final product (Abri & Dabbagh, 2019; Hadjerrouit, 2012; Hilton et al., 2019; Lee & Hannafin, 2016; Lee & Wicks, 2010; Swan & Hofer, 2011; Thacker & Laut, 2018).

In discussing their wiki creation assignment, Matthew, Felvegi, & Callaway describe students more closely and deeply reading textbooks, as well as, making connections with resources from other classes: “almost one fourth (23.6%) of all coded references note or reflect

on the types of connections the students made while taking the class: activities outside the confines of this course, their own teaching practice, materials found online, and textbooks from this course as well as from other courses” (2009, p.59). Indeed, while approximately 10% of the wiki sources reference textbooks used in that particular course, more than 50% referenced textbooks from other classes (Matthew, Felvegi, & Callaway, 2009) indicating that students are situating this assignment within the context of their prior knowledge and building connections between the content of various courses.

Indeed, instructors report that the non-disposable assignment affords an excellent opportunity to assess learning (Arruabarrena, Sánchez, Blanco, Vadillo, & Usandizaga, 2019; Doubleday & Wille, 2014; Swan & Hofer, 2011). As Doubleday & Wille suggest, these types of assignments may allow: “instructors to better understand what content challenged students” (2014, p.365).

Research Question 3 Findings

The third research question guiding this inquiry is: What benefits do others receive as a result of the use of reusable assignments, as reported in the extant literature? Findings for this question looked at benefits beyond the student and are presented below.

Benefits to others

Not only do students benefit from the incorporation of non-disposable assignments through improved and deeper understanding of course content, and the growth of personal and professional skills; but others may benefit from the work products, as well. This practice often results in the creation of content for others, whether future students or even the general public. Even within the bounds of the shared knowledge assignment, by co-constructing and sharing knowledge outside the traditional student-teacher dyad, other students within the same course are

afforded an: “opportunity to self-assess and evaluate their progress by comparing and contrasting their work to other students’ work” (Waycott, Dalgarno, Kennedy & Bishop, 2013, p.10).

When the artifact’s existence increases in time, to support future students, additional impact is realized. The use of student-created content can save the instructor from having to learn new skills and/or spend time generating the content (Croft, Duah & Loft, 2013; Otto, 2019). Most importantly, it creates a learning object that can be leveraged in future courses as content or supplementation. Whereas instructors “cite the challenges of locating relevant, high-quality and topical resources in their subject area as a significant barrier to more actively using OER and that integrating these resources into their curriculum is a time-consuming task” (Paskevicius & Irvine, 2019, p.2), the opportunity to harvest student work may counteract these barriers.

Croft, Duah & Loft (2013) describe screencasts of mathematical explanations created by undergraduate students. Following quality assurance by the supervising professor, the videos were subsequently published to LMS and downloaded 323 times by students, likely facilitating the learning of many additional students. Thacker and Laut explore the student creation of a permanent library guide (2018), viewed over a thousand times, and continuing to receive “traffic into the present, with an average of 52.5 monthly views since it was published” (p.295).

Goodenough, MacTavish, & Hart (2013) describe student created videos of bioscience field work. These video tutorials were found to be particularly helpful for subsequent students with communication or reading disorders who may struggle to learn the processes via the textbook alone. Similarly, Hubbard, Jones & Gallardo-Williams (2019) report that the tutorials created in one chemistry course continue to be used as review materials by subsequent students.

Not only do the successive cohorts benefit from this material, but the products can also provide impact beyond the course itself.

Matthew & Felvegi (2009) found that preservice teachers believed the wiki content assembled in class, could benefit their future instructional practice as teachers. Therefore, the pre-service teachers felt that the resources assembled would benefit their own children, children they were currently tutoring, students taught during their internship and even, future elementary students.

The open assignment, in which work may be created for identified clients, is designed to provide value and benefit to others. As Morris found, the creation of content, by students, for a university division payed dividends: “Social media engagement has steadily increased, and during the first year of the course and internship unique visitors to the website tripled. The division is currently conducting research into whether the uptick has contributed to higher enrollments among incoming students” (2019, p.47). Lee and Wicks (2010) report that the student partnership with tourism and marketing professionals, increased the professionals’ knowledge of technologies that they could integrate into their own practice. This assignment also contributed to the ‘greater good’ in the sense that the final product may be used by countless others who research and visit the targeted destinations.

Just as the WikiHaskell project (Duarte, Bulo, Posada & Lozano, 2012) created high quality Spanish language documentation available to any who wish to access it, the contributions of pharmacy students to Wikipedia can improve access to high quality references and documentation. By improving the accuracy of medical and pharmaceutical content on the web, this assignment improves access to quality information by the general public. Indeed, this

particular assignment resulted in improved content and comprehensiveness, as well as, increased page views by an average of 15% (Apollino, Broyde, Azzam, Heilman & Brock, 2018).

Non-disposable assignments, in all forms, create a unique opportunity to harness the intellectual work, effort and even final work product of students. Instead of ‘wasting’ the billions of hours students spend on the creation of ‘disposable assignments’, work should be harnessed in such a way that it provides value to other students, future courses, external agents and even the unknown general public.

Significance

Examples of constructivist, authentic, co-creative assignments can be found in the extant literature, however, the lack of a consistent nomenclature and taxonomy creates a nebulous and arduous environment to the conversation of non-disposable assignments. As the benefits of open education and in particular, of the non-disposable assignment include increased student engagement, motivation and in some instances, greater achievement; it behooves the academic community to codify a common set of terms and understanding. This article examined the literature and proposed an extension to the conceptualization of non-disposable assignments (Seraphin et al., 2019) by suggesting four overlapping types of non-disposable assignments. It also attempts to place this practice within the extant literature, and in particular, within the growing body of literature on OER and OEP. Finally, a review of the benefits these types of assignments provide to both the individual student, and to others, is explored.

Recommendations for future research

Locating the appropriate literature was confounded by the lack of systematic nomenclature. Likely, this phenomenon exists in literature not captured in this search. Future searches of the literature may benefit from using these additional keywords: Web 2.0, active

creators, authentic assignments, practice-based assignments, Education 2.0, constructionist assignments. In addition, this article proposed an extension to the framework proposed by Seraphin et al. (2019), as well as, a creation of a domain structure. Empirical research is needed to validate the proposed domains.

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CHAPTER 3: A QUALITATIVE CASE STUDY INTO STUDENT PERCEPTIONS OF LEARNING WHEN ENGAGING WITH REUSABLE ASSIGNMENTS

Abstract

This article seeks to examine the experience of working graduate students who engage with classroom assignments which provide meaning and value outside of a single point-in-time evaluation of learning. In particular, this qualitative case study sought to understand students' perceptions of learning when they engaged with reusable, or non-disposable assignments. Findings indicate that students perceive that hands-on application aids in their learning and retention of course content. This study builds upon the framework and definition of non-disposable assignments introduced by Seraphin et al. (2019).

Introduction

Wiley et al. suggest that over two billion hours of student work is wasted each semester through the creation of disposable assignments (Wiley, Webb, Weston, & Tonks, 2017). In contrast, reusable assignments can provide value beyond and past that of a single point in time evaluation of learning. A reusable, also called renewable or non-disposable, assignment is “any activity that: (a) students are asked to engage in as part of an organized course; (b) promotes student learning through the completion of the assignment; (c) affords assessment of students' learning of course objectives; and (d) provides impact or value outside of the traditional student–teacher dyad” (Seraphin et al., 2019, p.85). These types of assignments offer the opportunity to harness student effort and intellectual work for the creation of something meaningful, whether by sharing knowledge and co-creating artifacts within the classroom or by creating something that provides value outside of the course itself.

Problem Statement

If we cannot determine that reusable assignments are helpful to student understanding of course content, then we cannot recommend their implementation in course curriculum. While the benefits of creation of products is highly desirable, it cannot overshadow the primary purpose of course assignments; the contribution to, and evaluation of, student learning of course content. We must investigate how students perceive that this type of assessment of learning contributes to their understanding of course content.

Purpose Statement

The purpose of this study is to examine students' perceptions of how engaging with reusable assignments, in an online class, helps with their understanding of course content. Beyond giving back to the course and instructor by contributing and leaving behind deliverables that demonstrate a student's knowledge, it is important to see the impact on the students learning of the course content.

Guiding Research Question

This article reports the findings of the qualitative case study design with an emphasis on the benefit and meaningfulness of the reusable assignment as an instrument and measure of learning. In particular, this article seeks to address and report the findings of the following research question: How do working graduate students perceive reusable assignments impact their understanding of course content?

Literature

Issues around consistent nomenclature and conceptualization around the use of non-disposable, or reusable, assignments confound thorough academic inquiry into the potential of these assignments. In many cases, assignments that provide value beyond a single point-in-time

evaluation of learning are regarded as evidence of the practice of Open Educational Pedagogy (OEP) (e.g. Comas-Quinn, 2019; Duarte, Bulo, Posada, & Lozano, 2012; Otto, 2019; Paskevicius & Irvine, 2019). However, other researchers cite various theoretical underpinnings for the same sort of assignment, ranging from collaborative learning (Donne, 2012; Matthew, Felvegi & Callaway, 2009), or constructivist learning (e.g. Croft, Duah, & Loch, 2013; Stafford, Elgueta, & Cameron, 2014), to the creation of learner-generated content (e.g. Doubleday & Wille, 2014; Reyna & Meier, 2018). Regardless the theory and logic behind implementing these types of assignments, student-generated work is emerging in the literature as a potential opportunity to increase learning, as well as, create something of value.

Outputs of non-disposable assignments might include the creation of, or contribution to, a Wiki (e.g. Apollonio, Broyde, Azzam, De Guia, Heilman, & Brock, 2018; Duran, Brunvand, Ellsworth, & Sendag, 2011; Duarte, Bulo, Posada, & Lozano, 2012; Matthew & Felvegi, 2009; Stafford, Elgueta, & Cameron, 2014), the creation of Podcasts (e.g. Lee & Wicks, 2010; Swan & Hofer, 2011), or videos (e.g. Arruabarrena, Sánchez, Blanco, Vadillo, & Usandizaga, 2019; Doubleday & Wille, 2014; Goodenough, MacTavish, & Hart, 2013), and even the writing of content for a website and social media accounts (e.g. Morris, 2019; McCorkle & Payan, 2017). The artifact may also result in an educational product that can be leveraged both within the current class, as well as, serve as content or supplementation in future courses. Digital tutorials (e.g. Croft, Duah, & Loch, 2013; Hubbard, Jones, Gallardo-Williams, 2019), multiple-choice question banks (e.g. Grainger, Dai, Osborne, & Kenwright, 2018; Hardy et al, 2019; Singh, 2015), and course texts (e.g. Bonica, Judge, Bernard, & Murphy, 2018; Randall, Johnson, West & Wiley, 2013) exemplify student work harvested to create resources for future course iterations.

Benefits, both to students themselves and to others are reported in the literature. For the student, engaging with these types of assignments has provided the opportunity to improve soft skills such as communication (Croft, Duah, & Loch, 2013; Goodenough, MacTavish, & Hart, 2013), and teamwork (Doubleday & Wille, 2014; Goodenough, MacTavish, & Hart, 2013; Hadjerrouit, 2012; Wang, 2016). In addition, increased learning, both through objective analysis of test scores (Hardy et al., 2019; Stafford, Elgueta, & Cameron, 2014) and through student perception (Reyna & Meier, 2018) have been reported. In particular, Wiley, Webb, Weston & Tonks (2017) found that the creation of these non-disposable assignments, and the addition of the resources into subsequent classes, resulted in higher test scores. For slightly less than half of the assignments, the average grade rose by 8 points.

Creating digital tutorials in an undergraduate organic chemistry class was well-perceived by students, with 50% indicating that the creation of the product led to a better understanding of the course material and 16% indicating that they learned new content (Hubbard, Jones & Gallardo-Williams, 2019).

Dale and Povey (2009) suggest that the act of creation itself, is the cause for deeper learning; that students must understand the material, very well, before being able to leverage that material into the creation of an artifact.

Method

To answer the research question, a qualitative case study design was selected. Qualitative research is an appropriate methodology when studying dynamically interactive and highly contextualized educational things (Kozleski, 2017). As explained by Ambert, Adler, Adler, & Detzner (1995), a qualitative research study aims for depth of investigation, in contrast to breadth. As opposed to seeking an understanding of the scope of use of reusable assignments,

this study seeks to gain in-depth and intimate knowledge of *the way in which* these assignments are used by working graduate students. As such, a case study design was selected in an effort to provide a rich and thick description of the experiences of these students (Merriam, 1988).

Setting

This study took place at a large land-grant university in the American Southeast. This location is a master's and doctoral degree granting, research intensive, institution. In particular, the University offers a fully online master's degree in Training and Development. This degree is offered entirely online and is delivered in such a way as to maximize accessibility for working adults. Students may enroll in as few as one course per semester, so as to reduce the burden of learning while continuing to work full-time. This university is located in a large metropolitan city, and serves more than 36,000 students, approximately 130 of whom are enrolled in the online master's degree program in Training and Development.

Participants

A non-probability sampling method was employed, and access to current and former students was facilitated by a gatekeeper. Participants were solicited via an email, self-selected to participate, and then were screened to ensure they met inclusion criteria. Participants (n=18) were interviewed individually via the videoconferencing software Zoom. Participant inclusion criteria included pursuing a graduate degree or certificate in Training & Development, while working full-time in a highly congruent field. In total, two recent graduates of the Master's program, 14 current master's students and two current students from the associated Teaching, Training & Educational Technology Graduate Certificate program were interviewed.

Data Collection

Each interview lasted approximately one hour. Participants were not compensated. Interviews followed a semi-structured protocol, meaning that a list of questions was developed *a priori* but that the researcher was not fully scripted and given latitude to ask follow up or probing questions (Hancock & Algozzine, 2011). Checks for respondent validation occurred during the interview wherein the interviewer restated and summarized the participant's words to validate understanding. All interviews were recorded and Zoom automatically generated a transcript.

Data Analysis

Interview transcripts and syllabi documents were included in the data analysis for this study. Verbatim transcripts were checked for accuracy, and corrected where necessary, and all recordings were listened to in their entirety, before the transcripts were loaded into NVivo 12 for coding.

Interview Transcripts

Corrected transcripts were read in their entirety. Initially, an open coding and inductive strategy was employed to identify emergent themes in the interview narratives. These themes are reported below via thick and rich narratives. Once saturation of the emergent themes occurred, the researcher once again coded the data, this time utilizing a deductive approach. The purpose of this second round of coding is to understand the role that the theoretical framework may play in understanding the graduate students' experiences with reusable assignments. Emergent codes included: application helps, examples of choice, increased/decreased confidence, impact, reuse at work, among others. Deductive codes were derived from the theoretical framework of andragogy theory.

Document Review

The systematic review of documents allows for a richer understanding of the phenomena under investigation (Hancock & Algozzine, 2011). All syllabi from the core courses within master's degree program in Training & Development were thoroughly reviewed. Syllabi were analyzed to understand the types of assignments students complete in this program. Data from the interviews and syllabi were loaded into NVivo for coding and used to further clarify the students' described experiences. Document review is employed in this study to provide both background and contextual information. Content analysis systematically and analytically applied, contributes to the descriptive and naturalistic inquiry (Merriam, 1998).

Findings

Following an inductive coding procedure generated a number of emergent themes from the 18 transcripts of individual interviews. These themes are presented here, as well as, verbatim quotes, submitted as specific evidence gathered in an attempt to answer the research question: How do working graduate students perceive reusable assignments impact their understanding of course content?

Numerous students describe how hands-on application and tangible practice aided their understanding of course concepts. Students engaged with the course assignments in various ways. Some students applied the artifact at work (either simultaneous to their course assignment or following submission). While others used work problems to create context for their conceptual understanding of the course content. Many students alluded to missed learning opportunities that may occur with other styles of teaching and assessment. Repeatedly, students expressed that applying concepts, skills and products at work, increased their understanding and retention of the course content. Numerous types of assignments were identified via the interviews, however the differentiation between disposable and non-disposable assignments

could not be triangulated via the document analysis of the syllabi. Unfortunately, the syllabi did not present assignment requirements and rubrics in the granularity that was required for a thorough content analysis.

Application of Course Concepts

One student explained in detail how they leverage their course created content at their actual place of employment: *“we have a course library so every time that I reuse an assignment at school, that library doesn't go away. We might deactivate it; we might change the learning elements with it. But we, rarely are we starting from scratch every time. It's an iteration of what's been done before. And so, in that way, reuse is applied almost in perpetuity. Because we're constantly modifying what exists in that library. And that starts with the assignment from school, very often.”*

This particular interviewee was able to direct their coursework to inform and create actual products that were designed for re-use at their place of employment. While not unique in this ability to double-dip, certainly not all coursework easily lends itself to the creation of a value-add product for use in the workplace. However, all students interviewed expressed appreciation for hands-on, applicable, and relevant course assignments. Students discussed the benefit of being able to apply their course content via the creation of reusable products and a direct application of the concepts at work:

“So ultimately like, I learn much more effectively, when I have an actual application where I can understand. Like, conceptual math, I understand the process for a lot of it like calculus and some physics, but it's hard to retain it, unless I have a real-world example to apply it to.”

Another student shared how they felt their learning, and specifically the application of course content, was an example of a universal understanding around the ways in which adults learn: *“People learn best by being able to apply information to areas relevant to them. And I think that's how we learn best and it's also how we remember and retain the most and so, I think part of why it's most memorable is because I was using the information I was learning in the class and being able to do direct application to something I was working on.”*

Students further recognized that applying their classroom learning on the job increased their understanding. For example, one participant stated *“It was clear that you learn much more by doing than by seeing or just rote memorization and I found that to be the case for me. So, every time I get to practice something, I learn deeper what it actually means”*. In particular, one student went into detail about a SWOT analysis, a concept they had reviewed on multiple occasions. However, in this instance, they immediately applied it by conducting a SWOT analysis at work: *“But I guess a detail of the other side would be working through it in a real way, as opposed to just with my class project, but working through it with real terms, real people... So, making that distinction I guess helped and applying it real world.”*

Students describe the application of concepts at work, and how that leads to a deeper understanding, however, they also spoke about the application of actual products and class artifacts in the work setting. When speaking about the construction of an actual assignment designed to be reused at work, one student explained that the process of creating a product may lead to a deeper understanding: *“it really challenges me to know whether I understand the material or not”*. Another explains how the congruency between work and school affects learning: *“I think it, it is more impactful because you're taking the content you're learning and applying it to your life experiences, doing what that content is talking about.”*

An Example of Client Work

One assignment that came up frequently was an example of client work wherein groups of students create a curriculum for a client. This assignment, a semester-long project within the Advanced Instructional Design class, required that the student groups work in a “consultant” type role, meeting with the client to obtain curricular requirements, design and development specifications, and to regularly update them on progress. At the end of the semester, it was expected that students deliver a product that the client can then implement. While this type of non-disposable assignment may or may not be incorporated into the student’s personal portfolio, one student found ways to make this project reusable at their own workplace by reusing the content, though not the actual product (as it was designed for another party): *“We’ve actually incorporated that into one of our trainings that we have upcoming ...So we’ve been able to incorporate the research that I did for that, into a training that we’re going to do for the agents...All those hours and articles are not going to waste.”*

Learning Beyond the Textbook

In addition, this type of assignment meets all the criteria of a non-disposable assignment as described by Seraphin et al. (2019), in that it certainly provides both an opportunity for assessment, as well as, impact beyond the student-teacher dyad. Students share their experiences of engaging with this type of client work, in particular that the process itself was tremendously beneficial in learning valuable skills and lessons, not necessarily obtainable via the reading of a textbook:

“There were some lessons that I learned that a textbook could not have taught me. We ended up making some mistakes which (the instructor) was like, I assure you, that’s kind of why you’re doing this, because you will. There’s no way you could read it, and then when you’re put in the position to make those decisions, to learn how to make those decisions from a

textbook...So it, it was a huge benefit to be able to actually go do it kind of in a safe setting. Because I'm pretty sure if that was my job, and I did that, I wouldn't have a job anymore."

A Missed Opportunity

However, not everyone spoke of the benefits of this project. While many students described this particular project and class as an opportunity to apply concepts and create content for "real world" use, one student who is highly experienced in the Training & Development field lamented the need to create a product that was not personally beneficial: *"It frustrated me a little bit because I felt like I put an entire semester into creating an e-learning project that was never going to be used by me... that's not something I'm ever going to use again at work. I'm not going to ever talk about it in an interview and I'm not ever going to, you know, put it in a portfolio...But, you know, for those of us in the workplace, it's frustrating when you're spending all this time doing something, you know you actually could be using and incorporating in your own job, but you don't have the opportunity to because it's outside of the parameters of the assignment."*

This student brings up an interesting point when they discuss the parameters of an assignment. In many cases, such as in the Advanced Instructional Design class described above, the assignment is created with the intention to create a product that can be used and leveraged. These types of real-world applicable assignments could be considered Open Assignments in that the practice of engaging in real world work evidences Open Educational Practices. The students are not merely receiving knowledge as consumers, but instead act as co-creations in a collaborative project without outputs that potentially can reach and benefit far beyond the classroom in which they were created. A student describes another assignment in another course and says: *"We were encouraged to pick something where we were actually able to deliver a solution or deliver something of value"*. In that way, instructors can craft the parameters of an

assignment to increase the probability that its output will provide value beyond the single point-in-time evaluation of learning. Instructors can develop a plan to either harvest the student work themselves as content for future courses, or they can encourage students to be thoughtful and deliberate about the direction of their work, effort, and intellectual property, to ensure that the artifact's impact is not limited to a course grade.

The Role of Latitude in Assignments

Certainly, however, not all projects are designed with an eye towards re-use. In many cases, the assignment was structured in such a way, or provided enough choice and latitude that the student themselves could design a product that both met course requirements and could be leveraged later outside the class. In these cases, the student themselves made the determination that their work could and should provide meaning and value beyond that single point-in-time evaluation of learning. *"I love it. I love being able to have the choice. Because I can decide what matters to me, like okay, this is what I do for a job, so I can do this...I know more about it and it relates to what I want to do, versus like some other assignment that I don't care about."*

Students explain how, when given latitude, they often prefer to direct their work towards creating an applicable product, or how using real-world examples help to direct their work: *"And then when I can relate it to a real life experience, I remember it much faster and easier... If she said 'don't use any real-life experiences', I would have been stuck like Chuck. Because I'm not good at making up stuff."*

Choice, either related to the format of the actual deliverable itself, or the latitude afforded by some projects to allow students to incorporate real-world examples or to structure their project in a way that was personally meaningful, is seen as beneficial: *"You create that paper, you give it to the professor and then it just sits in your hard drive for however long and you*

usually don't ever open it again. But having that particular assignment, having those choices. ...So, it's just a little bit more complex and I think as someone who facilitates adult learning, a better measure of whether people actually know how to use what you've taught them."

Working students appear to appreciate the ability to 'double-dip', that is to re-use content, concepts, and even class-created products in the workplace: *"I love the classes where the primary function of the class is that you produce something that you then can reuse at work"*. Beyond simply appreciating the ability to direct their learning and the opportunities afforded by the ability to double-dip, students describe an increase in motivation when creating a course project that they know will provide value at their place of work.

Increased Motivation

Students in this online master's program, are likely juggling multiple roles and responsibilities. This study in particular sought to interview students who were also working full-time in highly congruent fields. Previous work has identified that students in online graduate programs are more likely to be working full-time, and to have a family (Haydarov, Moxley & Anderson, 2013; Oliphant & Branch-Mueller, 2019). Students in this study spoke of juggling multiple responsibilities and many times, tied that balancing act back to the importance of reusable assignments: *"It's really beneficial, I think, to be able to try to use it and apply it. You know, because as you're learning it, there's the excitement and – you're eager to use it and apply it, to be able to turn around. And to do that has helped kind of keep the momentum and say okay I can, you know, get through this. Because at the end of the day, if you work 40 hours and then, you know, with the kids... Not sure that I would have kept pressing on. I probably would have but this has helped the motivation to know this is what I can do."*

Creating or keeping momentum, increasing motivation to complete the class assignments, and increased engagement with both process and product were emergent themes. One student explains why tangible and application projects are perceived to be of higher value: *“Because I would feel like I’ve got more skin in the game because I’ve, you know, spent my time my energy, my blood, my sweat my tears into creating it. And so, I’m going to want it to see it to be successful and to move on”*.

Another student explains the increased motivation of creating a reusable, versus a traditional disposable assignment: *“And I think when you do a throwaway paper, it’s so much harder. Oh my God, I just turned 30 last year and it’s so much harder to do things when I don’t want to now...And so I think school is such a choice....And to know that the choice that I made directly benefits the work that I love, is the benefit of doing assignments that I can apply to my work. If it’s a throwaway, it’s just like dragging my feet to do it”*.

Students describe an increased motivation when creating their product, when they know that it will continue to impact beyond the submission for grading. For many students, knowing that the assignment will go on to benefit them at work, improves their desire to create a quality product: *“And I think the reason I appreciated classes like this one, were because I could actually take what I was learning, and work with it and then actually learn it in a different way. Because I was using the information to create something that I could then use on my job.”*

The Continuous Cycle of Practice and Feedback

Students who are working and pursuing degrees in similar fields are uniquely positioned to use concepts and content created in a safe, academic environment, often improved through instructor feedback, and to leverage those products on the job. This type of feedback, however, does not only flow in one direction. Instead it can be thought of as a loop. Students use their

work experience to inform their understanding of course material. In turn, they use course content and products at work to provide value to their teams or work units. A visual model of this concept is presented below in Figure 3.1.

“I actively look at every single thing I read, or any assignment that I'm doing in class and think about how it can be applied. Now (that) I've gotten to that point; it is really not to me anymore like a like a theory that's out there. Everything I read now; I look for something that can be applied. So, I don't know if everybody does that, but it's something that I definitely do”.

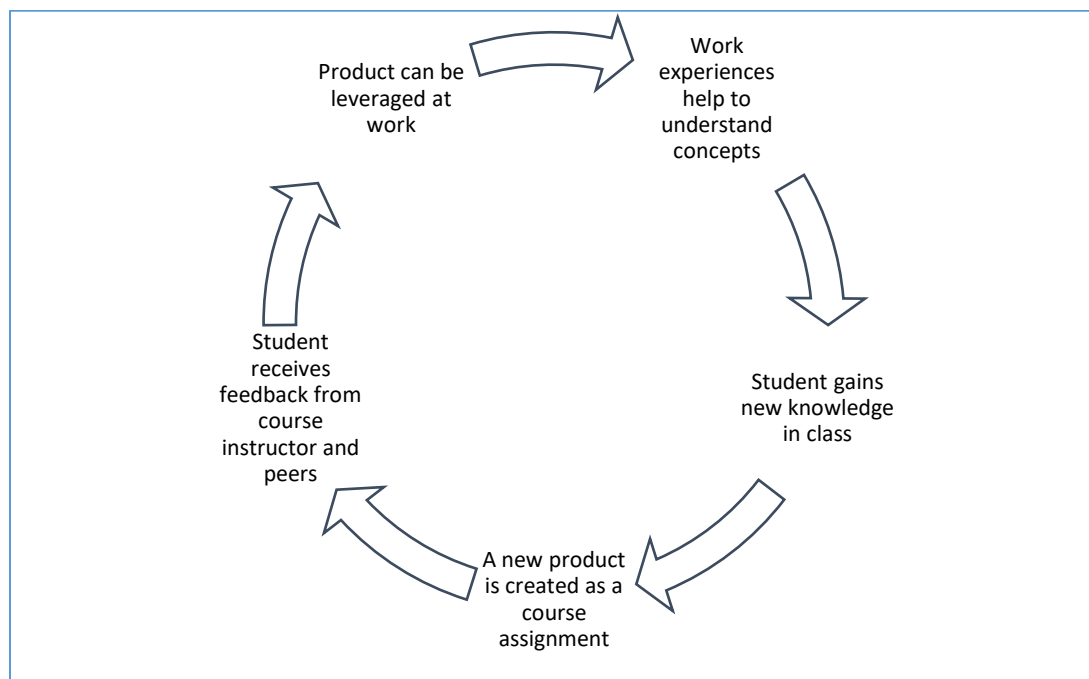


Figure 3.1 A Visual Model of the Work-Schoolwork Feedback Loop

Students who are able to engage with this feedback loop describe multiple benefits including the ability to immediately apply products and practice concepts in the workplace:

“I can say it this way. I think it will be different in almost, call it the follow up. For me, basically, you know, you go through some courses, you go through the course and you

learn in that vacuum and then it's over. And you're like, Okay, I'm done with that. And I think because of this experience of me actually being a local trainer and doing a strategic planning and evaluating with different groups, that I've been able to say, Okay, give me that, open that book up."

Learning and Retention

The congruency between the two domains of work and school may afford a synergistic understanding and application of content: *"I also kind of have found it not to be as difficult because I'm already in the field of training. So, I kind of have that advantage to some of my classmates, that I have had a lot of exposure to some of these things that we do in class. So, it doesn't feel as overwhelming for me"*. Certainly, many students see the benefit in work experience informing their understanding and perceptions of value of the course content. One highly experienced professional explains how pursuing graduate education later in their career may impact learning:

"I thought, Why did I not do this right out of undergrad, you know, and it could have just been done in two years or whatever? But then I realized as I progressed through, that my experience, like made assignments easier. Because there was a lot I had already done related to the coursework or I was able to direct my learning in a way that I felt like it was contributing to my job, or a project I was working on my job anyway, was able to count for an assignment that I needed to do".

Another student elaborates upon the synergy created by the high congruence of school and work. They explain how quickly being able to practice and apply course content may result in deeper learning and increased retention: *"I saw the actual concepts at work and being applied so that the application of the concepts...then it sticks in your head. I don't know. I'm one of those people that if I have an example where I apply learning...I remember it much better"*.

Feedback at Work

A few students spoke specifically of the feedback received at work, and how that can help to elevate their conceptualization and practice of the course content: *“Work informs the school assignment, like it gives you maybe some content, but I didn't think so much about how that feedback loop with my colleagues also made me adapt and edit my deliverables, my like, mini-papers for the course. So, it's kind of, it's a two-way street, actually”*, though it seemed to be more of a surprise realization than a foregone conclusion. A different student reflected: *“I've talked a decent amount about how school informs work but oddly enough, there have been more times than I expected, where work has informed school...so there have been times like that, where I didn't quite expect work to inform how I'm doing things in class. So that's been pretty interesting that they've both kind of overlapped at the same time.”*

This overlap, this feedback loop, this synergistic relationship between highly congruent domains of work and school, can benefit the student by deepening their understanding of the course material. As one student explains, it affords an opportunity to easily switch between the contexts and to situate learning: *“They strengthen each other a lot so they reinforce each other. And I actually find that to be really invigorating. It's not like I'm learning something that is a different...It doesn't require different mental energy because it's stuff I can apply in my day job and during the day I apply what I read at night. And they just tie into each other's pretty seamlessly.”*

Discussion and Implications

If a type of synergy exists when school and work domains are congruent, and if students feel that they are better able to learn, apply and retain a concept when they have the opportunity to practice it in the work-setting, instructors should seek opportunities to increase the potential transferability of, not only content, but also product from the classroom into the conference

room. Whereas students perceive deeper learning, as well as, value add when creating a reusable assignment, as opposed to a disposable one, this study cannot validate the intention of the instructor who either allows or even promotes such a practice. One student discussed how they attempted to bend every class project towards their particular assignment at work: *“So I guess the bottom line that kind of rolls it all together is: the benefits from allowing me to work on a project for work and as part of my coursework, as you know, as long as it's approved... It's a win-win. It's a win for industry and it's a win, you know, for the school and it's a win-win-win. It's a win for me as well.”*

One might begin to wonder why these types of win-win-win assignments are not ubiquitous throughout graduate programs, in particular the type of graduate programs that cater to working students. These types of hands-on, practical assignments are deeply supported by andragogy theory (Knowles, 1980; 1984) as often the assignment affords latitude, allowing the student to address a problem or pain point that personally appeals to them. In this way, the assignment may serve as a vehicle to the creation of a solution, thus the direction of the student's work is both problem oriented and informed by experience. The affordance of choice allows the student to personalize and self-direct their product. As the students expressed in their interviews, an increase in motivation is attributed to the perceived value-add of this product at work. Turning in the assignment and receiving a grade is motivating for some students; however, the creation of a product that can impact their work lives, increase their credibility, and that can potentially address a pain point can increase drive.

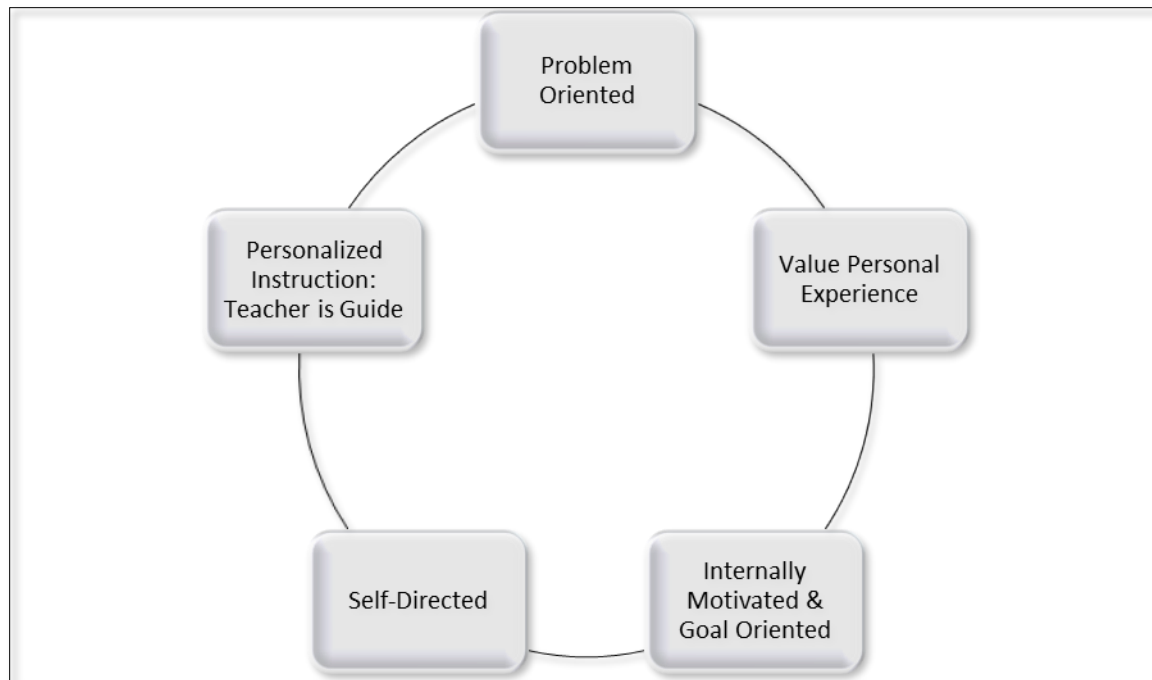


Figure 3.2 Knowles' Theory of Andragogy

Andragogy helps to explain the findings of this study. Indeed, many of the students themselves mentioned andragogy or ‘adult learning theory’ as possible explanations for their feeling that work that matters, matter more: *“So I think that's important because you know; for adult learners, what they do needs to be relevant, it needs to make sense for what they're doing”*. When students are able to direct the focus of their learning (and work product), when they are able to infuse context and experience into their learning, and when the schoolwork helps them achieve practical and applicable goals, students report a higher perceived value. Students, working and raising families, appear to appreciate the value-add of content and assignments that can immediately be applied. The learning becomes more relevant and immediate, and less about the long-term goal of obtaining a graduate degree.

On the whole, students express the desire for, and appreciation of, learning opportunities that respect their experience and expertise. Reusable assignments afford students the opportunity to create value and meaning beyond the single point-in-time evaluation of learning. Reusable assignments appear to positively impact student learning of the course content and may provide a slew of additional benefits.

“So whatever way that you can help students make those connections and begin to teach them this concept of, you know, your work can inform your coursework. And what you're reading should also inform what you do at work, like that symbiotic sort of circular thing... I think is really, really good. These people are going to walk away, remembering a lot more, and adding so much more value and also feeling like their degree was worth it... worth the time. You know, so those would be my final thoughts on that.”

Significance

This article reports on student perceptions of how reusable assignment impact their understanding of course content. This study contributes to the extant literature as another piece of evidence that reusable assignments are helpful to student understanding of course content. As reported in this work, student perceive these types of assignments to be useful and valuable, both at work and at school. The significance to faculty, who may wish to incorporate reusable assignments in their courses; to students who may wish to bend assignments to address pain points at work, and to the employers themselves, who may realize a higher value-add from student-workers, cannot be overstated.

Limitations

Certainly, all research inquires experience limitations. In particular, this inquiry is vulnerable in that it is tightly bound in scope. Only students within a specified program, who

also work full-time in a congruent field were interviewed. Therefore, we cannot assume that the findings of this study are in any way generalizable to other types of students.

Implication for Practice

The findings of this case study demonstrate that working students may benefit from congruency between the domains of work and school. Students report deeper learning and retention when they can easily transfer knowledge and product from school to work. In addition, students perceive value in feedback derived at work, as it informs and deepens their understanding of course content. As such, faculty of working graduate students may wish to incorporate these types of assignments, and to afford students choice and latitude so that they may self-direct the artifact of learning.

Future Research

The findings and implications of this study contribute to the budding body of literature on the use on non-disposable or reusable assignments. Future work could include the development of a consistent nomenclature and framework for application of this phenomenon. Additionally, studies inquiring into the benefits derived by students, instructors, and others should yield interesting findings, as would a quantitative look into student learning outcomes when reusable assignments are incorporated into curriculum.

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CHAPTER 4: A QUALITATIVE CASE STUDY INVESTIGATING HOW COURSE-CREATED ASSIGNMENTS ARE REUSED IN THE WORKPLACE

Abstract

Working graduate students juggle multiple roles and responsibilities. This study seeks to investigate whether a congruency between work and school domains facilitates the transfer of a product from one context to the other. Reusable assignments are course created products that are designed to provide value and impact beyond a single point-in-time evaluation of learning. This qualitative case study investigates the experiences of working graduate students (n=18) in the Master's of Training & Development program, and specifically the way in which they repurpose course created artifacts at work.

Introduction

As the Open Education movement begins to gain in awareness and popularity, researchers have begun to investigate not only the practice, but the products and resources that may potentially be created. While Open Education Pedagogy (OEP) often involves the incorporation of Open Educational Resources (OER) into its practice, it may also include the creation of these artifacts. However, not all student-created work becomes OER as it may not be in the public sphere and may not be licensed for public use. Indeed, work may not result in the creation of OER, as many times, the artifact is not designed to become course content. Occasionally, the product is designed to be reused by the student themselves, and perhaps even leveraged into the workplace.

This article reports the findings of the qualitative case study design with an emphasis on the usability and reusability of course created assignments at work. Findings related to finding employment or benefits at work that result from the assignment are explored. The population

(n=18) are working adult professionals who are enrolled in graduate level studies. In particular, this article seeks to address and report the findings of this research question: How do working graduate students apply reusable assignments on the job?

Interviews with the working graduate students were used to elucidate ways in which the students may have reused course created content at work. This article describes which benefits they may have experienced, as well as, their overall engagement with course created content within the labor market.

Problem Statement

If we do not understand the ways in which the products of assignments are used after a point in time evaluation of learning, then we cannot accurately describe the potential impact of reusable assignments. If students are not applying or using the products created outside of the classroom, then these types of assignments may be less useful than believed. By investigating the ways in which students interact with reusable assignments, and whether they leverage these products in their place of work, we can better understand the potential scope of impact when deploying these types of assessments in classrooms.

Purpose Statement

The purpose of this study is to explore how students are using reusable assignments beyond the classroom to better understand the potential value and impact of using reusable assignments in the classroom. This article reports the findings of the qualitative case study design with an emphasis on the ways in which course created content is transferred and used on the job. In particular, this article seeks to address and report the findings of the following research question: How do working graduate students apply reusable assignments on the job?

Literature

A non-disposable assignment, according to Seraphin et al. (2019), is “...any activity that: (a) students are asked to engage in as part of an organized course; (b) promotes student learning through the completion of the assignment; (c) affords assessment of students’ learning of course objectives; and (d) provides impact or value outside of the traditional student–teacher dyad. Further, in the context of this discussion, we conceptualize this final component as being fundamentally open, and thus as a type of OEP” (p.85).

The extant literature reports that the incorporation of non-disposable assignments can provide extraneous benefit to the students, however inconsistent nomenclature and conceptualization confound the ability to empirically investigate this phenomenon. Often viewed as evidence of OEP (e.g. Comas-Quinn, 2019; Duarte, Bulo, Posada, & Lozano, 2012; Otto, 2019; Paskevicius & Irvine, 2019), these types of course based assignments may be called constructivist (e.g. Croft, Duah, & Loch, 2013; Stafford, Elgueta, & Cameron, 2014) or collaborative (Donne, 2012; Matthew, Felvegi & Callaway, 2009) assignments. Student-created products include the creation of, or contribution to, a Wiki (e.g. Duarte, Bulo, Posada, & Lozano, 2012; Matthew & Felvegi, 2009; Stafford, Elgueta, & Cameron, 2014), the creation of digital tutorials (Croft, Duah, & Loch, 2013), and even the making of videos and podcasts (e.g. Doubleday & Wille, 2014; Goodenough, MacTavish, & Hart, 2013; Lee & Wicks, 2010).

Reported learning-related benefits to students who engage in the creation of these non-disposable assignments include an opportunity to practice critical thinking skills (Dale & Povey, 2009; Reyna & Meier, 2018; Wheeler, Yeomans, & Wheeler, 2008), and an improvement in study habits (Croft, Duah, & Loch, 2013; Donne, 2012; Hubbard, Jones, & Gallardo-Williams, 2019). Numerous studies have also reported on increased motivation due to the visibility of the

final product (e.g. Hadjerrouit, 2012; Hilton et al., 2019; Lee & Hannafin, 2016; Lee & Wicks, 2010).

Students are not the only ones who may benefit from these types of assignments. When the student-created product is harvested to become content for future courses, subsequent students benefit. Additionally, by using student work to enrich a course, the instructor saves time creating content themselves and/or learning the requisite required skills necessary to create these products (Croft, Duah & Loft, 2013; Otto, 2019). However, there is a dearth in the literature concerning student reuse of course created products in the workplace.

Method

A qualitative case study design has been selected to offer depth of investigation (Ambert, Adler, Adler, & Detzner, 1995). Crowe et al. define the case study design as a “research approach that is used to generate an in-depth, multi-faceted understanding of a complex issue in its real-life context” (2011, p.1). Similarly, Merriam describes case study research as “an ideal design for understanding and interpreting observations of educational phenomena” (1988, p.2). As such, a qualitative case study design was selected to examine student experiences with reusable assignments, both in and out of the classroom. Baxter and Jack (2008) describe a rigorous case study as an occasion to “afford researchers opportunities to explore or describe a phenomenon in context using a variety of data sources” (p.544). This case study seeks to understand the experiences of working graduate students who complete reusable assignments as a part of their course work. This phenomenon is highly contextualized and highly subject to each student’s individual experiences and unique work/school situation.

Merriam’s (1988) explanation of the special characteristics of qualitative case study research will be used to guide this inquiry. She explains that case study research should be

particularistic, meaning that it shall focus on a singular particular phenomenon. This research will focus on the particular experiences of working graduate students who encounter reusable assignments. In discussing the characteristics of ‘descriptive’ and ‘heuristic’, Merriam posits that a case study shall generate a rich and thick description that illuminates a reader’s understanding of the phenomena. Accordingly, this study aims to report a narrative that will deepen the understanding of how students engage with reusable assignments. Finally, the inductive nature of a case study inquiry guides the approach, in that this study seeks to discover the vivid, contextual, and highly personalized practices of the working graduate students.

Setting

This study is set at a large land-grant, research intensive, university in the American Southeast, that grants both master’s and doctoral degrees. This site was selected due to its potential to provide critical case opportunities; that is to say, it is highly likely that students who hold the dual roles of graduate student and employee will be able to describe their experiences with the reusable assignment.

Participants

A purposeful sampling method was employed to elicit participants for individual interviews over the videoconferencing application, Zoom. Participation was solicited via an email from a ‘gatekeeper’ within the program. Students self-selected and then were screened against the inclusion criteria before participating. Participation criteria included: (1) Graduate student status, or completed graduate degree within the last 12 months, (2) working full or part-time in a field of study, or a closely related field (or was during their graduate studies), (3) has taken, or is currently enrolled in, a course that employs reusable assignments and (4) student is available and willing to meet for an interview.

Data Collection

Participants (n=18) included two recent graduates of the Master's degree in Training & Development, 14 current master's students, and 2 students in the associated graduate certificate in Teaching, Training & Educational Technology. Each individual interview lasted approximately one hour and was recorded via the videoconferencing application, Zoom.

A semi-structured interview protocol was followed, including *a priori* questions, as well as, the opportunity for clarifying and follow up questioning. The researcher restated and summarized information during the interview to ensure accuracy and respondent validation. The Zoom application automatically generated transcripts, which were reviewed and corrected by the researcher, who also listened to all recordings in their entirety.

Data Analysis

The data were loaded into NVivo 12 for coding. Transcripts were read in their entirety. First, an inductive coding process was used, looking for themes to emerge from the interview transcriptions. Emergent codes included: application helps, reuse at work, increased confidence and impact, among others. Following a thorough coding of all documents, the data was coded a second time, using a deductive method to identify connections to the theoretical framework (Merriam, 1998). Deductive codes were derived from andragogy theory and are discussed in detail below.

Findings

Overall findings include that students appreciate the application and relevancy of reusable assignments, perhaps even more so than a traditional, disposable assignment. Students report and increase in motivation when they feel their work product will matter and will provide value following the single point-in-time evaluation of learning. For many students, the ability to

address a pain point in the workplace, or an opportunity to gain credibility, or affect change, at work is highly motivating. Reusable assignments discussed include a variety of artifacts, produced in variety of courses, within the program.

Class Provides a Framework

Participants varied in their levels of experience and expertise within the field of Learning & Development. At the high end, some students had been working in the field for 20 years, at the other end of the spectrum, were students who were crafting their jobs to pivot towards a training role. Whatever their experience and expertise, students appreciated the structure inherent in creating an assignment for class:

“So, it really gave me a good framework from which to build...not only the training content, but really the project management aspect of it, like, making sure I got things done in in a sequential manner. Making sure I didn't leave anything out, you know. Starting with a needs assessment, because I had a whole deliverable just on needs assessment and then it was design of the training, then it was development, implementation and then it was evaluation. Those are the four main deliverables. So, it really gave me a good framework.”

One example shared was a highly experienced professional who was tasked with creating a needs assessment for the ‘Needs Assessment and Task Analysis in Training & Development’ class, a required, core component of the master’s program. This professional had a pain point at work and chose that as the topic of their needs assessment assignment for class. This assignment encourages students to identify a real need. Four deliverables are due in the course, wherein students must report on the organization itself, the relationship between various stakeholders, the process of conducting the assessment and the findings. Whereas the student had done this kind

of work for many years, they describe it as less formal and less structured than what was required by the course assignment. In addition, because certain components were required for the assignment, this professional had to take on a more active and advisory role than they might have otherwise:

“I went in with more senior level people that I normally talk to. It is really one thing to talk to a department HR Rep and consult with them and tell them what they need to do, I’ve been doing that for years. But to go in and meet with senior directors, like more senior level people, and to tell them, ‘look, this is what I think you need to do’ is a different feeling. And I have had those conversations before, but I felt like in those situations, I was a little bit more back on my heels and I was a little bit more like ‘okay whatever you need me to do. Okay, whatever you need me to do’. And this case, I was like, ‘that’s not going to work with the needs assessment. I can’t just be like letting them run over me. I need to give them framework or we’ll get nothing done’. So, it gave me the framework to be confident and to lead the discussion, as opposed to react to the discussion”.

Similarly, another student in a different course, remarked upon the structure inherent within the course assignment and how that helped them to create the actual product, which was inherently designed for course submission, as well as, use at work. This student approached their supervisor, notified them of the class assignment, and brainstormed a way to create a product that would provide value in the workplace. The course assignment helped to create a higher quality product and provided the student necessary structure:

“Now having the framework, having the framework of having to do it for a class...so it’s like you already kind of have, like a rubric you have to respond (to) for the assignment.

When you submit the assignment and kind of having that timeline, you don't feel so kind of out on your own, like rudderless. You feel like there's a path. This is what I have to do, this is the rubric, this is what I need to accomplish for the class”.

Rubrics and assignment requirements aided the students in formalizing their processes and helped to ensure that no critical components were omitted. This likely resulted in a better work product, as compared to what the student may have created without the need to turn in an assignment for a course grade. In this way, the participation in graduate studies not only improves the student’s future labor-market outcomes, it may also improve their credibility and effectiveness at work, immediately.

Student Benefits

In the interviews, students mentioned not only the benefit derived by the structured framework of a course assignment, and the way that format helped improve their final work product, they also discussed the benefits they realized from leveraging a course created artifact into the work setting: *“It made me feel so competent. I felt like I could truly help people”.*

Another student shared: *“The other was just the confidence that it gave me to say, ‘you’re already doing this right’, which is something I think that has been so valuable for me because...I don’t have a whole lot of training experience. I’m gonna kind of have to fake it till you make it”.*

Increased Confidence

In addition to improved confidence due to skill in the workplace, students expressed how real-world application of work related material into the academic setting was helpful: *“Those are the ones that I feel the safest in because even though you know, I’m almost 10 years out from graduating undergrad, I’m still myself and that fear of ‘do I know what I’m doing?’ and ‘Am I okay at this?’, and especially a graduate school, it’s you know, it’s a bigger level, it gets really nerve wracking sometimes”.* The same student goes on to explain how they find academia to be

intimidating. When graduate level work can be tightly bound to their work expertise, they feel more confident in the value they can add to the conversation: *“Yeah, it makes it something that I can be a part of and that I know I'm invited to that party”*.

Another student shares a similar feeling, in that they have the content knowledge and expertise but may lack confidence in some academic type skills: *“It's the papers that aren't my favorite thing that I feel like is kind of my weakness, like I just want to talk about it, let's have a conversation. Let's debate it. Let's see. Because I have the experience to support it. I'm not so much big on the paper writing, but it is what it is”*.

Beyond increasing confidence in the graduate studies by incorporating relevant work experience, the close tie to application can also help foster an environment conducive to learning. This student explains how their medical diagnosis can affect learning, and also confidence in pursuing graduate studies. This student discusses how practical, hands-on and relevant assignments help them to understand and retain course concepts: *“I have an ADHD diagnosis, but only received it two years ago. So, I have, I think it's called, type two inattentive type. So ultimately like, I learn much more effectively, when I have an actual application where I can understand”*.

Students have Limited Bandwidth

Students enrolled in online graduate programs are more likely to be working full-time, and to have a family (Haydarov, Moxley & Anderson, 2013; Oliphant & Branch-Mueller, 2019). These students chose to pursue graduate studies but must also juggle the additional responsibilities that come along with assuming the role of graduate student. For many, the thought of spending time, effort and mental energy to create an assignment that essentially provides no value after it's submission to the instructor, feels like a waste: *“And I think when you do a throwaway paper, it's so much harder. Oh my God, I just turned 30 last year and it's so*

much harder to do things when I don't want to now...And to know that the choice that I made directly benefits the work that I love, is the benefit of doing assignments that I can apply to my work. If it's a throwaway, it's just like dragging my feet to do it".

One graduate student, also a working parent, shared the following thoughts: *"It's really beneficial, I think, to be able to try to use it and apply it. You know, because as you're learning it, there's the excitement and the your eager to use it and apply it to be able to turn around. And to do that has helped kind of keep the momentum and say okay I can, you know, get through this. Because at the end of the day, if you work 40 hours and then, you know, with the kids...not sure that I would have kept pressing on. I probably would have, but this has helped the motivation, to know this is what I can do".*

Numerous students commented on the mental energy required by graduate studies. Some explain that when work and school are congruent, they do not have to switch contexts when they leave work and go home to study. The overall concepts are the same, and the student found that helpful. Another described a 'washcloth being wrung out' when explaining the feeling of tackling schoolwork after a long day at work. Overall, students seemed to have mixed feelings about pursuing graduate studies on top of their other commitments, however, the vast majority describe high levels of organization, time management and decreased leisure time as the mechanisms employed to ensure success. One student went into detail about how a reusable assignment benefits the student who must meet numerous responsibilities: *"This is why reusable assignments are so critical. They're so critical for people who work full time, or part time, for stay at home moms, for working parents; to be able to connect for time value alone, to have reusable assignments that connect to their work and connect to their school, A) you're going to*

learn so much better because it's practical application, and B) if you have that much going on, you have a limited amount of time to focus”.

Benefits to the Workplace

Students have described the ways in which their assignments can contribute to greater understanding of course content, increased confidence in the academic arena, and a perception of using one's limited time in a wise manner. However, it is clear that the student is not the only one benefiting from non-disposable assignments. If the creation of the product results in an artifact suitable for future course use, the instructor themselves, and subsequent students may benefit. This is certainly the premise of the student-creation of OER, as seen in the extant literature. If, however, the reusable assignment is designed to be reused in the workplace, then the industry or its clients may benefit from the student-created product.

Examples of Reusable Assignments

Students discussed a variety of opportunities to transfer their learning from the classroom to work. While they reported value in open discussion forms, networking with other student-professionals, and a general increase in content knowledge due to undertaking graduate studies, many students discussed the opportunity afforded by the class project that can be 'picked up' and reused at work. Numerous examples were shared in interviews including:

- a needs assessment on the business processes of a global software company
- a needs assessment on the hiring practices within a research-intensive university
- a needs assessment on research ethics training, leveraged at two separate research-intensive universities
- a curriculum design for staff within a nuclear power plant
- a curriculum design for faculty to transition to online classes

- an evaluation plan for an executive coaching program

Clearly, the products created were as varied and diverse as the students and their industries. Students explained how in many cases, the pain point existed but was not being addressed. Once assigned a project requirement in their course, students found the time, framework, and desire to address the problem. Some students felt that *kismet* was at play, they enrolled in the right course with the right assignment, at exactly the right time: *“Oh yeah, I’m definitely creating it for myself. (when the instructor introduced the assignment) ...I was like, This is what I want to do ...And I was like, I’ve been trying to paste stuff together to kind of create my own, like in a way, I’ve already been doing this. So, this is actually just put it into, okay really write it out, get it planned out where I can pass it along to, you know, another colleague if need be. So, this has been perfect for me, for this class.”*

Another student explains: *“I’ve been lucky that a lot of stuff that I have learned in my courses, I have been able to almost immediately put them into practice or start working on developing you know into my work.”*

Impact

Whether the course assignment comes along at the ‘right time’, or whether students actively look for a problem to address for the purpose of a class assignment, when the product is created for use at work, clearly work benefits. Table 4.1, below, showcases some student quotes regarding the impact of their reusable assignments in the workplace.

Table 4.1 Selection of Student Quotes Regarding Benefits of Reusable Assignments

Participant	Quote regarding impact or benefit of reused assignment
1	They've been able to see how much better I am as a trainer. So, I think it's impacted their business and I think especially in the assessment debriefs that I give, it's made an impact on the other people that I work with.

Table 4.1 (continued).

2	(In the training) We really heavily focus on the general population's safety. Because, if they can stop any event, that of course, makes the general public safer.
4	Work gets a better product and...I gain from a better understanding and (from) a professional standpoint I benefit from that. Um, well, obviously the learners. They get...when, I feel like when we do our job correctly, then they're set up for success.
5	Even I mean if you wanted to trace that back in a financial way... I'm saving the institution money by not having to pay a person to be in a classroom.
7	It made me feel so competent. I felt like I could truly help people. I didn't feel like I was going to walk into a room and have absolutely no idea how to start a conversation. Some of the folks in that room are high level, there were senior. Um, I felt like I was an expert. I felt like I knew what I was doing. Granted, I'm sure that I have a lot to learn still. But it just gave me confidence.
7	Okay, how I would describe the mission of this group if you summed it up is 'they're trying to save the world'...But this is the impact: if they get qualified people, and especially then get permanent qualified people, people that can stay on; I think that it continue to give them more grants and could continue to allow them to do really, really useful work that is going to better humanity
9	So, I do this training for the field officers and then they can eventually reach thousands and thousands of women. Because they go train the promoters...then the promoters go train these care group volunteers and the volunteers go out and train...so you end up reaching, you know, like 6000 people.
10	I can give you a number so just in a strictly dollar amount, my company has benefited
14	It may have given me a little bit of credibility to the team as I'm trying to venture into a different part of the, you know, job.
16	I mean, people are super impressed with this needs assessment. Um, so it benefits me in that I am able to produce a higher quality product...For my customers or my boss or leadership and I think it directly benefits me too because I'm retaining it more
17	So, it would actually impact our global training. So, we have about 75 people (in this division) globally ...we do all of the core training so onboarding of new employees, the sales training, compliance training.

Student work, created for different classes, and resulting in disparate assignments, can create impact beyond the single point-in-time evaluation of learning. Indeed, these artifacts can provide value in the workplace in a number of ways.

Discussion

The products investigated as a part of this inquiry are diverse, as are the students and their experiences. As such, the impact varies widely. When applying Seraphin et al.'s (2019) three-part framework of time, space, and gravity; we see that many of the examples listed above would fall in the high end of these domains. Surely, guaranteeing public safety, and facilitating world-changing research would be classified as high-gravity. Knowing that each of these products began as a kernel, created for a course grade, but with far-ranging implications should change the way in which graduate faculty create course assignments.

Just as students are individuals, the work experience and personal interests that they bring into the classroom are diverse and varied. When course-based assignments are created with an eye towards choice, and afford latitude, students may elect to use their workplace to inform their product. As this study has shown, they may also use the product in the workplace, allowing for greater impact and value than seen with a traditional, disposable assignment. The flow need not be conceptualized as one-directional, instead this type of feedback can be thought of as a loop, in which work experiences inform the construction of concepts at school, which results in new knowledge feeding back into the work context. A visual representation of this model is presented below in Figure 4.1.

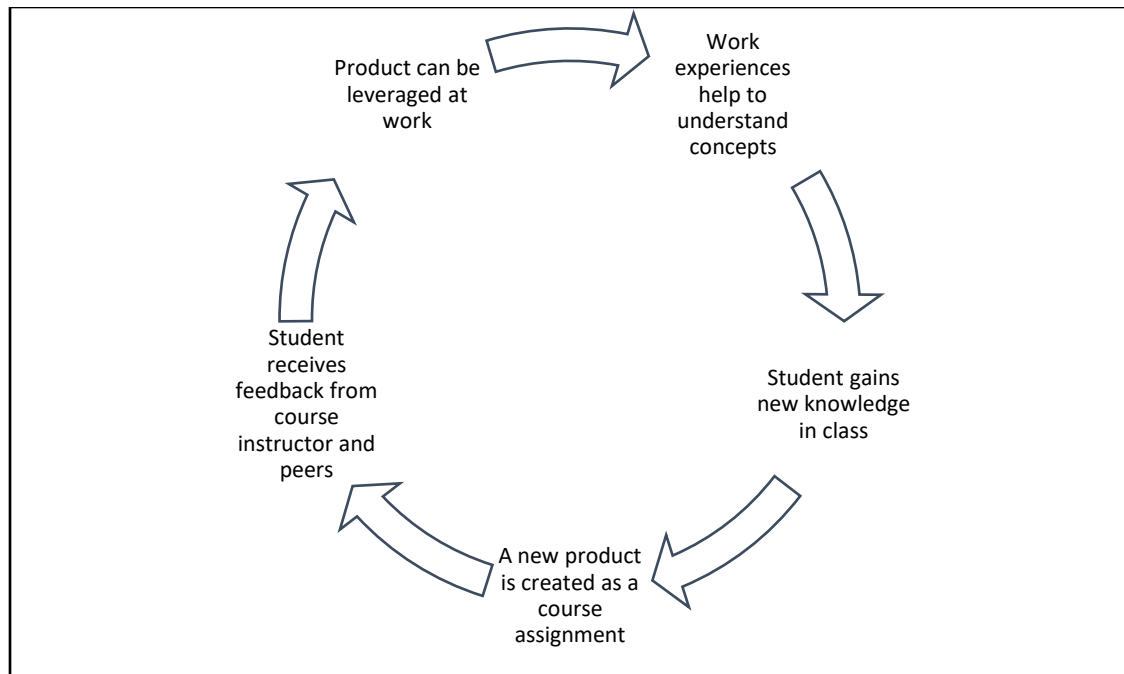


Figure 4.2 A Visual Model of the Work-Schoolwork Feedback Loop

As Harjouddri (2012) describes in his review of a largely failed experimentation with the incorporation of a wiki, moving a traditional assignment into a digital space simply to incorporate technology into the classroom, will not necessary produce the same gains in deeper learning, metacognition, motivation and collaboration that is seen in other student-generated interventions. Ultimately, the assignment that will prove the most engaging to a student is one in which the outputs (and not just the outcome in the form of a grade) matter. To situate an assignment within a practical and relevant real-world application is to activate a student's problem-solving abilities and creative thinking (Reyna & Meier, 2018; Wheeler, Yeoman & Wheeler, 2008). The student's project suddenly becomes high stakes, however with sufficient scaffolding in the form of peer review, instructor feedback and iterative processes, that it is not personally risky.

In 2015, a report out of Georgetown University found that 76 percent of graduate students work at least 30 hours a week (Carnevale, 2015). While students juggle multiple roles and responsibilities, this study suggests that working while in graduate school does not necessarily present only challenges. Indeed, many students report benefiting from the synergy created by highly congruent fields of study and work. Course assignments, which can be leveraged at work, also afford students a safe place to practice new skills. The feedback received by peers and the course instructor, provides an opportunity for improvement or iteration, before bringing the product to work for deployment. In this way, students report higher confidence at work; they know their process and product is good as it has been validated by the class instructor. The course structure provides a framework, a blueprint to follow, for the construction of their product.

Likewise, having work experience and expertise allows these students to contextualize the concepts and theories learned in class. Course content is no longer conceptual and theoretical, instead, as students employ this new knowledge at work, it becomes practical and applicable. Students also report that the confidence and high degree of skill they have from the workplace can help to alleviate the insecurities felt in the academic world.

Ultimately, the student benefits greatly; gaining knowledge, skill and confidence. The feedback loop affords them the opportunity to create a new product in safety, as well as, the opportunity to deploy it at work, often resulting in increased credibility and, in one case, accolades and awards. The student who ‘double-dips’ may not feel as overwhelmed with the multitude of roles and responsibilities they must meet; indeed, their time, effort and intellectual energy can create a product that provides value in the two discrete domains of school and work.

It is not only the student who can benefit from the incorporation of reusable assignments. Impact and value may be felt in the place of work, as explored in this article. Value may also extend to the greater good in some cases, such as the example of training for nuclear power plant operators. Indeed, other studies have explored the potential public benefits of student work by contributing to high profile wikis such as Wikipedia (e.g. Apollino, Broyde, Azzam, Heilman & Brock, 2018; Azzam et al., 2017; Duarte, Bulo, Posada & Lozano, 2012). This study contributes to the body of literature demonstrating that student work can provide value, outside the classroom walls, and past the point of evaluation. Not all student-created products result in such high-profile artifacts as wiki creation, nor are they all openly licensed, as would be required to meet the definition of OER. Still, the potential value of student work cannot be underestimated. As this study demonstrates, students are capable of much greater things with their 2 billion hours of homework time (Wiley, Webb, Weston & Tonks, 2017).

Study Limitations

This study attempts to investigate the ways in which working students engage with, and reuse, materials created in class, for their continued professional or personal development. As such, this case study examines the experiences of a few individuals. The major limitation of this study is that student experiences with reusable assignments will be limited by the scope of time. It is possible that students who have graduated many years ago would hold different viewpoints on the usefulness of their course constructed work. However, this study is limited to current students and alumni who have graduated within the last 12 months, from a specific program of study, at a specific university.

Significance

To date, the literature has examined a variety of non-disposable assignments and their potential outputs and outcomes. However, this study may be the first to examine the specific ways in which students interact with reusable assignments by leveraging these products in their place of work. By contributing to a deeper understanding of the ways in which the products of assignments are used after a point-in-time evaluation of learning, we can more accurately conceptualize the potential impact of reusable assignments. These findings indicate that students are applying and using the course-created products created outside of the classroom, proving the potential value and usefulness of course artifacts.

Implications

Students, their employers, and other stakeholders benefit when course-created artifacts can be reused at work. Students describe a deeper understanding and perceive additional relevancy of course content when they are able to infuse experience and expertise from their place of work, to aid in the contextualization of course content. In addition, they report higher motivation and engagement when the product created for the classroom, can also be used in the conference room. The study demonstrates the potential scope of impact of reusable assignments is large and promising. Graduate faculty may wish to consider implementing these types of assignments into their courses. Employers may wish to support prospective student-professionals by offering tuition support programs.

Conclusion

Given the types of research questions that frame this study, a qualitative case study method of research has been selected as the appropriate methodology to guide this investigation. The case study is bound by many factors including time and the selection of sample participants,

and by the graduate program within a particular university. However, findings indicate the student benefit from the congruence between work and school and that reusing course created artifacts in the workplace creates benefits for both the student, and the employer.

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CHAPTER 5: SUMMARY AND IMPLICATIONS

Summary

The articles presented in this dissertation focus on the use and reuse of course-based assignments by working students. This collection of manuscripts attempts to add to the body of literature, by summarizing the extant literature, proposing an additional typology, and by sharing the findings of a qualitative case study. The overarching research objectives guiding this inquiry are:

Research Objective #1: Investigating working graduate students' perceptions of the impact reusable assignments have on their understanding of course content.

Research Objective #2: Examining how working graduate students apply reusable assignments on the job.

The articles presented here are an attempt to better understand the ways in which students engage with reusable assignments, and what benefits we might expect from the incorporation of these types of assignments into courses. An overarching theme, and the theoretical framework of this dissertation, is the theory of andragogy (Knowles, 1975; 1990). That is to say, the theory that posits that adults learn, and are motivated to learn, in fundamentally different ways than children. Knowles suggests that adults are not passive recipients of knowledge, but instead active co-creators of it. As adults engage in learning, they are typically goal-oriented and self-directed.

Chapter Two presents an integrative review of the literature. Findings indicate that indeed, the extant literature supports the hypothesis that non-disposable assignments may result in better learning outcomes. Existing studies report that students' objective course grades (e.g. Stafford, Elgueta, & Cameron, 2014; Wiley, Webb, Weston & Tonks, 2017), as well as student

perception of learning (e.g. Bartle, Longnecker & Pegrum, 2011; Dale & Povey, 2009; Hilton et al., 2019; Reyna & Meier, 2018) increase with the incorporation of these assignments. Chapter Two also reviews the existing literature and attempts to summarize the benefits to students and to others by the incorporation of reusable assignments. This chapter also proposes an extension to the framework and definition proposed by Seraphin et al. (2019) and proposes sub-categories to aid in the conceptualization and differentiation of the types of non-disposable assignments found.

Chapters Three and Four present the findings of a qualitative case study inquiry regarding student perceived learning outcomes and benefits of reusable assignments. Again, andragogy can aid in the interpretation of these findings. Students report better and deeper learning when content is relevant and applicable to their work lives. They also report an appreciation for assignments which can be work informed (andragogy supports adults' prior experience) and reused at work to affect change (andragogy supports goal-orientated learning). Students describe a sense that the assignment is more valuable and meaningful and that they have more "skin in the game".

Chapter Three specifically inquires into ways in which the incorporation of reusable assignments may improve student learning. Students share their experiences with relevant, applicable assignments and discuss how they feel the ability to immediately implement new skills or products at work can deepen their learning. Students share how the ability to bring experience and expertise gained in the workplace, into the classroom, helps to alleviate some of the fears that may be felt around academic endeavors. Students also discuss how motivation to create a course-based assignment, and even to continue on in the pursuit of graduate studies, is increased when they realize immediate value from their learning.

Chapter Four seeks to uncover specific examples of reuse at work, as well as, the benefits derived from this transfer of artifacts from one context to another. A dearth exists in the literature regarding reuse of course-created assignments in the workplace. This article seeks to highlight this practice and demonstrate the potential value-add of this practice. In this chapter, students describe a variety of assignments that they were able to transfer into the workplace, including needs assessments, curriculum designs, and evaluation plans. They also discuss the benefits they personally realized, as well as, the potential business impact of their school artifact.

Particularly for working students, enrolled in an online program of study, the ability to use their time wisely to create something of value beyond a single point-in-time evaluation of learning, seems to be highly motivating. Knowles' Andragogy Theory supports problem-oriented, goal-driven, and differentiated learning. The articles presented here employ this theory to aid in understanding a highly complex phenomenon.

Practice Implications

This collection of articles has investigated the use and reuse of course-created artifacts by working students. Students reported on their experiences with reusable assignments, how they personally have benefitted, and how their learning has been affected. Findings from this research are used to generate recommendations and implications for practice.

Implication for Practice 1: Increase Awareness

The first implication for practice is to inform potential students of the possible immediate value-add of graduate studies. Quite a few of the participants in this study said that they were pleasantly surprised by the immediate relevancy and applicability of both course content and course work. Many participants believed that graduate school was a long-term endeavor, paying off in many years, once the degree has been earned. If, as this dissertation has attempted to

show, opportunities are immediately available for students to demonstrate growth and skill at work, then potential students should be made aware of this. Successful marketing to potential working students would demonstrate the possibility of transferring course-created products and knowledge into their place of work immediately.

Implication for Practice 2: Create Assignments Offering Choice

A second implication for practice is the affordance of choice so that students may self-direct their learning, as well as, the creation of the artifact of learning. In some cases, the course assignment was created with an eye towards applicability, by which instructors suggest (or possibly require) students to use real-world problems to inform their projects. One course assignment required client work, so that students were creating a curriculum designed for deployment by a real client, in a real setting. Other assignments afforded choice and latitude so that students themselves could choose to direct their work product to create something that would be meaningful or impactful at work. Therefore, practice implications for graduate faculty include potentially creating assignments that are *designed* to provide value and impact beyond a single point-in-time evaluation of learning and/or to structure assignments loosely, so that students can self-direct their effort, time, and intellectual contribution. Students should be supported and encouraged to use real-world experience, context, and problems to inform their schoolwork. Most importantly, students should be given latitude so that they may personalize assignments to meet their individual needs. Student choice, it seems, matters a great deal to students.

Implication for Practice 3: Faculty Professional Development

Finally, faculty wishing to implement reusable assignments into their courses, would also benefit from support. Professional development on incorporating OER and Open Textbooks into

classes are currently being offered. Faculty development of the potential uses and benefits of reusable assignments should also be made available. Faculty wishing to engage in work-informed, self-directed and goal-oriented evaluations of learning should have access to the support and mentorship necessary to ensure that they, and their students, experience success in this endeavor and maximize the potential of student work.

Policy Implications

Policy implications center around the availability of funding. Many of the practices of the OEP movement, including the replacement of traditional, costly textbooks with OER, are driven by a desire to reduce cost and improve access for students (see Hilton, 2016; Kermanshachi & Nipa, 2018; Woodward, Lloyd & Kimmons, 2017). Even with these innovations, issues of access abound. While the policy recommendations presented below cannot possibly address all barriers, an increase in the availability of funding to part-time students who are also working, could mitigate some of the challenges associated with undertaking graduate studies while working full-time.

Implication for Policy 1: Tuition Waivers and Reimbursement

Almost half of the participants (n=7) of this study worked for institutions of higher education, thus they were eligible for tuition waivers. Many students spoke of the opportunity afforded to them by the waiver, and the support of pursuing additional studies that is endemic in institutions of higher education. One student shared how they may forgo professional development opportunities but can avail themselves of their institution's tuition waiver:

“Because we have access to the tuition waiver program...we can take three classes a year. So, I will not have paid a single penny, other than buying books to get this master's degree.”

Another student, a working parent, explains how the tuition waiver program not only facilitates, but makes possible, their pursuit of higher education: *“I mean, there’s no way I would be able to do it if it weren’t for that (the waiver). I probably wouldn’t have chosen to do it because...I just, you know, don’t have \$15,000 laying around and I’m still paying on my undergrad college loans and I have one child in college.”*

Without tuition waivers and reimbursement programs, many talented individuals may find the barriers of graduate education to be too high to surmount. Waivers in this state’s university system are policy. However, a gap exists in the tuition reimbursement opportunities for employees in the private sector. The first policy recommendation is to expand tuition waiver and reimbursement programs. This study demonstrates an immediate and important impact to the employee-student’s workplace. Tuition programs are not merely investments in the future; instead, the employer can expect to be immediately and positively impacted by high-quality student work.

Implication for Policy 2: Access to Scholarships

The second policy implication also pertains to funding. A great number of scholarships, grants, and fellowships are reserved for full-time students. Of the 18 interviews conducted as a part of this study, only one participant was engaged in full-time coursework (9 semester hours). Thus, the large majority of students do not have access to additional monetary support. Without the ability to access scholarships and grants, and without tuition reimbursement programs, the barriers to attending graduate school may be too great. As students have shared, the impact on their lives, leisure time and finances are difficult to endure. Increasing opportunities for funding, particularly for students who have the chance to immediately apply their knowledge, may lead to an increase in innovation. Part-time students should not be devalued and under-funded.

Future Research

While this dissertation aims to contribute to the existing understanding of non-disposable and reusable assignments, the results and implications of this study also provide a foundation for future research. The findings presented in this collection of manuscripts indicate that students transfer not only content, but product, into the workplace. This finding was significant in the scope of this study with most students reporting a reuse of content at work, and many sharing multiple examples. Given the dearth in the literature regarding the practice of leveraging course-created content in the workplace, researchers should further study the scope and frequency of this phenomenon.

Implication for Research 1: Validate the Proposed Extension

First, the proposed typology and sub-definitions described in Chapter Two should be empirically validated. The proposal includes a previously enigmatic assignment, the *reusable assignment*, designed to be leveraged at work. While Chapters Three and Four attempt to share student experiences with this phenomenon, more research is needed to clearly articulate and differentiate between the various proposed sub-categories of non-disposable assignments.

Implication for Research 2: Replication

Second, a quantitative study would enrich and deepen the understanding presented in this qualitative work. A mixed methods investigation could further contribute to our understanding of this phenomenon. Indeed, replication of this research in any context, can also help to further our awareness and conceptualization of these types of assignments. And third, additional inquiries into the experiences of other students, in other programs, would greatly contribute to the conceptualization of non-disposable and reusable assignments. A replication of this research,

perhaps in another setting (such as an urban community college) or with vastly different participants would be beneficial.

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APPENDICES

Appendix A

Participant Recruitment Letter

Hello,

I am a doctoral candidate at North Carolina State University in the Adult, Workforce and Continuing Professional Education program. I am working on my dissertation “Exploring Working Graduate Students’ Experiences with Reusable Assignments: A Case Study” under the direction of my committee chair, Dr. Michelle Bartlett.

For this research project, I am seeking to recruit a sample of 10 participants who have simultaneously undertaken graduate studies while working in a closely related field. I’m seeking to understand how working graduate students engage with course assignments and if any transfer of that coursework occurs outside the classroom. I’m specifically investigating Reusable Assignments, essentially course created assignments that provide value beyond and past grading. As a qualitative inquiry, I anticipate using quotes and narratives to describe student experiences. However, I intend to take measures to ensure that your words will not identify you – both by using descriptors selectively and by using pseudonyms.

This case study method will allow me to investigate individual experiences by way of interview. You were referred to me as someone who may have insight into this phenomenon, and I would love to chat with you.

If you are available and willing to participate in a one-hour interview, to be conducted over Zoom, at a time and date of your choosing, will you please reply via email to skstanci@ncsu.edu so that we may schedule a time to talk?

I greatly appreciate your time and willingness to discuss your experiences as a working graduate student! I hope that we are able to connect in the near future for an interview.

Please do not hesitate to contact me with any questions regarding this study.

Many thanks,

Stephanie Stancil

Appendix B

Informed Consent

RESEARCHER. Stephanie Stancil | North Carolina State University, Doctor of Philosophy: Adult, Workforce and Continuing Professional Education | skstanci@ncsu.edu | 252-***-**** and CHAIR. Dr. Michelle Bartlett | North Carolina State University, Educational Leadership, Policy, and Human Development (ELPHD) | mebarlett@ncsu.edu | 919-***-****.

PURPOSE OF STUDY. The purpose of this case study is to explore the use and reuse of reusable assignments by graduate students who are also employed. An emphasis will be placed on the transfer of tools into the workplace. This qualitative study aims to further the understanding and practicality around the use and re-use of learning assignments outside the classroom setting with the goal of impacting institutional and organizational course design and by providing guidance to graduate faculty.

RISKS. Minimal, if any, risk is involved in the participation of this study. All information provided by participants will be confidential, and to ensure individuals' privacy, all data collected will be stored on a password protected personal computer and password protected software applications. The researcher will be sensitive and careful in the reporting of the data. At no point will individuals' names and their information be shared with other individuals or in the write-up of the results. Participation in this study is voluntary, and you may decline to participate or terminate your involvement at any time if you choose.

BENEFITS. There will be no direct benefit for those participating in this study. However, it is my hope that the findings from this study can be used as a means to begin conversations of what factors are required for optimal use of systems in practice.

CONFIDENTIALITY. Individual responses to this research study will be confidential. While I will collect demographic information from you, this information will be used to analyze trends; no identifying information will be reported in the findings of this research. Every effort will be made by the researcher to preserve your confidentiality. All data kept electronically will be stored on the researcher's password-protected computer. Only the researcher will have access to these files. Findings will be reported without your name or identifying information. I intend to protect your identity, both by using descriptors selectively and by using pseudonyms

CONTACT INFORMATION. If you have questions at any time about this study, experience adverse effects as the result of participating in this study or wish to withdraw or rescind your participation in this study, you may contact the researcher via phone or email. If you have questions regarding your rights as a research participant or if problems arise which you do not feel you can discuss with the researcher, you may contact the North Carolina State University Institutional Review Board at (919) 515-8754 or irb-coordinator@ncsu.edu.

VOLUNTARY PARTICIPATION. Your participation in this study is voluntary. If you decide to take part in this study, you will be asked to sign this consent form. After you sign the consent form, you are still free to withdraw at any time and without giving a reason. If you withdraw from the study before data collection is completed, your data will be returned to you or destroyed.

CONSENT. I have read and I understand the provided information. By replying "I agree" to this email, I agree to participate in the study. I have had the opportunity to ask questions. I understand that my participation is voluntary and that I am free to withdraw at any time, without giving a reason, and without cost. I voluntarily agree to take part in this study.

To confirm your consent to participate, please reply to this email with the words: “I agree” and your full name.

Appendix C

Interview Protocol

Exploring Working Graduate Students' Experiences with Reusable Assignments: A Case Study

Pseudonym: _____ Date of Interview _____/_____/_____

Time: _____

Written Consent Obtained _____

Interviewer: Stephanie Stancil

Recording started _____

1. Tell me about your job.
 - a. Field
 - b. What kind of work
 - c. How long employed there?
 - d. What did you do before?
 - e. What are your aspirations?
2. What are you studying in school? What program are you in, and how far along are you?
3. Do you see similarities between your work and your course of study? How so?
4. In what ways have your studies informed or impacted your work?
5. What is it like, simultaneously working and going to school?
6. The focus of my research is on reusable assignments. In case you're not familiar with that term; it means an assignment that you create for class that provides impact and meaning beyond that single point-in- time evaluation of learning. It's the opposite of a

paper that both you, and the instructor, might throw away at the end of the semester. Do you understand the types of assignments I'm describing?

7. Can you tell me about any experiences you've had with reusable assignments?
 - a. What did you create?
 - b. How did you use it?
 - c. What was the scope of impact?
8. How do you feel the creation of that product impacted your understanding of the course material?
 - a. Same? Different than traditional assignments?
9. Did you find that class or that assignment relevant? Was it applicable to your work or life?
10. Did you reuse that product at work? Elsewhere? In what ways?
 - a. If yes, how do you think you benefited from leveraging that work product?
 - b. Who else might have benefited from your work?
11. Thinking about that assignment, did creating ____, instead of a disposable assignment, impact your learning or understanding of the material differently? How so?
12. If you were to teach that class, what types of assessment would you assign or incorporate? Why?

Appendix D

Participant Post-Interview Email

Dear XXX,

Thank you so much for taking the time to participate in an interview with me! By sharing your insight and experience, you help me to better understand the ways in which working graduate students engage with reusable assignments. I'll take your words, along with those of the other study participants, and use those narratives as a basis for understanding this phenomenon. As a reminder, I may use themes or even direct quotes in my final manuscripts, but I'll always attribute them to a pseudonym, and I won't use your real name or other identifying information.

I want to thank you, again, for your time and candor. I enjoyed speaking with you and believe your insights are invaluable to my project. Have a wonderful spring semester.

Thank you!

- Stephanie